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# DEVELOPMENT OPPORTUNITIES

# IN THE

# OCCUPIED TERRITORIES

**(WEST BANK AND GAZA STRIP)**

**August, 1992**

**SECTORAL ANALYSES PREPARED BY:**

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# PART 1: OVERVIEW

## I. BACKGROUND TO AND PURPOSE OF THE SECTOR ANALYSES

The Agency for International Development (A.I.D.) has supported development projects in the Occupied West Bank and Gaza Strip since 1974. These projects have been carried out primarily through U.S. private voluntary organizations (PVOs); at present, six American PVOs and one Palestinian PVO receive grants to implement a wide range of projects in the Occupied Territories.

The most recent development strategy for the Occupied Territories, which was issued in draft form in December, 1987, assumed a continuation of the status quo and extensive linkage with the A.I.D.-financed Jordanian Development Program (which ended in 1990). The focus was almost entirely on private sector economic development. The Intifada began in late 1987, coincidentally shortly after the draft strategy had been prepared. The economic and socio-political situation changed precipitously, resulting in a dramatic impact on development opportunities in the Occupied Territories.

As a result of these unforeseen events, A.I.D. determined that program planning required the utmost flexibility, rather than adherence to the previous draft strategy. This flexible approach to program planning and approval has been reflected in A.I.D. programs from the beginning of 1988 to the present. In late 1991, A.I.D. determined that a new development strategy was required. The strategy would be based on an analysis of eight sectors: agriculture, education, finance and credit, health, industry and enterprise (including women in development issues), infrastructure, trade, and water and sanitation.

## II. METHODOLOGY

A.I.D. expanded an existing technical services contract with Policy Research Incorporated (PRI) in order to prepare sector analyses which would be used by A.I.D. in the preparation of a new development strategy for the Occupied Territories. The detailed sector analyses were prepared over a six-month period by a three person team:

> Vivikka Molldrem, Director of Program Development for the Near East Bureau, A.I.D./Washington. Ms. Molldrem was Team Leader for the strategy development effort, she also provided technical direction to PRI with respect to the sectoral analysis;
>
> Irene Jillson-Boostrom, Ph.D., Senior Technical Advisor, President, Policy Research Incorporated; and
>
> Alan Richards, Ph.D., International Consultant, Professor of Economics at the University of California, Santa Cruz (contracted to PRI for this project).

In addition to the members of the team, PRI contracted with a Palestinian economist to coordinate the contributions of 20 Palestinian specialists who prepared analyses of reports and other available information in each of the sectors. One or more members of the team made three site visits to the Occupied Territories (in December, January/February and May/June) to collect data and information, meet with the Palestinian consultants to provide guidance on preparation of their literature analyses, meet with the field staff of the PVOs currently receiving A.I.D. grants, and interview knowledgeable persons in each of the sectors. Both in Washington, D.C. and in the field, the team maintained close contact with relevant A.I.D. and Department of State (DOS) officials.

In early June, the team met for three days to review each of the draft sector analyses and discuss overall findings and conclusions. The drafts were then revised based on these discussions and on editorial suggestions made by PRI staff associated with the technical services contract. This report presents the individual analysis for each sector as well as a summary across the sectors. Tables, figures and references for each of the sector analyses are presented at the end of each section, unless otherwise noted.

During the course of this project, several hundred documents were obtained for use in preparation of the sector analyses. In view of the urgent need for data and information useful for development decisions with respect to the Occupied Territories, PRI has prepared a computerized list of these documents (using DBase IV). This bibliography will be made available to A.I.D., DOS, and PVO staff.

A more detailed description of the methodology used in the preparation of the sector analyses is included with Appendix 1.

## III. THE CONTEXT, IN BRIEF

Several parameters of this report should be clarified at the outset. Firstly, the term Occupied Territories is used to describe the geographic area of the West Bank and Gaza Strip as it is the accepted term for the USG and U.N. agencies. It refers only to the West Bank and Gaza Strip, not to the Golan Heights or the Israeli security zone in Lebanon. The terms Judea and Samaria are used when quoting Israeli statistics or other references, as this is the designation used by the GOI for the West Bank area. Unless otherwise stated, the West Bank statistics, information and recommendations presented in this report include East Jerusalem. Where necessary, East Jerusalem is referenced separately; for example, in those cases in which data have clearly excluded East Jerusalem. It must be noted at the outset that the statistical data available from the GOI (i.e., those published in the Statistical Abstracts and other

governmental sources) which can be used to numerically describe the sectors do not include East Jerusalem. This significantly skews the data and inhibits analysis of trend data which could be used for economic planning purposes. What is more, as Benvenisti has suggested,

> "For statistical purposes the West Bank and Gaza Strip are considered by Israel's Central Bureau of Statistics to be units independent of Israel. Economic activity there is investigated and reported as though it constitutes a 'national economy' united with Israel in a 'common market.' The official reporting of GDP, GNP, exports and imports and balance of payments of the territories is, however, inaccurate at best and misleading at worst. The daily, complex, economic interaction over the nonexistent 'green line', lacking any effective monitoring and control, call the reliability of the statistics into question."[1]

Unfortunately, because of the serious impediments faced by Palestinians and others to conduct empirical studies in the West Bank and Gaza Strip, most studies of the Occupied Territories depend primarily - and necessarily - on GOI statistics, notwithstanding their limitations.

Finally, although Israeli settlements in the Occupied Territories have considerable impact on economic and social development in the area, minimal data and information are available with respect to either plans for settlements or specific factors pertinent to individual sectors (e.g., infrastructure and industry).

## A. The Land and the People

The West Bank and Gaza Strip are bordered by Israel, Jordan and Egypt (see Figure 1). The total land area of the Israeli occupied West Bank and Gaza Strip (as defined by pre-1967 borders) is 5,939,000 million dunums (one dunum = .23 acres), of which 5,572,000 are in the West Bank and 367,000 are in the Gaza Strip.[2] According to the U.N., as of 1985, approximately 52% of this land was under Israeli control; that is, within the jurisdiction of the GOI or of Israeli citizens (settlers). Recent estimates of Israeli control of land are shown below:[3]

| | West Bank | Gaza Strip |
|---|---|---|
| Al Haq | 65% | 50% |
| Land and Water | 67% | 50% |
| PHRIC | 70% | 52% |

Accurate demographic data for the Occupied Territories are virtually impossible to obtain, as the most recent census was conducted in 1967;[4] since that time, all population data have

been estimated. The three primary sources of information regarding population are the Central Bureau of Statistics (CBS), the Interior Ministry (MOI), and estimates prepared by the Jordanian Medical Association in 1986. In the summary of demographic and other data published by Benvenisti and Khayat in 1988, it was noted that the Palestinian population data presented by the CBS and by the MOI for the Occupied Territories differ. For example, the data for 1987 showed CBS estimates of a total Palestinian population of 858,000 for the West Bank, while the MOI estimated the population to be 1,252,000.[5] The CBS estimates exclude East Jerusalem; the Palestinian population in East Jerusalem is generally considered to be approximately 150,000.

Using the Statistical Abstract of Israel for 1990 as a basis, and assuming a 3.5% annual growth rate in the West Bank and a 4.5% annual growth rate in Gaza, the following estimates were calculated for 1991:[6]

| | |
|---|---|
| West Bank (including East Jerusalem) | 1,104,799 |
| Gaza Strip | 1,010,640 |
| Total: | 2,115,439 |

More than 35% of the Palestinian population is rural (see Figures 2-4), with 15% living in villages with populations of 2,500 or less. The Palestinian population is also a youthful one; nearly half (47.4%) of the Palestinian population in the West Bank is under the age of 15, as is 49.5% of the population of the Gaza Strip.[7] This age distribution and the high birth rates have important implications for social service needs as well as for labor force concerns.

As of January, 1992 451,695 individuals (or approximately 40% of the population) in the West Bank were registered as refugees, of whom 119,172 (26%) lived in UNRWA camps. In the Gaza Strip, 549,675 Palestinians were registered refugees (approximately 80% of the population); of these, 302,977 (55%) lived in UNRWA camps.[8]

In spite of the high natural rate of increase, until 1991 the population had a relatively low rate of population growth; this resulted from emigration to Jordan, the Gulf States and outside of the region, primarily for job opportunities. Even prior to the Gulf War, and the influx of Palestinians from the Gulf States, an important population variable in the Occupied Territories, and particularly in Gaza, was the number of residents who return from the Gulf States annually for summer vacation. Reportedly, approximately 100,000 do so in the Gaza area, for 2-3 months each year; no estimates of similar temporary residents were available for the West Bank. Since the Gulf War, an estimated 35,000 Palestinians have returned to the Occupied Territories; 40% of them are currently residing in the Gaza

Strip.[9] Most are university graduates but are unemployed or underemployed; in spite of this, they are not eligible for social benefits from the GOI. Some are eligible for services through UNRWA.

## B. Governance in the Occupied Territories

From 1950 to 1967, the West Bank was under the authority of the Jordanian government, which in 1955 devolved public administration authority to elected municipal governments. From 1948 to 1967, Gaza was under Egyptian control, with appointed municipal governments. Subsequent to the 1967 War, the Israeli military authorities assumed control of the Palestinian population in the occupied West Bank and Gaza Strip. Since 1967, no local elections have been held in Gaza; no municipal elections have been held in the West Bank since 1976.

In 1981, the Israeli government initiated a system of civil administration (CIVAD). Figure 5 shows the organizational structure of the CIVAD. The CIVAD's "jurisdiction includes all the civil powers of the military government but not the authority to enact primary legislation, which has remained in the hands of the Military Commander."[10] In virtually all CIVAD offices, a military officer directs the departments, but Palestinians comprise most of the technical and administrative staff. According to the Fourth Geneva Convention, the GOI is responsible for the provision of public services for the Occupied Territories, based on tax and other remittances from the Palestinians residing in the West Bank and Gaza Strip and from the GOI budget. These governmental functions are carried out by the CIVAD, with specific responsibility for sectoral programs being coordinated with the relevant Israeli ministry or regulatory body. Local municipalities also carry out activities which in other circumstances would be either public or private sector responsibilities. In doing so, they liaise with both the CIVAD and Palestinian private sector organizations, as appropriate and necessary. For all intents and purposes, both CIVAD and the municipalities therefore constitute "public" agencies in the Occupied Territories.

## C. Recent Trends in the Economy of the Occupied Territories

According to some reports, the economies of the Occupied Territories began to decline in the early 1980s. This decline resulted from stagnation in the Israeli economy as well as in Jordan.[11] The economy further declined in the late 1980s, even prior to the Gulf War. UNCTAD reported in 1991 that their review of Israeli and Palestinian data indicated "a rapid deterioration in the performance of the economy of the occupied territory during 1988-1990."[12] According to that report, the gross domestic product (GDP) for the Occupied Territories decreased by 12%/annum during that period, to just over $1.2 billion in 1990.

Consistent with previous patterns, the decline in the Gaza Strip was more severe than in the West Bank: 17% versus 11%, respectively.[13] Gross national product (GNP) decreased by a comparable amount annually (11%), to approximately $1.8 billion. Per capita GNP was estimated to be $1,400 in the West Bank and $780 in Gaza in 1990.[14] By comparison, the GNP in Jordan for 1989 was $1,730.[15] In Israel it was $10,920 in 1990.[16]

With the exception of agriculture, all sectors exhibited significant decline in the period 1988-1990; for example, according to the 1991 UNCTAD report, industrial output decreased by an annual average of 14% and construction decreased by an annual average of 23%. Other sectors combined (public and personal services, trade, transport and communications) declined by 17%.[17] As a consequence, the contribution of the agricultural sector to the GDP increased from 25% to 31% from 1988-1990, while construction has decreased from 17% to 14%; industry has remained at 9% of GDP (although output had decreased). The UNCTAD reports that the decline in the industrial sector "bodes ill for the future of the Palestinian economy."[18] It should be pointed out, however, that several researchers have suggested that traditional economic indicators (e.g., GNP, per capita GNP, GDP) are not appropriate for the Occupied Territories as they have been devised to study productive economies. Given that the West Bank and Gaza Strip depend largely on transferred resources, the limitations of these indicators should be considered.[19]

The New Israeli Shekel (NIS) is the currency used predominantly in Occupied Territories, although the Jordanian dinar is still used by some in the West Bank; as of January, 1992, the rate of exchange was NIS 2.3/US $1 for the Shekel and JD 1/US $0.68 for the Jordanian dinar. Given the inextricable ties between the economies of the West Bank and Gaza and those of Israel and Jordan, pricing and inflation in these two countries have a significant and deleterious impact on the Occupied Territories. Several key examples of recent impacts are:

* increased prices for goods imported through Israel, which accounted for 90% of goods imported into the Occupied Territories;

* decline in the wages of Palestinians working in Israel and a decline in real disposable income of most income groups in the Occupied Territories (an example of the deleterious impact of Palestinian wages being tied to the Israeli economy); and

* the differential in the consumer price indices of the Occupied Territories and Israel, which lead to both 1) a decrease in value of sales of Palestinian goods to Israeli buyers, and 2) an increase in purchase by

Palestinians of consumer and durable goods from Israel (until the economic boycott of the Intifada, when this practice decreased considerably).

The economic impact of the Gulf Crisis on the Occupied Territories was - and continues to be - significant in all sectors. As the 1991 UNCTAD report noted, the economic impact resulted from both external and internal pressures; these are summarized below:[20]

* reduction in private remittances from Palestinians working in the Gulf states, estimated at $120 million to $340 million annually prior to the Gulf War;

* involuntary return of Palestinians working in the Gulf states to the Occupied Territories, resulting in increased pressure on an already distressed job market (an estimated 750,000 Palestinians worked and lived in Jordan, Kuwait and Saudi Arabia prior to the Gulf War);

* decreases in both public and private financial support from the region for Palestinian private sector development in both social services and productive enterprises (this support was estimated to be $150 million in 1989);

* disruptions in traditional export and import markets (note: the market share in Jordan had begun to decline prior to 1991[21])

The total estimated economic impact of the Gulf War (based primarily on lost remittances, transfers and exports) was between $250 and $750 million in 1990 alone (55% to 80% of the total generated by these three sources in 1989), or 10% of gross national disposal income.[22] Few knowledgeable individuals believe that there have been substantial moves toward an improvement in the economy of the Occupied Territories since the end of the Gulf War.

Estimates of current unemployment rates vary considerably. Israeli statistics for 1990 show a 13%-15% unemployment rate (including both those officially registered at the CIVAD labor exchanges and those defined as "employed persons, temporarily absent from work"). Other estimates of unemployment in both the West Bank and Gaza Strip still range between 30% and 40% of the work force.[23] While Palestinians now have minimal access to the Gulf States as a source of employment (and remittances), they are still dependent on employment in Israel (see Figure 6), although this alternative for export of labor capital is also highly volatile. As a result of reduced personal income, there has been a concomitant reduction in consumer demand (estimated 20-30%)[24] and reduced funding available for investment.

This latter point is particularly critical for economic development in the Occupied Territories in view of the fact that between 70% and 95% of capital investment in industry in the Occupied Territories is provided by the individual owners or their families. Importantly for economic development, the period 1988-1990 saw a 4% annual decrease in private investment.[25] Moreover, the external trade sector has not yet shown signs of improvement since the end of the Gulf War, in spite of efforts to re-establish economic relations with traditional trading partners in the region. Exports of both goods and services decreased an average of 30% per annum during 1988-1990, with the decrease far more dramatic in the Gaza Strip (50%) than in the West Bank (16%).[26] Imports of goods and services also declined during this period: 16% in the West Bank and 19% in the Gaza Strip.[27] As of the beginning of 1992, markets outside of Israel remained largely closed to Palestinian products and the decreased purchasing power of Palestinian consumers continues to result in decreased imports available for Palestinians and markets for Palestinian products as well.

Economic Dependence on Donors. In addition to remittances from Palestinians working abroad, the economies of the West Bank and Gaza Strip depend to a large extent on donor countries and organizations, each of which has its own particular interest in the Occupied Territories and therefore directs the aid in a particular way. In 1991 alone, $69 million in funding was provided to the Occupied Territories, not including funds provided by Arab states and funds contributed by governments to the UNRWA for activities in the Occupied Territories.

It is important to distinguish between the ultimate source of external funds (e.g., governments and private donors to non-profit organizations) and the vehicles through which such funds are disbursed. The most important sources of external aid have been:

* individual Palestinians in the diaspora, who contribute to a variety of organizations and institutions (as distinct from the remittances sent by individuals to their families in the Occupied Territories);

* Arab governments and individual Arabs, contributing to:

  -- individual Palestinian organizations and institutions, including municipalities;

  -- the Joint Jordanian-Palestinian Committee for the Steadfastness of the Palestinian People in the Occupied Homeland;

  -- the Palestinian Liberation Organization;

-- various U.N. agencies operating in the Territories, including the UNRWA and UNDP;

* the U.S. Government, which disburses funds through:

  -- various U.N. agencies operating in the Territories, including the UNRWA and UNDP;

  -- the Jordanian Development Program (until 1989);

  -- U.S. private voluntary organizations (PVO) operating in the West Bank and Gaza Strip and one Palestinian PVO;

* private U.S. individual donors and foundations, providing funds to:

  -- individual Palestinian organizations and institutions; and

  -- U.S. private voluntary organizations operating in the West Bank and Gaza Strip; and

* European, Canadian, Japanese and other governments, which provide contributions to:

  -- individual Palestinian organizations and institutions; and

  -- the EEC

  -- various U.N. agencies operating in the Occupied Territories, including the UNRWA and UNDP; and

* European individual donors and foundations, providing contributions primarily to:

  -- individual Palestinian organizations and institutions.

Understanding the nature of the source of external funds is important to an understanding of the dependency of the Palestinian economy on the vagaries of external conditions. Ultimately, the U.S. and European governments and Arab states (and, increasingly Japan) are the major sources of funding. The major funding vehicles, including the several U.N. agencies and the U.S. PVOs, derive their funds from essentially the same sources: other governments and a few foundations and individuals. For the most part, external funds have been provided for:

* construction of health and social service infrastructure projects and some housing,

* operating costs for health and social service programs (and lately for rehabilitation services, more popular during the height of the Intifada),

* agricultural cooperatives,

* municipalities (for construction and operating costs),

* professional education abroad,

* infrastructure and public works, and

* human resources development and training.

With the exception of agriculture, minimal donor funds have been provided for the productive sectors.

The importance of the economic role of UNRWA cannot be overlooked. In 1990, its annual budget for the West Bank and Gaza Strip was $98.6 million, in 1991, it was $98.3 million; the approved 1992/1993 budget is $217.8 million (roughly $109 million per year).[28] From 1988 to 1991, approximately $949.9 million has been contributed to UNRWA, primarily by the U.S. and European governments, to operate the refugee camps and to provide services to the refugees under its aegis. Approximately 40% of these funds are utilized for the West Bank and Gaza Strip.[29] Until recently, UNRWA has expended minimal funds for economic development projects. However, the agency plans to raise $20 million over the next five years for income-generating projects for Palestinians throughout the UNRWA projects in the Near East.

## IV. SUMMARIES OF SECTOR ANALYSES

This section provides brief summaries of the findings of each of the sector analyses. They are presented in alphabetical order, by sector. A summary of recommendations are presented in Tables 1 and 2 at the end of this overview chapter.

Agriculture. Although data has not been systematically gathered and reported since the Intifada began in December, 1987, the agriculture sector probably still accounts for roughly one-fifth of the total GDP; the estimated total income from agriculture in the West Bank is approximately $150 million. Agriculture is, however, heavily dependent on export of goods to Israel and Jordan, both of which impose trade barriers which render Palestinian agriculture highly dependant on the economies of those countries. The agriculture sector in the Occupied Territories directly employs perhaps one Palestinian in five; nearly one-half of Palestinians receive at least some income from

this sector. It has been estimated that about 70% of the farm labor force on the West Bank is female, almost exclusively family, seasonal labor. While low wages contribute to a competitive advantage for Palestinians in terms of product pricing, there are important socioeconomic disadvantages (e.g., low income for families). Finally, although agriculture contributes importantly to the economy, Palestinians are hardly self-sufficient with respect to food products. For example, more than 80% of wheat, all sugar and half of all dairy products are imported, as is most of animal feed.

Of the total land area of 5,572,200 dunums (a dunum is equal to .23 acres) in the West Bank, roughly three million dunums are available to Palestinians (that is, not acquired by Israel or by settlers); in Gaza, approximately 238,000 is available to Palestinians. Approximately 33% of the Palestinian land in the West Bank is under cultivation, about 5% of which is irrigated. In the Gaza Strip roughly half of Palestinian land is cultivated, of which 60% is irrigated. Less than 20% of West Bank orchards are irrigated using modern methods (drip or sprinkler), while roughly 60% of vegetables are so irrigated. Corresponding figures for Gaza are about 50% and 85% for fruits and vegetables, respectively. It has been estimated that some 18,000 dunums of orchards are now over 30 years old, and are accordingly yielding less than two tons per dunum, while at least three tons are necessary for economic viability. An estimated 1.5 million dunums of land in the West Bank, mostly around Ramallah, Hebron, and Nablus, could be reclaimed for cultivation and other uses.

In the West Bank, an estimated 60% of cultivated land is planted with fruit trees, with olives dominating in the north and grapes in the south; 33% of cultivated land is planted with field crops. Olive production - a mainstay of the economy of the West Bank - is markedly unstable and this has important implications for income variation and risk considerations. In the Gaza Strip, 60% of cultivated land is devoted to citrus crops; in 1989 citrus accounted for roughly 80% of the total value of farm exports.

Food processing is an important component of industrial production in the Occupied Territories, but is severely constrained by a dependence on imported products, inefficiency (in production technology, management and geographical distribution), poor quality control and adulteration. Excess capacity exists in many of the food processing plants, including in the dairy plants, which have an estimated total capacity of 50 tons per day, but which produce only about 17 tons per day. An estimated 80% of the input required for production in food processing plants is imported from Israel. Most of the plants (particularly the dairy plants) are operated by cooperative societies which utilize equipment (and in some cases, obtain partial operating costs) purchased through or by donors. It is unclear whether such plants are, or would be, commercially viable

without these grants or favorable loans. These cooperative-operated plants also compete (some would say unfairly) with the for-profit private sector.

Formal public sector institutions in the Occupied Territories are administered by the CIVAD Department of Agriculture; the budgets and activities for agriculture have significantly diminished since the late 1970s and in some areas, critical activities such as extension programs are now essentially defunct. The total expenditure of the CIVAD Agricultural Department in 1991 was $1.5 million dollars, of which just over 65% was allocated to salaries. It is estimated that less than $30,000 was devoted to extension, training, research, and data collection--i.e., the fundamental public goods needed by the agricultural sector. By 1987, there were only 43 extension agents serving all of the Occupied Territories. Donors have contributed significantly to the agriculture sector, primarily in terms of grants and loans to cooperatives, although support has also been provided for small scale agricultural projects not associated with cooperatives and to NGOs which are involved in extension, training and research services. Municipalities are involved in agriculture in a variety of ways, including as operators of slaughterhouses, which have been largely funded by donors. The involvement of municipalities in what could be a profitable enterprise is controversial, as is their involvement in other physical infrastructure projects.

Various aspects of agricultural and production infrastructure are severely lacking. For example, marketing information systems and export support mechanisms (e.g., refrigerated transport and cold storage, mechanisms for participation in trade fairs) are just now being developed; quality control is sporadic at best, and agricultural research is barely existent. However, Palestinian non-governmental organizations (NGOs) and universities have initiated a number of projects which have the potential to significantly improve development in the agriculture sector and to build on the human resources capacity which already exists.

Education and Training. Palestinians have historically had the reputation of being highly educated and viewing education as a linchpin of society. In Beit Jala, for example, as of 1989, 90% of the population had completed post-secondary education. For that reason alone, the present inadequacy of the educational system, and the impact that this inadequacy has had on Palestinian society, is particularly troublesome.

The Israeli Civil Administration (CIVAD), which is part of the Ministry of Defense, has authority over the educational systems in the Occupied Territories at all levels, including control of public and private sector curricula. Three separate types of institutions provide education in the Occupied Territories: the public sector (wholly administered by the CIVAD), UNRWA and the

private sector. CIVAD operates primary, preparatory and secondary schools attended by 75% of students in the West Bank and 45% of students in the Gaza Strip; CIVAD also operates 11 two-year and teachers colleges and technical schools. UNRWA operates schools at the kindergarten through secondary levels, providing education to 12% of the population in the West Bank and 54% in the Gaza Strip. A number of individual non-profit institutions have kindergarten through secondary, which are attended by 12% of students in the West Bank and 5% in the Gaza Strip. All of the six universities in the Occupied Territories are private - a situation unique in the world. An estimated 11,000 Palestinians are enrolled in universities in the West Bank and Gaza Strip, although data are difficult to obtain because of the closure of universities. Importantly, nearly one-quarter of those enrolled in universities are in a science curriculum (as compared, for example, with 4% of U.S. college freshmen enrolled in the sciences in 1989).

As critical as is vocational and technical training for economic development in any country or jurisdiction, it is sorely lacking in the Occupied Territories. Vocational/technical schools are few and have minimal advanced equipment, the latter a partial result of GOI restrictions on importation of equipment for use in teaching and on teaching of certain technical skills. As is true in many areas, there is little linkage between the productive private sector (i.e., potential employers) and planners and educators in the vocational/technical schools.

Public schools at all levels of education are poorly equipped, with few library or laboratory facilities; the buildings are in deteriorating condition. UNRWA schools are not in substantially better condition with respect to physical plant and facilities. Most community colleges and universities lack adequate laboratory and library facilities, critical factors in the quality of higher education. University faculty also have scant access to newer educational technologies or to information resources. In-service teacher training is almost non-existent in public schools and minimal at private and UNRWA facilities; teachers have little contact with recent educational technology and new developments in science and other fields.

The CIVAD has approval authority over the curriculum of all schools in the Occupied Territories, two distinct civil administrations (each headed by a different military governor) control the two geographic areas. This greatly exacerbates the historic distinction between West Bank education (based on the Jordanian system) and education in the Gaza Strip (based on Egypt). The existence of two separate military commands also explains the fact that, while all schools at all levels were closed in the West Bank (not including East Jerusalem) for most of the period 1988-1990 (and sporadically since then), the schools in Gaza were rarely closed. All universities were closed

by the CIVAD in the Occupied Territories for more than four years; they were allowed to reopen on a phased basis (i.e., certain departments) beginning in early 1992, although some are being sporadically closed for brief periods of time. There have been problems with discipline in many of the schools, not surprising in view of the fact that schools at every level have been entered by soldiers who have arrested and detained students, teachers and administrators, students and parents have been arrested for participating in "distance learning" projects, and students and teachers have participated in activities against authority figures.

Under these circumstances, it is hardly surprising that illiteracy rates are rising (now estimated at 20% - 30%) and that recent assessments of language and math skills demonstrate a serious deterioration in these two critical skill areas. The proportion of students successfully completing the Tawjihi has decreased, as has the proportion of students attending secondary school. There are positive developments, nonetheless. During the Intifada, individual schools and local institutions developed approaches to "distance learning", ensuring that students could continue to acquire some modicum of education in spite of school closures and highly stressful living conditions. Local educational institutes have also designed and implemented impressive literacy training programs, and women's groups in mosques have begun to operate pre-schools which are often combined with skills training and health education for mothers.

More than three-fourths of children of primary school age in the Occupied Territories are estimated to be enrolled in schools, as are 45-65% of those in the preparatory age cohort; only 25-35% of those in the secondary school age cohort are enrolled in school. However, all of the data with respect to enrollment, dropout and examination results in the West Bank must be considered in light of the fact that, effectively, public and private K-12 students had no access to education during the period 1987 - 1990, when schools were closed for most of the period. They have been sporadically closed since that time as well and schools are closed during general curfews. While post-secondary schools in the Gaza Strip were not closed for long periods of time, the frequent curfews included the closure of schools. In the West Bank, for all intents and purposes, school-age children lost two years of education from 1987 to 1991.

Given the significant problems with respect to inconsistency in curricula between the West Bank and Gaza Strip, the almost non-existent library and laboratory facilities, the inadequate physical structures and minimal in-service teacher training programs, there is cause for concern with respect to ability of this generation of Palestinians to continue the tradition of relatively high education and to compete successfully in the global economy.

Finance and Credit. The financial sector in the Occupied Territories is weak and largely fails to provide traditional functions of banking institutions. Although weak financial systems are common in low-income countries, regulations peculiar to the Occupied Territories have combined with politically generated public mistrust of the banking system to create a small, debilitated formal banking sector. Moreover, sources of investment in the Occupied Territories are extremely risky. For example, savings rates are reasonable (some banks offer highly positive real rates of interest to depositors, even under highly inflationary conditions); unfortunately, they are largely generated abroad, a fact which makes them highly unpredictable.

Banks are few, small, heavily restricted, and confronted with a highly uncertain economic climate. They pursue extremely conservative loan policies, even with the very small total volume of deposits at their disposal. Informal sector mechanisms are numerous, but are far too small, fragmented, and ephemeral to fill the gap. In the absence of Palestinian banks, the function of providing liquidity through checking services, providing a mechanism for saving and investing, and facilitating trade is carried out by three types of local non-governmental institutions: "credit" institutions, cooperatives, and money changers. Although these do fill certain critical needs, they are far too small, too weak, and (in the case of moneylenders) too subject to regulatory shifts to mediate between savers and investors. These groups can assist certain sections of the population; but they cannot be expected to substitute for formal banking institutions.

In the Occupied Territories there is no mechanism for macroeconomic planning within which a financial management system can rationally exist and which could devise comprehensive responses to the numerous and severe external shocks to which the economy of the Occupied Territories has been subjected. Fiscal policy plays no stabilizing role whatsoever; decisions concerning monetary policy are divided between two central banks -- the Bank of Israel and the Central Bank of Jordan -- both of which are concerned primarily (and understandably) with financial and economic issues in their respective countries. The economy of the Occupied Territories is neither so integrated into the Israeli economy that it can simply be regarded as a section of that system, nor sufficiently independent of the Israeli economy that Palestinians are insulated from the difficulties there. Palestinians have, in an important sense, the worst of both worlds.

In spite of the unstable political and economic situation, there appears to be no dearth of demand for credit. Indeed, excess demand for credit seems to be the norm. This situation does not seem to result from a common cause of excess shortage, low interest rates (which result in a shortage of credit because the

financial institutions cannot meet demand for low-cost investment); in fact, interest rates are relatively high at the formal banking institutions. Rather, the central problem is the institutional arrangements of the banking system, which do not effectively mediate between savers and potential investors.

Health Status and Service Delivery. Available health status measures indicate a cessation of improvements or a deterioration in the health status of the population in the Occupied Territories over the past five years. They also indicate a significantly poorer level of health than that of Israelis, but comparable to those of populations of Egypt, Morocco and Jordan. The health status of the refugee population is comparable to that of Palestinian refugees within UNRWA's jurisdiction in other countries. Mortality and morbidity data for the West Bank are more comparable to middle-income countries (i.e., with chronic disease beginning to predominate), while the data for the Gaza Strip continue to reflect its status as comparable to that of lower-income countries.

More than half of the health services in the Occupied Territories are provided by the private sector, with the CIVAD (through the Government Health Services, GHS) and UNRWA providing the remainder, particularly in the Gaza Strip than in the West Bank. The private sector provides services directly and contracts with UNRWA for provision of services. Hospital-based care is predominant, although hospital beds are seriously maldistributed, with most hospitals being located in the Jerusalem/Bethlehem area and few in the Gaza Strip or northwestern area (Jenin/Tulkaram). The Gaza Strip has among the lowest hospital bed per capita ratios in the world. There is also no rational "system" of care (e.g., regional care with clearly delineated referral networks, centralized regulatory bodies, and central mechanisms for pharmaceutical purchase, supply, distribution, utilization and monitoring). Although the GHS, private sector and UNRWA operate primary health clinics, there is a scarcity in some areas and the range and quality of services is highly variable.

There is no mechanism for planning the training of health care personnel consistent with defined service and managerial needs. Moreover, there is no medical school, in fact no formalized system for medical education, nor for continuing education of health professionals in general, although a number of schools exist for training of nurses and technicians. There is a severe shortage of nurses and a shortage of trained technicians and some medical specialties for which there are no practicing physicians (although having these physicians might reduce the need for referral to high-cost Israeli hospitals for diagnosis and treatment). In part because during the height of the Intifada donors concentrated on providing medical equipment (to secondary and tertiary facilities in particular), there is a

maldistribution of equipment, it is often not functioning, and physicians and nurses are not adequately trained in its use.

Rehabilitation services are also poorly distributed, and expensive, facility-based care predominates, although there have been recent efforts to expand community-based care. There are an estimated 15,000 individuals with severe Intifada-related injuries who require extensive rehabilitative care; this places a significant additional and continuing cost burden on an already-burdened system. Family planning services do exist, but because of political concerns are provided on request only; no outreach activities are carried out by the few organizations which provide such services. In a positive vein, at least two of the organizations which offer family planning services do so in the broader context of maternal health services, including health education.

While Palestinians can participate in the Israeli national health insurance system, the premiums are too costly for most and the benefits not seen as commensurate with the cost by others. There are embryonic efforts to establish private health insurance systems in the Occupied Territories, but these are hampered by the lack of a rational system of care and health status data on which to base detailed plans as well as on the increasing economic problems, which limit the ability of individuals or firms to pay health insurance premiums. This latter factor has also increased the proportion of patients who are classified as social cases, and thus are unable to pay for private sector care.

The total amount of funds expended in the health sector in a given year is an elusive figure. Obtaining accurate estimates of total health expenditures is hampered by the difficulty in obtaining cost data from the GHS, private facilities and donors. It is estimated that in the Gaza Strip between $36 million and $45 million were spent on health care by a combination of the GHS, UNRWA and private donors in 1990. In the West Bank, the range has been estimated at $50 million to $75 million. GHS budget allocations actually decreased over the period 1988-1991, in spite of continued population growth. Health and rehabilitation services in the Occupied Territories became increasingly dependent on donor support, perhaps more than any other sector. Even within donor agencies and organizations, such support has been uncoordinated, resulting in excess or inappropriate distribution of certain types of services or equipment and shortages in others. This is of considerable concern, as is the fact that few Palestinian administrators who work for CIVAD, the private sector and UNRWA have training in health systems management or planning; knowledge and experience in health care financing is particularly lacking.

The GOI has proposed that the GHS hospitals be turned over to the Palestinian health sector. However, with no existing tax

mechanism within the control of the Palestinians, dependence on donors for more than half of all capital and operating costs, and minimal experience and training in policy-level planning and decision-making, it is not clear how Palestinians can readily assume responsibility for the public health care system, particularly in view of the fact that this system has been underfunded for some time.

Industry and Enterprise. The Occupied Territories lack most of the essential factors which ensure successful industrialization. These include: a) raw material (with the exception of sand, salt and stone quarries), b) indigenous investment capital, c) access to markets, d) supportive managerial and regulatory infrastructures, e) self-determination with respect to laws and regulations pertaining to industrial development, and f) the ability to educate, train and provide experience for both the skilled and unskilled work force. However, even in the absence of these essential factors, some industrial expansion has occurred in the past twenty years, although it has decreased more recently. As of 1989, the most recent year for which data are available, the industrial sector represented approximately 12% of GDP for the Occupied Territories. The primary types of industry and enterprise include clothing, textiles and leather, fishing, tourism, construction, pharmaceuticals, quarries, plastics and paper products.

Investment in the private sector in the West Bank and Gaza Strip derives from the owners and investors in the private sector, Arab donors (primarily through grants) and other donors (primarily through credit arrangements). Investment in Palestinian companies rests primarily with the "large" (i.e., more than 8 employees) firms, derives largely from the family-owners, and is significantly smaller than investment in Israel. As is true with many developing countries, "industries" in the Occupied Territories comprise primarily owner-operated businesses. For example, in 1987, of the total of 4,255 "industrial" firms in the Occupied Territories, only 2,431, or 57% have employees. As of 1989, 19,849 workers (17% of the work force) in the West Bank worked in industry, as did 7,990 workers in Gaza (13.5% of the work force). In the West Bank, the proportion of the work force employed in industry remained relatively stable from 1980 to 1989; in the Gaza Strip, however, it declined by 16% over the same period. This shift has been due in part to employment of Gazans in Israel and is reflected in changes in employment by type of industry; for example, the proportion of Gazans working in the construction Industry rose appreciably from 1987 to 1990 and rose slightly in the West Bank during the same period.

The economies of the West Bank and Gaza Strip are inextricably linked with Israel, both as the occupying nation and as an economic "competitor"; this is particularly true for industry and enterprise. A specific example of the link between the

industrial sector in the Occupied Territories and Israel is the fact that, as with the West Bank, Israel is the primary source of raw materials used in manufacturing in the Gaza Strip, providing just over 40% of such materials in 1990. In 1986, the Occupied Territories exported more than 80% of their industrial goods to Israel (no data are available with respect to the types of goods exported).

Subcontracting arrangements, which entail Palestinian enterprises subcontracting to Israeli firms for small-scale production, have been an important factor in Palestinian industry since the Occupation. These subcontracting arrangements are primarily for the production of goods requiring labor-intensive finishing (final stage of production), including clothing, shoes, wood and leather products, and in addition the repair of durable goods, including electrical appliances and motor vehicles. Although subcontracting has provided employment for large numbers of Palestinians, these arrangements -- which make use of low-wage workers -- have been criticized by some Palestinians hindering expansion of small-scale enterprises. In the event that the bureaucratic and economic climate would change in the Occupied Territories, subcontracting would hold promise for economic expansion as has occurred in other developing areas (including, notably, the Pacific Rim).

Infrastructure. Physical infrastructure -- communications, energy and transportation -- is a vital link for economic and social development. Without adequate infrastructure, the productive private sector cannot adequately compete in domestic or global markets. In addition, the use of physical infrastructure projects as a means of jobs creation has historical bases, and is increasingly seen as an option in countries with increasing unemployment, including the U.S.. With the exception of relatively small investments in road networks and rural electrification projects, however, donors have not been involved in this sector. When donors have invested in the physical infrastructure sector, villagers have shared the cost of most road construction or repair projects.

Bezek, a semi-public Israeli company which liaises with the CIVAD, controls all telecommunications in the Occupied Territories. Of 400 villages in the West Bank, only 80 have telephone service; this is due largely to impediments to access to the communications network, rather than potential customers' ability to pay for service. Even in the urban areas, demand for telephone service far exceeds supply; for example, as of 1991, there were 12,500 applications for service pending in the West Bank. While no comparable data are available for the Gaza Strip, it is generally agreed that the communications system lags behind that of the West Bank. In both areas, repair and maintenance is minimal, with frequent service breakdowns and long delays before repairs are initiated. Notably, although several of the

vocational/technical schools provide training in telephone repair, instruction in this area is restricted for security reasons by the GOI.

While 95% of urban areas in the Occupied Territories are supplied by electricity continuously, less than half of all rural areas have continuous access. More than 25 villages in the West Bank have no electrical supply whatsoever. Although quasi-public municipal electrical companies have existed in the Occupied Territories since 1928, the system has been, for the most part, tied to the Israeli grid since 1967. The municipal companies serve as distribution networks, purchasing electrical supply from the Israel Electric Corporation. However, they have little authority to adequately plan for appropriate distribution, and scarce finances for operations and maintenance, training of staff, or implementation of alternative energy projects. In part as a result of scarce funds, power stations and peripheral equipment have deteriorated significantly. CIVAD has not allowed the Palestinian municipal power companies to expand capacity and has disallowed most new rural electrification projects; however, the municipal companies have been permitted to expand their capacity to supply electricity to the settlements in their areas.

Since there is no airport (to which Palestinians have access), no operating seaport and no railway system in the Occupied Territories, Palestinians are entirely dependent on the road network for transportation. Particularly in the rural areas, this road network is wholly inadequate, with minimal funds being allocated for maintenance. The Gaza Strip, as with other sectors, has a substantially poorer road system than does the West Bank. There is only one main road in the Gaza Strip from Gaza City to Khan Younis to which Palestinians have access; when that road is closed, there is minimal access from one end of the Strip to the other. The condition of the road network serving Palestinians in the Occupied Territories is poor, with minimal funds being allocated for maintenance. Because Palestinians may not themselves ship goods from airports and seaports in Israel, roads are particularly important for the productive private sector in the Occupied Territories since they are the only mechanism currently open to Palestinians for export of goods through Israel and Jordan to other export markets.

Finally, the GOI makes minimal investment in physical infrastructure in the Occupied Territories (encouraging donors to do so). Donors, on the other hand, have scarcely funded this sector (and do not seem inclined to support physical infrastructure which will benefit the productive private sector, with the exception of agricultural roads), and Palestinians have little if any means of supporting such projects.

Trade. Necessarily, over the 25 years of the occupation, Israel had become the most significant trading partner for the Occupied Territories. This is due in part to the elimination of trade barriers for Israeli goods to the Occupied Territories and the imposition of protective measures to hinder the export of certain goods from the Occupied Territories to Israel as well as to other countries. Moreover, Israeli tax and other import regulations result in substantial increases in the cost of goods imported to the Occupied Territories from other countries. In 1984, for example, 90% of goods imported to the Occupied Territories were Israeli, 8% were from other countries via Israel and 2% were directly from Jordan to the West Bank. Conversely, 54% of exports from the West Bank and 83% of those from Gaza went to Israel and 44% of West Bank exports and 13% of Gaza exports went to the Jordanian market.

As a result of these trade relationships, the balance of payments in the Occupied Territories has worsened considerably since 1967, and particularly during the period 1980-1987, when the trade deficit increased by more than 90% in the West Bank and by 140% in the Gaza Strip, in dollar volume. In 1986, the most recent year for which total balance of payments data are available, the total trade deficit was $512 million; the deficit with Israel was $532 million. In this respect, the situation is worse than it was just prior to the 1967 occupation, when the trade deficit for the West Bank was JD 20 million and that for Gaza was JD 7 million.

In consideration of the disparities in balance of payments with the primary trading partners of the West Bank and Gaza Strip, a key issue has emerged in the discussion of necessary and appropriate economic development strategies for the Occupied Territories. This critical issue, which must be addressed in formulating trade development strategies, is the determination of the appropriate balance between import substitution and export expansion. While not mutually exclusive, they require somewhat different emphases in terms of investment and focus. This is both an economic and a political issue which is being considered by the Palestinian representatives to the Peace Talks as well as by various economic development and research institutions.

Non-parity with respect to preferential trade agreements with potentially significant trading partners (i.e., the U.S. and the EC) also hampers the ability of Palestinian industry to compete effectively in the global market, as does the absence of economic and physical infrastructures and systems on which free market economies depend (e.g., access to domestic and foreign market pricing data, adequate transportation and storage facilities, ability to participate in trade fairs and deliberations, mechanisms for production and packaging quality control). Moreover, the dependence on the Israeli economy (and to a lesser

extent on the Jordanian economy) with respect to production and trade hampers the ability of Palestinian industry to diversify and expand. Finally, the dependence on export of Palestinian labor to Israel and the Gulf States as a means of income generation (both for families and for Palestinian society as a whole) is a volatile proposition, as has been proven since late 1990 in the Occupied Territories and more recently in countries from which labor capital has been "exported" to the U.S. (e.g., Jamaica).

Water and Sanitation. While the Israeli Water Authority is ultimately in control of all water resources in the Occupied Territories, and the Israeli Water Company (the Mekorot) is the distributor of water derived from Israeli-controlled sources, Palestinian municipalities and non-profit water authorities manage distribution networks. However, relatively few engineers work with these authorities, and there are minimal in-service training programs for any of the staff. Moreover, the management staff of these water authorities have virtually no experience or training in the economics of water management. There are no linkages with water supply management across the Occupied Territories, minimal linkages between water authorities and the small-scale, largely donor-funded water and sanitation projects, and minimal linkage between the water authorities, NGOs involved in water and sanitation, and organizations involved in health, agriculture and industry -- all sectors with inextricable links to water supply and usage. Few Palestinian institutions have the capacity for water quality testing and few donors have funded studies of water quality. Finally, the water authorities have few resources for use in repair and maintenance, resulting in general disrepair of many of the water systems; as a result, it has been estimated the more than half of the water supply passing through the system in the West Bank is lost through leakage or waste.

The West Bank water resources serve not only Palestinians in the area (who use an estimated average of 75-100 mcm per capita/annum), but also settlers (whose per capita use is not available) and Israeli residents (who use an estimated 354 mcm per capita/annum). In fact, Israel depends on West Bank aquifers for approximately 25% to 35% of its water use, depending on the assumptions of the total volume of water use. Current figures for per capita use in the West Bank are misleading, as many of the water departments pump the water supply for a total of only four to nine hours per week. Thus, the distribution of water (i.e., through pumping of the supply) does not necessary reflect the demand (if pumping were unrestricted). This contributes to the assumption on the part of some analysts that there may not be an actual water shortage in the West Bank. However, in addition to recognition of the "forced reduction" in demand, of considerable concern is the rapidly rising population in the area. Even without a larger influx of immigrants (both returning

Palestinian refugees from outside the Occupied Territories and Israeli settlers), the population in Israel and the present Occupied Territories is expected to nearly double in 15 years.

The cost of water in the West Bank differs considerably. For example, the cost of water in Nablus (a municipal water authority) is estimated at 40% of the cost of delivery, while the cost in Ramallah (a non-profit water authority) is estimated at 158% of delivery cost, with the "excess" covering repair and maintenance and water leakages. Farmers pay approximately half of the cost of water delivery and receive a number of other agricultural subsidies which do not serve to encourage water-saving agriculture. Settlers pay approximately one-third the cost of water; one-third is subsidized by the government and one-third is paid by external donors.

Water supply in Gaza is markedly different from that of the West Bank. Current levels of water utilization in Gaza are clearly unsustainable, and are inflicting serious damage on the aquifer. While infiltration of irrigation run-off and waste-water (10-20 mcm) could be considered an important water source, it poses serious water quality issues: water draining from the east has already usually been used at least once in the chemical-intensive Israeli Negev agriculture, and Gazan agricultural water run-off also contains high levels of pesticide, herbicide, and fertilizer residues. Waste water usage is currently a major problem in Gaza, as untreated raw sewage and septic tank overflow seeps into and pollutes the groundwater. Substantial waste water treatment projects would be required to render this water source useful.

As in any system, irrigated agriculture consumes the large majority of water in the Occupied Territories. About 5% of agricultural land in the West Bank is irrigated, compared with some 60% of Gaza farm land and about 49% of Israeli farm land. However, Kolars reports that, in the past, Israel has 75% of available water resources for irrigated agriculture.[30] Subsidized agricultural water use is largely responsible for the "water shortage" in Israel. Current Israeli policy is to reduce water subsidies in 20% increments each year for the next five years. In addition to subsidies for Israeli farmers and settlers, the Palestinian production of water-consuming crops also contributes to inappropriate water demand. In the Gaza Strip, for example, more than one-third of agricultural land in Gaza is planted with citrus and flowers, both extensive water-consuming crops.

Several approaches to increasing the water supply have been discussed in international, regional and bilateral meetings, including for example, large-scale desalinization projects, importation of water from the Nile in Egypt and importation through the "Peace Pipeline" from Turkey. The latter two projects are considered by many to be impractical for political

as well as technical reasons, and face considerable obstacles in their own countries. Desalinization, while initially expensive, is being considered by both Israeli and Palestinian engineers and planners. The options which are more feasible and less costly include rainwater collection and sewage treatment and effluent use. While not without problems, in combination with substantial improvements in demand, they could contribute to improvements in water scarcity.

## V. VISIONS OF A SUSTAINABLE FUTURE

The move toward economic self-reliance on the part of the Palestinians expanded considerably with the advent of the Intifada in 1987. Generally, the intent of these measures has been to: "enhance self-reliance in production, lessen dependence on external financial sources, diversify, rationalize and integrate domestic production branches, reorient consumption patterns towards less conspicuous modes."[31] In essence, the aim has been to promote a more productive allocation of investments, both internal (Palestinian) and external (from donors). Palestinians have begun to develop sectoral and regional plans, design and implement experimental projects, new institutional forms and entrepreneurial initiatives, as well as a range of popular 'participatory development' efforts involving families, communities, regions, cooperatives, enterprises and professional associations.

Given the status of the various sectors of Palestinian economy and society, and in particular given bureaucratic and other impediments, what are the opportunities for economic and social growth and development in the West Bank and Gaza Strip? The technical and managerial issues are myriad and complex, both within and across sectors. This is true in any country or jurisdiction. However, the situation in the West Bank and Gaza Strip is complicated by the volatile and fluid political situation and by the significant dependence on external donors for any type of development. USG investment is also complicated by the fact that the traditional role and involvement of the primary development agency (A.I.D.) is severely limited in the Occupied Territories.

The draft strategy which was formulated by A.I.D. in 1987 for its West Bank/Gaza Program was based primarily on the Jordanian Development Program, and was thus essentially inapplicable shortly after it had been issued. In order to ensure that the sectoral analyses and the strategy which will be derived largely from them, are as useful as possible for development planning, this section of the overview will address opportunities for development investment given two alternative political scenarios: the status quo and political change (which could include, for example, interim self-government or autonomy). There are, of course, many shades within this spectrum, but presenting these

alternatives hopefully provides a useful basis for discussion of development opportunities. Importantly, the development recommendations presented for the status quo are not only ends in and of themselves, but are designed to provide a foundation for development under whatever political solutions are realized.

## A. Constraints to Development in the Occupied Territories

Prior to any discussion of development in the Occupied Territories within the status quo, it is necessary to summarize the constraints under which the various sectors operate and within which development occurs. The constraints which pertain to each of the sectors are described in the corresponding section of the sectoral analysis, with a discussion of the manner in which they impact on development in that specific sector. Several types of constraints impact overall on development; these are:

Bureaucratic constraints include GOI regulations which discriminate against Palestinians and their public (municipal) and private sector institutions and organizations. These regulations are subject to change (sometimes without notice) and to enforcement by individual members of CIVAD without approval (or knowledge) of their superiors. Examples include curfews (sometimes for extended periods of time), barriers to physical mobility, building and other permits, taxation, labelling requirements and restrictions, control of basic physical infrastructure including electrification, communications and transportation and control of water and land use.

Lack of access to fiscal, economic and technical information which is collected, processed and maintained by the CIVAD (or the GOI). While some information is available to Palestinians and others through the Central Bureau of Statistics (and other sources), other critical information is not, including revenue and expenditure information which is critical for an understanding of operating costs and recovery possibilities. Palestinians (and donors supporting projects in the Occupied Territories) have no information with respect to plans for settlement areas, including plans for physical infrastructures to support the settlements.

The complex mixture of residual laws (in force at the time of the occupation), Israeli civil laws and regulations and military regulations. Virtually all court cases involving Palestinians are adjudicated in the military courts, including all civil cases (e.g., with respect to contracts and taxes). The effective absence of a civil court system makes it all but impossible to formulate and enforce contractual arrangements.

Palestinians have no adequate mechanism to generate revenues and provide public services. As a result, Palestinian NGOs and municipalities operating health and social programs or public infrastructure systems (e.g., water and sanitation, road networks, electrification) face unusual obstacles in attempting to cover their operating costs and to adequately maintain physical plants and equipment.

Economic and other constraints. Since the onset of the Gulf crisis, the "safety-valve" of Palestinian emigration to the Arab Gulf has been closed and Palestinians have returned to the Occupied Territories or to Jordan. As a consequence, remittances from the Arab Gulf, on which the Palestinian economy was heavily dependent, have been significantly curtailed. As a result of the lack of opportunity to engage in external free trade and the virtual absence of support structures for economic and social development (e.g., marketing systems for agricultural and industrial trade), Palestinians have little competitive advantage, with the exception of low-scale wages, which have socioeconomic consequences as well. The human resources on whom Palestinian economic development must depend are ill-trained and have little experience in management of medium and large scale public and private sector enterprises and in the important systems which link sectors. Development of useful and potentially effective national and regional level plans requires a governmental base (through which to link sectors and public/private sector initiatives and programs), data and information (to which Palestinians have minimal access and which they collect only minimally) and planning techniques (with which they have little practice).

Physical infrastructure (communications, electrification, and transportation networks) and water and sanitation systems are in poor repair and wholly inadequate. This severely impedes operation and expansion of both the public and social service sectors and the productive private sector. Moreover, political and economic factors impede the efficient linkage of critical physical infrastructure (e.g., electrification, road networks).

## B. Development Opportunities

Even given these constraints, however, substantial improvement can and should be made in economic and social development in the Occupied Territories. It is critical that Palestinians and donor agencies rationalize the existing scattered projects within and across sectors, identifying linkages across sectors which can improve the likelihood of development under both the status quo and potential political change. Under the present circumstances, it is all too easy to assume that little can be accomplished other than minimal support for existing projects; this approach

defeats the intention to ensure sustainable development. On the other hand, to assume independence (statehood) as a starting point negates the reality of the present and the need for phased implementation of policies and programs in the event of statehood. For example, how long would a tax system and functioning health system have to be in place prior to assumption of responsibility for financially burdensome public hospitals? What economic support structures would have to be in place prior to significant expansion of industrial capacity, and at what point would trade-offs have to be made between agricultural and industrial development in the water-poor Gaza Strip? How can Palestinian planners and donors develop effective plans for physical infrastructure and other projects, ensuring that they will be used by their intended beneficiaries (i.e., Palestinians) given the possibility that such projects could be within settlement areas in the future?

A more useful approach may be to distinguish between what can be accomplished under two assumptions:

1) no change in current status (but perhaps with some relaxation of constraints), but with programs and activities which could have short, medium and longterm impact without respect to a change in governance; and

2) a change in governance (e.g., interim self-government or autonomy).

In any case, A.I.D. should accept that its development expectations should be considerably diminished under the present circumstances, and even in the event of autonomy. In this most abnormal situation, the traditional indicators of change -- difficult to obtain, verify and attribute to A.I.D. programs under any circumstances -- are scarcely applicable.

There have been some positive indicators of relaxation of constraints. For example, since late 1990 the GOI has initiated relaxation of restrictive policies which impede economic development which have included:[32] approval of licenses for a number of new small- and medium- scale manufacturing, agricultural and commercial projects and relaxation of restrictions on the flow of external financial resources by raising the limits from $400 to $3,000 per person entering the Occupied Territories. It may well be that the USG and other donors can convince the GOI that relaxation of other bureaucratic constraints is mutually beneficial to the economies and social structures of these two interdependent jurisdictions. Simultaneously, A.I.D. and the other donors should work with the Palestinians (and Arab states) to ensure that, insofar as possible, constraints which are derived from these sources are removed. Finally, the USG, European and other countries should remove constraints which are imposed by their governments or

apply policies which would encourage development (e.g., labelling and most favored nation status). They must also ensure that their investment policies and programs are consistent and adequately funded, given the extraordinary and enormous needs of the area.

Table 1 presents a summary of recommended programs by sector, assuming the status quo and political change, respectively. The recommendations for the political change option are in addition to those for the status quo. The recommendations initially were devised based on the needs identified in each of the sectors, independent of other sectors. In order to minimize space, the recommendations in Table 1 are abbreviated; for example, "other support" may mean travel to trade fairs for the industry and trade sectors, or support for commodities used in small-scale water and sanitation projects, purchase of seedlings or materials for construction of agricultural roads. Complete detailed recommendations are presented in the eight accompanying companion reports for each sector. It should be noted that in Table 1 (and Table 2) and the discussions which follow, the term "public" or "quasi-public" refers to municipalities and to other entities which undertake activities which under normal circumstances would be the purview of public (or quasi-public) entities (e.g., local water authorities).

Table 2 depicts the interrelationship among the sectors, showing the specific sector recommendations and their respective relationship to a general development goal and four specific objectives for development in the Occupied Territories. In order to determine funding priorities, it is important to recognize the linkages across sectors. An assumption throughout all recommendations is that A.I.D. would utilize local (Palestinian) resources wherever possible as well as appropriate, cost-effective U.S. resources. In the latter regard, A.I.D. is encouraged to expand its horizons to include organizations with which it usually does not liaise in order to take advantage of the opportunity to be involved in comprehensive development across sectors.

From Table 2, it is clear that there is a consistent pattern across the sectors and across the objectives. This pattern could serve as a basis for a rationalized development approach for A.I.D. The principle foci are:

* strengthening the capacity of Palestinian quasi-public and private sector institutions and organizations to plan, manage and evaluate policies, programs and projects at the national, regional and local level, through:

  -- improving education and training at the primary through university levels, including

vocational/technical training, and including literacy and self-instruction programs,

-- providing technical assistance, training (for managerial and technical staff) and other support for the enhancement or development of quasi-public and private sector institutions and organizations which have responsibility for or are involved in economic and social infrastructure support systems (e.g., water and sanitation, quality control, marketing systems, civil courts, tax collection, social welfare), including, for example, assisting in the adaptation of standardized procedures;

* improving the development, diffusion, use and assessment of technology in the quasi-public and private service and productive sectors, through:

  -- providing technical assistance and training to enhance the selection and use of equipment and new procedures (technologies) in agriculture, industry, health and education, and physical infrastructure, including assessment of the economic, social and environmental impact of new technologies and procedures,

  -- providing grants and loans (as appropriate) for the purchase of equipment which has been demonstrated as useful and appropriate for enhancing productivity or effectiveness in the sector to which it applies (e.g., new technologies in cardiovascular disease, crop production or alternative energy sources),

  -- providing grants and loans (as appropriate) to enhance the capacity of Palestinian universities and research institutions to develop and/or adapt appropriate technologies for use in the West Bank and Gaza Strip and for export (including, for example, computer software),

* improving management of, access to and use of credit and financial resources, through:

  -- training of existing personnel in banks and credit institutions,

  -- technical assistance and other support to improve management of bank and credit institutions,

- -- facilitating loans through international and regional development banks and private sector financial institutions,

- -- supporting the development of credit circles and other locally based organizations which foster savings and loan arrangements for local development;

* improving the collection, analysis and distribution of data and information for use in quasi-public and private sector programs and projects, through:

  - -- training in data and information management,

  - -- technical assistance and other support for the development of clearinghouses and information systems in each primary economic and social sector (e.g., agriculture, industry, water and sanitation),

  - -- encouraging the provision of relevant data sets from the GOI to Palestinian public (and private) institutions;

* improving the physical infrastructure which supports both quasi-public and private sector services and productive enterprises, including, for example, communications, electrification and transportation networks;

* strengthening health and social welfare services which are critical for human growth and development, and which are linked (albeit indirectly) to a society's economic development.

Economic development and expansion is proving an elusive objective even under normal circumstances in developing countries, and increasingly for countries of all income levels. As this report demonstrates, the Occupied Territories do not approximate normal circumstances. There is no free market economy and no favorable public or private policy environment with respect to development. The economic and physical infrastructures and systems on which development normally depends are either grossly inadequate or nonexistent. In addition, the Occupied Territories have few natural resources, a shortage of water, and a local workforce which, while it has in the past served as an important source of income (through export of labor to the Gulf States and other countries), is unbalanced with respect to education and training (i.e., highly educated but underemployed professionals and skilled and semi-skilled workers and managers with minimal access to training for technological

advances). Educational and training opportunities in the Occupied Territories stand in stark contrast to those available in Israel. As Aharoni has noted, human resource development in Israel has been a foundation of economic development. In fact, according to this economist, "The longterm competitive advantage of Israeli firms is largely a function of their ability to exploit unique human capital capabilities".[33]

The small population base of the Occupied Territories and other factors also suggest that economic growth depends on export-oriented industry and domestic service enterprises (e.g., tourism); this also builds on the historical mercantile tradition of Palestinians. In any case, such development must be as diversified as possible (and as practical), in order to lessen the dependence on one or another source of economic development, and must be based on improvements in the capacity of Palestinians to compete in the increasingly competitive and dramatically changing global economy and to manage their domestic quasi-public and private institutions.

While it is true that devising plans for economic and social development in the Occupied Territories is difficult under the present circumstances, it does provide an opportunity for the design and enhancement of public and private sector systems which avoid the problems of entrenched bureaucracies and make the most effective use of Palestinian entrepreneurship and community and support networks. All too often, it is necessary to prepare development plans in the context of bureaucratic structures which are not disposed to interact with competing bureaucracies (e.g., health with agriculture) or with the private sector (e.g., industry and environment). In the virtual absence of such structures, ensuring the most effective and appropriate use of limited resources for Palestinian development has potential. Moreover, A.I.D. (and other donors) have a unique opportunity to put into place incremental programs and projects on which broader or more extensive development can be based both within and across sectors. The situation also provides the opportunity for consideration of broad-based policy issues which entrenched bureaucracies often avoid; these include, for example:

General

1. Given that there is no existing mechanism to ensure coordinated planning across sectors, what are the opportunities to ensure (insofar as possible) intra- and inter-sectoral linkages for development investment purposes? Such linkages include, for example, investment in productive industries which are not environmentally hazardous and in crop and livestock production which places minimum burden on land and water resources. A related consideration is the following: given the importance of integrated

planning, but the inherent difficulties in doing so under the current circumstances, what should be the priority projects for the immediate (1-3 years), medium (3-5 years) and long-term (5-8 years)?

2. What will/should be the relative priority of public social and economic infrastructure systems (e.g., unemployment insurance, welfare, public health, social security/pensions as well as quality control and testing of medicines, protection of the environment, etc.) vis-a-vis investments in the productive private sector (e.g., tax benefits for private investment, public support for physical infrastructure for industrial zones)?

3. What contribution should donor agencies (bilateral, multilateral and private) make to improving the capacity of public services (e.g., health, education, physical infrastructure), pending a political resolution? Should such contribution include, for example, training the existing or an emerging cadre of municipally-based physical infrastructure employees - (communications, electrification, transportation and water and sanitation) and/or investment in physical infrastructure projects themselves?

4. What is the most appropriate and feasible degree of centralization/decentralization of public and quasi-public services, given cultural/geographical realities and practical economic and administrative considerations? What role could/should donors (particularly A.I.D.) play in planning and preparing for centralization/decentralization of such services?

Specific to A.I.D.

5. What is the most appropriate role for donors with respect to investment in the productive private sector? Given that the mechanisms used in both market and mixed economies to encourage investment and jobs creation are minimal (at best) in the Occupied Territories, what should donors do to assist in "jump starting" the economy in the Occupied Territories? What should A.I.D. invest in the cooperatives, which have (for all intents and purposes) assumed the role of quasi-shareholding for-profit companies, competing with privately held companies? Donors (including A.I.D.) have supported the cooperatives extensively, but private sector companies have had almost no donor support. Should A.I.D. now provide support (e.g., loan guarantees, grants similar to the USG Small Business Innovation Program) to privately-held, productive

private sector companies? To what degree should donors encourage or discourage small-scale enterprise in lieu of investments in medium and larger scale industrial enterprises? While human resources development (education and training) is necessary (and a traditional investment role for A.I.D.), it is simply insufficient and could lead to problems of social and/or economic instability if the economy does not rebound soon.

6. What should be the role of A.I.D. in preparing for assumption of certain public services (e.g., health, education, tax, regulatory and court systems)? On the one hand, there is considerably pressure for the Palestinians to assume responsibility for the social systems (e.g., health and education), in spite of the fact that they are not now responsible for the governmental systems with which they are inextricably linked (e.g., tax and regulatory systems). On the other hand, creating the basic (non-physical) infrastructure required for assumption of these responsibilities could consume a large proportion of the current A.I.D. allocation for the Occupied Territories.

7. Given that current A.I.D. (and USG) policy encourages privatization of services which are currently owned or managed by the public sector in some countries (e.g., electrification, transportation, communications, health), what investment should A.I.D. make in municipal control of such services in the OT? What rationale is there for such investment versus investment in encouraging private sector ownership/management of such services? (This is particularly important given economic arguments made elsewhere for private sector control; this is a consistency issue.)

Unfortunately, as is discussed throughout the individual sector analyses, the political situation in the Occupied Territories militates against investing in private sector economic activities which may have the highest potential for economic impact, or in social or physical infrastructure projects which take into consideration economies of scale. With respect to the latter (which includes, for example, telecommunications, electrification and health services), this limitation has fostered wasteful and costly duplication while at the same time hindering the ability of Palestinian institutions and donors to ensure adequate coverage of basic services for the population as a whole and certainly for the industrial sector. For example, Palestinians are prohibited (for security reasons) from using much of the extensive road network which serves settlers, although access to

these roads would facilitate considerably access to markets. Similarly, electrification projects (largely funded by donors) have focused on ensuring access to the smaller villages without electrification, rather than on ensuring that industries have access to adequate services to meet their production needs.

A final point should be made with respect to the worsening economic situation, which bodes ill for development opportunities. Extensive development is difficult for projects which rely on private sector initiative and those which rely on public (municipal) initiative (and assume an adequate tax base for the medium term). At the same time, the relatively young, disaffected (and unemployed) youth are potentially both participants in social unrest and contributors to social and economic change. Given this situation (reminiscent of the U.S. in the 1930s and at present), A.I.D. should consider immediate support for a public works program comparable to that of the CCCs - focusing on small and medium scale physical infrastructure projects (e.g., farm to market roads, environmental clean-up). A.I.D. should also consider assistance with respect to a social safety net, which is largely non-existent now and which absence helps to foster social disequilibrium.

Development planning in the Occupied Territories is taking place in a rapidly changing political environment. When the preparation of the A.I.D. strategy, and these sectoral analyses, was initiated in December, 1991, the Peace Talks had only just begun and a different political party was in office in Israel. Since then, several sessions of the Peace Talks have taken place, with some progress as the political and technical levels, and the election in Israel resulted in a change in government. In order to ensure that they are contributing positively to the process of economic and social development in the Occupied Territories, A.I.D. and other donors should increasingly turn their attention to support of policies, programs and projects which are linked across sectors in ways which most effectively make use of the resources available. Moreover, in the event of political change, it will be necessary for A.I.D. (and the U.S. PVOs currently operating projects in the West Bank and Gaza Strip), as well as for other donors and importantly for UNRWA to recognize that they will likely have different roles in the process of planning and implementing economic development and social programs in the area.

In the long run, donors, including A.I.D. will need to recognize that great expectations with regard to economic growth in the Occupied Territories will require infusion of sufficient funds for operating costs and capital investment as well as technical assistance and training, in order to stimulate jobs creation and the development of a healthy, competitive economy. If A.I.D. cannot provide such funds directly, then facilitating access should be a priority.

Table 1

Summary of Recommendations by Sector

| Agriculture | Education & Training | Finance & Credit | Health |
|---|---|---|---|
| **ASSUMES STATUS QUO** | | | |
| TA, training & other support for improved irrigation systems | TA, training & other support for priv. sect. initiatives in literacy, new educ. tech. | TA, training & other support for expansion of cmty.-based savings & credit inst. (e.g., credit circles) | TA, training (ST and limited MA level) & other support to strengthen health systems plng. & mgmt. |
| TA, training & other support for new/improved crop varieties & livestock production (to enhance marketing poten., improv. land & water use) | TA, training & other support for curriculum revision at K-12 levels | TA, training & other support for banks, cred. inst., & coops. to improve mgmt. | TA, training & other support to strengthen inst. capacity for collection, analysis & dissemination of data & information |
| TA, training & other support for expanded/improved marketing systems | TA, training & other support for mgmt. imp. of post-secondary educ. institutions | TA & sup. for mgmt. infra. (e.g., regul., finance, inf. systems) | TA, training & other support for expanded health educ. programs (incl. dis. prev., escp. & environ. health) |
| TA, training & other support for expanded research & extension serv. | TA, training & other support for post-second. inst. to upgrade their capacity to provide short-term trng. in marketable skill areas | Limited expansion of credit for productive priv. sector | TA, training & other support for impr. in HSR & D (e.g., conduct of cmty-based needs assess.) |
| Support linkages with US land grant inst. and private sector agric. res. & devp. institutions | TA, training & other support to post-secon. inst. to imp. capacity to provide ST trng. | TA, training & other support for educ./trng. data & information clearinghouses | TA, training & other support for expansion of comparable computer-based inf. systems |
| TA, training & other support for agricultural data & information clearinghouses | Provide grants to post-second. institutions to imp. labs & other R & D-related facil. | Support study of capacity of existing inst. to manage larger loans to industry (build on current A.I.D. credit assessment) | Expanded CE for health care providers to help ensure quality of care |
| Short-term relief program incl. agric. feeder roads, land reclamation, repair of storm damage (see infra.) | TA, training & other support for educ./trng. data & information clearinghouses | | TA, training & other support for dev/adapt. of practice guidelines for all levels of care |
| | TA, training & other support to improv. library facil. at public & priv. K-12 level & limit. sup. for post-secon. library expans. | | TA, training & other support for devp. of health tech. mgmt. systems at regional & facility levels |
| | TA, training & other support for devp. & util. of KAP assess. materials | | Support for expansion of primary & second. level care & cmty.-based rehab. serv. to areas without services |
| **ASSUMES POLITICAL CHANGE** | | | |
| | Support for construc./rehab. of public schools | Expand credit for prod. priv. sector through loan guarant., etc., through intl., reg. & US banking institutions | Support for establ. of integ. health systems |
| | | | Support to establ. of public & private health finan. mechanism |

NOTE: Detail with respect to 'other support' is not provided in this summary matrix; the recommendations presented in each individual sector analysis describe examples of such support (e.g., commodities for use in small-scale water and sanitation projects.

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| Industry & Enterprise | Infrastructure (Commun., Elec., Trans.) | Trade | Water & Sanitation |
|---|---|---|---|
| TA, training & other support re: production & mgmt. technology | TA, training & other support for agric. roads, privately-operated marketing infra. (e.g., cold storage, refrig. trucking systems) | TA, training & other support support for trade-related data & information systems & clearinghouses (linking to reg. & intl. inf. systems) | TA, training & other support to munic. & private comp. resp. for Water & Sanit., focusing on mgmt., upgrading skills in exist. & new technologies |
| TA, training & other support to encourage linkages between industry and local, regional and US univ. and research institutions | TA, training & other support to repair & upgrade key market access roads | Support trade missions to US, Europe & other areas to part. in trade fairs, etc. | TA, training & other support for design & implem. of small-scale water & sanit. projects, utiliz. most approp. tech. |
| TA, training & other support for comprehensive indus./enterprise planning & plans for regional indus. (e.g., for indus. zones) | TA, training & other support to munic. & private comp. resp. for infrast., with a focus on mgmt., upgrading skills in exist. & new technologies | TA, training & other support to upgrade competitive advant. of Palest. firms (e.g., trng. in new prod. devp., envir. and qual. control requir. of trading partners, mktg. tech.) | TA, training & other support for conduct of study of water pricing & utilization |
| TA, training & other support to strengthen inst. which support indus. devp (e.g., Indus. Union, Cham. of Com) | TA, training & other support for demonstration projects in altern. energy sources | Support for linkages between Palestinian firms and trade inst. & US. business & trade institutions & related inst. | TA, training & other support to upgrade capacity of Palest. inst. to study water quality |
| TA, training & other support for indus./enter. data & information systems & clearinghouses (e.g., marketing inf. systems) | TA, training & other support to expand elec. to serve villages without elec. | USG should explore relax. of any trade barriers on Palest. products & implem. of favor. trade regul. | TA, training & other support to conduct water quality studies in high risk areas |
| TA, training & other support for applied rsch. studies of productivity & quality control (dir. & indirec. related factors, e.g., person. mgmt., environ. & policies, quality control mechanisms) | TA, training & other support for devp./adap. of certif.& standards for phys. infra. (e.g., elec., commun.) & for assess. of skills among munic. & quasi-public employees | | TA, training & other support to implement waste-water recycling, large-scale water-catchment projects in the Gaza Strip |
| TA, training & other support to expand support systems for indus./enter. (e.g., qual. control, prod. test., consult. for envir. & occup. health & safety progs.) | TA, training & other support for a region-wide assess. of elec./energy needs & present resources, focusing on plans for most cost-effec. systems | | |
| Support for design & devp. of industrial zones | Support for expan. of communic. system, using low-cost tech. | | Support for large-scale water & sanitation projects, as rec. |
| Support for adap/devp of new products (through small grants & loans) | Support for expan. of trdng. elec. system, using low-cost, approp. tech. | | |
| | Support for expansion of road networks & linkage with modern Israeli road network | | |

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Table 2.
Linkage Among Sectoral Programs

| Recommended Sectoral Activities | GOAL | Objectives | | | |
|---|---|---|---|---|---|
| SECTORS | Improved economic & social well-being of Pales. in WB/G | Increased Productivity & marketing of agric. & manufactured goods | Strengthening Capacity of Public & Private Sector Inst. Institutions to plan & manage on-going and develop. projects | Improved quality, & mgmt. of Palestinian educ. & training institutions | Improved quality, & mgmt. of Palestinian health & rehabilitation institutions |
| **Across Sectors** | | | | | |
| Strengthening the capacity of Palestinian public and private sector institutions & organ. to plan, manage, and eval. policies, programs & projects at the national, regional and local level | X | X | X | X | X |
| Improving the dev., diffusion, use, access to assess. & acquisition of technology (equipment, procedures and material) in the public & private service and productive sectors. | X | X | X | X | X |
| Improving management of and access to use of credit and financial services. | X | X | | | |
| Improving the collection, analysis & distribution of data & inf. for use in public and private sector progr. & proj. | X | X | X | X | X |
| Improving physical infrastructure (commun., elec., transp.) & water & sanit. systems which support the public & private sectors & meet basic human needs | X | X | | X | X |
| **Agriculture** | | | | | |
| TA, training & other support for improved irrigation systems | X (jobs creation) | X | | | |
| TA, training & other support for new/improved crop varieties & livestock production | X | X | | | |
| TA, training & other support for improved/ expanded marketing systems | X | X | | | |
| TA, training & other support for improved/ expanded research & extensive services | X | X | | | |
| Support linkages with US land grant inst. & private sector agric. res. & devp. inst. | X | X | | X | |
| TA, training & other support for agricul. data & information clearinghouse | X | X | | X | |
| Short-term relief program, incl. agric. feeder roads, land reclamation, repair of storm damage (see infra.) | X (jobs creation) | X | | | |

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| Recommended Sectoral Activities | GOAL | Objectives | | | |
|---|---|---|---|---|---|
| SECTORS | Improved economic & social well-being of Pales. in WB/G | Increased Productivity & marketing of agric. & manufactured goods | Strengthening Capacity of Public & Private Sector Inst. Institutions to plan & manage on-going and develop. projects | Improved quality, & mgmt. of Palestinian educ. & training institutions | Improved quality, & mgmt of Palestinian health & rehabilitation institutions |
| **Education & Training** | | | | | |
| TA, training & other support for private sector initiatives in literacy, new educ. technologies and methodologies | X | X | | X | |
| TA, training & other support for curriculum revision at K-12 levels | X | | | X | |
| TA, training & other support for mgmt. impr. of post-secondary educational institutions | X | | X | X | |
| TA, training & other support for post-second. institutions to upgrade their capacity to provide short-term trng. in marketable skills | X | X | | X | |
| Provide grants to post-second. instit. to improve labs & other R & D-related facilities | X | X | | X | |
| TA, training & other support for educ. & trng. data & information clearinghouses | X | | | X | |
| **Finance & Credit** | | | | | |
| TA, training & other support for expansion of community-based savings & credit inst. | X | X | | | |
| TA, training & other support for banks, credit institutions & coops to improve mgmt. | X | X | | | |
| Limited expansion of credit for productive private sector | X (jobs creation) | X | | | |
| TA, training & other support for finance/ credit data & information clearinghouses | X | X | | | |
| Support study of capacity of existing inst. to manage larger loans to industry (expans. of current A.I.D. credit assessment) | X | X | | | |
| **Health** | | | | | |
| TA, training (ST and limited MA level) & other support to strengthen health systems ping. & management (focusing on financ. mgmt. & qual.) | X | | | | X |
| TA, training & other support to strengthen inst. capacity to collect, analyse & disseminate data & inf. | X | | | | X |
| TA, training & other support for expanded health education programs | X | X | | | X |
| TA, training & other support for impr. HSR & D | X | | | | X |
| TA, training & other support for expanded computer-based information systems | X | | | | X |
| Expanded CE for health care providers | X | | | | X |
| TA, training & other support for devp./adap. of practice guidelines at all levels of care | X | | | | X |
| Support for expansion of primary & secondary level care & cmty.-based rehab. services to areas without such services | X | | | | X |

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| Recommended Sectoral Activities | GOAL | Objectives | | | |
|---|---|---|---|---|---|
| SECTORS | Improved economic & social well-being of Pales. in WB/G | Increased Productivity & marketing of agric. & manufactured goods | Strengthening Capacity of Public & Private Sector inst. institutions to plan & manage on-going and develop. projects | Improved quality, & mgmt. of Palestinian educ. & training institutions | Improved quality, & mgmt. of Palestinian health & rehabilitation institutions |
| **Industry & Enterprise** | | | | | |
| TA, training & other support re: production and mgmt. technology | X | X | | | |
| TA, training & other support to encourage linkages between industry and local, regional, between industry and local, regional and US univ. and research institutions | X | X | | X | |
| TA, training & other support for comprehensive indus./enterprive planning & plans for region. indus. devp. (e.g., for indus. zones) | X | X | | | |
| TA, training and other support to strengthen institutions which support indus. devp. (e.g., indus. Union , Chambers of Commerce) | X | X | | | |
| TA, training & other support for indus./enter. data & information systems & clearinghouses incl. marketing inf. systems) | X | X | | | |
| TA, training & other support for applied res. studies of productivity & quality control | X | X | | X | |
| TA, training & other support to expand support systems for indus./enter. (e.g., quality control, product testing, marketing) | X | X | X | | |
| **Infrastructure (Commun., Elec., Trans.)** | | | | | |
| TA, training & other support for agric. roads, privately-operated marketing infrastructure (e.g., cold storage, refrig. trucking systems) | X (jobs creation) | X | | | |
| TA, training & other support to repair & upgrade key market access roads | X | X | X | | |
| TA, training & other support to municip. & private companies resp. for infrast., with a focus on upgrading capac. in mgmt. & technical skills in new technologies | X | | | | |
| TA, training & other support for demonstration projects in alternative energy sources | X | X | | | |
| A, training & other support to expand elec. to serve villages without electrification | X (jobs creation) | X | | | |
| A, training & other support for devp./adap. of certification & standards for physical infra. | X | | X | X | |
| A, training & other support for assess. of skills among municipal & quasi-public employees | X | | X | X | |
| A, training & other support for a region-assess. of elec./energy needs & present resources, focusing on plans for most cost-effec. systems | X | | | | |

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| Recommended Sectoral Activities | GOAL | Objectives | | | |
|---|---|---|---|---|---|
| SECTORS | Improved economic & social well-being of Palest. in WB/G | Increased Productivity & marketing of agric. & manufactured goods | Strengthening Capacity of Public & Private Sector Inst. Institutions to plan & manage on-going and develop. projects | Improved quality, & mgmt. of Palestinian educ. & training institutions | Improved quality, & mg. of Palestinian health & rehabilitation institution |
| **Trade** | | | | | |
| TA, training & other support for trade-related data & information systems & clearinghouse linked to reg. & intl. inf. systems) | X | X | X | | |
| Support trade missions to US, Europe & other areas to part. in trade fairs, etc. | X | X | | | |
| TA, training & other support to upgrade competitive advantage of Palestinian firms e.g., trng. in new prod. devp., envir. & qual. control requir. of trading partners) | X | X | | | |
| Support for linkages between Palestinian firms & trade inst. & US. business & trade institutions & related inst. | X | X | | | |
| USG should explore relax. of any trade barriers on Palestinian products & implem. of favor. trade regul. | X (jobs creation) | X | | | |
| **Water & Sanitation** | | | | | |
| TA, training & other support to munic. & private companies resp. for Water & Sanit., focusing on mgmt, upgrading skills in existing & new technologies | X | | X | | |
| TA, training & other support for design & implementation of small-scale water & sanit. projects, utiliz. most approp. tech. | X (jobs creation) | X | | | |
| TA, training & other support for conduct of studies of water pricing & utilization | X | | X | X | |
| TA, training & other support to upgrade capacity of Palestinian inst. to study water quality | X | X | | | X |
| TA, training & other support to conduct water studies | X | | | | |
| TA, training & other support to implement waste-water recycling, large-scale water-catchment projects in the Gaza Strip | X (jobs creation) | X | X | | X |

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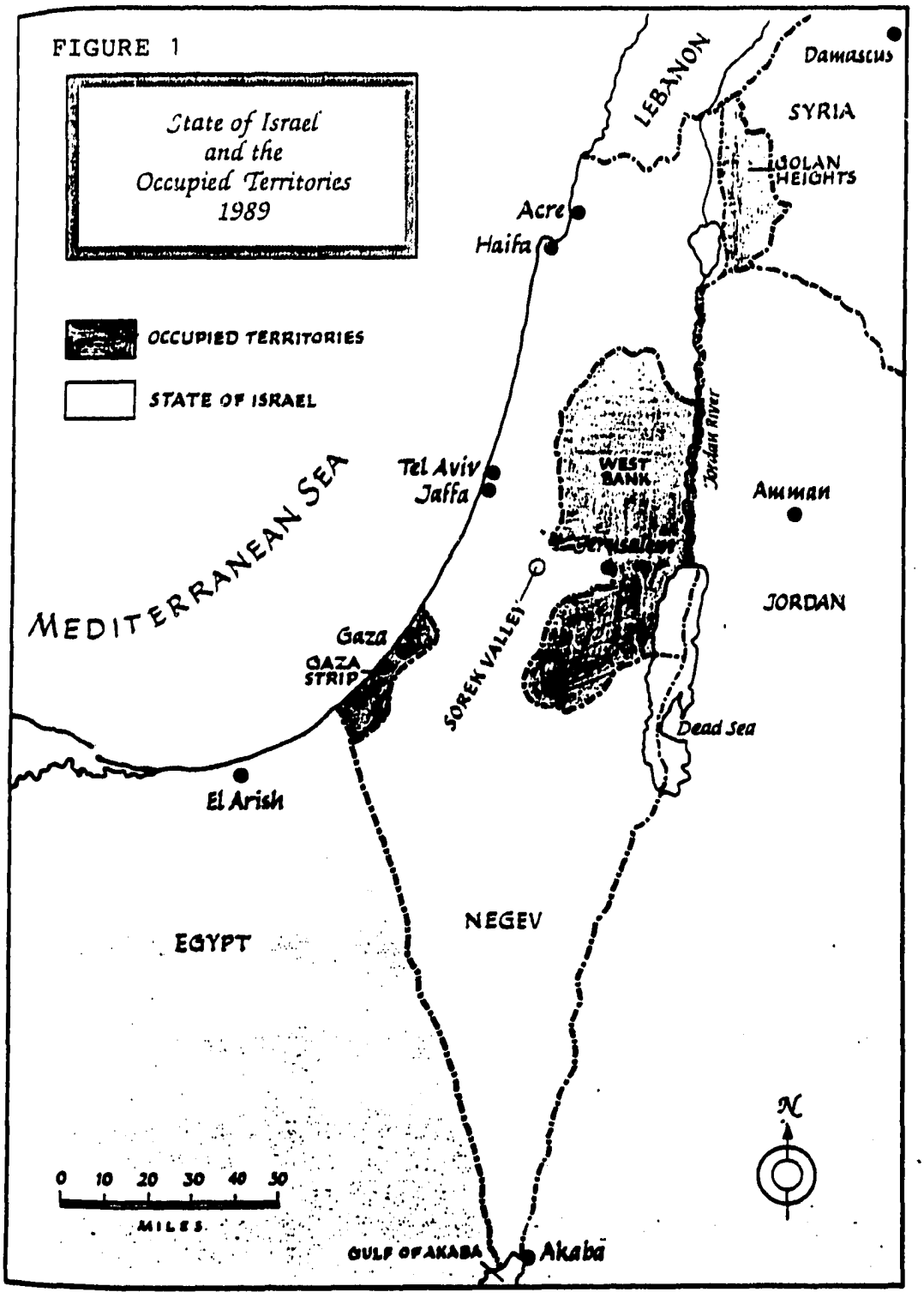


Source: M. Kunstel and J. Albright, Their Promised Land. Crown Publishers, Inc., New York; 1990.

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FIGURE 2 : Places of Residence, Occupied Territories, 1990

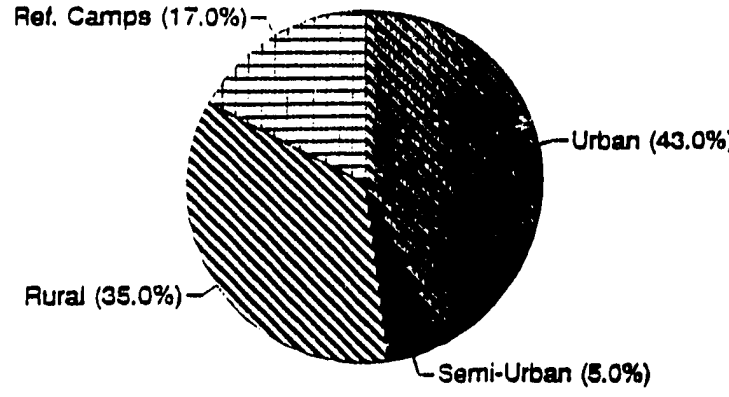



FIGURE 3: Places of Residence, West Bank, 1990

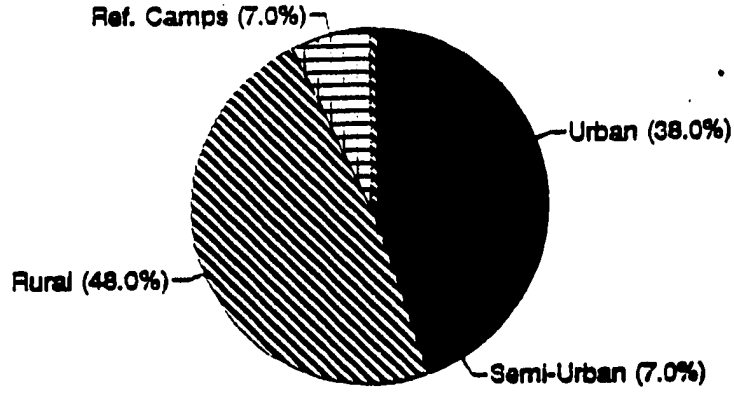
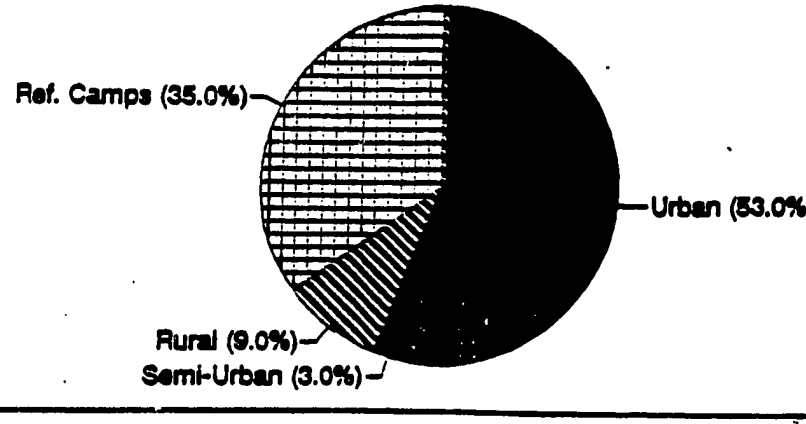
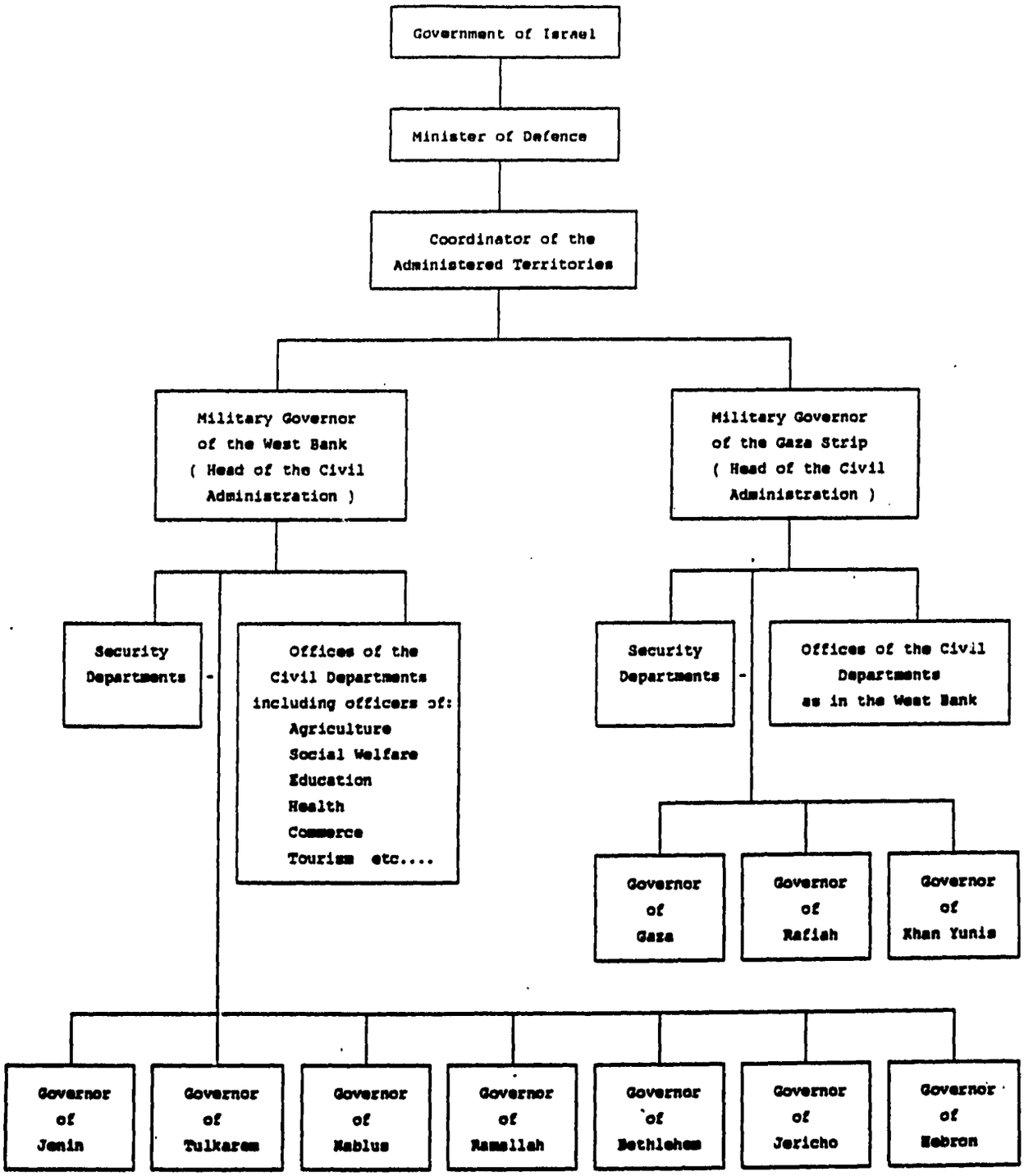



FIGURE 4: Places of Residence, Gaza Strip, 1990




Source: Calculated from Statistical Abstract of Israel 1990. Central Bureau of Statistics: Jerusalem; 1990.

FIGURE 5: ORGANIZATIONAL STRUCTURE OF THE CIVIL ADMINISTRATION (CIVAD)




Source: "Food Security in the West Bank and Gaza Strip," Oct 1985, p. 4. Arab Scientific Institute for Research and Transfer of Technology (ASIR); El-Bireh, West Bank.



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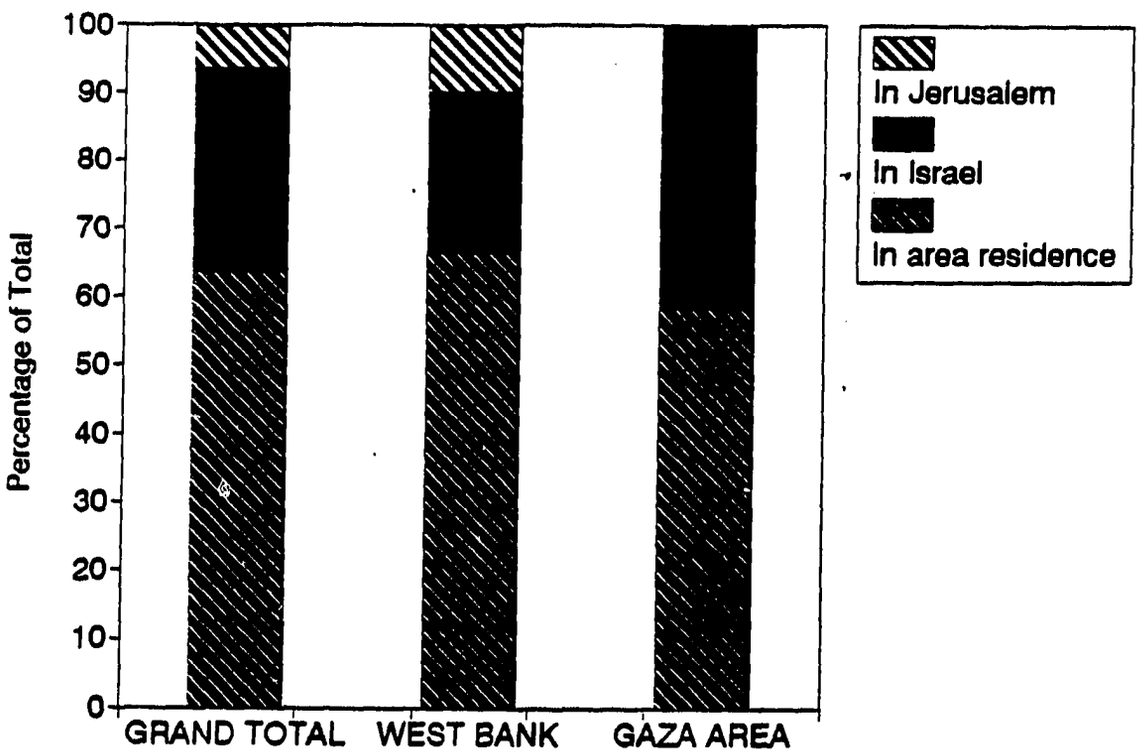
FIGURE 6: EMPLOYED OCCUPIED TERRITORIES PALESTINIANS, BY RESIDENCE, BY LOCALITY OF WORK, 1990




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem; 1991.

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3. Obtained in March, 1992 through personal contact with these sources.

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5. Benvenisti and Khayat, 1988, p. 27.

6. Statistical Abstract of Israel 1990; 1991, pp. 708 (for West Bank and Gaza) and 49 (for non-Jewish population in Jerusalem as an approximation of the population of East Jerusalem). The growth rates are based on recent estimations developed by UNRWA and private sector health planners.

7. Calculated from: Statistical Abstract of Israel 1990; 1991, p. 709.

8. Personal communication with Dr. Hidmi, Director, UNRWA West Bank Health Services; May, 1992.

9. Al-Quds Newspaper; May 6, 1992.

10. UNCTAD; 1989, p. 6.

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12. United Nations Conference on Trade and Development (UNCTAD). Assistance to the Palestinian People: Recent Economic Developments in the Occupied Palestinian Territories, Geneva: United Nations; August, 1991, p. iv.

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# PART 2: INDIVIDUAL SECTOR ANALYSES

AGRICULTURE

EDUCATION

FINANCE AND CREDIT

HEALTH

INDUSTRY AND ENTERPRISE

INFRASTRUCTURE

TRADE

WATER AND SANITATION

# AGRICULTURE IN THE OCCUPIED TERRITORIES

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

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## I. EXECUTIVE SUMMARY

Although data has not been systematically gathered and reported since the Intifada began in December, 1987, the agriculture sector probably still accounts for roughly one-fifth of the total GDP; the estimated total income from agriculture in the West Bank is approximately $150 million. Agriculture is, however, heavily dependent on export of goods to Israel and Jordan, both of which impose trade barriers which render Palestinian agriculture highly dependant on the economies of those countries. The agriculture sector in the Occupied Territories directly employs perhaps one Palestinian in five; nearly one-half of Palestinians receive at least some income from this sector. It has been estimated that about 70% of the farm labor force on the West Bank is female, almost exclusively family, seasonal labor. While low wages contribute to a competitive advantage for Palestinians in terms of product pricing, there are important socioeconomic disadvantages (e.g., low income for families). Finally, although agriculture contributes importantly to the economy, Palestinians are hardly self-sufficient with respect to food products. For example, more than 80% of wheat, all sugar and half of all dairy products are imported, as is most of animal feed.

Of the total land area of 5,572,200 dunums (a dunum is equal to .23 acres) in the West Bank, roughly three million dunums are available to Palestinians (that is, not acquired by Israel or by settlers); in Gaza, approximately 238,000 is available to Palestinians. Approximately 33% of the Palestinian land in the West Bank is under cultivation, about 5% of which is irrigated. In the Gaza Strip roughly half of Palestinian land is cultivated, of which 60% is irrigated. Less than 20% of West Bank orchards are irrigated using modern methods (drip or sprinkler), while roughly 60% of vegetables are so irrigated. Corresponding figures for Gaza are about 50% and 85% for fruits and vegetables, respectively. It has been estimated that some 18,000 dunums of orchards are now over 30 years old, and are accordingly yielding less than two tons per dunum, while at least three tons are necessary for economic viability. An estimated 1.5 million dunums of land in the West Bank, mostly around Ramallah, Hebron, and Nablus, could be reclaimed for cultivation and other uses.

In the West Bank, an estimated 60% of cultivated land is planted with fruit trees, with olives dominating in the north and grapes in the south; 33% of cultivated land is planted with field crops. Olive production - a mainstay of the economy of the West Bank - is markedly unstable and this has important implications for income variation and risk considerations. In the Gaza Strip, 60% of cultivated land is devoted to citrus crops; in 1989 citrus accounted for roughly 80% of the total value of farm exports.

Food processing is an important component of industrial production in the Occupied Territories, but is severely



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constrained by a dependence on imported products, inefficiency (in production technology, management and geographical distribution), poor quality control and adulteration. Excess capacity exists in many of the food processing plants, including in the dairy plants, which have an estimated total capacity of 50 tons per day, but which produce only about 17 tons per day. An estimated 80% of the input required for production in food processing plants is imported from Israel. Most of the plants (particularly the dairy plants) are operated by cooperative societies which utilize equipment (and in some cases, obtain partial operating costs) purchased through or by donors. It is unclear whether such plants are, or would be, commercially viable without these grants or favorable loans. These cooperative-operated plants also compete (some would say unfairly) with the for-profit private sector.

Formal public sector institutions in the Occupied Territories are administered by the CIVAD Department of Agriculture; the budgets and activities for agriculture have significantly diminished since the late 1970s and in some areas, critical activities such as extension programs are now essentially defunct. The total expenditure of the CIVAD Agricultural Department in 1991 was $1.5 million dollars, of which just over 65% was allocated to salaries. It is estimated that less than $30,000 was devoted to extension, training, research, and data collection--i.e., the fundamental public goods needed by the agricultural sector. By 1987, there were only 43 extension agents serving all of the Occupied Territories. Donors have contributed significantly to the agriculture sector, primarily in terms of grants and loans to cooperatives, although support has also been provided for small scale agricultural projects not associated with cooperatives and to NGOs which are involved in extension, training and research services. Municipalities are involved in agriculture in a variety of ways, including as operators of slaughterhouses, which have been largely funded by donors. The involvement of municipalities in what could be a profitable enterprise is controversial, as is their involvement in other physical infrastructure projects.

Various aspects of agricultural and production infrastructure are severely lacking. For example, marketing information systems and export support mechanisms (e.g., refrigerated transport and cold storage, mechanisms for participation in trade fairs) are just now being developed; quality control is sporadic at best, and agricultural research is barely existent. However, Palestinian non-governmental organizations (NGOs) and universities have initiated a number of projects which have the potential to significantly improve development in the agriculture sector and to build on the human resources capacity which already exists.

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

Analysis of the agricultural sector is complicated not merely by fragmentary and often entirely absent data, but also by the extremely high degree of politicization of all aspects of the "Land Question," which is the core of the Palestinian-Israeli conflict. As wide a range as possible of sources was used in the preparation of this report, including data and information derived from reports prepared by Palestinian agricultural experts, Government of Israel statistics, international agricultural and donor agency data, and local non-governmental organizations (NGOs) and U.S. and other private voluntary organization (PVO) data and information. Where possible, specific citations are provided; in some cases, the information has been derived by field observation of the Policy Research Incorporated (PRI) team.

The gross land area of the Occupied Territories is 5,935,000 dunums (one dunum = .23 acres); 5,572,200 is in the West Bank and 360,000 is in Gaza. Israel has acquired land in the Occupied Territories comprising at least half of the total area of the West Bank, and about 33% of the Gaza Strip. The United Nations estimated that 53.7% of the land area of Occupied Territories has been taken over by Israel.[1] Because there is no agreement on total amount of land available to Palestinians for cultivation, estimates of the total land area, and cultivated area, are difficult; this calls into question any statistics for which these figures are the denominator. Some 32.8% of the West Bank (1,753,000 dunums) and 49.4% of Gaza (178,000) are cultivated.[2]

Labor emigration and technological change led to marked increases in per capita incomes in the sector, and indeed, throughout the Occupied Territories. Value added per worker in the West Bank in 1980 was nearly six times (586%) the figure for 1968, while the corresponding figure for Gaza was 330%. Labor use in agriculture fell until the mid-1980s, but has risen since the Intifada. The majority of labor in agriculture is family labor: in 1985, over 90% in the West Bank and over 75% in Gaza.[3] It has been estimated that about 70% of the farm labor force on the West Bank is female, almost exclusively family, seasonal labor.[4] Such labor provides an important source of competitiveness to Palestinian farmers: the phenomenon of the "self-exploiting peasant," familiar to agricultural economists since Chayanov,[5] is apparent in Palestinian agriculture. Privileged access to the very low-opportunity, cost labor of family members gives Palestinian farmers one of their few competitive advantages in the export market. However, there are socioeconomic disadvantages as well, including, for example, low per capita and national income and decreased ability for individual farm workers to advance with respect to job position and salary.

Weak, underdeveloped, formal credit institutions have necessitated the strong involvement of family, clan, and community networks in risk-sharing. However, given the general economic decline in the Occupied Territories since August, 1990, this source of financial investment in agriculture is likely to be severely stretched.

## A. Importance of Agriculture for Development in the Occupied Territories

Agriculture looms large in the economy of the Occupied Territories. Although data have not been systematically gathered and reported since the Intifada (which began in December, 1987), this sector probably still accounts for roughly one-fifth of the GDP of the Occupied Territories and directly employs one Palestinian in five. Nearly one-half of the Palestinians in the Occupied Territories receive at least some income from agriculture. Total crop value was estimated at $239 million in the West Bank and $81 million in the Gaza Strip in 1990 (see Figure 1.)[6]

In the Occupied Territories, agriculture is likely to play an important role in the economy, certainly until the industrial and entrepreneurial sectors are more fully developed and can compete effectively in the global market. Even then, agriculture could and should continue to contribute to Palestinian society, providing foodstuffs for local consumption as well as for export. The sector can and must be improved, however, to ensure that the most effective and efficient use is made of scarce land and water resources.

## B. Key Sectoral Issues

### B.1 Land Reclamation and Ownership

In the Occupied Territories, land reclamation efforts are often carried out by cooperative societies with PVO assistance. Officials of the Agricultural Cooperatives Union (Nablus) estimate that some 1.5 million dunums, mostly around Ramallah, Hebron, and Nablus, could be reclaimed. Land reclamation can have significant economic benefits, generating considerable employment in the short term and economic benefit over the medium and longer term, depending on the utilization of the land after reclamation. The political benefits to the U.S. of funding small-scale land reclamation projects are considerable. Palestinians, eager to implement such activities as a means of offsetting Israeli land seizures, believe that U.S. assistance for land reclamation would provide evidence of the U.S. position with respect to settlements in the Occupied Territories.

## B.2 Subsidies for Israeli Agricultural Water Use

The Israeli agricultural sector receives direct and indirect subsidies from the Israeli government which de facto ensures that Palestinian agriculture is at a distinct disadvantage with respect to growth and development. Perhaps the most important of these subsidies is the subsidy provided to Israeli farmers (including settlers in the Occupied Territories) for agricultural water use; these subsidies, together with the limited access to the water network allowed for Palestinian farmers, adversely affect the ability of West Bank farmers to expand irrigation. Recently announced decreases in water subsidies to Israeli farmers could increase supplies available to Palestinian farmers, but there is no guarantee that the savings will be so allocated. Gazans face similar problems with respect to subsidies for Israeli farmers and settlers, but Gazan water supplies are grossly inadequate and have been systematically over-exploited for several decades, with consequential dangerous long-term hydrological and ecological consequences.

## III. SECTORAL STATUS AND TRENDS

The Palestinian agriculture sector is already very much a "middle-income" type of agriculture. That is, it is relatively highly mechanized (farmers have long been exposed to modern technology) and the rural population has high levels of educational attainment in comparison with other rural populations in developing countries (although not in comparison with their Israeli competitors). However, the per capita income for Palestinians, including farmers, is low, and the current outlook for the agricultural sector to make sustained contributions to the economy is not favorable.

No reliable data are available with respect to the distribution of land ownership or management/tenancy in the Occupied Territories. However, evidence suggests that tenancy is widespread in two areas (Tulkaram/Jenin and the Jordan Valley), while elsewhere owner-operation of farms seems the norm. Tenancy in Tulkaram/Jenin is mainly on a cash-rent basis, while sharecropping is common in the Jordan Valley. A 1983 study conducted in the North Jordan Valley found that most share-leases were verbal contracts, covering one year.[7] Absentee owners typically provided water pumps, water, and other services, and usually received 50-59% of the annual crop yield. As always, there is dispute about the conditions and equity of sharecropping, with some claiming that workers are exploited while others argue that sharecropping is an efficient vehicle for diffusing risk in an environment of essentially non-existent, formal, rural capital markets.

Indeed, published data show that the sector began to deteriorate in the early 1980s; subsequent events, in particular the Intifada

and Gulf War, only exacerbated an already difficult situation. During the Intifada, the agriculture sector increased its role as "employer of last resort," absorbing labor displaced from work in Israel or abroad. Travel restrictions, curfews, and a host of other impediments to the free flow of goods, and information became especially severe during the past several years at the same time that land seizures have expanded. Finally, the exceptionally severe winter of 1991/92 wracked considerable damage on a farm sector almost totally lacking in conventional risk-sharing institutions.

## A. General Trends in Output and Labor in the Agricultural Sector

For the first 10 to 13 years after the 1967 Israeli occupation of the West Bank/Gaza, the agricultural sector expanded rapidly. From 1968 to 1980, the value of real agricultural output in the West Bank grew at an annual rate of 10.8%; the growth rate of real value added agricultural goods grew at almost exactly the same rate (10.7%). Corresponding figures for Gaza were considerably lower: 7.0% for agricultural output and 7.6% for real value added (see Figures 2 and 3).[8]

The agricultural labor force fell by roughly 10,000 or by about 25% from 1968 to 1980, as Palestinians increasingly sought off-farm employment either in Israel or in the oil-exporting countries of the Gulf. The farm labor force in the Occupied Territories declined more rapidly than anywhere else in the region, with the sole exception of Jordan. From 1970 to 1985, the farm labor force declined by 32.6% in the West Bank, 48.2% in Gaza, 30.7% in Lebanon, 61% in Jordan, and 9.1% in Syria.[9] Because of methodological difficulties, especially the undercounting of women's labor, all farm labor estimates in the region are subject to considerable error.

Several indicators of domestic demand for agricultural products in the Occupied Territories are:

* Population growth expanded by approximately 3% overall for the West Bank and Gaza, respectively, from 1969 to 1986 and combined with rapidly increasing per capita incomes to generate relatively high rates of growth in demand for foodstuffs.

* From 1969 to 1986 the demand for food rose at approximately 6.2% per year in the West Bank and at 4.8% in Gaza.[10] The demand for fruits and livestock products expanded very quickly because of their high income elasticity of demand. West Bank per capita consumption of milk, meat, and fruit rose 140%, 258%, and 41%, respectively, from 1964/66 to 1985. In all cases, most of the gains came in the 1970s.[11]

* Much of the increased output for these goods, especially dairy products, was supplied by neighboring Israeli farmers. However, output of fruit and vegetables expanded rapidly in the Occupied Territories in response to the increased demand. Such developments favored producers of irrigated horticultural products over those of rainfed cereals.

Developments on the supply side complimented those of demand; for example:

* As is often the case with farm families in any country, emigration for the purpose of employment became a mechanism for Palestinian farm families to ensure at least minimal income. This was especially important, because other mechanisms for risk-sharing were weak or absent. Labor emigration of labor reduced labor supplies and raised wages.

* For cereals and other staples, relatively sluggish demand growth, comparatively inexpensive imports, and the absence of suitable alternative technologies for hilly areas reduced farmers' margins.

* As a result of reduced prices for cereals, farmers reduced the area devoted to "field crops" (wheat, barley, beans, sesame and tobacco), from about 833,000 dunums in 1968 to about 521,000 dunums in 1980.[12]

* Technological change and brisk demand for horticultural products led to an increase in the area under cultivation in fruit trees. Fruit also increased its share of the value of agricultural output from 35.1% in 1969/71 to 46.4% in 1977/79.[13] Remittances of Palestinian workers often provided the capital necessary to undertake technological change.

Neighboring Arab countries underwent a similar process of reallocation of land and output value within their agricultural sectors.[14] However, there are two major differences between developments in the Occupied Territories and those which transpired elsewhere in the region. First, the proximity of highly subsidized (and technologically efficient, as opposed to economically efficient) Israeli producers to markets in the Occupied Territories meant that Palestinian farmers lost part of the "natural protection" (due to transport costs) which producers of such products enjoyed in other Arab countries. Such competition tended to moderate price increases, which helped Palestinian consumers and hurt Palestinian farmers. In other countries, the government often responded with food imports to assist domestic consumers. This was especially prominent during the 1970s at the height of the regional oil boom. Second,



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elsewhere in the region the withdrawal of labor, the increase in remittances, and the acceleration of demand for high-value products often led to an expansion of irrigated areas for farming. Such a response was sharply constrained in both the West Bank and Gaza for two reasons:

1) much of the land best suited for irrigated horticultural production lies in the Jordan Valley, and much of this land has been confiscated for use by settlers; and

2) Israeli regulations often prevented Palestinian farmers from expanding irrigation.

For a more detailed discussion of water issues, see the companion sectoral report, "Water in the Occupied Territories."

The first half of the 1980s may be fairly characterized as one of moderate decline: both the value of output and value added in the sector fell from 1980 to 1984/85 (the last year for which reliable data exist). Real output on the West Bank in 1985 was roughly 25% below that of 1980; in Gaza output peaked in 1977, falling nearly 30% by the mid-1980s. A variety of causes underlay this decline:

* Weather was poor in the early 1980s, when a series of droughts occurred.

* The agriculture sector suffered from the macroeconomic disequilibrium and crisis of the Israeli economy, as inflation accelerated to four-digit levels, and the exchange rate became seriously overvalued. The austerity program which began in the second quarter of 1985, sharply reduced GOI support of agriculture in the Occupied Territories.

* Deflation in Israel had an adverse effect on the demand for Palestinian labor in Israel, and therefore, on remittances and incomes. The number of Palestinians working in Israel did not decline, and probably even increased somewhat, but the rate of growth of the demand for Palestinian labor in Israel slowed. By 1982, it is estimated that perhaps 79,000 Palestinians were working in Israel;[15] some 100,000 were working there in 1990[16].

* As incomes and demand for high-value farm goods slackened in Israel, competition intensified as Israeli producers sought to unload surpluses.[17] Demand for Palestinian produce in Jordan also stagnated, as Jordanian producers became increasingly competitive and as incomes in that country leveled off.

* The onset of the Iran-Iraq War deprived Palestinian farmers of the very lucrative Iranian market.

* GOI land seizures and water restrictions continued and, in some areas, intensified, particularly since 1990.

In an effort to maintain some equilibrium in the agricultural sector -if not to expand the sector - Palestinians began attempts to create a market in the Occupied Territories, which would be somewhat protected from Israeli competition. These efforts, which included production of dairy products and other processed foodstuffs, have been partially successful. It should be noted that this process was not free of the usual ironies which cloud protectionist moves. For example, although sales of Israeli dairy products in the Occupied Territories may have declined, sales of Israeli animal feed increased.

Parallel to the Intifada, Jordan formally removed itself from all political responsibility for the West Bank, which permitted the Amman government to succumb to protectionist pressure from its own domestic farm lobby. West Bank exports to Jordan effectively collapsed. By contrast, farm exports to Israel appear to have increased during the first year of the Intifada. Estimates of self-sufficiency for key foodstuffs are as follows: wheat, 18%; sugar, 0; potatoes, 135%; vegetables, 155%; citrus, 253%; grapes, 178%; bananas, 36%; edible oils, 137%; red meat, 99%; poultry, 122%; eggs, 97%; milk, 71% (see Figure 4).[18]

The Gulf War created additional havoc for the farm sector. The six-week, 24-hour curfew during the War severely limited farm activity. Since January and early February is the time for land preparation for cereals in the West Bank, the timing of political and military events was most unfortunate from an agricultural development perspective. While improvements were seen in late 1991, the storms of the winter of 1991/92 have wrought considerable damage (e.g., destroying some 20% of Gaza greenhouses), when savings have been drained by draw-down during the Intifada and Gulf Crisis/War.

## B. Cropping Patterns

### B.1 Overview

The geographical distribution of farming systems as of 1988 (the most recent year for which data were obtained) is illustrated in Figure 5. Agricultural land use for the West Bank and Gaza Strip is shown in Figures 6, 7 and 8. In 1990, the distribution of the cultivated land area in the West Bank was as follows:[19]

| | |
|---|---|
| Field Crops | 588,000 dunums |
| Vegetables | 150,000 dunums |
| Fruit trees | 1,055,000 dunums |
| Total | 1,793,000 dunums |

Corresponding figures for Gaza in 1991 were:[20]

| | |
|---|---|
| Irrigated vegetables | 41,000 dunums |
| Rainfed vegetables | 25,000 dunums |
| Field crops | 10,000 dunums |
| Citrus | 59,000 dunums |
| Other fruits | 43,000 dunums |
| Total | 178,000 dunums |

In contrast to the 1970s, when the land area cultivated in field crops decreased, there has been an increase in the land area of field crops since 1986, a development which would be consistent with falling incomes and increasing cost of farm labor supplies.

Irrigation is overwhelmingly used for vegetables and fruits. Less than 20% of West Bank orchards are irrigated using modern methods (drip or sprinkler), while roughly 60% of vegetables are so irrigated. Corresponding figures for Gaza are about 50% and 85% for fruits and vegetables, respectively.[21] Relatively speaking, Gazans use more advanced technology than do West Bankers, but even in Gaza, over half of all orchards are irrigated using water-wasting surface flow methods. It is estimated that drip irrigation reduces the amount of water needed per dunum of Gaza citrus from 1000 mcm/year to 700 mcm/year. This is an important area for technological change and assistance. The principal irrigated areas in the West Bank are in the Tulkaram-Jenin area, especially in the Jordan Valley. In the Northern West Bank, olives and dry-farming are common; most grape cultivation occurs in the Hebron-Bethlehem area.

## B.2 Grain Production

Grain production seems to have recovered from its mid-1980s nadir. This may be partly the result of increases in the cultivated area as argued above, and also simply the fruit of relatively favorable weather. In 1990, West Bank wheat output was 45,000 tons compared to 27,000 tons in 1989 and 39,000 tons in 1988. Such fluctuations are typical of rain-fed grain cultivation in Western Asia, including the Middle East. Sesame production increased 50% from 1989 to 1990. It is very likely that numbers for 1991 and 1992 will be far less favorable, as a consequence of the Gulf War and adverse weather conditions.

## B.3 Olive production

Olive production is a mainstay of West Bank farming. The area planted in olive trees reportedly increased by just over 13% in the 11 year period from 1978 to 1989 (718,000 to 812,000 dunums), but then decreased by 7% in the two year period from 1989 to 1991, to 753,916 dunums.[22] The decline in area may be the result of Israeli tree-removal; Palestinian sources claim that some 78,446 olive trees were uprooted by the Israeli Defense Force (IDF), settlers, and the GOI "Green Patrols" during the Intifada.[23] Olive production is markedly unstable even in "normal" years as Figure 9 shows. The coefficient of variation of olive output from 1968 to 1985 was roughly 70%; olive production was approximately 25% of the value of West Bank farm output in 1990.[24] Fluctuations in value of such an important output have serious implications for income variation and risk considerations, which are briefly analyzed below. Note that, in general, olives are grown on marginal land, using low-opportunity cost family labor and few purchased inputs. Production exceeds consumption on the West Bank by 37%.[25] The development of processing and marketing infrastructures are important possible infrastructures as interventions to assist producers. Cooperatives, often with NGO assistance, are now engaged in some activities in this area.

## B.4 Citrus production

Citrus is by far the most important crop in Gaza and has long dominated the value of farm exports from the Occupied Territories; for example, in 1989, citrus accounted for roughly 80% of the value of farm exports. The area planted in citrus trees has been relatively stable in the West Bank (25,600 dunums in 1977/79 and 24,500 dunums in 1986/88). The situation in Gaza, where most citrus is grown, is markedly different. There the area cultivated has fallen from 72,700 dunums in 1977/79 to 59,500 dunums in 1991.[26] The citrus sub-sector in Gaza faces numerous problems, for instance:

* water scarcity and increased salinity;
* diffusion of epidemic disease, especially porosis;
* aging orchards (it is estimated that some 18,000 dunums of orchards are now over 30 years old, and are accordingly yielding less than 2 tons per dunum, while at least 3 tons are necessary for economic viability);
* lack of agro-processing, e.g., juice factories;
* loss of export markets due to uncontrollable external factors, the most recent of which is the civil war in

Yugoslavia, formerly the main overseas market for Gaza citrus; and

* severe restrictions and a variety of fees levied by GOI authorities ( e.g., $15/ton charge on all exports, fees from spraying and inspection). Farmers assert that they are unable to obtain permits to replant either citrus or other fruit trees. They are unwilling to uproot old trees without prior permission to replant because of concerns over the interpretation of Ottoman Land Law--they fear that it will be easier for the authorities to take their land if they have planted it in annual crops in contrast to fruit trees. Despite such property right concerns, tens of thousands of dunums of citrus trees have been reoriented to vegetable cultivation.

The impending water crisis in Gaza makes it very unlikely that the citrus situation will improve markedly in the immediate future. Even if all marketing, tax, processing, etc. constraints were removed, the scarcity of water will probably become increasingly acute in the years ahead. The outlook for Gaza citrus is poor. It is essential that research be conducted that examines alternative crops, which are both water-saving and have good marketing potential. The recent development of carnations for export is not an example of a product which satisfies these two constraints; it uses roughly 1700 cu.m/dunum/year of water, nearly 70% more than citrus. Recommendations for such a detailed study should then be swiftly implemented, if Gaza is to have a viable farm sector in the coming decades.

B.5 Other fruit production

The area devoted to grapes has steadily declined during the occupation from 128,000 dunums in 1966 to 81,500 in 1990. Grape farmers face a water constraint (since they are not permitted to sink additional wells), and there have been some serious pest problems with few systems available to respond to the problems. For example, agricultural specialists assert that a fungicide used in 1990 to protect grapes proved ineffective. Despite such difficulties, output per unit land has risen by over 150% during the past two decades.[27]

Marketing of grapes is problematic. The main variety (white Dabouki) is too soft for transport as a table grape, particularly using relatively primitive packing technologies. At the same time, there are no processing facilities, apart from a few specialized wineries serving the Christian population. Given the climate and local tastes, it is quite possible that a juice factory would be economical.[28] At the moment, none exists, whether because of GOI licensing or the deterrent of a highly uncertain investment climate.

Strawberry cultivation was introduced on a pilot scale in Gaza about 12 years ago. This highly labor-intensive activity (300 work days/dunum/year) is concentrated in the northern Gaza Strip. Output is largely exported, and production is highly remunerative. However, the area devoted to this crop has declined during the past several years: 290 dunums in 1991 compared with 400 dunums in the early 1980s. Gaza producers are heavily dependent upon Israeli institutions for seedlings and marketing; this dependence proved crippling during the political upheavals of the past several years.

Bananas are mainly produced in the Auja region and in the Jordan Valley under irrigation. They are an extremely water-intensive crop (3000 cu.m./dunum, compared with 1000 for citrus). Water scarcity, increasing water salinity, and marketing constraints (especially, increasing Jordanian competition in Jordanian markets) have all led to a decrease in banana cultivation. For these reasons, the banana crop is not seen by Palestinian agronomists as a crop with high potential.

Almonds cover a large area (some 10% of the cultivated area of the West Bank), however, the yield of these trees is low. Almond production is labor intensive and there is little available support, particularly for pest control. In view of the current slack labor market, there may be underexploited potential for this crop. Expanded technical assistance for pest control and marketing could produce positive net economic and environmental benefits. A similar case may be made for figs, although this fruit has faced serious insect problems recently and Palestinian farmers have been prohibited from importing the most productive and marketable varieties of fig seeds.

## B.6 Vegetable production

Vegetable production is divided between irrigated and non-irrigated sub-sectors. During the 1980s, the total vegetable area on the West Bank nearly doubled (from 80,000 dunums to 150,000). In 1990, roughly 60% of the West Bank vegetable area was rain-fed, while in Gaza the proportions are roughly reversed. There is some regional specialization. For example, nearly 75% of tomato production is in the Jordan Valley (Ghor), while farmers in Tulkaram and Qalqilya specialize in cucumber production. Eggplant is another popular crop, whose production rose by 40% in 1990.

Although Palestinian vegetable producers are highly competitive in the Israeli market, one should be cautious in forecasts for development of the vegetable sub-sector under different political scenarios. While it is true that liberalization of Israeli agriculture (i.e., opening of Israeli markets to Palestinian produce and a cessation of subsidies to Israeli producers) would greatly benefit Palestinian vegetable farmers, regional trade

liberalization would confront Palestinians with severe competition from Jordan and Egypt. Producers in these two countries enjoy labor and water costs far below those for the West Bank and Gaza. They also have the benefit of a considerable head start in export markets. Nevertheless, Palestinians probably continue to have a comparative advantage in horticultural production.

## C. Livestock

Livestock products account for about half of the total value of farm output in the West Bank, with such production initially stimulated by the Intifada-related boycott of Israeli goods. Small ruminants (sheep and goats) were a critical part of farming systems before 1967, with much free grazing especially in the arid hills east of Hebron-Bethlehem. These and similar areas were closed and often confiscated by the GOI after 1967. Estimates of the total number of small ruminants vary widely, from a one-third decrease during the first 15 years of occupation[29] to wide fluctuations between 1967 and 1985/86.[30] In the mid-1980s a new breed, Asaf, suitable for stall-feeding was introduced and diffused widely. Increased labor supplies and "import substitution" of the early Intifada fostered an increase in the number of these animals of over 20%. They have done well as a result of efficient management, but the lack of veterinary services, rising feed costs, and insufficient technical knowledge have reduced the investment return for some producers.[31]

Cattle numbers likewise rose during the Intifada; however, the absence of modern dairy facilities has reduced the viability of such investment. Under improved political conditions, one would expect dairy production to expand in the West Bank, while that in Gaza might decline, as regional specialization and comparative advantage took hold. Additionally, dairy cattle do not thrive under the hot weather typical of Gaza. However, even if all public subsidies were removed, Israeli dairy producers would remain highly competitive, because of their sophisticated technology and highly-trained agricultural workers.

Poultry production seems also to have benefitted temporarily from the boycott of Israeli products. Palestinian producers complain of "market manipulation" by Israeli authorities, for example, refusing to license hatcheries, requiring permits to buy chicks, and placing quotas on the number of chicks which Israeli hatcheries may sell to Palestinians. Poultry production also faces problems of disease control, availability and distribution of feed supplies, and marketing (e.g., absence of refrigerated transport), all of which are technical problems which can be alleviated if not eliminated.

Fishing in Gaza declined in the wake of the Camp David accords, when Palestinians were effectively barred from fishing off the



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Sinai coast. Security restrictions reduced the fishing distance from the coast from 18 to 12 km. Due to such restrictions, the quantity of fish caught fell substantially from about 2500 tons per year in the late 1970s to about 350 tons in 1990. This sub-sector faces the usual marketing and credit problems common to all agriculture. There have been some improvements, however, such as the opening of a fish market with modern cold storage facilities. It is possible that there is some modest potential for canning and processing; however, the eastern Mediterranean Sea does not provide especially favorable conditions for fishing, and over-fishing could easily become a problem.

## D. Exports of Agricultural Goods

Export markets absorb a significant proportion of some Palestinian products, as Figure 10 demonstrates. In 1988/89 more than 40% of citrus and 35% of olive oil was exported.[32] The following shows the distribution of exports by recipient country in 1985 and 1989, with 1989 being the most recent year for which data were available (also see Figure 11); values are in millions of 1989 U.S. dollars:[33]

| | Total Exports | To Israel | To Jordan | Elsewhere |
|---|---|---|---|---|
| 1985 | $89.1 | $28.4 (31.9%) | $55.36 (62.1%) | $5.34 (6.0%) |
| 1989 | $92.9 | $44.5 (47.9%) | $35.9 (38.6%) | $12.5 (13.5%) |

Citrus accounted for over three-quarters (77.3%) of the value of the exports to Israel; vegetables were 14.5% and other fruits the remaining 4.4%.[34]

The Israeli market continue to absorb a significant quantity of produce. Indeed, as the above figures show, the role of the Israeli market increased both absolutely and relatively during the first year of the Intifada. Palestinian producers, in particular, benefitted from the cost advantages of low wages. However, the market was quite risky, since the GOI applied a policy which may be called "selective protectionism," in which Palestinian produce was allowed into Israel, if demand in Israel could not be met from Israeli sources. At other times, Palestinians were subject to restrictions on selling their products in Israel. Of course, such restrictions offer substantial financial rewards for smuggling; in the summer of 1990, Israeli press reports estimated that 40% of the produce in Israeli markets was coming from the Occupied Territories. Although Palestinian sources believe that this number is too high, they agree that considerable smuggling was occurring, perhaps especially from the Tulkaram-Qalqilya area. There was a campaign to "crack down" on smuggling in the first half of 1990,

when, according to the Jerusalem Post, over 1800 Palestinian vehicles carrying "illegal" produce were seized.

During the 1970s, Jordan and the countries of the Gulf provided a lucrative market for Palestinian horticultural exports. Booming incomes and severe domestic supply constraints led the Gulf countries to expand their imports greatly from many sources, including the Occupied Territories. Such exports were not without serious difficulties and high costs: exporters faced expensive delays at the bridges, Palestinian trucks were old and required to be uncovered to facilitate Israeli security inspection, and time and money was required to obtain Jordanian "certificates of origin," which were necessary to exempt produce from the Arab boycott of Israeli goods. Despite these and other costly regulations, export to the East was highly lucrative.

During the past 12 years, both the Gulf and the Jordanian markets have essentially collapsed for Palestinians. The outbreak of the Iran-Iraq War closed the formerly lucrative Iranian market and reduced Iraqi imports. The decline in oil incomes in the mid-1980s similarly depressed markets in the Arab Gulf. The Gulf Crisis and War of 1990 shut Arab Gulf markets to Palestinian produce. The Jordanian market has also greatly declined. Exports during the first half of the 1980s averaged over 200,000 tons per year. By 1989, volume had fallen to 43,000 tons and in 1990 to 34,500 tons.[35] Vegetable exports, in particular, have essentially collapsed from about 37,000 tons in the early 1980s to 2,500 in 1990. The decline has multiple causes:

* Given the need for structural adjustment in Jordan, the authorities in Amman have devalued the real exchange rate of the Dinar, which was some 22-23% lower in 1989 and 1990 than in 1987 and 1988, and some 12% lower than the average value in the early 1980s.[36]

* The Jordanian government's renunciation of all political authority over the West Bank unleashed the strong protectionist lobbying of Jordanian horticultural producers, especially those of the East Jordan Valley.

* An important source of this pressure was the saturated Jordanian market: Jordanian incomes were stagnant or falling, reducing demand for high-income, elasticity horticultural products, while supplies increased, thanks to the rapid development of Jordanian production.

* Jordanian producers have not only adopted all the same technologies (greenhouses, foliar sprays, etc.) as their Palestinian cousins but also enjoy dramatically lower labor and water costs. Lower labor costs are

largely due to the widespread employment of rural Egyptians. Wage costs in Jordan are one-third of Palestinian levels, while water costs are only 8% of those in the Occupied Territories.

* Quality problems have developed, e.g., Valencia oranges from the West Bank; further reducing Palestinian competitiveness.

* Regulatory charges and fees have recently been increased by the Israeli authorities.

During the past several years, Palestinians have made major efforts to secure a foothold in the European Community (EC) market. This has been difficult for many reasons, not the least of which is the role of the Israeli state-owned agricultural marketing company, AGREXCO, through which most Palestinian agricultural products must be exported. In spite of the fact that the role of AGREXCO has changed recently, both within Israel (where it was seen as a statist monopoly) and with respect to Palestinian products, items such as Gaza flowers and strawberries continue to be exported through AGREXCO.

An example of the difficulty in direct export of agricultural products is provided by an incident involving eggplants grown in Jericho. Approximately one year after a decision by the Council of Foreign Ministers of the EC to treat the Occupied territories as an independent unit (end of 1986), an agreement between Israel and the EC to permit direct Palestinian export to the EC was signed in Brussels. Israel, however, delayed the export of Jericho eggplants, insisting that such exports continue to go through AGREXCO.

Palestinians wanted to begin to develop their own "brand name recognition," believing that under the existing circumstances they suffered the usual fate of anyone who sells to a monopsonist: reduced sales at lower prices. In October, 1988, a protocol governing Palestinian exports to the EC was signed by all parties concerned.[37] Direct export commenced with a trial shipment of eggplants from the Jericho Marketing Cooperative to Marseilles, France during the 1988-89 season. Some 90 tons were shipped in Israeli refrigerated ships; approximately one-third of the shipment was destroyed enroute. Israelis and Palestinians disagree on the cause of the destruction. Israelis assert that the goods were improperly packaged, while Palestinians charge sabotage. In any case, a second attempt was made during the following season, when 550 tons of eggplant and 20 tons of pepper were exported under the "Jericho" trade-mark. Marketing during the next year was disrupted by the Gulf War.

The above figures indicate that the quantities of eggplants being exported to the EC constitute a very small percentage of total



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production. In 1988-89, eggplant exports to the EC constituted less than 1% of production; however, exports during the subsequent year was substantially greater, but still only half of what was formerly exported through AGREXCO. Many Palestinian commentators argue that exporters have lost money on marketing in the EC;[38] however, breaking into a new market and increasing market share is always costly. It is perfectly rational for a firm to incur losses for the initial years, if it is believed that the increased market share will recoup these losses later. It is also the case that the share of non-Israeli, non-Jordanian markets for Palestinian farm exports roughly doubled between 1985 and 1989 (from 6.0% to 13.5%). Palestinians also value the political benefits of their own, independent action very highly; such experience can serve as an important foundation for development of the agricultural sector under any political scenario.

Three factors constrain expanding exports to the EC: 1) Israeli restrictions, 2) Palestinian quality-control and marketing problems, and 3) sharp competition for other Mediterranean exporters. Israeli security inspections are widely cited as problematic; for example, it is often asserted that inspectors physically touch eggplant, which leads to bruising. Additionally, the length of the inspection procedures causes delays which are extremely damaging to the viability of fresh produce exports. Palestinians also believe that the $1000 per 50 ton inspection fee is excessive.

Perhaps one of the most important recent developments in the export of Palestinian agricultural products has been the establishment of the Palestinian Trade Promotion Organization, based in the West Bank with affiliate offices in The Netherlands. This organization, founded in early 1992, is designed to facilitate and promote the export of Palestinian agricultural and industrial goods. The five agricultural NGOs involved are PARC, United Agricultural Company, the Agricultural Cooperative of Jericho, the Beit Lahia Cooperative in Gaza and CDP.

## E. Agro-Industry in the Occupied Territories

A 1983 survey of the Palestinian agro-industry (the most recent survey available) found approximately 450 agroindustrial firms, about 10% of total firms in the Occupied Territories.[39] Of these, roughly 75% were olive presses. It is possible that there is an excess capacity in this industry, and that the geographical distribution of plants is inefficient. Problems of quality control and adulteration are also reported. Although there were eight citrus packing plants in Gaza in 1983, only four were in operation; one plant used to operate on the West Bank, but is now closed. The capacity of these plants varies according to the standard of packing; i.e., for local market standards, 1200 tons per eight hours, or, for EC market standards, 800 tons per eight

hours. There are seven food processing firms (producing tomato paste, humus, foul, falafel, and soups) distributed in the main cities of the Occupied Territories (two in Hebron; two in Tulkaram; two in Jerusalem; one in Nablus; one in Gaza). Except for a small quantity of lentils, most of the inputs are imported. Olive pickling is carried out using traditional technologies and produces an output of uneven quality. There are two cigarette plants, which produced 60-70% of the local consumption before the Intifada using imported tobacco.[40] Given the importance of food processing for the agricultural sector (for export and as a means of utilizing excess produce), it is critical that more recent information be collected, analyzed and disseminated with respect to the food processing industry in both the West Bank and Gaza Strip.

Dairy processing was "very primitive and small scale" before the Intifada.[41] The Palestinian boycott of Israeli dairy products created favorable conditions for entry into this market, although the Palestinian industry is highly dependent on Israeli imports. For example, several researchers have estimated that the West Bank imported 50-60% of its dairy products in 1990. There are now 16 dairy plants in the Occupied Territories, with a total capacity of 50 tons per day. Actual output of dairy products, however, is closer to 17 tons per day. It is estimated that 80% of the input is bought from Israel. Most plants are run by cooperative societies which are operating their plants with equipment given as grants by NGOs, including ANERA. It is unclear whether such plants are, or would be, commercially viable without the grant to cover capital costs. It is equally unclear whether such plants would be competitive with even unsubsidized Israeli producers, in the event of relatively free trade between Israel and the Occupied Territories.

## F. Inputs and Technological Change

Agricultural technologies are very location specific. Accordingly, local testing and adaptation is usually necessary when introducing a technique from other areas. Further, if the financial benefit of research cannot be realized by the private sector, then such research will receive scant investment. It is perhaps not surprising that many of the technologies which have diffused the most widely in Palestinian agriculture have been existing technologies (i.e., development and adaptation did not occur in the Occupied Territories) and the diffusion has been supported primarily by external donors, with private capital for lower-cost "technologies" such as pesticides being derived from the family owners and their friends.

Tractors have diffused rapidly in both the West Bank and Gaza. From a very low base, the number of tractors is now approximately 4000 on the West Bank and to over 700 in Gaza. On the West Bank, the most rapid rate of growth occurred during the 1970s (14% per

year), while the absolute numbers expanded just as rapidly during the 1980s (approximately 2000 tractors per decade). The proportion of land to tractors in the Occupied Territories is higher than any other Middle Eastern country. In 1985 at 469.1 dunums per tractor (46.9 hectare per tractor), the West Bank's proportion of tractors was approached only by Egypt (54) and Turkey (49); the level on the West Bank far exceeded that in neighboring Syria (149) or Jordan (274).[42] In Gaza, the proportion was even higher: 317 dunums (31.7 hectare) per tractor in 1985.[43] Such density confirms field impressions and statements of local experts that the large majority of farmers have access to tractor services through relatively well-developed rental markets. It seems reasonable to view the majority of tractorization in the Occupied Territories as a labor-saving technological change, although there is evidence of inappropriate distribution of tractors, with an excessive amount equipment being unused in some areas while there is a dearth of equipment in others.

There is relatively little information on the extent of other types of mechanization by farm operation. Land preparation is allegedly 90% mechanized, but field visits in February 1992 around Nablus belie this figure. It is also asserted that plant protection is largely mechanized. The pattern of mechanization in the West Bank and Gaza may conform to the world-wide pattern of mechanization, in which "power-intensive" operations such as hauling, ploughing and waterlifting are mechanized first, while mechanization of more "control intensive" operations such as fruit and vegetable harvesting and pest control occurs later.[44] In the first stage of mechanization, machinery is basically substituting for animal power; labor costs are the determining variable only in subsequent stages. The number of animals used for draft in the Occupied Territories fell from 47,000 in 1968 to 20,400 in 1985.[45] However, the usual explanation for "animal displacement" is the rising opportunity cost of using farm animals for work instead of for meat and milk.

Fertilizer use also seems to have expanded rapidly in the Occupied Territories, although no reliable data are available for the past decade. It has been plausibly argued that other technological changes such as the diffusion of cultivation under plastic, hybrid seeds, growth hormones, weed killers and foliar sprays have been the most important type of technological change in Palestinian agriculture under the Occupation.[46] These land-saving technological changes have had a dramatic impact on crop yields. From 1966 to 1989, output per unit/land has increased by 51% in rainfed wheat, 171% in irrigated tomatoes (open cultivation), 250% in cucumbers, and 153% in grapes.[47]

In the Occupied Territories, as elsewhere, individual farmers, agronomists, environmentalists and others face the conundrum of weighing the benefits of pesticide use against their long-lasting

environmental and health effects. However, with few exceptions, there appears to be little concern for, or knowledge of, the environmental and health effects of pesticides, although they are widely used. Recently, efforts have been made by agricultural agents to reduce the use of pesticides through integrated pest management. Additionally, several of the U.S. PVOs have initiated activities directed towards the prevention of excessive pesticide use and the reduction of harmful health effects; for example, Save the Children Federation (SCF) has distributed an information booklet, AMIDEAST has conducted a literature search and has collected published information regarding pesticides (as a result of requests from Palestinian physicians) and ANERA requested, through an A.I.D. technical services contract, information concerning pesticides. The resultant 1990 report on pesticide use in the Occupied Territories revealed that a number of the pesticides used in the area contained dangerous chemicals and were not permitted for use in the U.S. Several were not permitted in Israel, although this was not confirmed.

As noted above, many of these technologies were diffused from Israeli Jews to Israeli Palestinians and hence to the West Bank Palestinians. The diffusion of new technologies from the highly technologically sophisticated Israeli agriculture to Palestinian farmers has certainly been a great benefit to the latter. Input suppliers often acted as "private extension agents," offering follow-up consultations and advice on use. Unfortunately, however, it is likely that the process of technological change has slowed in recent years because of political obstacles to the diffusion of information, the absence of a public-sector research system, and the acute shortage of capital and credit. These and other constraints to development of the agriculture sector are described in Part V.

## IV. INSTITUTIONAL ARRANGEMENTS

### A. Palestinian Public and Private Sector Organizations

#### A.1 Public Sector Agencies

Formal public sector institutions in the Occupied Territories come under the Department of Agriculture (DOA) of the Civil Administration (CIVAD). Although these institutions made important contributions to the diffusion of technology in the West Bank in the early years of occupation, their budgets and activities have dwindled since the late 1970s. In many areas, they are now essentially defunct, with both politics and economics playing a role in this demise.

Public agricultural extension activities were quite important in the early 1970s; the 70 agricultural engineers and technicians who served as extension agents (all of whom were Palestinian) received training in extension, experimental station work,

services, and management. These trained personnel implemented several annual programs such as field and farm demonstrations and agricultural "fairs" (e.g., one for grapes in Hebron). These activities contributed to the rapid rate of technological change and output growth during the decade of the 1970s.

The decline of the extension service began in the late 1970s and accelerated in the early 1980s. The change in Israeli government in the late 1970s and runaway inflation in Israel in the early 1980s contributed to the decline in funding for the DOA program in the Occupied Territories. In the early 1970s, a total of approximately 500 Palestinians worked for the DOA in the West Bank; i.e., 70 were agricultural engineers and 142 were extension agents. By 1987, there were only 161 employees, of whom 55 were extension agents or worked in experimental stations. Although these agents and other Palestinian DOA employees are generally considered knowledgeable with respect to the agricultural sector in the Occupied Territories, their work is severely hampered. For example, transportation is critical for extension agents, but the number of cars operated by the DOA in the West Bank decreased from 82 in 1972 to 8 in 1987, effectively all but nullifying the extension activities of the remaining agents.

During the Intifada, CIVAD/DOA budgets dwindled, and services such as home economics, artificial insemination, soil and water laboratories, and many agricultural experiment stations were slashed or eliminated altogether. The total expenditure of the Department between 1989 and 1991 remained at approximately $1.7 million dollars (assuming 2.4 NIS = $1.00); of which just under $28,000 was devoted to extension, training, research, and statistics; i.e., the fundamental public goods needed by the agricultural sector. The total budget for 1992 was increased to $2.2 million. No data were available for previous years; this would have allowed for direct comparisons of expenditures in total public expenditures for the DOA over time. The provision of veterinary services provides a revealing contrast with research and extension. Funds continued to be allocated to this sector, perhaps because the spread of animal diseases would impose large negative externalities on Israeli livestock producers. However, Palestinian farmers also obviously benefit from such services. Forestry services have been almost entirely taken over by the Jewish Agency, although the DOA allocated just over $36,000 for "forest maintenance" in the West Bank in 1991.

Research is a crucial public sector input to agricultural growth and development. The five agricultural experiment stations which had been set up by the Jordanians (at Fari'ah, Asker, Arroub, Beit Qad, and Qabatieh) were placed under the supervision of Israeli researchers, primarily those at the Volcani Institute. Research results of this institute were, of course, published in Hebrew; however, Arabic translations were often not prepared. The number of employees at the experiment stations steadily declined,

from 114 in 1972 to 37 in 1979. Increasingly, stations engaged primarily in commercial agriculture in order to cover their operating costs. Only 5% of the stations' budgets were actually devoted to research activities. Research ceased altogether in 1988/89. There is now no public sector research activity supporting agriculture in the Occupied Territories. This has significant impact on the ability of the agricultural sector in general, and the Palestinian farmer individually, to remain competitive and ensure efficient and environmentally-safe use of the scarce land and water resources in the area.

## A.2 Palestinian Organizations

Cooperative Societies. Cooperatives in some form have been encouraged in the Occupied Territories since the British Mandate and their recent role in Palestinian agriculture cannot be overemphasized. For this reason, somewhat more extensive detail is included with respect to these institutions than to others which are involved in the agricultural sector.

Most existing cooperatives can be traced back to the Jordanian era. In December, 1966, there were 176 agricultural cooperative societies with just under 9000 members in the West Bank.[48] Although their activities were officially halted by the Israeli authorities after 1967, they remained in existence. After 1976, the Jordanian Cooperative Organization (JCO) and local Palestinians sought to revive cooperatives as a mechanism to promote development. Cooperatives were assisted by the formation of the "Joint Palestinian-Jordanian Committee" to promote "steadfastness," and by funds and technical assistance from donors. In the case of A.I.D., these funds have been channeled primarily through ANERA and CDP. The Israeli authorities also reportedly have encouraged the formation and work of cooperatives.

There are contradictory reports concerning the total number of agricultural cooperatives; estimates range from more than 200[49], to 352 [50]. There seems to have been a surge of registrations recently. Awartani asserts that in 1984 there were about 30 functioning agricultural cooperatives, about half of which were olive press associations.[51] In 1987, eight marketing and canning cooperatives (in Nablus, Tulkaram, Qalqiliah, Salfeet, Jenin, Ramallah, Hebron and Jericho) formed the "Agricultural Cooperative Union," with their headquarters located in Nablus. The Jericho Cooperative has since withdrawn from the Union.[52]

Much controversy surrounds these cooperatives. One area of agreement seems to be that although the Israeli authorities are widely believed to have tried to use the cooperatives for their own political purposes, these attempts largely failed.[53] The fundamental critique holds that a significant proportion of all donor funds for the Occupied Territories is provided to

cooperatives, which are headed by powerful local individuals who may not always have made the most appropriate use of the funds, nor distributed it in the most equitable and effective manner.

Palestinian familial and clan relationships have reportedly played a part in the way cooperatives have functioned in the Occupied Territories. These relationships, which historically have had a positive impact on development in the West Bank and Gaza Strip, through an assurance of support networks in times of distress and cooperation in agricultural endeavors, may actually militate against broad-based cooperation across clans and geographic areas. On the one hand, the positive aspects of the social structures may not have been adequately utilized and, on the other hand, the traditional patronage networks may have been supported indirectly by development assistance. It is also postulated that when donors provide grants, rather than loans, to cooperatives, it gives them an unfair competitive advantage, as does the provision of expensive machinery (e.g., tractors, dairy equipment). Because cooperatives need not repay the grants (or pay for the equipment), their members have, in effect, access to highly-subsidized capital, an extremely scarce factor of production in the Occupied Territories. Moreover, it may be that the type of projects funded by donors through cooperatives have encouraged their development as what some believe are, essentially, family-controlled (or shareholding) for-profit companies in competition with other private sector organizations. Finally, it has been reported that much of the equipment provided to cooperatives is inappropriate (non-functional), or unused (in part because it is inappropriate) and that the cooperatives have not been extensively involved in the decision-making process vis-a-vis planning for donor funding of projects and equipment purchase.

Proponents of cooperatives[54] argue that cooperative societies are as democratic as any set of Palestinian institutions can be under the present circumstances, and this is the criterion by which they should be judged. Elections for cooperative leaders have been held throughout the West Bank recently, with assistance being provided to ensure that, insofar as possible, the election process encouraged the participation of as many members as possible. In the case of one local election, landless sharecroppers in Jericho reportedly won half of the seats on the Board of Directors. Proponents also suggest that, because the cooperatives charge interest on loans to their members, the cooperatives do not constitute unfair competition with the private sector. Moreover, they assert also that various equipment (e.g., tractors for deep ploughing or bulldozers for land reclamation) were unavailable or prohibitively expensive in local markets and that cooperatives served as a readily available mechanism for funding the purchase of this much-needed equipment. Cooperatives have also performed a useful function with respect to product marketing and export. For example, they arrange for



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"Certificates of Origin" for transhipment of agricultural goods to and through Jordan and improve utilization of telecommunications linkages with Amman as a means of avoiding the costly and time-consuming trip to Amman to obtain marketing information. The Jericho Cooperative in the West Bank and Beit Lahia Cooperative in the Gaza Strip have also promoted horticultural marketing in the EC, with assistance from A.I.D. and other donors.

Grants of equipment to cooperatives do constitute subsidized credit, which then results in their having a competitive advantage over others. Given this reality, A.I.D. and other donors need to be consistent in formulating policies and programs to provide credit for agricultural development. The same is true for support for other types of cooperative ventures. Assertions that cooperatives which are not successful (effective and/or efficient) will become non-existent, ignore the reality that so long as grants continue to flow, money-losing activities can continue to be sustained. Donors need to work with the cooperatives to determine in what ways the cooperatives can make the most effective and efficient contribution to the development of the agricultural sector. For example, given the high level of tractorization in the Occupied Territories, it seems highly unlikely that tractor rental markets were so deficient that small farmers could not have acquired these services without cooperative assistance. This begs the question of whether providing tractors through cooperatives was the most appropriate funding vehicle. However, given political and other realities, it may have been one of the few options available.

Non-Governmental Organizations (NGOs). There exists a number of Palestinian NGOs which are active in the agricultural sector and which contribute importantly to its development, even if on a relatively small scale. These institutions include the United Agricultural Company, the Palestinian Agricultural Relief Committee (PARC), the Agricultural Services Committee, the Association of Agricultural Engineers, Land and Water Institute, the Institute for Technological Research, the Palestine Hydrology Group and Ma'an, The Development Work Center. Additionally, the Arab Thought Forum (ATF) has been involved in preparing reports and other documents specifically related to agriculture and holding seminar and workshops on various related issues, although the ATF is not specifically an agricultural institution. Local development and credit organizations which have supported agricultural projects include the Economic Development Group, the Arab Development and Credit Company and the Arab Technical and Development Corporation. These institutions are assuming an increasingly important role in the agriculture sector, in particular in the absence of public sector support infrastructures. Although their staffs lack adequate recent training and exposure to technological developments and new

knowledge, they are in the forefront of agricultural research and development with respect to marketing and farming systems.

Importantly, several of these organizations are working cooperatively on specific development projects. For example, PARC, the Agricultural Engineers Association and the Arab Thought Forum have begun to develop an Agricultural Data Bank which will collect, store and disseminate production, marketing and other agricultural information. In 1991, four organizations formed the Agricultural Coordinating Committee (ACC) to identify particular problems in the agricultural sector, coordinate responses to these problems, and initiate the formulation of short- and long-term plans for the agricultural sector. The four organizations are the Agricultural Engineers Association, the Palestinian Agricultural Relief Committees, the Center for Agricultural Services and the Union of Agricultural Work Committees. Individual farmers and agricultural engineers are also actively involved in the committee.

Universities and Agricultural Schools. An-Najah, Hebron and Bethlehem Universities offer technical services to farmers. After years of application, Hebron University was permitted to start a College of Agriculture in 1987, but the closure of the university from late 1987 through 1991 forestalled its development. Some five students have received AMIDEAST-funded scholarships for study abroad (U.S. and Jordan). The university has also established a Center for Community Service, in which the university's 10 agricultural engineers operate an extension service. The university hopes to expand the number of staff to 30. These activities, largely concentrated in the area around the city of Hebron, include collecting data, and writing and distributing leaflets on modern practices for olive cultivation, poultry, and apiculture. An-Najah University in Nablus also conducts some agricultural research, especially in the area of agricultural economics. Each of the universities has examples of successful linkages between the university-based researchers and area farmers, with researchers providing specific information which has resulted in improvements in crop production and livestock management.

There are also several secondary-level schools for agriculture, the Khadouri School in Tulkaram and the Arab Development Society in Jericho. The first is public, and therefore falls under the authority of CIVAD, while the second relies on private funds. The Khadouri School was established during the Mandate, and prior to 1967 operated a three year community college. Reportedly, the resources available to the school and the quality of the student body has steadily declined, until now it has only the weakest students and maintains few agricultural training activities. However, it owns 400 dunums of land as well as several buildings. Its faculty also have considerable experience in training at this educational level, although, as with other

educational institutions, they lack continuing education and the requisite laboratory and other facilities to provide quality education.

The Arab Cooperative Society is a trade school established in Jericho in the early 1950s. They train students in a variety of agricultural activities on their 2000 acre farm, using buildings which were constructed in the 1950s with assistance from the Ford Foundation. Given the land, buildings, and reputation of the institution, it would be especially suitable to establish connections between this institution and some American land grant college to upgrade the skills of the staff.

## B. Donor Involvement in the Agricultural Sector

The agricultural sector has been one of the primary beneficiaries of donor assistance to the Occupied Territories over the years. For example, of the more than $202 million in assistance from donors other than the Arab States for projects being implemented in 1991 and planned for 1992, $17,352,938 was directly for agriculture. This does not include water and sanitation projects, which benefit agriculture and support for projects which support the agro-industry. One such project provides just over $9 million for a citrus processing plant in the Gaza Strip.[55] Much of the donor funding has been channeled through the United Nations Development Program (UNDP), which has carried out primarily large-scale projects, although they also have small grants programs for projects such as drip irrigation and apiaries. UNRWA also provides loans to farmers for small-scale projects.

A.I.D. has supported agricultural projects through ANERA, which has provided extensive support to Palestinian cooperatives and municipalities (the latter for development of support infrastructure, such as cold storage) and played a key role in supporting veterinary services, among other activities; Catholic Relief Services (CRS), which has had a rural development program emphasizing small scale agricultural projects and the construction of agricultural roads; the Agricultural Cooperative Development Institute (ACDI), which has supported the Cooperative Development Project, providing training, technical assistance and other services primarily to cooperatives, and which has supported food processing plants; and Save the Children Federation (SCF), which has emphasized small-scale agricultural projects and which has more recently focused on integrated development, linking agricultural, water and sanitation and health projects.

Until recently, minimal effort has been made to coordinate the extensive assistance provided by donors, or to determine the impact of donor-funded projects. In the absence of a central planning body, other than the Israeli government, such coordination is understandably difficult. However, Palestinians



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are increasingly interested in medium and long-term planning for this sector, in particular, given the scarcity of land and water and the concern for protecting these natural resources.

## V. CONSTRAINTS TO DEVELOPMENT

In addition to the general constraints on development in the Occupied Territories, several constraints particularly affect the agricultural sector. These are briefly summarized in this part of the report.

### A. Capital Markets

Capital markets in the Occupied Territories are weak, fragmented, and underdeveloped. This is especially problematic for agricultural development because the level of risk in the Occupied Territories is very high. Both output and price are highly variable and dependent on both natural phenomena and bureaucratic factors uncontrollable by the Palestinian agricultural sector. Olive production, for example, is subject to very large output fluctuations, but prices do not typically vary inversely with production because of the openness of the Palestinian economy to Israeli imports. West Bank markets may be "balkanized," whereby travel restrictions and lack of information lead to large spacial price differences across markets. Farmers are also subject to unanticipated political shocks, which have recently been very severe. All farming is risky, but that in the Occupied Territories is especially so.

One of the principal functions of capital markets is to diffuse risks, but such markets are essentially non-existent in the Occupied Territories. Nor are there well-developed futures and forward markets which could permit farmers to hedge their production. There is no system of crop insurance, which, although expensive, is common in the farm sectors of advanced industrial countries, including Israel. The only banks, Cairo-Amman Bank (West Bank) and Bank of Palestine (Gaza), are very conservative in their loan policies, subject to various administrative restrictions, and perceive themselves to be operating in an extremely risky environment. Rural credit in the usual sense simply does not exist in the Occupied Territories.

The only mechanisms for diffusing risk are sharecropping and family networks. The former is powerless in the face of a weather disaster (both cropper and land owner lose heavily), while family network systems have been placed under increasing stress with the large-scale return of Palestinian workers from the Gulf. The absence of efficient, risk-sharing mechanisms and institutions to mediate between savers and investors places an increasingly severe constraint on the diffusion of modern technology in the agricultural sector of the Occupied Territories.



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## B. Bureaucratic Policies

The policies of the State of Israel which have had the most negative impact on the development of Palestinian agriculture are principally land seizures, tree removal, curfews and other travel and transportation restrictions, water restrictions, subsidies for Israeli farmers and differential trade regulations, which protect the Israeli market but not the Palestinian one. During the Intifada, the GOI severely and sharply stepped up its travel and other restrictions. Curfews, in particular, took a serious toll on farm activities, often applying to entire villages and interfering with the timeliness of farm operations such as harvesting, pruning and land preparation.[56] Land seizures and tree cutting similarly had a serious effect; estimates of the number of trees removed range from 60,000 to 100,000.[57] Several of these constraints have been discussed in the overview to this comprehensive report on sector analysis and in the companion sectoral report, "Water in the Occupied Territories." This latter report includes a detailed discussion of water resources in the West Bank and Gaza Strip, including the role of the GOI with respect to restrictions on availability and subsidies for Israeli farmers and settlers.

Travel restrictions are particularly onerous; they impede physical arbitrage and substantially reduce access to information for both marketing and agricultural development. It is commonly asserted that local Palestinian markets are highly fragmented and balkanized. Theoretically, the fact that travel restrictions appear to a merchant as almost random, unpredictable events must impede physical arbitrage (a curfew may be announced suddenly, a truck driver may be detained, a cargo delayed, a road closed arbitrarily). Another consequence of these "unanticipated negative shocks" is the destabilization of prices, which has reverberating effects throughout the agricultural sector and the economy.

Palestinians are also isolated from sources of information on new technologies and developments in agricultural research. In this respect, travel restrictions and hindrances to expansion of telecommunications networks are especially harmful. The best way to learn about new technologies is to see them in operation, but this has become very difficult during the past four years. Palestinian researchers and growers of rain-fed cereals and cereals, for example, could greatly profit from visits to ICARDA in Aleppo, but current political relations seriously hamper this possibility.

It has been suggested that the Intifada, and Israeli reactions to it, adversely affected agriculture. While it would be informative to compare pre-Intifada data with more recent data dealing with a wide range of indicators for this sector in order to verify this assertion, such data are scarcely available. One

clear effect is that the supply of labor to agriculture has increased, as many young men's permits for work in Israel were revoked, and as the goal of "self sufficiency" and withdrawal from the Israeli economy became a goal of the leadership of the Intifada. The number of workers employed in Gaza agriculture may have almost doubled from 1987 to 1991 (from 8600 to 16,000). With no corresponding increase in demand, real wages in agriculture have fallen in the last few years.[58]

## C. Inadequacy of Marketing and other Farming Systems

The absence of an organized system of marketing agricultural products is one of the most critical constraints facing the agricultural sector in the Occupied Territories. Packing, handling, and transportation technologies are quite rudimentary and out-of-date by international standards, nor do many Palestinians have the kind of training which a modern marketing system would require.

The European Community (EC) is potentially a critical market for Palestinian agricultural products, but the absence of adequate marketing and farming systems (in addition to the bureaucratic constraints described previously) hinder the ability of Palestinians to export to this market. For example, Palestinian products too often fail to conform to the demanding standards of EC consumers, and therefore lose out to Israeli and Turkish competition. The marketing system remains quite underdeveloped in both technological and human resources. Grading, packing, cooling, and market information systems are either deficient or absent altogether. Successful marketing in the EC will require an entire system which is geared to rapid transactions and transportation, from Jordan Valley field to European supermarket. This is especially necessary, since other Mediterranean producers, notably Israeli, Turkish and Moroccan exporters, already have such systems and are working continuously to improve them. There is a potential for expanded exports to the EC, and development of the (fungible) technologies and skills which such growth will require is a promising area for U.S. assistance. However, increased Palestinian horticultural exports to the EC will not be accomplished easily, and such activity is no panacea for the problems of agriculture in the Occupied Territories. An improved marketing system is a very high priority for the resumption of Palestinian agricultural development.

It is also asserted that merchants lack information on prices in various alternative markets, which may contribute to the fact that prices reportedly vary greatly from one local market to another. A graph prepared by ACDI (see Figure 12) shows some substantial price differences within the West Bank; however, these may be due to other factors, including, for example, transportation costs. Only a detailed marketing study would provide adequate and reliable data to determine the causal



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factors related to price differences. To remedy the lack of pricing and other information essential for effective marketing of agricultural goods, Palestinian NGOs, including a consortium consisting of the Agricultural Engineers Association, the Palestinian Agricultural Relief Committees (PARC) and the Union of Agricultural Cooperatives, have been developing a "market information system." These embryonic efforts, some of which have been supported by A.I.D. through ANERA and ACDI, have been generating data but have only lately begun to disseminate the information widely to Palestinian farmers. Impediments to collective action within rural communities in the Occupied Territories further constrain effective responses, including for example, the ability to collectively respond to the threat of insects.[59]

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Development Opportunities

As with all of the sectors, any strategy of development assistance to Palestinian agriculture must include both immediate short-run relief or development projects and those designed for medium and longer-term development. The need for the former is apparent in the drastic decline in per capita income and by reports of the damage caused by the recent winter's storms. Such short-term efforts take the current political situation as given. Medium-term development plans do not assume political change, but include that as an option.

Ideally, a relief program would generate employment and incomes for the most needy while simultaneously contributing to medium-term development goals. While some type of "food for work" program would seem to be appropriate, a recent report on Food and Nutrition in the Occupied Territories found that it would not be feasible in the West Bank and Gaza Strip.[60] However, other types of relief programs, including for example, construction of agricultural roads and repair of storm damage such as greenhouses, orchard walls and weirs can be used to create useful infrastructure as well as jobs (albeit short-term).

Improvements in marketing and farming technology are urgently needed, can be initiated immediately, and have short-, medium- and long-term impacts. They are also closely connected. Marketing is clearly a critical bottleneck to renewed growth of the sector; equally clearly, the process and pace of technological change needs to be revived, but both local and export market opportunities could be expanded considerably if human and physical capital were upgraded. Packing, grading, and sorting knowledge, techniques, and equipment could be greatly improved. Improvements must also be sought in greatly enhanced market information systems and augmented business skills, from advertising to cost accounting, which successful competition will



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require. Finally, as with other exports, the U.S. should take steps to remove any existing trade restrictions which inhibit the direct importation of Palestinian products to the U.S.

Improved marketing requires changes in farming systems, while improved farming systems will not be adopted as long as marketing bottlenecks persist. With respect to farming systems, varieties which are appealing to discriminating European consumers must be introduced, on-farm transport must avoid spoilage and damage, and the application of chemicals must be carried out in a way which is compatible with the consumer protection standards which are found in such markets. Risk minimization strategies and improved pest control are two critical areas for research and extension. Both the West Bank and Gaza Strip, but, in particular the latter area urgently require assistance in the identification of crops which both economize water and have marketing potential. Given the seriousness of the Gaza water situation and the dependence of so much of the Gaza economy on farming, such assistance should have a high priority. This in no way contradicts the proposition that Gaza's future must be largely an industrial one. Such a transition could be eased by the development of appropriate water-saving crops and the diffusion of water-saving technologies.

The U.S. has a strong comparative advantage in agricultural research and extension, which is urgently needed in the Occupied Territories. Various mechanisms, ranging from short courses both in and outside of the West Bank and Gaza, to exchange programs between Palestinian universities and U.S. land grant institutions, to the encouragement of the dissemination of expertise found in U.S. private sector agricultural companies should all be utilized to upgrade the Palestinians' skills, thereby improving the marketing and farming systems. However, while these U.S. resources should be utilized where appropriate, Palestinian universities and technical schools require strengthening, building on their important contributions over the years. These institutions require additional facilities, especially laboratories, as well as, improved training for staff. However, over time these institutions have become somewhat duplicative in terms of courses and services (understandable under the current travel restrictions). In planning for projects designed to strengthen these institutions, donors should be cognizant of such duplication, taking care to ensure that resources and services are appropriately distributed.

The question of an "appropriate" role for cooperatives in the Occupied Territories continues to be debated, as it is elsewhere, in particular given donor interest in promoting the private sector. Donors have funded cooperatives which "compete" with individual entrepreneurs in other countries, and such cooperatives abound in the U.S. (e.g., the fuel cooperatives which were developed in the early 1980s). The more "traditional"



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functions of cooperatives, as providers of supply and marketing "infrastructures" (e.g., seed and livestock food cooperatives) may no longer pertain, but a clearly-defined role in the changing economic and political structure of the Occupied Territories is unclear. For the present, U.S. development assistance to agricultural cooperatives should focus on upgrading their technical capacity through such activities as assistance in computerization of their information resources and improving the capacity of their staff to provide assistance to members.

In designing development plans and programs, it will important to ensure that, in supporting agricultural development, the focus is on projects which ensure that the agricultural sector contributes to the overall economy. In this regard, it is critical that A.I.D. assistance be utilized to assist Palestinians in transforming agriculture into a modern, water-conserving sector integrated with the global economy. In Gaza, it is particularly important that, at least over the short term, A.I.D. support farmers in a shift to water-saving technologies and crops. Over the longer term, industrial expansion in the Gaza Strip should replace agriculture as a focus of development, given the severe water shortage. A.I.D. can contribute to a positive role for agriculture in the economy of the Occupied Territories by ensuring that projects within the sector have the potential to be sustainable, as well as, by fostering linkages between and among related sectors, including for example industry (for food processing), water and sanitation (for appropriate and efficient use of water resources) and health (to prevent agricultural illness and injury). In this way, it will be less likely that agriculture will become a "brake" on economic development in other sectors, which could occur given the historic importance of agriculture for the Occupied Territories.

## B. Recommendations

The recommendations for A.I.D. support for the agricultural sector are summarized in Table 1.



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TABLE 1
SUMMARY CONCLUSIONS AND RECOMMENDATIONS: AGRICULTURAL DEVELOPMENT

| Conclusions | Recommendations |
| --- | --- |
| 1. While the agricultural sector continues to play an important role in the economy of the Occupied Territories, its productivity and potential for short and long-term contributions are hampered by both bureaucratic policies of the GOI and structural inadequacies in Palestinian quasi-public and private institutions, including inadequate farming and marketing systems. The sector is also in need of short-term relief, both with respect to the sector itself and as a means of jobs creation for the economy as a whole. | 1.1 A.I.D. should support a short-term relief program which includes support for the construction and/or repair (as appropriate) of agriculture feeder roads, land reclamation, and repair of storm damage not already supported through other emergency A.I.D. and other donor programs.<br><br>1.2 A.I.D. should provide technical assistance, short-term training and other support to the Palestinian quasi-public and private sector institutions responsible for, or engaged in the agricultural sector to improve their capacity to plan, manage and evaluate programs and projects.<br><br>1.3 A.I.D. should provide technical assistance, short-term training and other direct support to private sector Palestinian organizations to expand and/or improve Palestinian domestic, regional and international agricultural marketing information systems (e.g., such as those currently being developed by the consortium of agricultural organizations) and support systems (e.g., grading and packing and cold storage). This support should be coordinated, wherever possible and appropriate, with other sectors (e.g., industry, with respect to food processing). |



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1.4 A.I.D. should engage in policy dialogue with the GOI with respect to its policies which hamper Palestinian productive capacity and exports.

2. The lack of planned, coordinated donor assistance in agriculture has also contributed to inefficiencies in this sector. This includes but is not limited to support provided by A.I.D.-funded donors to the agricultural sector.

2.1 A.I.D. should ensure that all agricultural projects it funds through PVOs are coordinated, avoid unnecessary and inappropriate duplication, and are reviewed taking into account at least minimal criteria for selecting projects, including the environmental impact and cost-efficiencies.

2.2 A.I.D. should continue to support efforts on the part of donors to coordinate agricultural relief programs and other donor assistance in this sector.

3. As is true with agricultural policies in other countries and jurisdictions, projects in the Occupied Territories designed to relatively short-term gain (e.g., investments in pesticide and water-intensive agricultural production) have short-, medium- and long-term negative impacts.

3.1 A.I.D. should provide technical assistance, training, commodities and other support for the design and implementation of irrigation systems which make the most appropriate use of scarce water resources.

3.2 A.I.D. should provide technical assistance, training, commodities and other support for the development of new or improved crop varieties and livestock production which recognize environmental imperatives (e.g., conservation of scarce water and improved land use) as well as market factors (e.g., quality and variety requirements for the EC market).

3.3 A.I.D. should encourage the development of the



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Palestinian industrial and service sector in the Gaza Strip in lieu of expansion of the agricultural sector, given the severe water shortage in that area.

4. Agricultural research and extension services and information sources are wholly inadequate throughout the Occupied Territories and non-existent in some areas; this severely hampers the ability of the Palestinian agricultural sector to meet domestic and export market needs.

4.1 A.I.D. should provide technical assistance, short-term training, commodities (e.g., microcomputers and related software) and other support to Palestinian quasi-public and private sector institutions for expanded research and extension services.

4.2 A.I.D. should support linkages between Palestinian universities and private sector agricultural institutions and U.S. governmental (federal and state) agencies, land grant colleges and private sector agricultural research and development institutions.

4.3 A.I.D. should provide technical assistance, short-term training, commodities (e.g., microcomputers and related software, published and unpublished documents) and other support for the development and/or expansion of an agricultural data and information clearinghouse.

4.4 A.I.D. should encourage and support linkages among research institutions in the agricultural sector and those in other sectors (e.g., water and sanitation and health).



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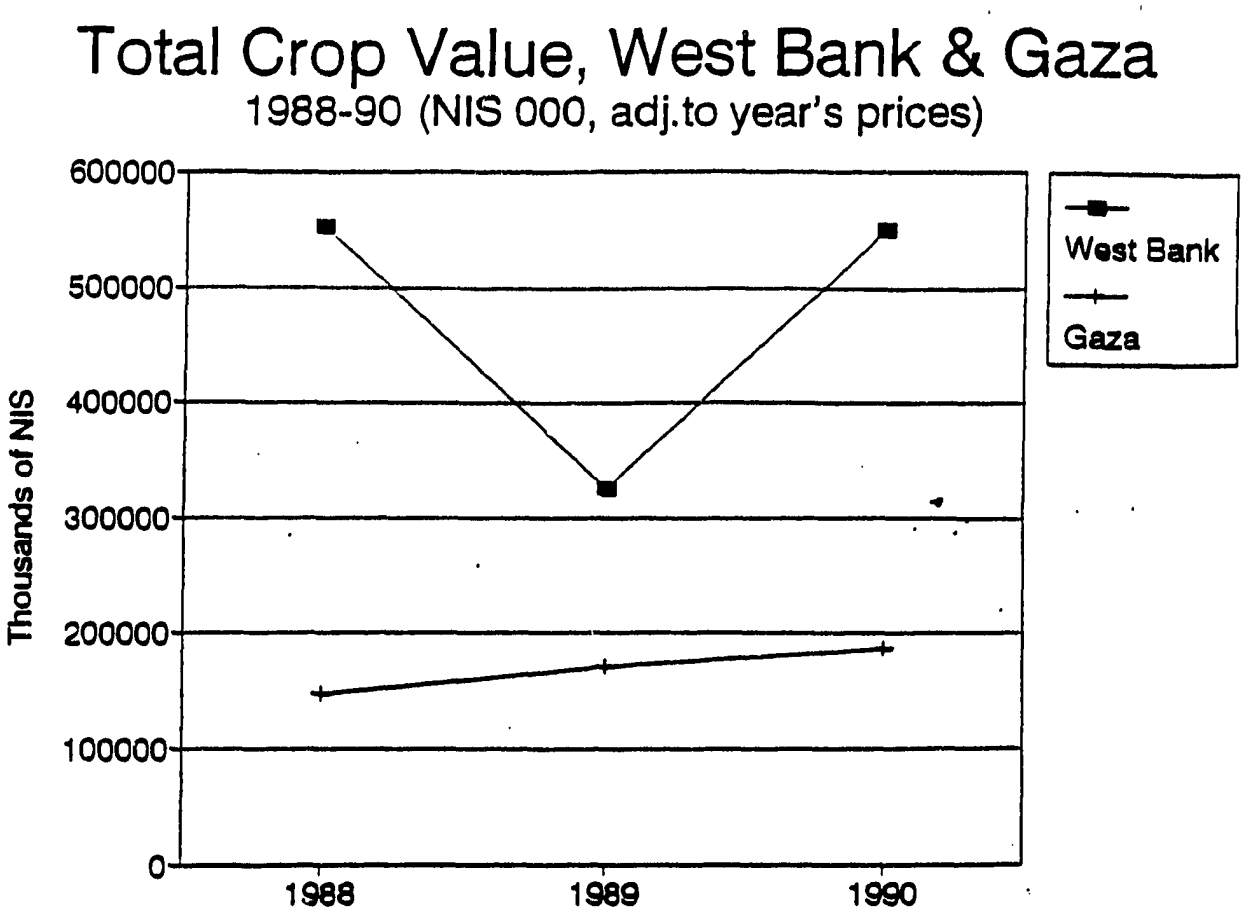
FIGURE 1




Source: Statistical Abstract of Israel 1991. Central Bureau of Statistics: Jerusalem; 1991.



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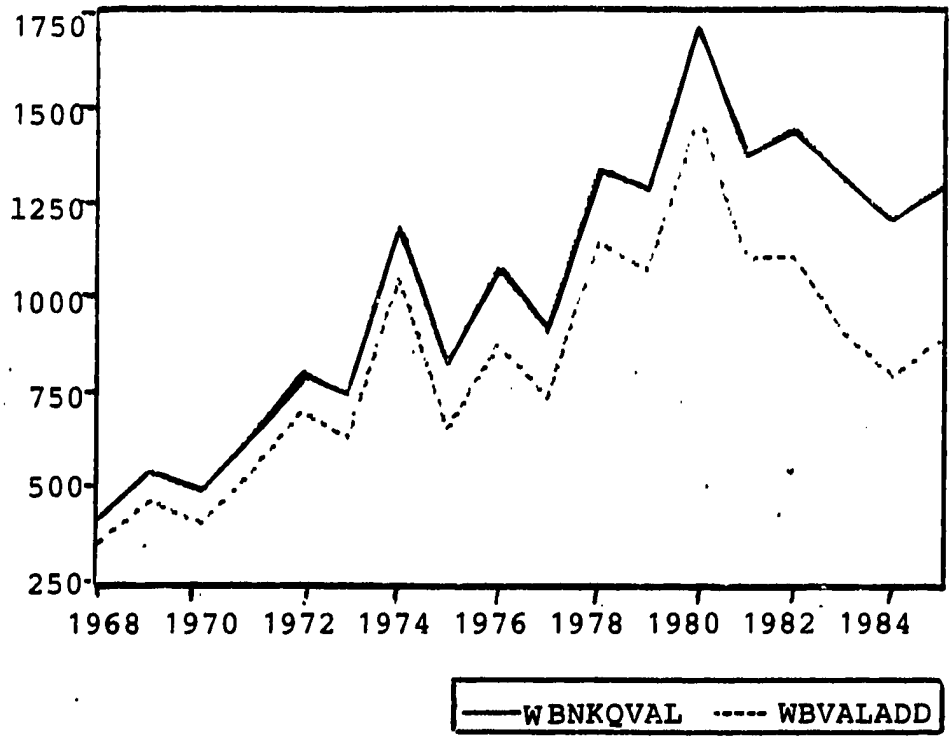
FIGURE 2

REAL OUTPUT AND VALUE ADDED, WEST BANK




Source: Calculated from data in Kahan, D. Agriculture and Water Resources in the West Bank and Gaza (1967-1987). Jerusalem: The Jerusalem Post and the West Bank Data Project; 1987.



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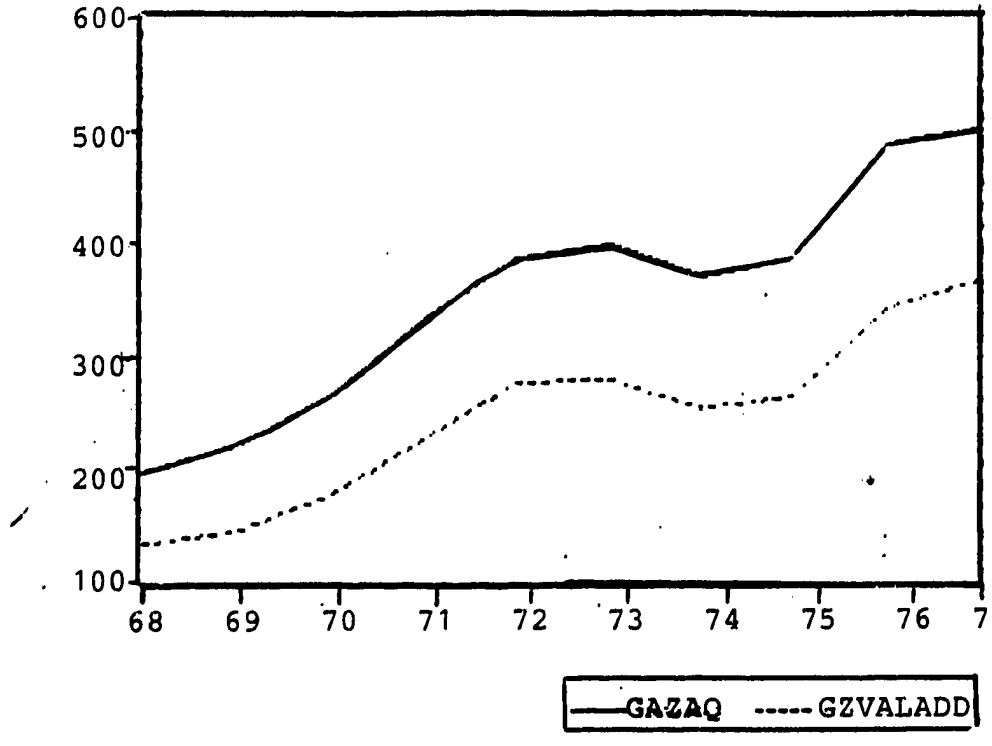
FIGURE 3

REAL OUTPUT AND VALUE ADDED, GAZA




Source: Calculated from data in Kahan, D. Agriculture and Water Resources in the West Bank and Gaza (1967-1987). Jerusalem: The Jerusalem Post and the West Bank Data Project: 1987.



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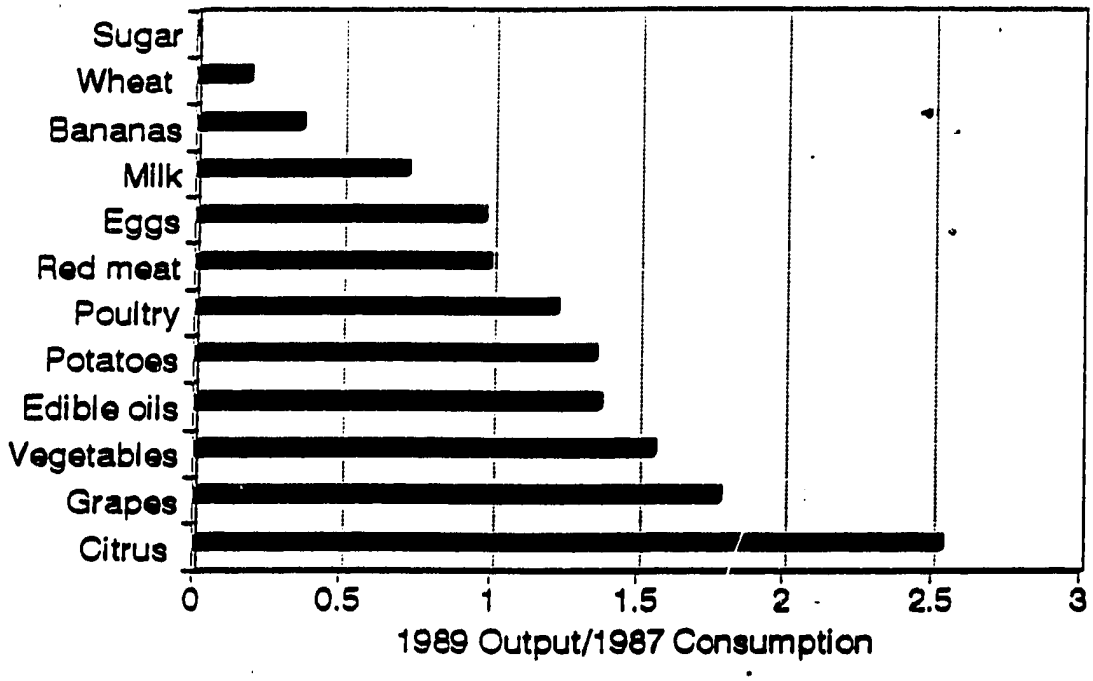
FIGURE 4

# Estimated Self-Sufficiency, Foodstuffs

## West Bank and Gaza




Source: Awartani, H. Agriculture in the West Bank and Gaza Strip: Dynamics of Change Since 1968. Geneva: UNCTAD (Draft Report); 1992.



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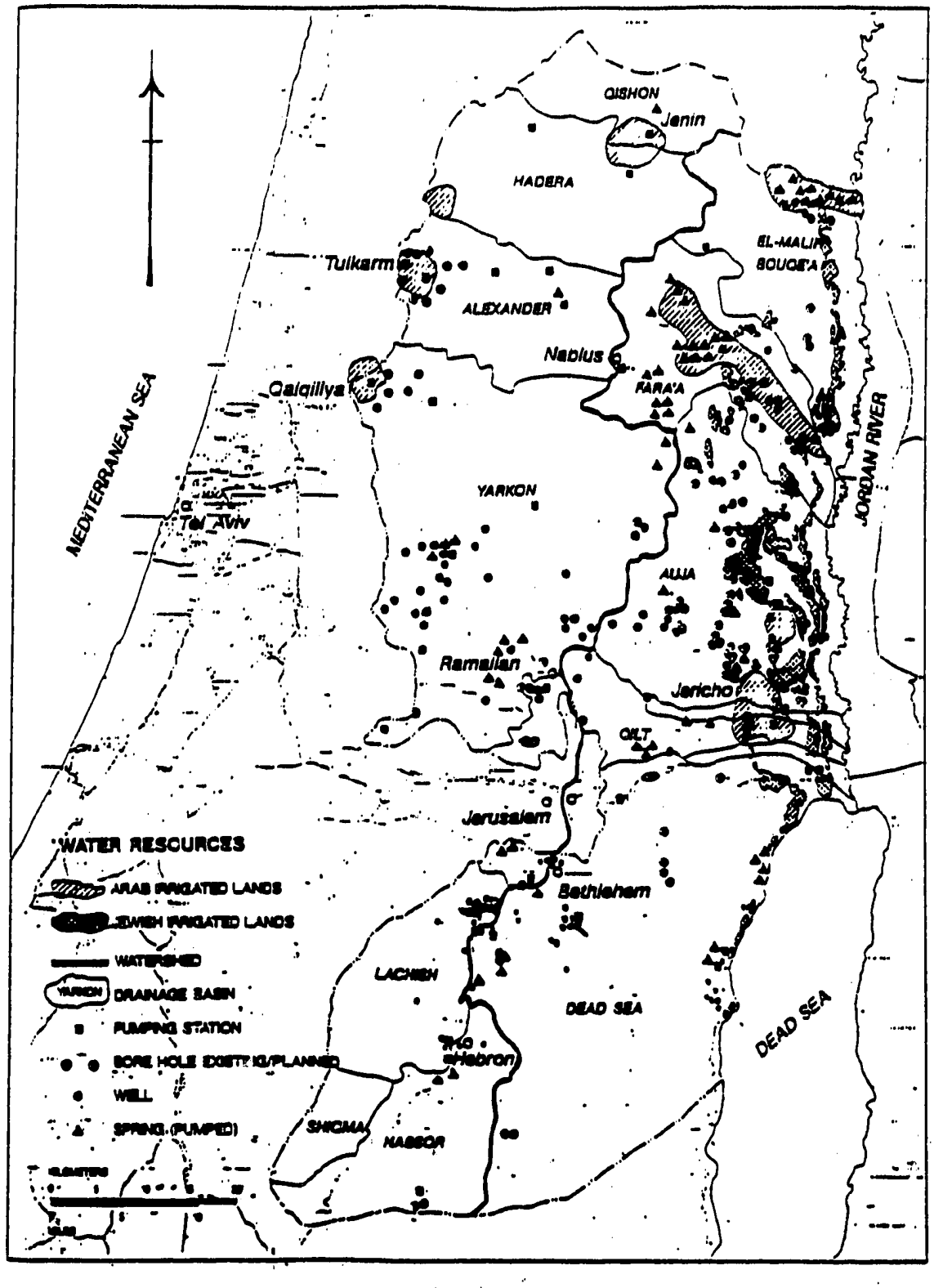
FIGURE 5

GEOGRAPHIC DISTRIBUTION OF FARMING SYSTEMS




Source: Benvenisti, M. and Khayat, S. The West Bank and Gaza Atlas. Jerusalem: West Bank Data Project and Jerusalem Post; 1988.



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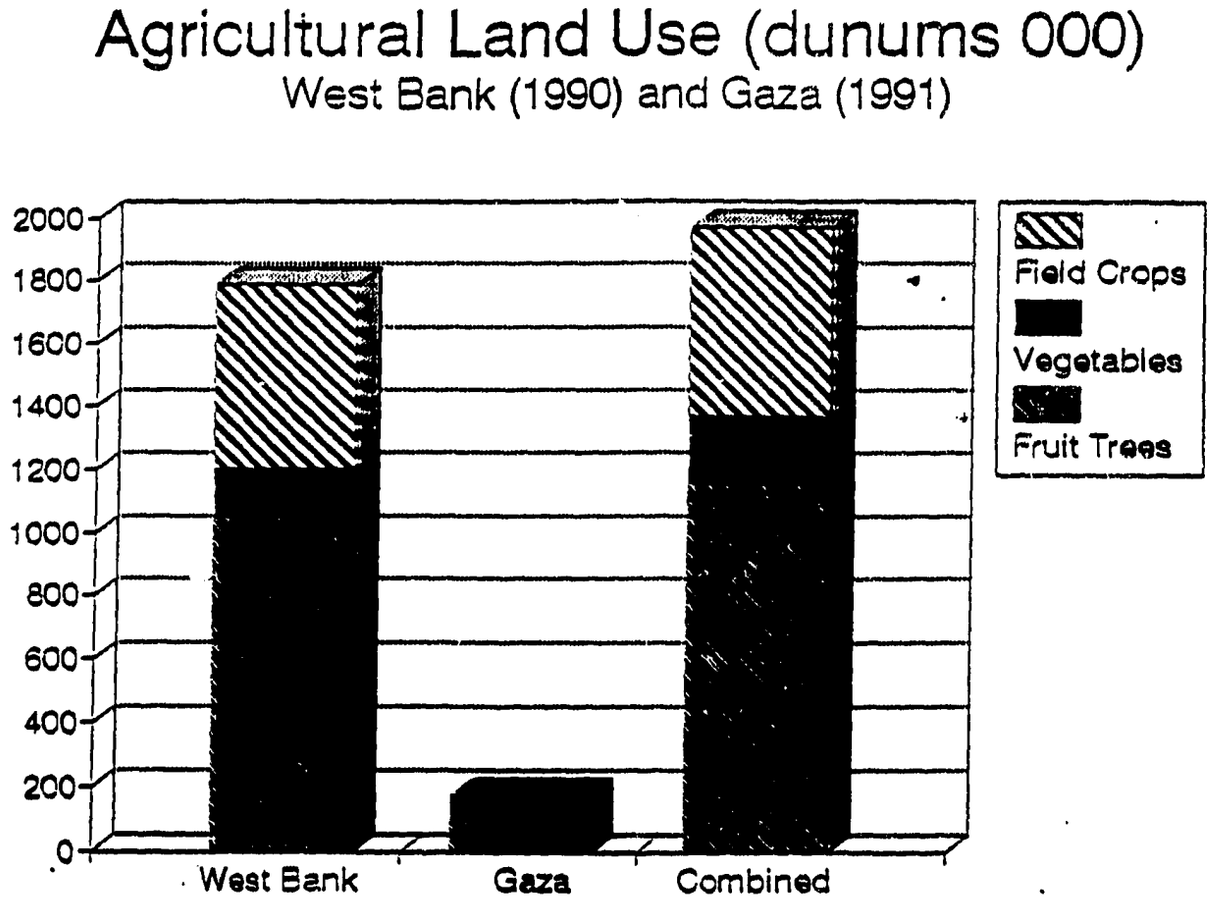
FIGURE 6




Source:Joudeh, S. The Agriculture Sector in the West Bank. Nablus; Report prepared for Policy Research Inc., Clarksville, MD; 1992.



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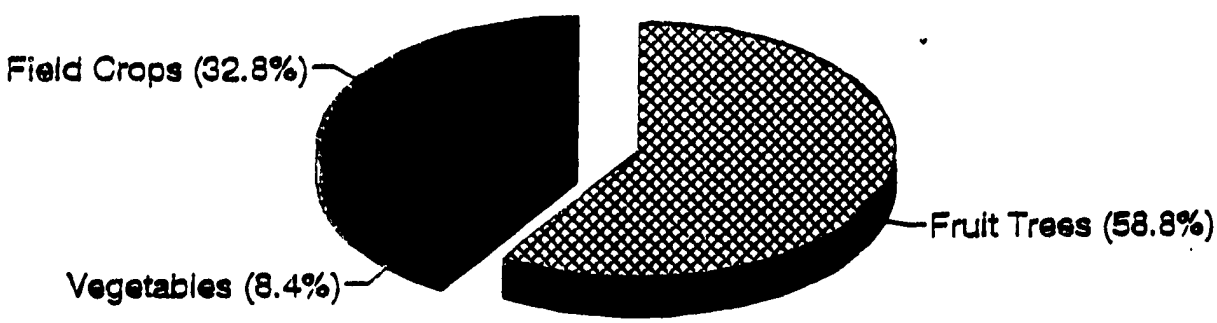
FIGURE 7

# Agricultural Land Use, West Bank, 1990




Source: Joudeh, S. The Agriculture Sector in the West Bank. Nablus; Report prepared for Policy Research Inc., Clarksville, MD; 1992.



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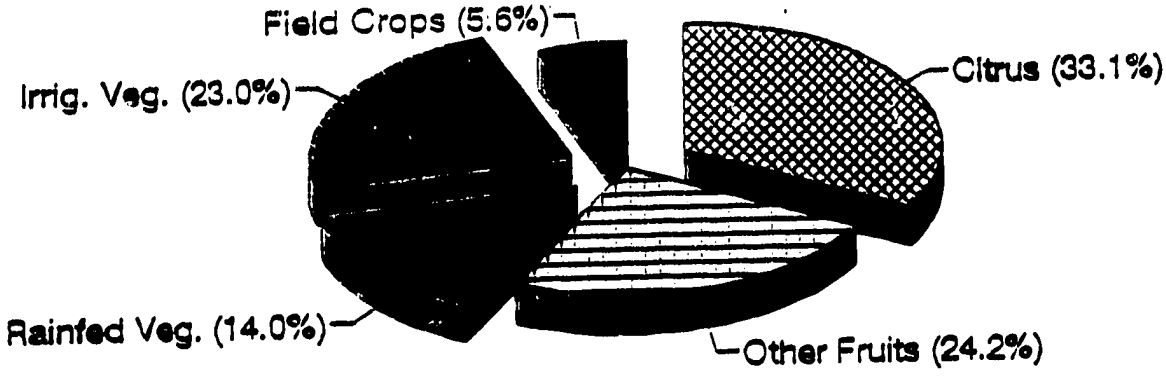
FIGURE 8

# Agricultural Land Use, Gaza, 1991




Source: Joudeh, S. The Agriculture Sector in the West Bank., Nablus; Report prepared for Policy Research Inc., Clarksville, MD; 1992.



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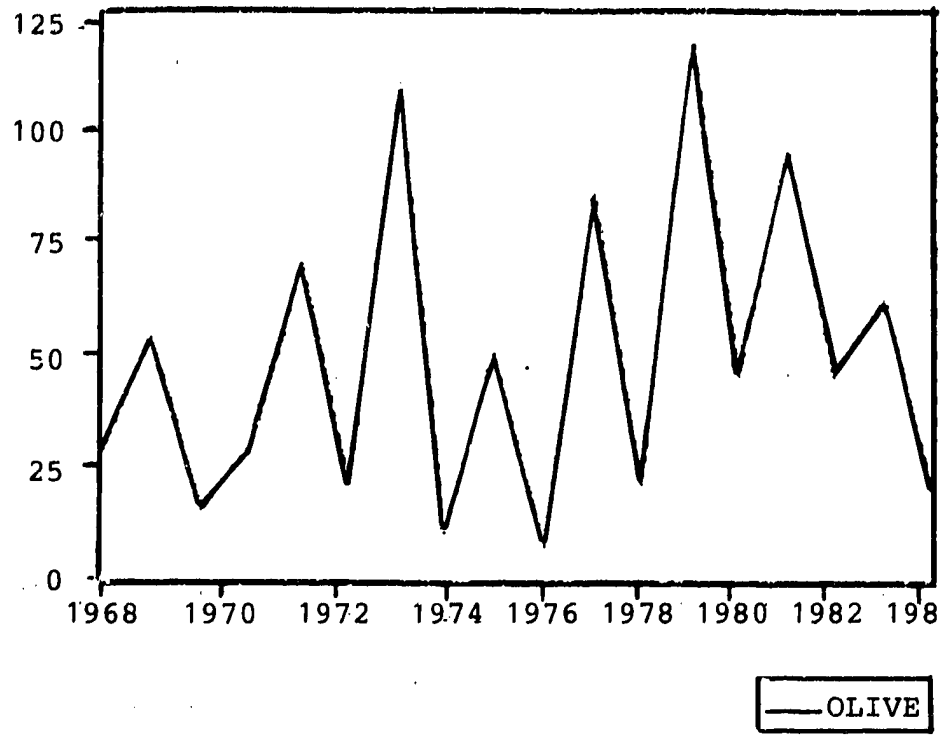
FIGURE 9

OLIVE PRODUCTION IN WEST BANK, 1968-85




Source: Calculated from data in Kahan, D. Agriculture and Water Resources in the West Bank and Gaza (1967-87). Jerusalem: the Jerusalem Post and the West Bank Data Project; 1987.



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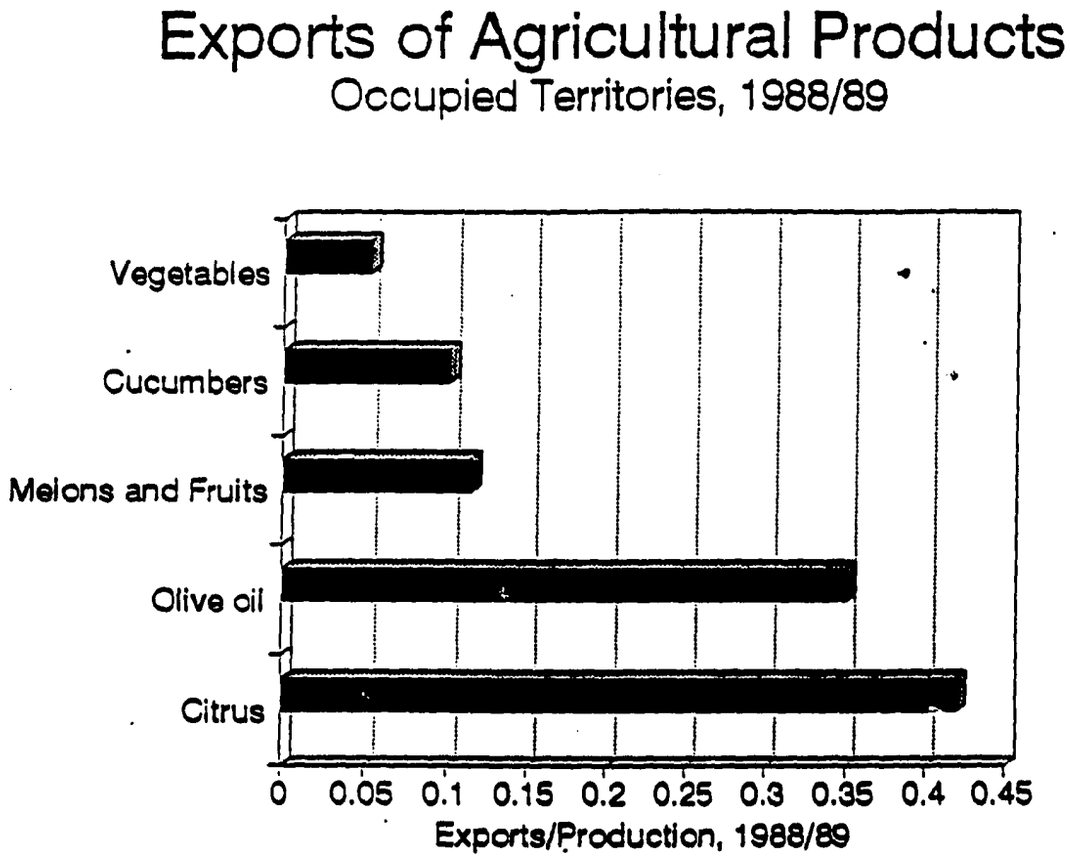
FIGURE 10




Source: Jaber, A. Summary: Export Potentials for West Bank and Gaza in document published by CDP; 1990.



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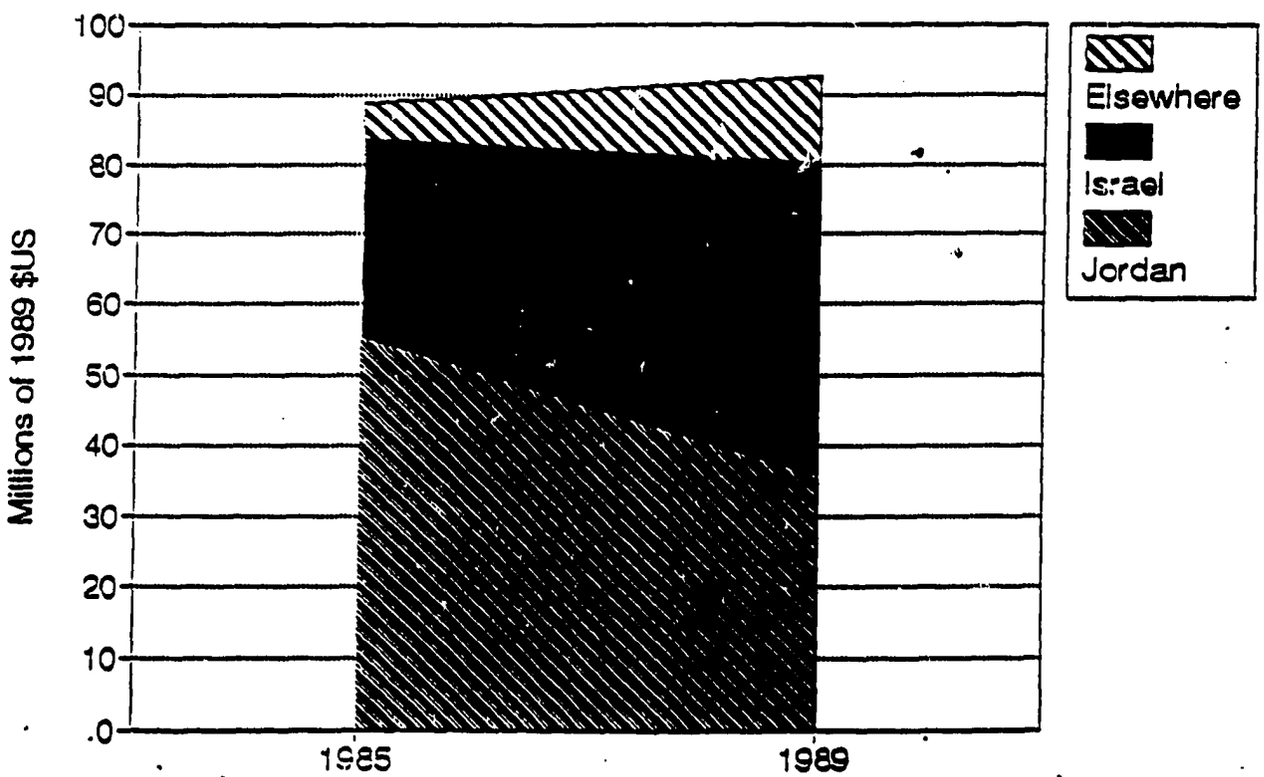
FIGURE 11

# Agricultural Export Markets,1985 & 1989

## Occupied Territories, 1985 & 1989




Source: Data for 1985 from Kahan, D. Agriculture and Water Resources in the West Gank and Gaza (1967-1987). Jerusalem The Jerusalem Post and the West Bank Data Project; 1987. Data for 1989 calculated from Cooperative Development Project (CDP) administered by ACDI.



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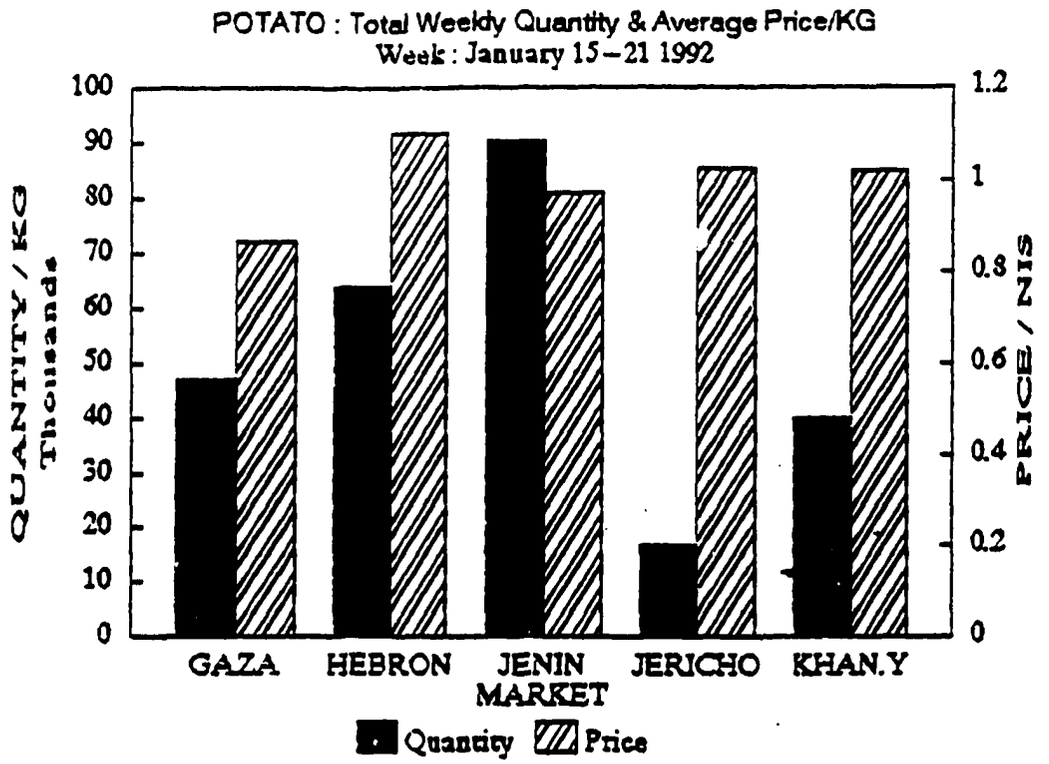
FIGURE 12

AGRICULTURAL GOODS MARKET INFORMATION BY QUANTITY AND PRICE



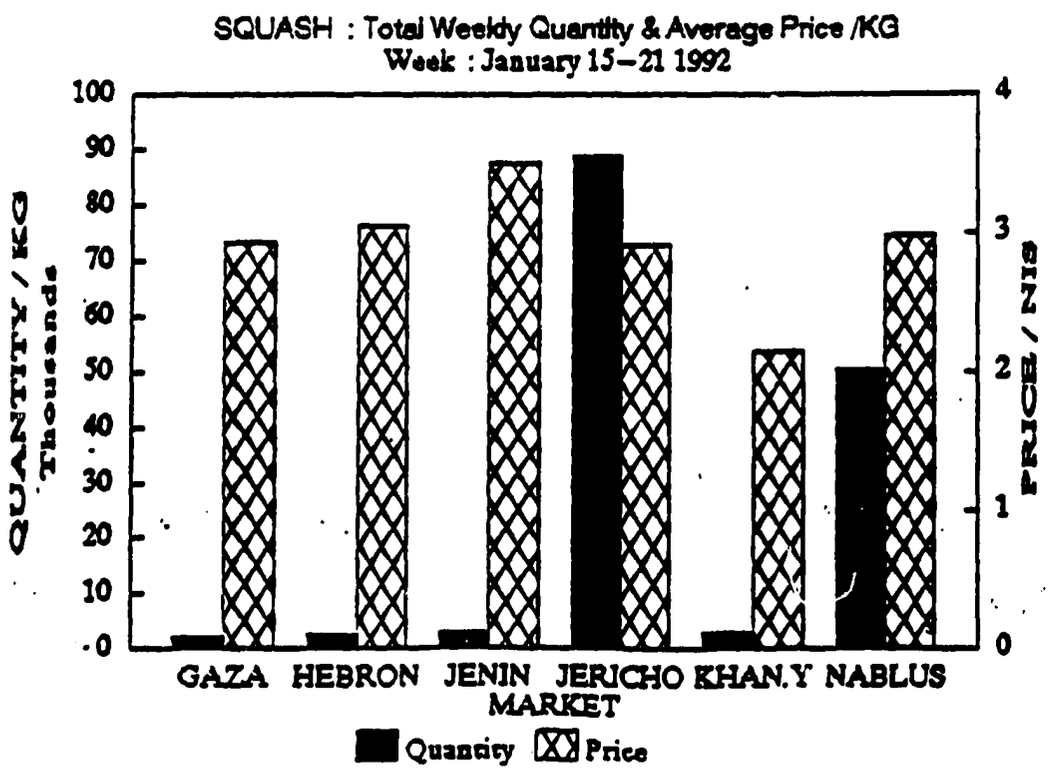






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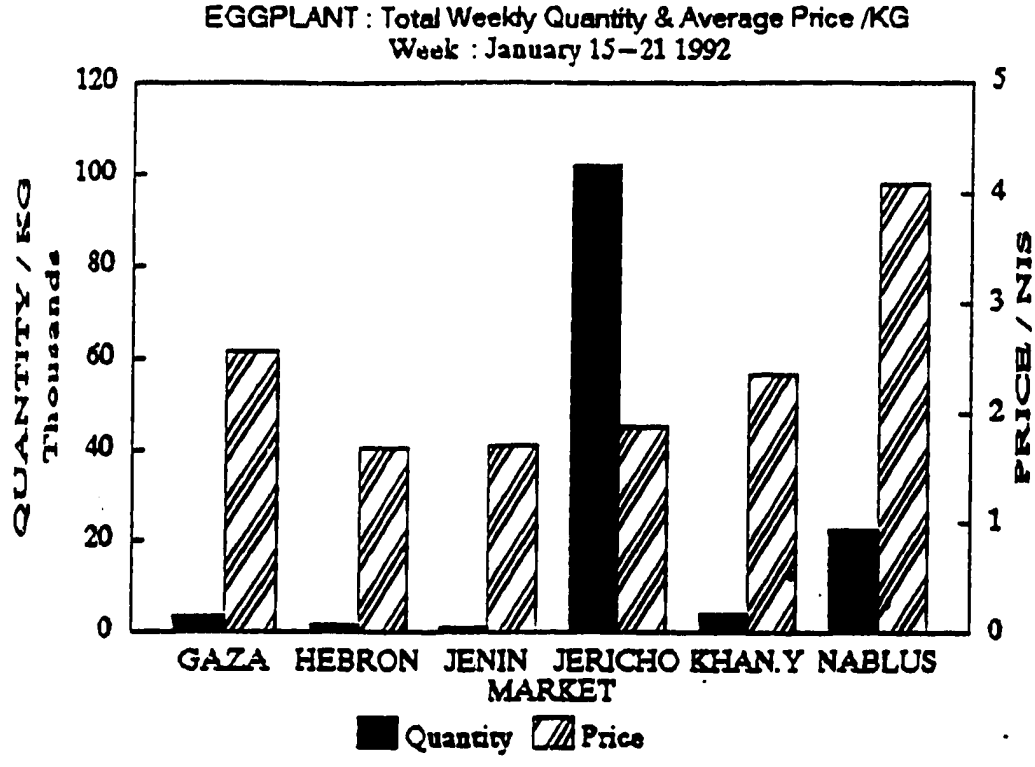
FIGURE 12 Continued



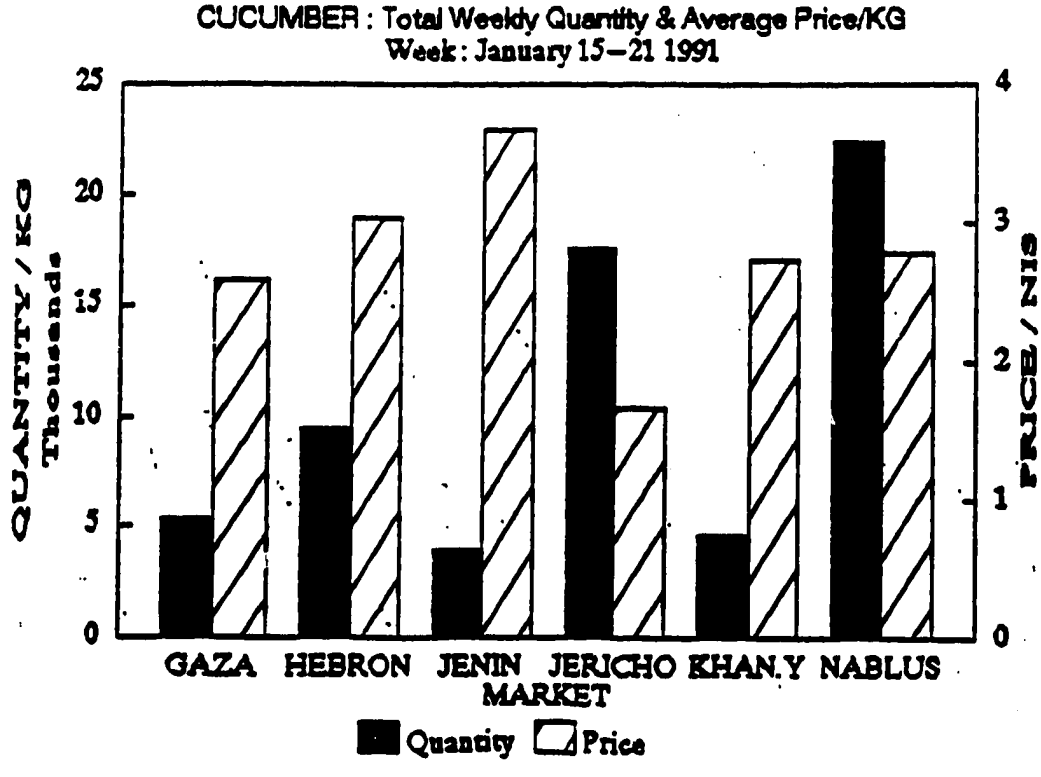






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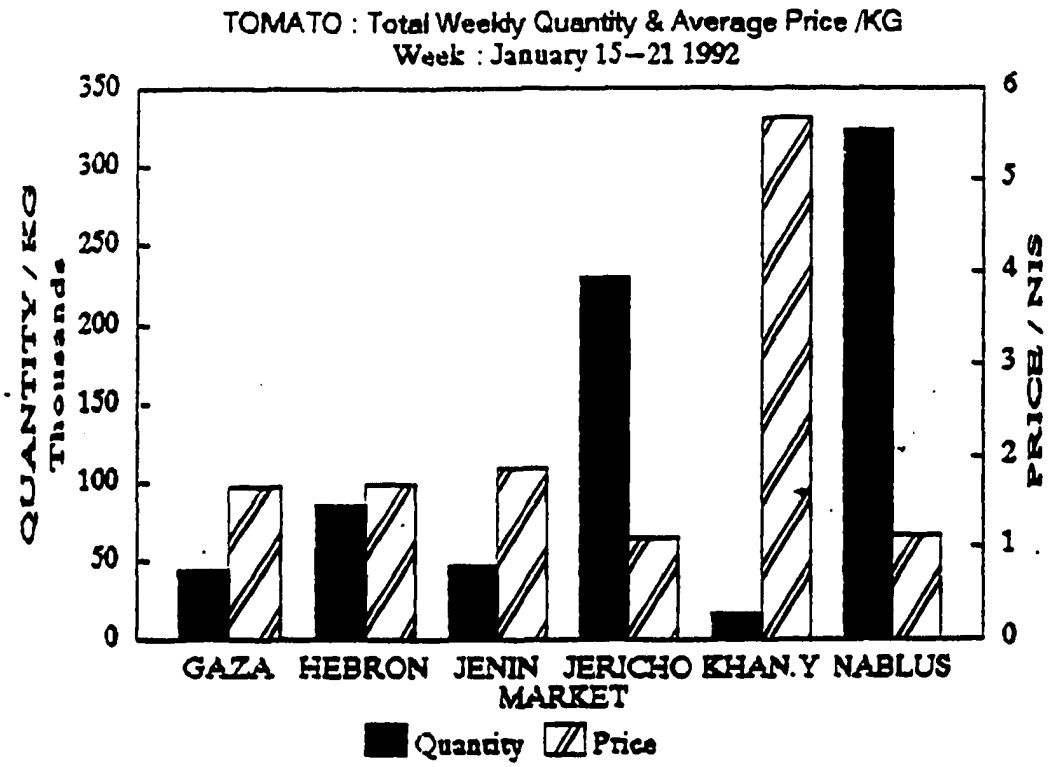
FIGURE 12 Continued




Source: Cooperative Development Project (CDP) graphic printout.



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# EDUCATION AND TRAINING IN THE OCCUPIED TERRITORIES

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

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## I. EXECUTIVE SUMMARY

Palestinians have historically had the reputation of being highly educated and viewing education as a linchpin of society. In Beit Jala, for example, as of 1989, 90% of the population had completed post-secondary education. For that reason alone, the present inadequacy of the educational system, and the impact that this inadequacy has had on Palestinian society, is particularly troublesome.

The Israeli Civil Administration (CIVAD), which is part of the Ministry of Defense, has authority over the educational systems in the Occupied Territories at all levels, including control of public and private sector curricula. Three separate types of institutions provide education in the Occupied Territories: the public sector (wholly administered by the CIVAD), UNRWA and the private sector. CIVAD operates primary, preparatory and secondary schools which are attended by 75% of the students in the West Bank and 45% of the students in the Gaza Strip; CIVAD also operates 11 two-year and teachers colleges and technical schools. UNRWA operates schools at the kindergarten through secondary levels, providing education to 12% of the population in the West Bank and 54% in the Gaza Strip. A number of individual non-profit institutions have kindergarten through secondary, which are attended by 12% of the students in the West Bank and 5% in the Gaza Strip. All of the six universities in the Occupied Territories are private - a situation unique in the world.

Public schools at all levels of education are poorly equipped, with few library or laboratory facilities; the buildings are in deteriorating condition. UNRWA schools are not in substantially better condition with respect to physical plant and facilities. Most community colleges and universities lack adequate laboratory and library facilities, critical factors in the quality of higher education. University faculty also have scant access to newer educational technologies or to information resources. In-service teacher training is almost non-existent in public schools and minimal at private and UNRWA facilities; teachers have little contact with recent educational technology and new developments in science and other fields.

The CIVAD has approval authority over the curriculum of all schools in the Occupied Territories, two distinct civil administrations (each headed by a different military governor) control the two geographic areas. This greatly exacerbates the historic distinction between West Bank education (based on the Jordanian system) and education in the Gaza Strip (based on the Egyptian system). The existence of two separate military commands also explains the fact that, while all schools at all levels were closed in the West Bank (not including East Jerusalem) for most of the period 1988-1990 (and sporadically since then), the schools in Gaza were rarely closed. All



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universities were closed by the CIVAD in the Occupied Territories for more than four years; they were allowed to reopen on a phased basis (i.e., certain departments) beginning in early 1992, although some are being sporadically closed for brief periods of time. There have been problems with discipline in many of the schools, not surprising in view of the fact that schools at every level have been entered by soldiers who have arrested and detained students, teachers and administrators. Students and parents have been arrested for participating in "distance learning" projects, and students and teachers have participated in activities against authority figures.

Under these circumstances, it is hardly surprising that illiteracy rates are rising (now estimated at 20% - 30%) and that recent assessments of language and math skills demonstrate a serious deterioration in these two critical skill areas. The proportion of students successfully completing the "Tawjihi," has decreased, as has the proportion of students attending secondary school. There are positive developments, nonetheless. During the Intifada, individual schools and local institutions developed approaches to "distance learning", ensuring that students could continue to acquire some modicum of education in spite of school closures and highly stressful living conditions. Local educational institutes have also designed and implemented impressive literacy training programs, and women's groups in mosques have begun to operate pre-schools which are often combined with skills' training and health education for mothers.

All of the data with respect to enrollment, dropout and examination results in the West Bank must be considered in light of the fact that, effectively, public and private K-12 students had no access to education during the period 1987 - 1990, when schools were closed for most of that period. They have been sporadically closed since that time as well and schools are closed during general curfews. While post-secondary schools in the Gaza Strip were not closed for long periods of time, the frequent curfews included the closure of schools. In the West Bank, for all intents and purposes, school-age children lost two years of education from 1987 to 1991.

Given the significant problems with the inconsistency in curricula between the West Bank and Gaza Strip, the almost non-existent library and laboratory facilities, the inadequate physical structures and minimal in-service teacher training programs, there is cause for concern with respect to ability of this generation of Palestinians to continue the tradition of relatively high education and to compete successfully in the global economy.

Table 1 presents a summary of conclusions and recommendations.

## I. INTRODUCTION

### A. Importance of Education and Training for Development in the Occupied Territories

The positive synergies among human resources' development, technological innovation, and expansion of markets lie at the core of economic and social development. Human resources' development strategies - in practice, education and training of the population - require substantial national investment and commitment, a commitment which must be shared by government, business, labor and society in general.[1]

This commitment - a necessary but insufficient condition for national and human growth and development - is increasingly accepted as having contributed to the rapidly expanding economies of countries as divergent as Germany, Japan and the Republic of Korea, for example.[2] Recognizing the linkage between economic growth and human resources' development, the Government of Israel (GOI) expended more than $11 billion on education in Israel during the decade of the 1980s - more than $1.1 billion in 1987/88 alone, or $846 per pupil.[3] No comparative data are available with respect to GOI allocations for education in the Occupied Territories, although estimates based on reports of CIVAD budgets for public schools range from $10 million to $20 million per annum, or $23 to $46 per pupil.[4]

If the Palestinians are to reverse their decade-long fall in per capita income and living standards, investments must be made in human resource development in the Occupied Territories. The area is bereft of major exploitable minerals, possesses agricultural land of only average quality, and confronts an acute water shortage in Gaza. The only resource upon which the Occupied Territories can build a development strategy is the Palestinian people. Palestinians have long recognized the priority of education and training; such interest has several roots:

1) the historic interest in and commitment to education on the part of Palestinians, who are acutely aware of the need to base their own comparative advantage upon the skills of their people;

2) the awareness that knowledge and skills' enhancement of individuals (collectively, human resources' development), unlike infrastructure, cannot be "appropriated," although it can be severely undermined; and

3) the fact that many Palestinians believe that the educational system would very likely largely devolve to their control early in any autonomy process.



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Educational investment does not, unfortunately, entirely escape from the political situation. Effective investment in enhanced skills in the West Bank and Gaza continue to face constraints which foster duplication and undermine effective cooperation which is essential to the planning and management of human resources' development strategies. In virtually all countries, whatever the economic system, the national government provides some level of funding, guidance and overall structure to support education and training. This makes it possible to plan, coordinate and help ensure quality education for all citizens. This is, essentially, impossible in the Occupied Territories because there is no central educational planning structure and minimal public investment is made in education and training at all levels. As a result, independent educational institutions receive funds from a wide range of donors, contributing to a tendency to divisions among the Palestinian community. In turn, these community divisions are exacerbated by the circumstances of the occupation.

Notwithstanding the compelling reasons for investment in human resources' development, it is important to recognize that a U.S. Government (USG) investment in human resources' development must be linked directly with USG and Palestinian strategies for comprehensive development for the area (whatever the immediate and long term political solutions), and with USG investments in facilities and technological enhancement. This is imperative if sound economic and social growth is to be attained. Experience in the U.S., Europe and elsewhere has demonstrated that investment in an adequately trained workforce is simply insufficient. Large numbers of highly skilled or semi-skilled individuals who are unemployed or underemployed, not only reflect a human tragedy but have important implications for economic and social stability.

## III. SECTORAL STATUS AND TRENDS

### A. Organization of the Educational System in the Occupied Territories

The educational systems in the West Bank and Gaza Strip are not uniform, including curricula and testing at all levels. Rather, that of the West Bank is based on the Jordanian Law of Education and Culture of 1964; that of the Gaza Strip has a framework based on the Egyptian educational system; the United Nations Relief and Works Agency (UNRWA) curricula is based on both of these systems, dependent on the location of the school.[5] Overriding these systems is the Ministry of Defense, Civil Administration (CIVAD), with two distinct military governors in each of the two territories. Each of the CIVAD commands has a Department of Education. In the West Bank, there are seven district educational offices: Bethlehem, Hebron, Nablus, Jenin, Tulkaram, Qalqiliah, and Ramallah. In the Gaza Strip, there is one



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district educational office within the CIVAD. The CIVAD exerts control over the educational content and operation of public (CIVAD), private and UNRWA schools, including approval authority with respect to books and other educational materials used as well as in-service teacher training.

Three separate types of institutions provide education in the Occupied Territories:

* the public sector (wholly administered by the CIVAD), which operates primary, preparatory (middle) and secondary schools as well as community and teachers' colleges;

* UNRWA, which provides primary, preparatory and secondary education to registered refugees; and

* the private sector, which includes pre-school through university-level institutions sponsored and/or operated by community-based charitable organizations, region-wide institutions and intra-regional associations.

The Council of Higher Education, founded by Palestinian educators, public officials and others in 1978, has assumed an ever-increasing role in the planning of education services in the Occupied Territories. Although initially and primarily concerned with higher (university-level) education, in recent years it has added committees concerned with pre-university education and with training programs. Notably, most donors coordinate their funding of educational activities through the Council.

## B. Overall Enrollment

Figure 1 presents the distribution of students in the kindergarten through secondary level by sponsoring entity of the school for 1990/91 (for the West Bank) and 1991/92 (for the Gaza Strip). In the West Bank, 75% of the 338,165 students were enrolled in government schools in 1990/91; there were slightly more students (13%) enrolled in private schools than in UNRWA schools (12%).[6] In contrast, in the Gaza Strip (in which refugees comprise 80% of the population), 54% of the 186,434 students enrolled in 1991/92 were in UNRWA schools and 45% were enrolled in government schools; only 2% of students were enrolled in private institutions.[7] The smaller proportion of Gaza students enrolled in private schools is primarily a result of the relatively poorer economy of the Gaza Strip.

Enrollment in private schools varies significantly by level of education; for example, at the primary and preparatory levels, 6% of primary school students in the West Bank were enrolled in private schools in 1990/91. This proportion more than doubles at the secondary level (to 13%). In teachers training or community



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colleges, approximately 85% of 6,054 students were enrolled in private or philanthropic schools in the West Bank in 1990/91;[8] no private community colleges exist in the Gaza Strip. All universities in the Occupied Territories are private, a situation which is unique throughout the world.

The tuition rates in private schools are minimal: 1) from $10-$20 per month for kindergartens, 2) from $15-$25 per month for primary, preparatory and secondary schools, and 3) from $120 per year for public community colleges to $150 per year for private community colleges. University tuition ranges from $150-$500 per year.[9] However, even though only approximately 20% of students officially receive scholarships, no student is refused admission to a private university because of an inability to pay. The universities (and to a lesser extent the private primary through secondary schools) are financially supported largely by religious (Islamic and Christian), non-sectarian and other external donors.

In the 1991/92 academic year, 12,681 teachers were working in formal school education in the West Bank and 5,365 working in the Gaza Strip. Teachers in the Occupied Territories are poorly paid; the average salary of teachers in public schools in the West Bank, for example, is $350/month, the average for UNRWA teachers is $450/month. Private school teachers' salaries range widely, from $150 to $400 per month. Kindergarten teachers (all of whom work for either UNRWA or the private sector) earn an average of only $70 per month. In comparison, the average teacher's salary in Israel is $650/month. In Jordan, the average is reportedly $200/month. In both countries, however, in-service training and other benefits are available.[10]

Several teachers' unions in the Occupied Territories are actively involved in working with local non-governmental organizations (NGOs) to develop teacher training materials and to conduct in-service training for teachers at all levels. However, teacher training is hindered by, among other factors, the limitations that the CIVAD places on participation in teacher training activities by public school teachers (e.g., travel restrictions and prohibitions against participation in teacher training sponsored by NGOs). CIVAD provides essentially no in-service teacher training, the UNRWA has some limited in-service training and the private sector depends largely on workshops sponsored by donor agencies through local NGOs. Recently, the universities have embarked on an EEC/UNESCO, in-service teacher training project which will be coordinated by the Council on Higher Education.[11]

More specific trends in enrollment and other educational data are presented by level of educational institution.

## IV. EDUCATIONAL INSTITUTIONS

This section of the report describes educational and training institutions and services, by level or type of education. Key indicators are presented where available.

### A. Kindergarten, Primary, Preparatory and Secondary Education

Kindergartens are, for the most part, operated by the private sector, although UNRWA has a few kindergartens in both the West Bank and Gaza Strip. For example, in 1989/90, only 29,207 students were enrolled in kindergartens, of whom only 1,136 were enrolled in UNRWA facilities;[12] this probably represents only 10-20% of children of kindergarten age, although age-specific population estimates are not available by which to derive precise estimates. Charitable societies and mosques throughout the Occupied Territories have become interested in pre-school and kindergarten education. In 1985, the Early Childhood Resources Center was established in Jerusalem. This organization has supported the local NGOs in their efforts to promote and improve the quality of pre-school education;[13] there is no comparable organization in the Gaza Strip. While the CIVAD ostensibly supervises the education at this level (as at all levels), many of the schools are not licensed.[14]

Until 1991, the Jordanian educational statute mandated nine years of free, compulsory education from the age of six, and created three, additional years of free high school education. Completion of grade 10 was also made compulsory in both Jordan and the West Bank in the same year. At grade 11, students specialize in one of three "streams": literary, scientific, or vocational prior to completion of grade 12. At the end of this cycle, students take a comprehensive exam, the "Tawjihi," whose successful completion is rewarded with the grant of the secondary school certificate. This system remains in effect in the Occupied Territories.[15] In 1968, a military order established the Supreme Examination Board, which is composed of Palestinian examiners who communicate examination results to the Jordanian Ministry of Education in Amman. This body remains the official grantor of the secondary school certificate in the West Bank and Gaza Strip.[16]

All of the data with respect to enrollment, dropout and examination results in the West Bank must be considered in light of the fact that, effectively, public and private K-12 students had no access to education during the period 1987-1990, when schools throughout the West Bank (with the exception of East Jerusalem) were closed for most of that period. They have been sporadically closed since that time as well, and schools are closed during general curfews. While post-secondary schools in the Gaza Strip were not closed for long periods of time, the

frequent curfews included the closure of schools. In the West Bank, for all intents and purposes, school-age children lost two years of education from 1987 to 1991.

Given the significant problems with the inconsistency in curricula between the West Bank and Gaza Strip, the almost non-existent library and laboratory facilities, the inadequate physical structures and minimal in-service teacher training programs, there is cause for concern with respect to the ability of this generation of Palestinians to continue the tradition of relatively high education and to compete successfully in the global economy.

A.1 Enrollment, Dropout Rates and Examination Results

According to the Statistical Abstract of Israel (SAI) there were 506,119 students enrolled in primary through secondary schools in the Occupied Territories, in the school year 1989/90 (the most recent year for which directly comparable data are available for the West Bank and Gaza Strip from any source). Just over 81% of these students were enrolled in the mandatory, primary and preparatory levels.[17] The total estimated number of enrolled students in the primary-secondary levels in the West Bank was 338,165 for the year 1990/91.[18] (See Table 2.) In Gaza, the total number enrolled was 186,434 for the school year 1991/92.[19] Comparable estimates for a single year were not available, for each of the jurisdictions, but assuming that the proportion of enrolled students has not changed significantly, the total number of enrolled students at the primary-secondary level is approximately 535,000. Estimates of the proportion of school-aged children enrolled in schools in the Occupied Territories at the three pre-university levels are: 70-85% for primary, 45-65% for preparatory and 25-35% for secondary.[20] The proportion of females enrolled in primary through secondary schools remained essentially the same from 1982 to 1988 (48% versus 47%).[21]

It is very difficult to estimate the dropout rates (the percentage of those who entered, but did not complete a grade level) in the Occupied Territories. Estimates of dropout by grade 8 range from 5% to 15%.[22] Perhaps 45% of present students reach grade 12,[23] a performance roughly similar to comparison countries. UNDP finds that about 49% of youth are enrolled in secondary education in the class of countries, "medium human development, excluding China."[24] While no gender-disaggregated data for dropout rates are available, it is considered a particular problem for girls, especially in the villages.[25] The factors associated with drop-out rates in other countries, including stress, family disintegration and social pressures, are exacerbated in the Occupied Territories. Children face the stress and educational disruption of school closures, administrative detention of students' parents and teachers, and social and economic pressures of the Intifada. Declining family

incomes, in particular since 1990, have also reportedly led to an increase in dropouts among poor children, as they seek employment in the informal sector as a means of supplementing family income. In this area, children in school also live under military occupation and more than 20% live in refugee camps under deplorable conditions.

The proportion of students successfully completing the Tawjihi in the West Bank has fluctuated widely since 1968, but generally has decreased since 1988. In all but two years since then, the proportion has been less than that of 1968, when 69.6% of students passed the Tawjihi; the proportion completing the Tawjihi in 1984, 1988 and 1991 was only 54%, 58.9% and 52.6%, respectively.[26] In numeric terms, the data are striking: in 1991, only 8,296 students completed the Tawjihi - just over the number for 1985.[27] Data for the Gaza Strip were available only for the years 1981 through 1986; for the years 1987-1990, the data are available disaggregated by the art and science examinations; these data also show wide fluctuations, although they are consistently higher than those for the West Bank, with the range in those years from 59.5% to 85%.[28] In the West Bank, a consistently higher proportion of students successfully complete the scientific portion of the examination;[29] in the Gaza Strip, the relative proportion fluctuates.[30] Through the period 1985-1991, the proportion of female students in the West Bank completing the Tawjihi has been 36% to 45%, with the proportion declining since 1988.[31] No comparable data are available for the Gaza Strip for this period, but the proportion ranged from 45.4% to 55.5% during the period 1981-1986, the most recent years for which data are available.[32]

Other than the Tawjihi results, there have been limited assessments of student learning. Recently, the Tamar Institute conducted studies of language and mathematics proficiency in the West Bank. Results of both assessments were startling, revealing considerable weakness in both writing skills and estimation and solving of verbally-presented problems. The Tamar Institute is now working with other NGOs and with the Council of Higher Education to expand these studies and to identify approaches to correct these deficiencies, both within the context of the current political situation (and thus the current educational system) and in the event of autonomy.[33]

## A.2 Quality of Education

As in any educational system, there are serious concerns with respect to the quality of education. Although the relative importance of classroom size with respect to learning or later performance is controversial among educational researchers, the pupil/teacher ratio is considered a standard indicator. The pupil/teacher ratio in the Occupied Territories in 1982 was 42:1; by 1988 the ratio was 44:1. Similarly, the pupil/school ratio

has increased from 312:1 to 321:1 over the same time period.[34] Generally, class size in the Gaza Strip is larger than in the West Bank, and UNRWA schools have class sizes the same as, or higher than those of the public education system. As in other countries, class size in the private sector is far smaller than the public system.[35] By comparison, in Israel the average pupil/teacher ratio was 27:1 in 1979/80, 28:1 in 1984/85 and 28:1 in 1991, the only years for which data were available.[36]

The lack of clear linkage between the West Bank (Jordanian) and Gaza (Egyptian) curricula, and the differences between the various systems (public, private and UNRWA) pose significant problems for primary through secondary education. This will be particularly true in the event of a political change and is of concern on the part of Palestinian educators. While a full-scale review and upgrading of the curricula may be warranted (to both improve the quality and render it more technically and culturally relevant), that process can take years. What curricula should be used in the interim and how can improvements in textbooks and teacher (as well as student assessments) be integrated within the existing curricula? These are issues which are presently being explored by such organizations as the Tamar Institute, the Educational Network, the Council for Higher Education (which has committees for pre-university education) and individuals working with the technical committees associated with the peace process.

One aspect of education which contributes to the quality of education is the physical environment. Public school buildings (unlike those of UNRWA) have often not been specially constructed for use as schools. About 30% of all schooling takes place in rented buildings which are usually small, typically part of an old residential building. They are often in considerable disrepair, with cracked ceilings, poor lighting and ventilation, leaking walls and are unheated. Many schools operate on double-shifts, with one shift from morning until noon and a second shift from noon until mid-afternoon.[37]

With such basic structures so neglected, it is unsurprising that very few schools have libraries, laboratories, audio-visual aids or other facilities and materials needed to foster the growth and development of independent, problem-solving mental habits. For example, in 1985/86, only 27% of the 822 public schools in the West Bank had a separate library; even at the preparatory and secondary level, only half had a separate library. These "libraries" were usually ill-equipped, some with no books or other materials and no furniture. More than one-third (35%) of public, preparatory and secondary schools had no science laboratory, and those with laboratories were largely ill-equipped.[38]

Textbooks are a particular problem. In addition to a scarcity of textbooks, many of those used in both the West Bank and Gaza

Strip are old (this is of critical importance for the sciences), teachers are not trained in the use of newly introduced texts or curricula, the textbooks are not clearly related to a coherent curriculum design and there is no clear relationship between curricula or texts at the primary, preparatory and secondary levels.[39] Notably, while books in public schools are free in grades 1-10 (with the exception of English books), students must pay for those at the secondary level. All books for public school students are obtained from the Education Office in each district. University-level books are particularly scarce and are expensive, with the price of science texts averaging $35.[40] While such texts are reportedly less expensive in Israeli universities, it was not possible to verify this assertion.

## B. Vocational/Technical Training

While it is widely recognized that public secondary education should concentrate on imparting basic skills, particularly writing, math, scientific knowledge, and practice in problem-solving, the role of the public sector in imparting vocational/technical knowledge and skills is less clear. For example, while training in specific job-related skills is seen by some as the purview of either the employer or private educational institutions, others consider public vocational/technical training as imperative in the present, rapidly changing economic and social environment.

One of the criticisms of public vocational training is that often there is little if any linkage between knowledge and skills taught in the school and the marketable skills required in the productive private sector (potential employers). As Knight and Wasty have pointed out, "...the kind of learning that takes place at work remains largely invisible to the educational community."[41] The private educational sector also faces this problem, and employers who provide on-the-job training often train workers in skills useful only for the particular job situation - skills which may not be transferable. Whatever the mechanism of education, vocational/technical training is recognized as critical for a rapidly changing technological future.

While the importance of vocational/technical training with respect to economic development is well recognized, access to and quality of such training is woefully inadequate in the Occupied Territories. In addition to a shortage of funding for both public and private vocational schools, the CIVAD strictly controls the curriculum of vocational/technical schools (public, private and UNRWA), disallowing certain types of training (communications, for example) and limiting the types of equipment which can be imported for educational/training purposes.[42]

The first two vocational training centers were established in Jerusalem in the late 19th century.[43] As of 1990, there were 14 vocational/technical schools in the Occupied Territories. Students can begin the three-year training after the 10th grade (that is, after the compulsory education curricula). The CIVAD operates eight vocational/technical schools (four industrial, two commercial and two agricultural). There is no standard curricula and with few exceptions, little effort is made to assess pre-post training knowledge and skills' attainment and to follow-up on student job placement. In secondary level vocational schools, the vocational Tawjihi is used to assess student knowledge and skills attainment.

As of 1986/87, total enrollment in vocational schools in the Occupied Territories was 2,271. Importantly, all of the industrial students and 93% of the agricultural were male. Even in the commercial schools, only 18% of the students were female.[44]

## C. Community and Teachers Training Colleges

There are 19, two-year community colleges on the West Bank, three of which are run by CIVAD, three by UNRWA, and 13 by private institutions.[45] The Gaza Strip has three teacher training institutes and three colleges of education.[46] The community colleges in the West Bank include technical training (e.g., engineering), agricultural, commercial (business and administration), paramedical, social services and teachers' training institutes. All community colleges are part of the Jordanian system; all must receive authorization to operate from the Ministry of Higher Education in Jordan and must conform to that Ministry's standards and practices. As of 1991, none of the colleges met the requirement that 50% of the faculty have at least an M.Sc.[47] The community college system is based generally on community colleges in the U.S.; that is, they provide a general, post-secondary curricula with as much specialization as possible in a two-year program. However, graduates of these colleges are not admitted to West Bank universities because their training is designed to serve as a means of entry to the labor market, rather than as an alternative to, or basis for university education. As a result, those graduates who have adequate financial resources often go abroad for further education.[48]

In spite of this limitation, community colleges are a rapidly growing educational alternative, with their enrollment nearly doubling in ten years, from 3,200 students in 1980 to 6,054 in 1991. While half of the total students enrolled in these colleges in the West Bank in 1990/91 were female, most of the young women are enrolled in the teachers' colleges (53% of the 3,040 women enrolled in community colleges) or commercial colleges (20%). Only 6.5% were enrolled in engineering schools

and an equal percentage in paramedical schools. In fact, women comprised only 22% of all engineering students; no women were enrolled in agricultural community colleges.[49] Sixty-five percent of students enrolled in the teachers' training and education colleges in the Gaza Strip in 1991/92 were female.[50]

There are six main community college programs: teachers' training (enrolling 42% of students in 1990/91), commercial (24%), engineering (15%), social services (10%), para-medical (8%) and agriculture (1%).[51] The average institution in the West Bank enrolls only a little over 300 students; in the Gaza Strip, the average enrollment in the teacher training institutes is less than 300 and in the colleges of education only 125. As a result, it is likely that economies of scale are lost (e.g., duplication of physical and managerial infrastructure required to operate multiple institutions). Unfortunately, these institutions appear disinclined to share libraries and laboratory facilities. These issues certainly warrant further exploration.

The principal needs in community colleges and teacher training institutes are to upgrade staff (to conform with Jordanian standards) and to integrate training more closely into practice. The system was originally developed to provide skilled manpower for the labor market; close integration of such systems with changing economic conditions is always difficult, but necessary if improving the capacity of human resources is to be a focal point for economic development.

## D. Universities

The Occupied Territories has six universities, all of which are private; they are: Al-Najah University (Nablus), Beir Zeit University (near Ramallah), Bethlehem University, Hebron University, the Islamic University in Gaza, and the Open University in Jerusalem (see Table 3 for enrollment in West Bank universities). All universities and institutions of advanced learning (e.g., nursing schools) were closed continuously by Israeli authorities from late 1987 through late 1991. During this time, no formal classes were held and no diplomas or certificates were formally issued. Essentially, higher education has been at a standstill for four years. Since the beginning of 1992. at least two of the universities have been temporarily closed for brief periods of time and no university has all of its departments fully functioning. The authorities are permitting the universities to open on a phased basis (e.g., one department at a time).

University enrollment data have been difficult to obtain for recent years because of the closure of the schools. Even now, a given university may have several different estimates of "enrollees": those who are officially enrolled and who may or may not be attending classes (i.e., because of military detention

or Intifada-related injury), those who are enrolled and attending classes, and those who are attending classes but who may not be officially enrolled. Nonetheless, according to Shaheen, in 1990/91 there were 9,942 students enrolled in universities in the West Bank (including East Jerusalem), compared to 7,339 in 1981/82.[52] Just over 1,500 students were enrolled in higher education in the Gaza Strip in 1991/92.[53] Approximately 40% of university students in the West Bank are women; of these, more than half are enrolled in the humanities and 21% are enrolled in a science specialization.[54] No data are available with respect to enrollment in universities as a proportion of those in the university age-cohort.

In the Occupied Territories overall, university students are enrolled primarily in humanities curricula (44% of enrolled students); nearly a quarter (24%) are enrolled in the sciences. The remaining are enrolled in commerce and business administration (13%), engineering (8%), education (7%), health and nursing (3%), and agriculture (1%) (see Table 4 and Figure 2). The proportion of students studying science and engineering (32%) is similar to that in comparable countries: the UNDP's group of countries with "medium human development (excluding China)" had some 29% of their university graduates in "natural and applied science."[55] The West Bank figure exceeds the ratio for Egypt, where 25% of university students were enrolled in "science," which includes engineering, nursing, and agriculture.[56]

In this relatively small geographic area, there are potentially many opportunities for educational programs which take advantage of economies of scale. However, difficulty of geographic access (e.g., problems with passes and travel permits for both faculty and students) contributes to the duplication of courses and specialty departments among universities in the Occupied Territories. Another factor is the competition for students (and funding) among institutions of higher education, with such competition resulting in a circuitous problem of multiple offerings of the same program with a limited market for students - a problem in many countries.

Few universities in the Occupied Territories have substantial libraries; in fact, the total holdings of all West Bank libraries is approximately 150,000 volumes and 307 periodicals,[57] for a total student population of 9,942. Virtually none has modern information technology, including access to on-line literature searches. As elsewhere, library facilities are among the first budget items to be reduced when funds are limited. This is especially unfortunate, because for Palestinian students, most of whom cannot readily travel within or outside of the Occupied Territories, the library is one of the few mechanisms for maintaining contact with rapidly changing technology and knowledge.

In common with many countries, Palestinians believe that a university diploma not only confers substantial social prestige, but entitles the holder to a white-collar job. This not only contributes to the lack of emphasis on vocational/technical training, but to a relative disassociation between university graduates and professors and the productive private sector. Increasingly, however, universities in the Occupied Territories are establishing linkages with the private sector. For example, the Bethlehem University has made a particular effort to link its training in rehabilitation services directly with the needs for health personnel in the Occupied Territories; it has also established linkages between its department of business administration and industries in the West Bank. Similarly, Beir Zeit University has begun to develop a capacity for providing training in marketing, quality control, and use of computers in business administration, working with industries to identify specific needs and approaches to short-term training in these skill areas.

## E. Literacy

No national study has been made of literacy in the Occupied Territories. Rather, estimates are based on community-level or regional studies of varying population groups, which makes total estimates and comparisons over time essentially impossible. However, given these caveats, estimates of adult literacy on the West Bank range from 70% to 90%, with literacy rates for women lower than those for the general population - 65% to 80%.[58] In the Gaza Strip, the estimate for the general population in 1990 was 75.6%, with significantly lower rates of literacy among women (66.2%) than for men (85.9%).[59] In addition, educational specialists in the Gaza Strip report a deterioration in literacy rates over the past six years.[60] A higher proportion of Palestinian adults in the Occupied Territories cannot read or write than is the case in Jordan, Lebanon, Cyprus, Turkey, or Israel (see Table 5 and Figure 3).

There are some modest adult literacy efforts in the Occupied Territories. For example, in 1991 there were 50 literacy centers (operated by a variety of private organizations and UNRWA) and 154 classes with 2000 participants in the West Bank.[61] In the Gaza Strip, six literacy centers, with a total of eight teachers have the capacity to teach just over 80 students. In addition, several women's societies have literacy courses for women.[62] Given the growing problem of adult illiteracy, these are insufficient to meet the needs of the population.

## F. Informal Education System and Distance Education

In particular since the Intifada, informal education has played an important role in the Occupied Territories. Palestinians have

developed innovative approaches as a means of ensuring that the closure of schools and other disruptive influences have the least possible destructive influence on Palestinian children and youth. For example,

* the Ramallah Friends School has developed K-12 self-study materials which continue to be used and improved;[63]

* the Tamar Institute has embarked on a creative, multi-media reading campaign which is gaining territory-wide participation;[64] and

* an Educational Development Center in the Gaza Strip has literacy education, remedial education for language and mathematics skills, a women's educational and training center, and a program in community health and sanitation.[65]

In addition, the Palestine Open University, founded in Amman in 1983 as Al-Quds Open University, operates through six centers in the West Bank (Jerusalem, Nablus and Jenin, Ramallah, Bethlehem and Hebron). As of 1990, 2,775 students were enrolled in courses in the Open University which utilizes self-learning principles and multi-media educational methods. Most of the students (43.7%) are enrolled in an educational curriculum and in administration (26.5%). The remaining study land and rural development and home and family development.[66] The experience of this university, while only minimally documented, is serving as an example of utilizing new principles and methods of education for other levels of education. However, all of the centers connected with the Open University lack equipment, in particular laboratories and computer facilities. In the event of political change in the Occupied Territories, and concomitant freedom of movement and control over an educational system, it will be necessary for Palestinian educators to re-consider the role of this "university" in comprehensive educational planning.

## G. Local and Overseas Training and Other Education Programs

Short-term, non-academic training and overseas academic and non-academic education has long been a mainstay of human resources' development in the Occupied Territories; A.I.D. has been at the forefront of these activities. Local short-term training has been sponsored and/or conducted by local NGOs, universities and community colleges with the sponsorship of AMIDEAST and other U.S. Private Voluntary Organizations (PVOs), the British Overseas Council, NOVIP and other institutions. The training has been broad-based (from teacher training to business skills enhancement and wastewater treatment) and directed toward professionals, paraprofessionals and administrators. Increasingly,

administrative and management skills have been the focus of training programs sponsored by many of the organizations. Business/university linkages have been fostered, with the result that, at present, there are developing associations between such diverse entities as Beir Zeit University and the Union of Industrialists in Gaza. AMIDEAST and other PVOs (and local NGOs) have also made concerted efforts to strengthen Palestinian institutions (including universities and other education and training institutions) through short- and long-term training and technical assistance in planning and management of educational and training institutions.

Faculty development has been a primary focus of A.I.D.'s educational component in the Occupied Territories. According to a 1990 evaluation of the AMIDEAST project, 45% of all post-secondary faculty and 65% of all those with MS/PhD degrees received U.S. training through the A.I.D.-funded AMIDEAST project.[67] The Arab Welfare Association (based in Geneva) has also been an important source of financing education abroad.

Unfortunately, as is often the case elsewhere, little effort is made to assess pre-post training knowledge and skills. Necessarily, follow-up of students (to determine job placement, utilization of knowledge and skills) is virtually impossible, although many of the local training institutions are keenly interested in improving their training evaluation efforts.

## H. Donor Contributions to Education in the Occupied Territories

From 1984 to 1991, donors have contributed more than $31.6 million to education in the Occupied Territories, not including funds provided by Arab donors (which have been reportedly substantial although not documented) and annual contributions for UNRWA educational institutions. This level of funding also does not include funding for specialty training in medicine and other technical professions.

Of the education contributions, $11.8 million (37%) has been for vocational/technical training and $5.3 million (17%) for higher education. A.I.D. has allocated more than $10 million for training and education, including projects ranging from small-scale funding for pre-school education to long-term training programs in the U.S. Notably, each of the private voluntary organizations (PVOs) funded by A.I.D. has funded educational activities. ANERA has funded a kindergarten, Save the Children Federation (SCF) has funded preschools and ACDI has funded bookkeeping courses. AMIDEAST has been a primary mechanism for education and training in the Occupied Territories, as discussed previously.

## V. CONSTRAINTS TO Human resources' development

### A. Bureaucratic Constraints

Bureaucratic constraints, and those generally related to the CIVAD's role in the Occupied Territories, militate against effective education at all levels. Direct obstacles include:

* CIVAD control of curricula at the primary through secondary levels in the public, private and UNRWA systems;

* closure of schools for extended periods of time in the West Bank (except East Jerusalem) and curfews which include the closure of schools;

* the intrusion of soldiers onto school grounds and campuses, a practice which not only undermines the learning atmosphere but also sometimes has led to physical destruction of buildings and books; and

* the arrest and detention (in many cases for considerable periods of time) of many teachers (and other authority figures) as well as students and their parents.

The long closure of the primary through secondary public, private and UNRWA schools in the West Bank and the closure of universities throughout the Occupied Territories over nearly a four-year period has been particularly harmful, resulting in what some have described as a type of "lost generation." The actions of soldiers on school property, arrest of teachers and other authority figures, and involvement of children and youth in activities related to the Intifada, have combined to create a climate of mistrust and defiance of authority among Palestinian children and youth. This is of considerable concern to Palestinian educators.

At the same time, because of Israeli restrictions against even distance education (including self-instruction, such as that devised by the Friends School in Ramallah), Palestinian youth have regressed in their academic achievements, as seen in the Tamar Institute's language and math assessments, as well as the Tawjihi results described previously. They have also been unable to acquire marketable skills. Integrating such youth into productive activities, in particular in view of the economic situation which continues to deteriorate one year after the Gulf War, offers Palestinian educators and the productive private sector a formidable challenge.

Curfews and travel restrictions more generally pose serious impediments to the flow of information, which is the core of

human resources' development. It is difficult for teachers to communicate with their colleagues in different localities, thus contributing to duplication of curricula, diminished opportunity to share new knowledge and skills and lack of access to information with respect to changes in educational indicators (e.g., Tawjihi results and estimates of literacy). It is also difficult for educators and trainers to travel abroad to attend conferences or even to attend local in-service training programs. For example, in 1991 AMIDEAST organized a workshop in the West Bank for primary teachers to discuss pedagogy and new materials, but the CIVAD refused to permit public school teachers to attend.

The bureaucratic constraints indirectly create a disincentive to investment in human resources' development, by lowering the expected rate of return to education. The disincentives to learning specific skills are myriad (e.g., marketing skills may seem essentially useless in the face of GOI restrictions on exports). However, in the face of these and other restrictions which balkanize the Palestinian economy and which have contributed to the decade-long decline in output, Palestinians continue to be interested in acquiring such skills and Palestinian institutions are enhancing their capacity to provide them.

## B. Curricula at the K-12 Levels

The absence of a comparable curricula at the K-12 levels, with a complex mix of Jordanian, Egyptian, British, Israeli and UNRWA requirements - superimposed by CIVAD control of the curricula - is a serious impediment to education. This situation would make it difficult to devise and implement standardized teacher and student assessments and to engage in curricula planning even under the best circumstances. With the other difficulties of the educational system (including, for example, wholly inadequate teacher training), the impact is compounded.

## C. Lack of Investment in Education and Training

The scarcity of investment in education and training, with the notable exceptions of A.I.D.'s investment and the support of the Gulf States for Palestinian universities, and the decrease in support of the public education system have resulted in a serious deterioration in the educational "system" in the Occupied Territories. The Council of Higher Education has estimated that there is a $3 million shortfall in costs of university education alone (total estimated expenditures are $24 million per year). The results are inadequate physical facilities at all levels, poorly paid teachers with virtually no incentives or support systems, virtually non-existent laboratories and libraries at the K-12 level and inadequate libraries in community, teachers' and

technical colleges and in most universities, and minimal access to new educational technologies, which are dependent on advanced telecommunications and computer equipment.

## VI. CONCLUSION AND RECOMMENDATIONS

### A. Development Opportunities

There is a consensus among international development specialists that primary, preparatory and secondary education should receive priority among educational efforts in countries of all levels of development, but particularly lower and middle-income countries. Virtually all studies show that the social rate of return to pre-university (and in particular primary) education exceeds that at other levels and is usually far above the return on most other public investments.[68] Strengthening this level of education not only greatly improves efficiency and fosters growth, but also significantly contributes to equity goals by improving labor skills. Accordingly, from an economic and social perspective, the core of any A.I.D. program to assist Palestinian human resources' development should include, if not concentrate on, the pre-university education levels.

Unfortunately, however, there are serious political difficulties which impede implementing such a program in the Occupied Territories. The problem is simple: CIVAD dominates pre-university education in the Occupied Territories, both in terms of the proportion of students enrolled in public schools and their control of curricula. Assistance, therefore, could easily be construed as alleviating the responsibility of Israel, which is obligated by the Geneva Convention to provide educational programs to Palestinians. However, there are opportunities for A.I.D. investment in this area which recognize this problem and build on private sector Palestinian initiatives. In addition, recommendations which are appropriate to a change in the political and/or administration status of the Occupied Territories are also presented.

In the meantime, A.I.D. can continue to support faculty and institution development, vocational/technical training, short-term technical and management training, development and utilization of new educational technologies and expanded information resources - at all levels of education and training. A.I.D. can also contribute to the process of system-wide educational planning, including planning for improvements in curricular content. Among the most critical issues which have to be addressed in this regard is the integration of the West Bank (essentially, Jordanian) and Gaza (essentially, Egyptian)

curricula, although this process must take into consideration any interim arrangements for transfer of authority over curricula in the event of a political change.

## B. Recommendations

Table 1 presents a summary of conclusions and recommendations.

Table 1
Summary of Conclusions and Recommendations

| Conclusions | Recommendations |
| --- | --- |
| 1. The primary, preparatory and secondary schools have woefully inadequate physical plants, laboratory and library facilities and educational materials, all of which contribute to deterioration in the quality of education. | 1.1 In the event of any political change in the Occupied Territories (including, for example, interim self-government or autonomy), A.I.D. should support the enhancement of laboratory facilities and educational materials in public schools in the Occupied Territories.<br><br>1.2 In the event of political change, A.I.D. should support large-scale educational infrastructure projects to physically rehabilitate existing public schools and construct new schools as necessary. (Note: This would also serve as a means of creating jobs.) |
| 2. The primary, preparatory and secondary curricula is non-comparable across the two regions of the Occupied Territories (i.e., the West Bank and Gaza Strip) and is not clearly related to educational needs or economic development. | 2. A.I.D. should support the embryonic efforts to improve the curricula of the several levels of education. |
| 3. Palestinian teachers are largely unaware of new developments in educational theory and practice and have little if any access to new educational technologies. Teachers in each of the three systems of education are not trained in the use of the new texts which they are expected to use. | 3.1 A.I.D. should support short-term local training of private sector teachers in educational theory and practice as well as in the subject areas for which they are responsible.<br><br>3.2 A.I.D. should support the purchase of new educational technologies (and training in the use of same). |

4. Post-secondary education (including community colleges and universities) lack adequate management systems and personnel, as well as laboratory facilities and information resources. It is not clear that there is a present shortage of faculty (see # 5 below), but the quality of post-secondary education would be enhanced through short-term training which updates the knowledge and skills of existing faculty.

4.1 A.I.D. should continue to support institutional development, focusing more on enhancement of management and administration of post-secondary institutions.

4.2 A.I.D. should support: a) the enhancement of science and computer laboratories in post-secondary education facilities, linked insofar as possible to specialties or skills defined as relevant to economic development goals; and b) the expansion of information resources (while encouraging regional specialized clearinghouses which help to alleviate problems of duplication).

4.3 Local and overseas short-term training of present and prospective faculty should be continued, focusing on clearly defined training objectives which are linked insofar as possible to both institutional needs and economic (and social) development needs of the Occupied Territories.

4.4 A.I.D. should support the development of a capacity for post-secondary institutions to design and implement short-term training courses to meet the education and training needs of the productive private sector, including assistance in marketing and establishing fee structures for such training.

4.5 A.I.D. should support post-secondary institutions in the development of a capacity for research and development linked to practical applications in the productive private sector.

5. Several Palestinian private sector institutions have pioneered educational programs designed to reduce illiteracy, enhance teaching (and learning) skills, assess the quality of education and ensure linkages between education, training and the productive private sector. These embryonic efforts, while poorly funded, can contribute importantly to improvements in the quality of education and training at all levels of education.

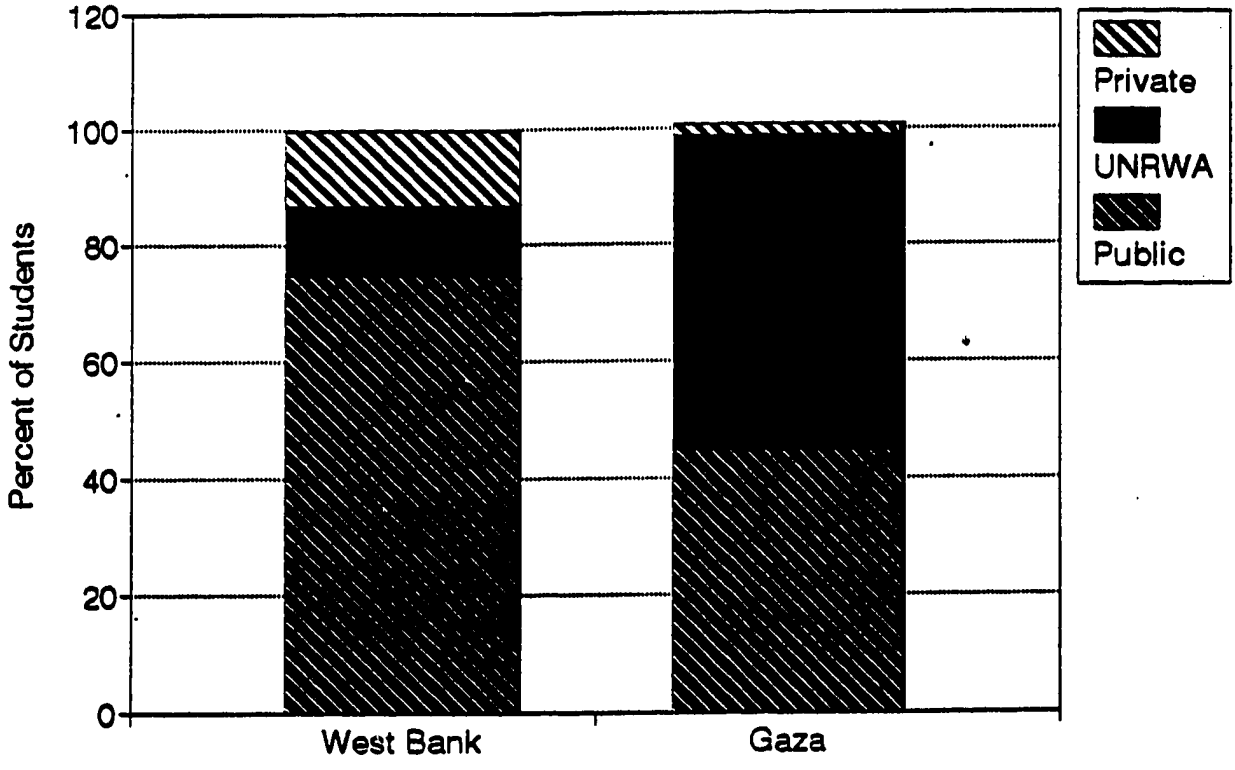
5.1 A.I.D. should support the development, adaptation and dissemination of these private sector efforts insofar as possible. Such efforts can have impact on Palestinian education notwithstanding the eventual political situation.

6. Palestinian schools have not been self-supporting. The public schools are supported by the GOI (from taxes derived from the Occupied Territories), private schools are supported largely by donors, and UNRWA schools are entirely supported by donors, primarily the U.S. Moreover, school administrators at all levels have little if any training in financial management (even the Palestinian CIVAD employees) and in funding mechanisms. It is critical that managers and administrative staff at all levels of education have improved capacity to manage the finances of the educational institutions and to identify and implement alternative funding mechanisms. These skills will be useful notwithstanding the political solutions.

6. A.I.D. should support short-term intensive training of Palestinian educational administrators and managers at all levels in the fiscal management and funding mechanisms, providing whatever support systems (e.g., computer-based record keeping) are necessary to ensure sound fiscal management.

# Fig. 1: Dist. of Pupils by School Type

West Bank (1990/91) and Gaza (1991/92)




**Source:** For the West Bank: Shaheen, K., Education in the West Bank. Nablus: Report prepared for Policy Research Inc., Clarksville, MD; 1992. For the Gaza Strip: Souhuh, F., Education in the Gaza Strip. Report prepared for Policy Research Inc., Clarksville, MD; Feb 1992 (Annexes 3, 5, 8).

TABLE 2

ENROLLMENT OF STUDENTS IN THE WEST BANK, 1990-91

| Level | UNRWA | Private | Public | Total |
|---|---|---|---|---|
| Kindergarten | -- | 23,684 | -- | 23,684 |
| Basic Education Grades 1-10) | 40,046 (14%) | 17,280 (6%) | 229,155 (80%) | 286,481 |
| Secondary Education | -- | 3,500 (12.5%) | 24,500 (87.5%) | 28,000 |
| Total | 40,046 | 44,464 | 253,655 | 338,165 |

Source: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research Inc., Clarksville, MD; 1992.

TABLE 3

ENROLLMENT IN WEST BANK UNIVERSITIES, 1990-91

| University: | Enrollment: Male | Female | Total |
|---|---|---|---|
| An-Najah | 1713 | 1329 | 3042 |
| Bethlehem | 702 | 602 | 1304 |
| Birzeit | 1978 | 665 | 2643 |
| Hebron | 880 | 508 | 1388 |
| Al-Quds | 667 | 898 | 1565 |

Source: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research, Inc., Clarksville, MD; 1992.

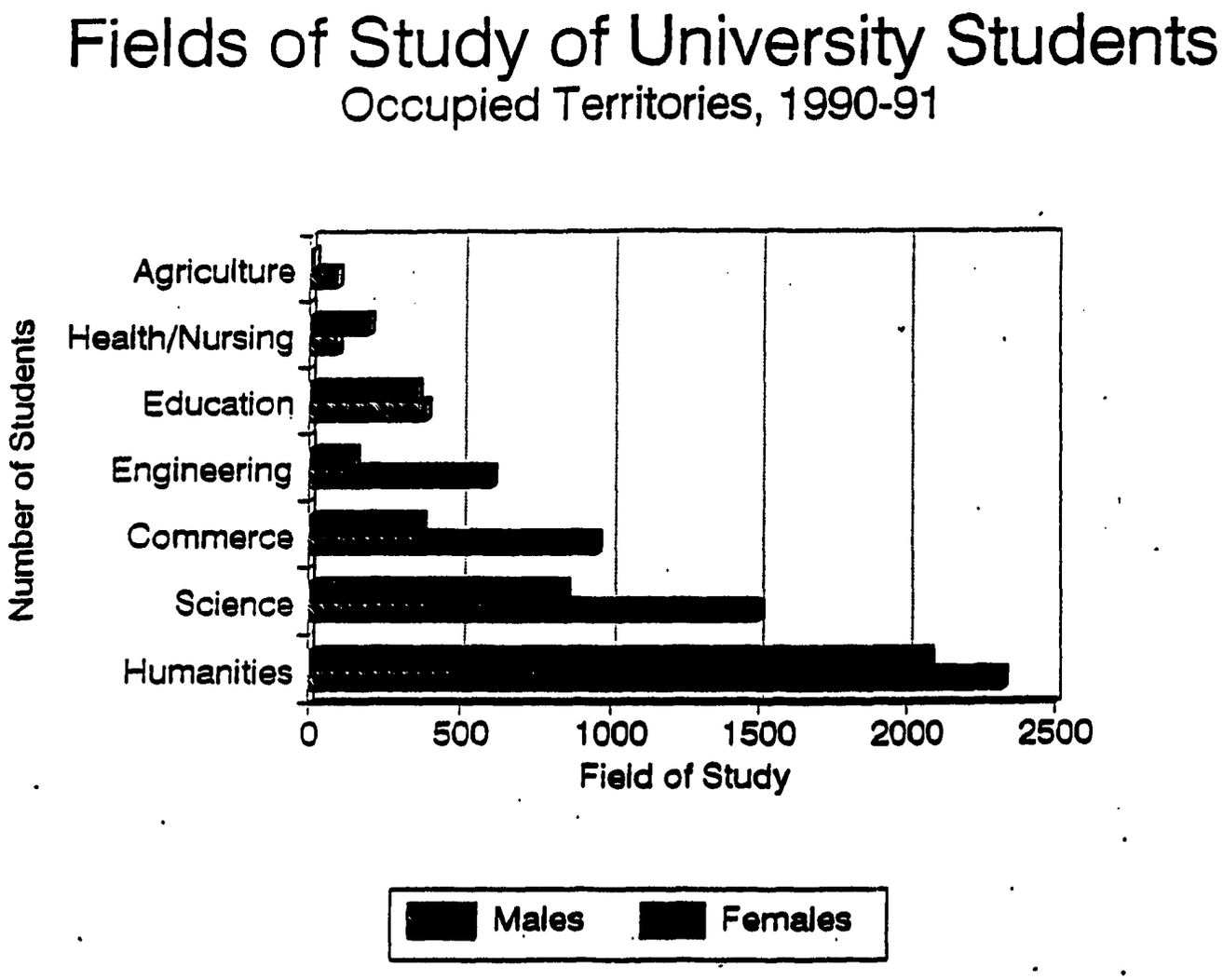
TABLE 4

Fields of Study of University Students, Occupied Territories, 1990-91

| Field of Study | Males | Females | Total | % |
|---|---|---|---|---|
| Humanities | 2327 | 2072 | 4399 | 44.2% |
| Science | 1493 | 845 | 2338 | 23.5% |
| Commerce | 950 | 368 | 1318 | 13.3% |
| Engineering | 602 | 150 | 752 | 7.6% |
| Education | 385 | 354 | 739 | 7.4% |
| Health/Nursing | 93 | 196 | 289 | 2.9% |
| Agriculture | 90 | 17 | 107 | 1.1% |
| | | | 9942 | 100.0% |

Source: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research, Inc., Clarksville, MD; 1992.

FIGURE 2




Source: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research, Inc., Clarksville, MD; 1992.



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TABLE 5

West Bank & Gaza Literacy Rates in Regional Perspective

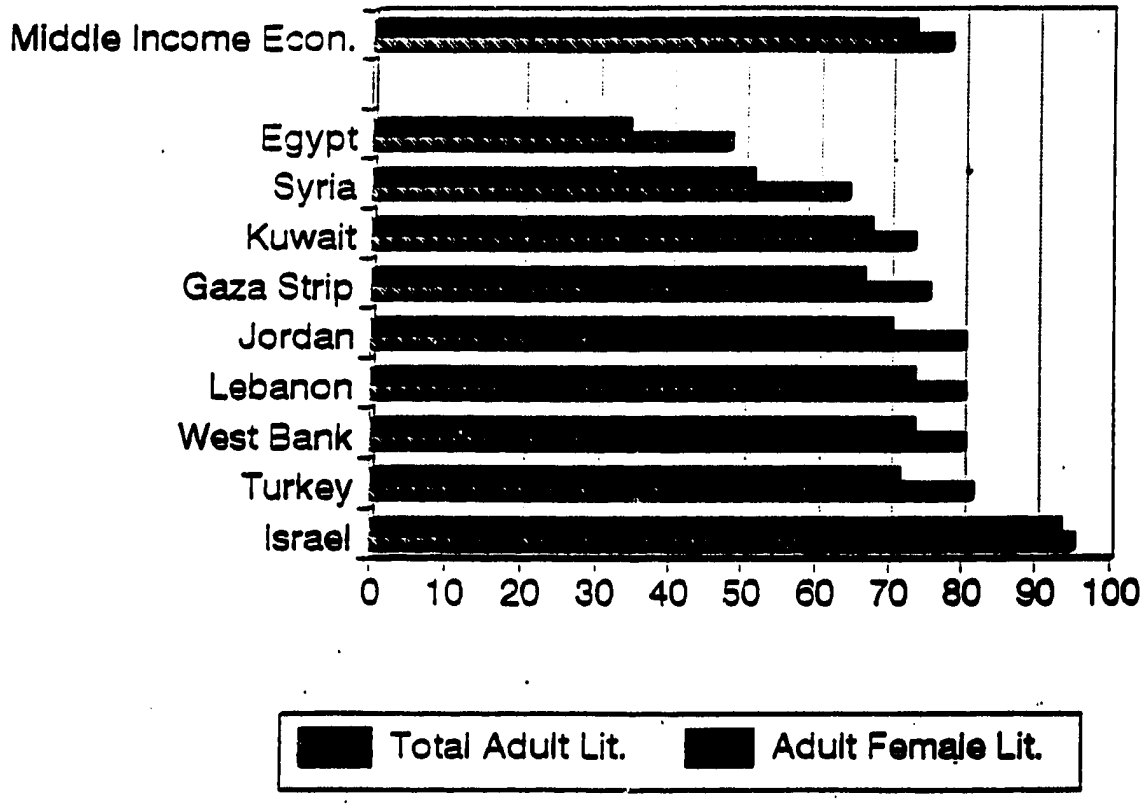
| Country | Adult Literacy Rates, 1990 (%) Total | Female |
|---|---|---|
| Israel | 95 | 93 |
| Turkey | 81 | 71 |
| West Bank | 80 | 73 |
| Lebanon | 80 | 73 |
| Jordan | 80 | 70 |
| Gaza Strip | 75 | 66 |
| Kuwait | 73 | 67 |
| Syria | 64 | 51 |
| Egypt | 48 | 34 |
| Middle Income Econ. | 78 | 73 |

Sources: West Bank: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research Inc., Clarksville, MD; 1992. Gaza: Soubuh, F. Education in the Gaza Strip. A report prepared for Policy Research Inc., Clarksville, MD; 1992. All others: World Bank, World Development Report 1992, pp. 218-219.

FIGURE 3

# Adult & Adult Female Literacy, 1990

## a Regional Perspective




Sources: West Bank: Shaheen, K. Education in the West Bank. Nablus: Report prepared for Policy Research, Inc., Clarksville, MD; 1992. Gaza: Soubuh, F. Education in the Gaza Strip. A report prepared for Policy Research, Inc., Clarksville, MD; 1992. All others: World Bank World Development Report 1992, pp. 218-219.

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# FINANCE AND CREDIT IN THE OCCUPIED TERRITORIES

## FINAL DRAFT REPORT OF SECTORAL ANALYSIS

August 1992

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## I. EXECUTIVE SUMMARY

The financial sector in the Occupied Territories is weak and largely fails to provide traditional functions of banking institutions. Although weak financial systems are common in low-income countries, regulations peculiar to the Occupied Territories have combined with politically generated public mistrust of the banking system to create a small, debilitated formal banking sector. Moreover, sources of investment in the Occupied Territories are extremely risky. For example, savings rates are reasonable (some banks offer highly positive real rates of interest to depositors, even under highly inflationary conditions); unfortunately, they are largely generated abroad, a fact which makes them highly unpredictable.

Banks are few, small, heavily restricted, and confronted with a highly uncertain economic climate. They pursue extremely conservative loan policies, even with the very small total volume of deposits at their disposal. Informal sector mechanisms are numerous, but are far too small, fragmented, and ephemeral to fill the gap. In the absence of Palestinian banks, the function of providing liquidity through checking services, providing a mechanism for saving and investing, and facilitating trade is carried out by three types of local non-governmental institutions: "credit" institutions, cooperatives, and money changers. Although these do fill certain critical needs, they are far too small, too weak, and (in the case of moneylenders) too subject to regulatory shifts to mediate between savers and investors. These groups can assist certain sections of the population; but they cannot be expected to substitute for formal banking institutions.

In the Occupied Territories there is no mechanism for macroeconomic planning within which a financial management system can rationally exist and which could devise comprehensive responses to the numerous and severe external shocks to which the economy of the Occupied Territories has been subjected. Fiscal policy plays no stabilizing role whatsoever; decisions concerning monetary policy are divided between two central banks -- the Bank of Israel and the Central Bank of Jordan -- both of which are concerned primarily (and understandably) with financial and economic issues in their respective countries. The economy of the Occupied Territories is neither so integrated into the Israeli economy that it can simply be regarded as a section of that system, nor sufficiently independent of the Israeli economy that Palestinians are insulated from the difficulties there. Palestinians have, in an important sense, the worst of both worlds.

In spite of the unstable political and economic situation, there appears to be no dearth of demand for credit. Indeed, excess demand for credit seems to be the norm. This situation does not



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seem to result from a common cause of excess shortage, low interest rates (which result in a shortage of credit because the financial institutions cannot meet demand for low-cost investment); in fact, interest rates are relatively high at the formal banking institutions. Rather, the central problem is the institutional arrangements of the banking system, which do not effectively mediate between savers and potential investors.

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

### A. Importance of Finance and Credit for Development in the Occupied Territories

Financial intermediation -- the function of providing liquidity through checking services, providing a mechanism for savings and investing, and facilitating trade -- is an essential component of any economic development strategy. It is essential that savings be safeguarded, and even more critical that they be channeled to investors. Without investment in an economy, there can be no growth, but unless domestic sources provide the majority of investment, any economy becomes increasingly indebted to foreign governments, private institutions or individuals - an untenable situation for any country. Macroeconomic management is equally crucial for development: small, open economies are subject to numerous external shocks over which they have little if any control. Macroeconomic policy can play a major role in partially mitigating the adverse effects of such shocks on production, trade, and investment.

However, in the Occupied Territories there is no mechanism for macroeconomic planning within which a financial management system can rationally exist and which could devise comprehensive responses to the numerous and severe external shocks to which the economy of the Occupied Territories has been subjected. Fiscal policy plays no stabilizing role whatsoever; decisions concerning monetary policy are divided between two central banks -- the Bank of Israel and the Central Bank of Jordan -- both of which are concerned primarily (and understandably) with financial and economic issues in their respective countries. The economy of the Occupied Territories is neither so integrated into the Israeli economy that it can simply be regarded as a section of that system, nor sufficiently independent of the Israeli economy that Palestinians are insulated from the difficulties there. Palestinians have, in an important sense, the worst of both worlds.

The financial sector in the Occupied Territories is weak and largely fails to provide traditional functions of banking institutions. Although the weak financial systems are common in low-income countries, regulations peculiar to the Occupied Territories have combined with politically generated public mistrust of the banking system to create a small, debilitated formal banking sector. Moreover, sources of investment in the Occupied Territories are extremely risky. For example, savings rates are reasonable (some banks offer highly positive real rates of interest to depositors, even under highly inflationary conditions); unfortunately, they are largely generated abroad, a fact which makes them highly unpredictable.

In spite of the unstable political and economic situation, there appears to be no dearth of demand for credit. Indeed, excess demand for credit seems to be the norm. This situation does not seem to result from a common cause of excess shortage, or low interest rates (which result in a shortage of credit because the financial institutions cannot meet demand for low-cost investment); in fact, interest rates are relatively high at the formal banking institutions. Rather, the central problem is the institutional arrangements of the banking system, which do not effectively mediate between savers and potential investors.

With such a weak formal financial sector, it is hardly surprising that there exists a fairly extensive "informal financial sector," composed of moneylenders, credit circles, and (more nearly formal) cooperative societies and credit institutions. Although these do fill certain critical needs, they are far too small, too weak, and (in the case of moneylenders) too subject to regulatory shifts to mediate between savers and investors. These groups can assist certain sections of the population; but they cannot be expected to substitute for formal banking institutions.

## III. SECTORAL STATUS AND TRENDS

This sections describes recent trends in economic growth, instability of the economy, fluctuations in prices, sources of savings and the demand for credit in the Occupied Territories.

### A. Growth

Estimates for Gross National Product (GNP) and Gross Domestic Product (GDP) for the Occupied Territories are shown in Table 2 and Figure 1. As can be seen from Table 2, both measures peaked in 1987 and fell substantially between 1987 and 1990. During these four years, real GNP and GDP fell by 36% and 38%, respectively; nominal GNP and GDP fell by 28% and 30%, respectively.

Over the twenty-year period 1970-1990, the nominal growth rate was 11.2% for GNP and 10.2% for GDP. However, when the nominal dollar figures are converted using the U.S. GNP deflator, the estimated growth rate is 4.7% for real GNP and 3.8% for real GDP over the same period. If only the years 1970 to 1987 are considered (in recognition of the distortion of the years following the Intifada), then nominal GNP grew at 13.3% per year, real GNP at 6% per year. Assuming an estimated population growth rate of 3.4% per year,[1] per capita annual growth of real GNP between 1970 and 1990 was 0.7%; between 1970 and 1987 (prior to the Intifada) it was 2.6%. Per capita real GDP growth rate was 0.4% between 1970 and 1990 and 1.6% during the period 1970-1987.

According to the World Bank, from 1965 to 1989, the average per capita GNP growth rate of all middle income countries was 2.3%,

and of lower-middle income countries (which would include the Occupied Territories), 2.0%.[2] Thus, while the growth rate in the Occupied Territories was slightly higher than comparable areas from 1970 to 1987, it compares unfavorably for the entire period 1970-1990, reflecting the serious deterioration of the economy of the West Bank and Gaza Strip.

It is notable that GNP considerably exceeds GDP (by 44% in 1990, for example) and grew more rapidly than did GDP. GNP is treated in these accounts as GDP plus net factor income; the latter consists overwhelmingly of remittances by workers employed in Israel and elsewhere. These numbers indicate the high degree of dependence of the Palestinian economy on external sources of income; importantly, figures for net factor income underestimate the degree of external dependence.

## B. Instability

Productive output has fluctuated considerably in the Occupied Territories, more so than in Israel (Figure 2). There are several sources of instability:

* the usual forces of weather (affecting agricultural goods), changing international prices, and shifts in demand in the economy of primary trading partners (although in the case of the Occupied Territories, the dependence on Israel as a trading partner exacerbates this factor considerably);

* shocks due to shifts in the demand for Palestinian labor in the Gulf, on which remittances (and savings and private investment) largely depend; and

* strikes and curfews.

The Occupied Territories have no public mechanism by which to stabilize economic shocks, being dependent on automatic stabilizers devised in Israel and Jordan - effectively catching the Occupied Territories in a vice. These shocks matter greatly to this economy, which is a very open one: imports averaged 41% of GNP on the West Bank, and 62% in Gaza for the 1970-87 period. However, there are essentially no policy offsets to these shocks. Moreover, the fact that Israeli entrepreneurs (in all sectors) have access to public and private insurance and other types of public mechanisms to absorb economic shocks, places them at a significant competitive advantage over their Palestinian counterparts.

Instability in the job market, with a minimal social safety net, results in both economic and social shocks to families and communities. There are minimal unemployment benefits for a small proportion of the work force and a minimal welfare system. Trade

unions in the Occupied Territories have tried to ensure that companies pay one-half to three-fourths of wages until the worker, who has been made redundant, locates employment, but the Palestinian firms are reportedly unable to do so in most cases. The GOI does provide food and a small stipend to severe social cases, and the local Zakat Committees (local Islamic welfare committees) provide some support for extremely poor individuals and families, but this support is sporadic and meets the needs of only a small proportion of the population. In the Occupied Territories, as is true throughout the Middle East, the extended family serves as a primary social safety net.

There is no evidence of public spending to offset the shocks in the Occupied Territories; in fact, government spending is a small and declining proportion of GNP; it declined from 14.4% in 1970 to 6.9% in 1987. While it has been argued that the population in the Occupied Territories pays more in taxes than the occupying authorities spend there,[3] the data were not available to support this assertion. This reported net loss to the Occupied Territories is based on estimates of income (from taxes and other fees) and expenditures (on health, social and other services); no published data are available by which to verify this critical assertion.

The Occupied Territories have neither their own currency nor a Central Bank. Instead, two currencies, the New Israeli Shekel (NIS) and the Jordanian Dinar (JD), are legal tender, while the dollar circulates widely, as in Israel, as a relatively more secure store of value. Accordingly, the money supply in the Occupied Territories has three sources: 1) foreign trade, 2) net factor income, and 3) net transfers. Since the first is largely in deficit, the main sources of money in the West Bank and Gaza are net factor income and net transfers. In effect, the supply of money, foreign exchange, and savings are all heavily dependent on the remittances of Palestinians working either in Israel, in other Arab countries or farther afield, and bilateral and multilateral governmental transfers, all of which are highly unstable.

There is essentially no foreign direct investment in the economies of the West Bank and Gaza Strip in the traditional sense. Some would suggest that the private "investment" in construction of houses and Arab "investment" in health and social infrastructures and (less substantially) in physical infrastructure represents a political investment in the Occupied Territories, but it has certainly not contributed to economic growth. As is seen in other sectors, most importantly industry and agriculture, this lack of investment has served to severely hamper the growth and development of a Palestinian capacity to compete on an "open" market.

## C. Prices

The economies of the Occupied Territories have suffered from "imported inflation" from Israel. Although the two economies are closely integrated, they are not perfectly so. As Figure 3 shows, although the rate of inflation in the Occupied Territories closely tracked that in Israel for most of the past 20 years, more recently the price level in the West Bank and Gaza appears to have fallen more rapidly than that in Israel. This is probably because the Intifada tended to reduce the (at least measured) articulation of the two economies, and the money supply in the Occupied Territories fell sharply, as a result of the decline in workers' remittances.

It has been argued recently[4] that there has been a transfer of real financial resources from the Occupied Territories to Israel; because NIS circulates as legal tender, Palestinians hold real NIS balances, which are transferred to the Bank of Israel. This seigniorage (in this case, a form of transfer of wealth resulting from the relationship between an occupying authority and a subject population) is 6.6% of the GNP of the Occupied Territories.[5] This may be compared with Selowsky's estimates for several Latin American countries for 1982-1988: Argentina, 3.7%, Bolivia, 3.5% and Peru, 4.7%.[6] Although one can question the size of the estimate, it nevertheless illustrates the substantial difficulty which current monetary arrangements create for sustained development.

## D. The Supply of Savings

The large majority of savings available in the Occupied Territories are private; the government is a very small contributor to savings, if indeed, it contributes at all. For the period 1977-1984, average savings were some 21.4% of GNP. This is quite a respectable rate of savings in the international perspective, particularly since it is almost exclusively composed of private savings. The average rate of Gross Domestic Savings in all lower-middle income countries in 1989 was 23%,[7] and this figure, of course, included public as well as private savings.

It is not possible to determine the precise sources of income which are saved. However, it is likely that foreign earnings, including those derived from work in Israel and the Gulf States, provide a large component of savings. About one-third of national disposable income originates either from net factor income or from net transfers (see Table 3). Even in 1990, when work in Israel and in the Gulf and transfers from the Arab Gulf governments were curtailed, these sources comprised over one-third of the national disposable income.

It is worth noting that there is a discrepancy between the way in which this data is presented and the conceptual distinctions



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which an analyst would wish to see. Conceptually, one would want to distinguish between income earned by Palestinians abroad on the one hand, and official public (bilateral and multilateral) transfers on the other. Unfortunately, the national income accounts do not show this. Instead, data are available for "net factor income", which is for "residents" (a holder of valid West Bank or Gaza identity papers). It is essentially a political definition. The second source, net transfers, combines government transfers and private remittances. The latter figures (private transfers) averaged one-fourth to one-sixth of net factor payments. This has sometimes been interpreted to show that earnings in Israel are much larger than those earned in the Gulf and elsewhere. Governmental transfers can, of course, be identified and netted out. When this is done, it still appears that "net factor income" greatly exceeds "(private) remittances."

One must, however, be cautious in making such an inference. It can be argued, for example, that the figures for net factor income overestimate money earned by Palestinians working in Israel which is remitted to the Occupied Territories. This is because the Israeli Central Bureau of Statistics reports as net factor income its estimate of the gross earnings of such workers. Palestinian analysts have objected that this neglects social security and other taxes which are levied on Palestinian workers in Israel.[8]

It is also likely that for the Occupied Territories, as for other jurisdictions, the officially reported "remittances" are only the "tip of the iceberg"; there are several reasons for underreporting. For example, if a migrant has to convert a hard currency into NIS, then he/she would have every incentive to eschew official channels in order to take advantage of the higher rate of exchange obtainable on the parallel market. This is less of a problem for JDs, however, since that currency has been both more stable and less undervalued at official exchange rates. Most of the activities of the formal moneychangers involve exchanging the foreign currencies of Palestinian workers for NIS or JDs; such activities, are ostensibly regulated but are not regularly monitored. Foreign currency exchange carried out by "informal" (illegal) money changers is necessarily unrecorded.

These considerations make it difficult to estimate the relative weight of the Israeli and the Gulf labor markets as sources of Palestinian incomes and savings. Current estimates of the number of Palestinians working in Israel range from 20,000 to 75,000, a substantial decrease from 1990, when the estimates ranged from 40,000-150,000.[9] These external labor markets served as a Janus-like influence on the economy of the Occupied Territories: while more than one-third of Palestinian national income has derived from outside of the Occupied Territories, this dependence on Israel and the Gulf States resulted in an unstable situation

the has been disruptive at worst and at best has not contributed to development of a sustainable and open productive economy. Essentially, the Gulf States have provided funds to institutions in the Occupied Territories but have not invested in economic development, nor have they channelled funds through Palestinian economic development institutions such as the Economic Development Group or the Technical Development Corporation.

These external sources of income and savings have declined markedly since the onset of the Gulf Crisis and War. While it has been reported that employment of Palestinians in Israel increased during the summer and fall of 1991, unemployment still is reported as ranging between 30%-45%, largely as a result of decreased employment in Israel. Moreover, prohibitions against employment of Gazans in Israel are often imposed by the Israeli government for extended periods of time for security reasons. In May/June, 1992, for example, Israel was closed to Gazan workers for two weeks in response to the murder of an Israeli by a Gazan. Employment of Palestinians in Israel is therefore an highly volatile option.

Although there had been concern that the recent surge of European immigrants would result in job losses for Palestinians, the rate of immigration from Russia and other C.I.S. states has in fact declined considerably in the last year.[10] Moreover, the high skill levels of most of these immigrants certainly implies that they will not want the kind of unskilled farm, construction, and service jobs which Palestinians have filled in Israel. These immigrants are often unemployed for up to one year after arriving in Israel, and although it reportedly requires two to three years for them to find a job in their area of expertise, it is unlikely that they are engaged in heavy manual labor.[11] It appears that Palestinian employment opportunities in Israel will grow less rapidly than in the period before the Intifada, and could diminish if the economic situation in Israel results in absorption of immigrants into the labor pool normally filled by Palestinians.

The decrease in Palestinian labor in the Gulf is also of great concern. It has been estimated that of the mid-1980s, approximately 750,000 Palestinians lived and worked abroad (excluding refugees living in camps),[12] of whom more than 40,000 resided in Kuwait.[13] As has been discussed previously in this report, the Palestinian economy is very dependent on the remittances from the Gulf States. However, it is estimated that between 25,000 and 35,000 Palestinians have returned to the Occupied Territories since the beginning of the Gulf Crisis;[14] there is essentially no prospect of their being allowed to return in the near future. The revival of aid from the Gulf states also does not appear to be imminent.

The overall picture is poor. Incomes are falling, particularly that component which might be thought of as transitory income (and therefore more likely to be saved). By some estimates, per capita GNP has fallen to 40% since 1987.[15] As a result of the harsh economic situation, many households have been depleting their savings for some time and the resumption of the accustomed sources of savings does not seem very likely.

### E. The Demand for Credit

It has been consistently reported[16] that one of the most serious impediments to economic growth in the Occupied Territories is the "shortage of credit." This appears to be a genuine shortage, not simply a complaint about high interest rates. The difficulties, described in the next section, are largely institutional. Despite high, real rates of interest (e.g., 12-13% at Cairo Amman Bank, 25% at Israeli Banks, 2% per week or per month at moneychangers, 4-5% at credit institutions),[17] many entrepreneurs have indicated that they would borrow funds if they could do so. However, even at these rates, lenders were unwilling to provide loans of sufficient size to allow productive private enterprises to retrofit or expand, or were not willing to provide loans at all. While one bank official reported that there is a surplus of funds available at his bank and that there is a large volume of overdue loans, this has not been confirmed.

While there are many pressing investment needs, the banks and credit institutions provide relatively small loans - not, in the view of many industrialists and economists of sufficient size to encourage expansion. The predominant source of capital investment in industry is, by far, the owner or his family, although the investment is comparatively small. Under the present circumstances, it is understandable that lending institutions (in the Occupied Territories and elsewhere) would be risk-aversive to providing substantial loans for economic development.

## IV. FINANCIAL INSTITUTIONS

There are two types of formal banks: Israeli and Arab (including one Palestinian bank), and a variety of formal and informal sector financial institutions, ranging from cooperative societies and credit institutions to moneychangers. None performs the needed function of financial intermediation on the scale which is required in the Occupied Territories or which would be expected in any area.

### A. Israeli Banks

As of the end of 1984, six Israeli banks operated 30 branches in the Occupied Territories. These banks have not served as a mechanism for investment in the economy of the Occupied

Territories although, until 1987 they played an important role as a source of overdraft funds for trading transactions. Reportedly, in 1984 only 8% of credit was lent by Israeli banks to Palestinians;[18] the remainder was lent to settlers in the Occupied Territories.[19] More recent data are not available, nor was it possible to obtain data with respect to comparative deposits by Palestinians and settlers in these banks. Israeli banks charge 25%-28% interest on loans made to Palestinians. The banks do maintain deposits, and pay relatively high, real rates of interest (8%-9%), which makes them economically attractive. However, the Palestinian public tends not to use these banks except as a means to hold short-term, cash balances because:

1) the high rate of inflation increases the perceived risk of holding NIS accounts;

2) the accounts are perceived by Palestinians as being subject to scrutiny and hence arbitrary taxation or even confiscation by the authorities; this perception is sufficient to deter use of Israeli banks; and

3) many Palestinians dislike using Israeli institutions, while others may feel considerable social pressure not to use such banks, in spite of the fact that the banks have also been a source of letters of credit for some Palestinian importers.

A recent (mid-1991) but undocumented GOI policy offered residency to Palestinians returning to the Occupied Territories if they brought with them a minimum of $100,000. This policy, known as a "family reunion" incentive, may be a mechanism to ensure that financial investment in the Occupied Territories is available without the need to use existing deposits in Israeli banks. This is a complicated but potentially critical issue (and policy) and should be explored further by A.I.D.

## B. Palestinian and Arab Banks

Prior to 1967, eight banks, with a total of 32 branches, operated in the West Bank and three banks operated in the Gaza Strip (only one of which was a local bank with two branches). The total assets of the banks in the West Bank have been estimated at JD 15 million as of June, 1967, with JD 10 million in credit and a credit to deposit ratio of 70%. In June, 1967, all banks operating in the Occupied Territories were closed by military order and all records and assets were transferred to the Bank of Israel, with these assets being considered deposits of branches of the Bank of Israel.[20]

In addition to the Israeli banks, two other banks operate in the Occupied Territories: the Bank of Palestine in Gaza (which is not allowed to operate in the West Bank), and the Cairo-Amman Bank in

the West Bank (not allowed to operate in the Gaza Strip). As with Israeli banks, these institutions largely serve as holders of short-term cash balances. They do make loans to Palestinians other than their depositors, but they follow (of necessity, according to them) very conservative lending policies.

B.1 The Bank of Palestine

The Bank of Palestine was established in 1960 under Egyptian administration. It was closed after June, 1967, and was permitted to reopen in 1981, but was not allowed to deal in foreign exchange. In September, 1991 the Bank was permitted to open a branch in Jabaliyya, Gaza, but its requests to open branches in Nablus and Hebron are still being appealed through the Israeli courts. After long legal actions and negotiations, the bank has recently been permitted to deal in foreign exchange and foreign currencies. It can also now grant letters of credit for importers.[21]

At the end of 1990, the total assets of the Bank of Palestine were approximately $13 million.[22] The Bank's portfolio is managed very conservatively: in 1990, its total loans (loans + "other sundry debtors") were approximately $2 million, far below the need.[23] The Bank's liquidity ratio was 73%, up from 48% in 1984 (liquidity ratio = ratio of cash to total assets);[24] this is three times the legal limit in Israel. The ratio of loans to deposits was roughly 21%, which, although twice as high as that of Israeli banks operating in the Occupied Territories before the Intifada (see below), remains very low by international standards.

In addition to the constraints faced by other Palestinian financial institutions (including, for example the volatile political and economic climate and GOI restrictions), the Bank of Palestine faces two problems:

1) a closely held, "family style" management approach which results in conservative credit practices; and

2) reports that Palestinian employees of CIVAD are encouraged by their GOI managers to boycott the bank.

The constraints faced by the Bank of Palestine certainly affect the degree to which it has been able to intermediate effectively in the financial market of the Gaza Strip and to contribute to economic development in the area. According to a report by UNCTAD, as of 1989 the Bank of Palestine had "not yet succeeded in mobilizing available resources, however small, and allocating them to needy and priority areas, and it [had] thus not contributed to an increase in output and income."[25]

## B.2 The Cairo Amman Bank

The Cairo Amman Bank, headquartered in Amman, initiated operations in 1986; the bank has four branches in the West Bank. As of the end of 1991, the Cairo-Amman Bank reportedly had a $40 million credit line, with $16 million in loans outstanding. Twenty-five percent of its loans were in default (that is, behind in 1-3 payments); the average for U.S. commercial banks is 1%-2%.[26] The bank charges an interest fee of 9% on loans, plus an additional fee of 3%. Total assets of the Bank were not available as of the preparation of this report.

The Cairo-Amman Bank is not allowed to deal in foreign exchange and is permitted to have demand deposits only in JDs, on which it can charge 3-5% interest. However, as of mid-1992, the Bank had reached its ceiling on allowed deposits and was therefore no longer accepting new deposits. Although the JD's value has been considerably more stable than the Israeli currency, (not least because from 1980-88 the inflation rate was only 2.2%), it has lost roughly 40% of its value against the dollar over the past several years. Because the bank is not permitted to deal in foreign exchange, it cannot hedge or otherwise protect its customers against exchange-rate depreciation. Nor are the negative, real rates of interest on JD accounts liable to attract large deposits. New accounts can be opened only in Amman, where the bank suffers the fate of dual regulation, by both the Central Bank of Jordan and the Bank of Israel, whose regulations may conflict. In this case, bank management must engage in complex, time-consuming negotiations.

In addition, the Cairo-Amman Bank is not allowed by the GOI to deal directly with non-Israeli banks. This restriction places them at a competitive disadvantage with Israeli banks in offering letters of credit: if, for example, Bank Leumi charges 0.5% commission on a letter of credit and, if the Cairo-Amman Bank must go through Bank Leumi, Cairo-Amman must charge 1.0% in order to make the same rate as Bank Leumi. Therefore, despite social pressures, some Palestinians avoid the more expensive Palestinian bank and use the Israeli banks.

## B.3 Development Banks

Since 1967, a number of Arab development banks have invested in the Occupied Territories. Rather than serving as financial intermediaries in the traditional sense, these banks have been a conduit of development funds, primarily from Arab states. For example, the Housing Bank of Jordan managed more than 2,000 loans totaling JD 13.8 million from 1981-1985 for the repair and construction of houses in the Occupied Territories. The Industrial Development Bank of Jordan currently manages loans, primarily for small-scale enterprises, under a JD 1 million grant from the EC. A third Jordanian-based bank, the Bank for the

Development of Municipalities and Villages, had granted just over JD 600,000 in loans to 18 localities by the end of 1984.[27]

In early 1992, ANERA developed a proposal for the formation of a Cooperative Finance Bank. The proposal for funding for the bank calls for $15 million of equity during the first five years and $35 million in international loans, primarily from the International Finance Corporation (IFC).[28] As of the preparation of this report, no funding agency had assured ANERA of funding for the bank.

## C. Cooperative Societies and Credit Institutions

In the absence of a fully functioning banking system, cooperative societies and institutions which manage credit have taken on added importance in the Occupied Territories.

### C.1 Cooperative Societies

Cooperatives, local membership organizations, have been seen by development specialists as having potential for enhanced productivity at the local level. However, the history of cooperatives in developing countries has not been laudable in this respect, with some exceptions. Uphoff has identified four types of cooperatives:[29]

1) credit unions and savings and loan associations, important as sources of finance where other financial institutions are not available, as is the case in the Occupied Territories;

2) labor cooperatives;

3) consumer cooperatives or buying clubs, including input supply cooperatives (important for agricultural producers in particular) and marketing cooperatives (which encourage the use of new technology and can lead to increased production because of reduced cost resulting from shared labor and infrastructure); and

4) producer cooperatives, which is a "unit of production parallel to the household, private company or state enterprise".[30]

Many of the cooperatives which exist in the Occupied Territories fall within the latter two categories.

Cooperative societies in the Occupied Territories have been an important source of credit since the time of the British Mandate. In 1966, just prior to the Occupation, 238 cooperative societies with more than 14,000 members, a share capital of $683,000 and a total volume of loans of $1.6 million operated in the West Bank.

In the Gaza Strip, only 17 cooperatives with just over 2,000 members were operating in the same year.[31] Between the occupation of 1967 and 1978, the cooperatives carried out minimal activities. However, since that time, their role has been supported extensively by donors, particularly the U.S.

The Union of Cooperative Societies (based in Nablus) is essentially a coordinating mechanism for the estimated 110-300 individual cooperatives which operate in the Occupied Territories.[32] Although approximately 30% of the cooperative societies relate to the agricultural sector, they, and the housing cooperatives seem to have been the primary focus of donor interest and funding. Others, including women's cooperative societies, have received substantially less funding but have played an important role in promoting small scale enterprise. Loans have been provided by the cooperative societies for housing, purchase of equipment and machinery (e.g., tractors, olive oil presses) and physical infrastructure, including irrigation canals and agricultural roads.[33] In addition, cash loans have been provided by cooperative societies, primarily to "regional marketing societies."[34] The cooperative also provides services such as assistance in export of goods and management of small scale development projects.

The level of support from A.I.D. has changed substantially in recent years. For example, while ANERA had provided more than $22 million in aid to cooperatives by 1983, in the period 1984-1991, this A.I.D.-funded PVO has provided just $500,000 in aid to cooperatives. Of concern to donors has been the relatively low proportion of equity to the total resources available to cooperatives. It has been estimated that the average cooperative society has only 10-20% of its resources in equity capital.[35] This may be one result of the fact that cooperatives, wholly dependent upon infusions of donor aid, have little incentive to be self-sustaining. This reality, together with the fact that little seems to have been done by donors to strengthen the managerial capacity of the cooperatives, may also explain the low repayment rates for credit received through cooperatives, which was estimated at 30%-50% in 1986.[36]

In a recent book on cooperatives, Shehadeh suggested that the success of the cooperatives has been hampered by the cumbersome and politicized registration requirements on the part of the CIVAD. This is caused by the complex (and often delayed) process for review and approval of projects (many of which may not be approved) and the absence of training for cooperative board members, administrative staff and members.[37] However, he also pointed to a number of internal factors, which diminish the ability of cooperatives to contribute substantially to economic development. These factors included: excessive intrusion of politics into the management and implementation of cooperative projects, inadequate organizational structures and poor

management practices, control by and competitiveness among families tribes (which also leads to duplication of projects) and inattention to the need to adhere to laws and regulations established by the cooperatives themselves. Finally, he suggests that the cooperatives do not adequately plan for general development programs nor (adequately) for specific projects.[38] One could ask how cooperatives, which have been the beneficiaries of such a large proportion of donor financing over the years since 1978, could have internal problems which might well have been addressed by donors or their conduits of funds?

A more detailed discussion of agricultural cooperatives is included in the companion sector analysis report, Agriculture in the Occupied Territories.

C.2 Credit Institutions

In the Occupied Territories, credit institutions have served an important role as a mechanism for disbursal of credit funds received from donors. These institutions have no other formal financial intermediary role (e.g., check cashing and investment of savings). Four local institutions have provided loans to industries and enterprises over the past four years. These are:[39]

1) Arab Development and Credit Company (ADCC), which was founded in 1987, provides loans for agricultural projects, has a loan capital of $3 million and has 30% of its loans overdue by more than 90 days;

2) Cooperation for Development (CD), which was founded in 1987, provides loans for agricultural and industrial projects, has a loan capital of $2 million and has 8% of its loans overdue;

3) the Economic Development Group (EDG), which was founded in 1988, provides loans for both agricultural and industrial projects, has a loan capital of $2 million and has 40% of its loans overdue; and

4) the Technical Development Company (TDG), which was founded in 1990, provides loans for industrial and agricultural projects, and has a loan capital of $3.2 million (data are not available on outstanding loans).

The impact of these institutions on economic development in the Occupied Territories has thus far been minimal. From their founding (the earliest in 1987) to late 1991, the total amount of loans provided was $6.8 million.[40] The loans are relatively small ($5,000-$60,000, most average $8,000) and loans to small and medium-size enterprises predominate.[41] The interest rate

for all but the Cooperation for Development (CD) is 4% to 4.5%; the CD charges 8% interest.[42]

The primary source of funding for these credit institutions is the European Community (EC), which presently provides 70% of all liquid assets of these institutions. The Welfare Association, a Palestinian non-governmental organization based in Geneva, is the second most important source of funds in terms of volume and provided initial start-up costs for most of the institutions.[43] The European Economic Community plans to pass an estimated $19.8 million of its grants for credit expansion through these institutions over the next few years. Just over $17 million (87%) of these funds will be allocated to agriculture, industry and services (including tourism) with the remainder to be used for export credits.[44]

Given their comparatively small loan portfolios, concern has arisen among some donors with respect to the capacity of these institutions to manage loan portfolios of this magnitude. Importantly, these credit institutions have initiated efforts to substantially improve their capacity to manage loan portfolios. For example, in both the West Bank and Gaza Strip they have recently joined together to develop a computer-based information system to which they will each have access; this will allow them to determine, for example, whether a prospective borrower has submitted multiple applications to the cooperating institutions. Moreover, the EC plans to provide extensive technical assistance to these institutions in credit management and to monitor their progress with respect to management of the loan portfolios.

## D. Informal Credit Markets

Given the weakness of the formal financial system, it is not surprising that a variety of informal financial networks exist. The most prominent of these are the "moneychangers," or dealers in foreign exchange in the parallel market. Moneychangers have, in fact, operated in the West Bank and Gaza Strip since prior to 1967 (when there were approximately 40), but their numbers and level of activities has increased sharply since then. As of the end of 1986, an estimated 200 moneychangers have operated in the West Bank. Most of these were not licensed. Although the GOI does not permit licenses for moneychangers in that area, an unknown number of individuals carryout the same functions.[45]

The principle activity of the moneychangers has been to change foreign currencies, and, to a very limited extent, to hold short term deposits. Operating on the margins of legality, they are entirely dependent on their reputation and on the tolerance of the authorities. The importance of reputation for such dealers reduces the risk of fraudulent activity, but does not, of course, eliminate it altogether. The authorities have recently been increasing their regulation and taxation of these dealers. Since

these dealers typically do not maintain written records, there are frequent disputes between them and the fiscal authorities concerning their tax liability. Increased surveillance and taxation and declining remittances have reportedly jeopardized the viability of many dealers.

Although the moneychangers fulfill an important function, they do not and cannot fill the need for financial intermediation in the Occupied Territories. The current severe underdevelopment of financial intermediation ultimately means that the main way in which credit is obtained is through "wasta" or family connections. There are at least three disadvantages of this system:

1) it is necessarily small and fragmented, thus leading to only a limited degree of financial intermediation;

2) it is ultimately dependent upon family wealth, which, in turn, is often a function of remittances; and

3) it reinforces traditional business practices and habits that impair successful economic development in the Occupied Territories.

This last point has been emphasized recently by Palestinian economists and industrialists, including members of the Palestinian delegation.

In addition to cooperatives (discussed in a previous section), there are few credit institutions comparable to community-based or employee credit unions in the U.S., or to credit circles in developing countries. Two exceptions are the Bethlehem Committee for Rehabilitation's Development Center and the Union of Charitable Societies. No detailed information was available with respect to these institutions at the time of the preparation of this report.

## E. Insurance Companies

As of 1991, only one Palestinian insurance company, the Arab Insurance Establishment (AIE), operated in the Occupied Territories. AIE operates in the West Bank (including East Jerusalem, in which it has been allowed to operate since the mid-1970s) and Gaza Strip.[46] All other insurance companies were agents for Israeli firms. Notably, automobile insurance comprised more than 80% of the total volume of insurance in the Occupied Territories.[47]

In most countries, insurance premiums are an important source of investment in the local economy. In the Occupied Territories, none of the more than $27 million in premiums paid to Israeli insurance companies was invested in the West Bank or Gaza Strip,

nor were any of the AIE deposits in Israeli banks invested in these areas.[48] However, AIE has invested - albeit minimally - in local projects by contributing to local shareholding firms and providing loans for construction and commercial ventures; 9% of its $1.25 million in assets in 1984 were in loans and discounted bills.[49]

### F. Donors

The role of donors in the financial sector of the Occupied Territories has been almost exclusively limited to expanding access to credit. However, this involvement has been largely limited to a few cooperative societies and small scale loans to individuals operating enterprises with four or fewer employees. According to a recent report on donor financing for development in the Occupied Territories, the total amount of funds provided for the expansion of credit between 1979 and 1991 has been $18,696,526, of which U.S. private voluntary organizations (PVOs) have provided only $700,000.[50] The EC is planning to provide nearly $20 million of credit for the productive, private sector and $50 million in credit for housing construction over the next few years.[51]

In addition, AMIDEAST has supported local, short courses in credit management and participation in U.S.-based study tours and short courses.

## V. CONSTRAINTS TO DEVELOPMENT

The principle impediments to the finance and credit sector in the Occupied Territories are:

1) bureaucratic restrictions, including:

   a) the absence of legal remedies to ensure repayment of loans,

   b) prohibitions against Palestinian banks dealing in foreign currency and with non-Israeli banks and the exceptionally high requirement for reserves,

   c) restrictions against opening additional banks or additional branches of existing banks, and

   d) the fact that, although a bank's liquid assets must be placed on deposit with the Bank of Israel, the latter will not guarantee deposits;

2) the exceptionally volatile and risky political and economic climate in the Occupied Territories, which serves as a barrier to both domestic and foreign investment;

3) the "family-style" management structures and procedures which pertain to both banks and cooperatives, if not the credit institutions, which contribute to conservative management practices;

4) the absence of any mechanism for macroeconomic planning within which Palestinian financial institutions can operate and which could devise comprehensive responses to the numerous and severe external shocks to which the economy of the Occupied Territories has been subjected;

5) the domination of Palestinian financial institutions by two central banks -- the Bank of Israel and the Central Bank of Jordan -- which are concerned primarily (and understandably) with financial and economic issues in their respective countries;

6) the fact that the economy of the Occupied Territories is neither so integrated into the Israeli economy that it can simply be regarded as a section of that system, nor sufficiently independent of the Israeli economy that Palestinians are insulated from the difficulties there;

7) the dependence on foreign labor markets and external donors for savings and investment, both of which are volatile and risky.

These constraints render the finance and credit "system" of the Occupied Territories weak, and call into question the appropriateness of substantial sums of donor assistance in the absence of policy dialogue with respect to changes in GOI restrictions on open financial markets in the Occupied Territories.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Development Opportunities

The weaknesses of the financial sector are numerous. Banks are few, small, heavily restricted, and confronted with a highly uncertain economic climate. They pursue extremely conservative loan policies, even with the very small, total volume of deposits at their disposal. Informal sector mechanisms are numerous, but are far too small, fragmented, and ephemeral to fill the gap. Credit institutions and cooperatives have little capacity to manage larger supplies of funds, but are initiating efforts to improve their management of current loans. Under the current circumstances, strengthening such cooperative programs may be appropriate on a case-by-case basis.

Although the supply of savings may be declining and, therefore, the cost of credit rising, there remains significant excess demand for credit. This strongly suggests that the current institutional framework of financial intermediation is very weak, a surmise that is certainly borne out by direct inspection of the situation. However, despite the magnitude of the need for an effective financial system, under the present political circumstances, the opportunity for investment on the part of A.I.D. or the U.S. may be limited.

A.I.D. could play an important role in improving the capacity of existing institutions to serve as financial intermediaries, with particular attention to the management of loan portfolios. Credit expansion should proceed only if A.I.D. can be assured that those organizations through which it allocates credit funds (presently limited to four, private, voluntary organizations) have the capacity to adequately plan for and monitor credit programs. Planning for credit programs must be carried out in conjunction with the EC and other donors and with relevant Palestinian economic planning entities, to limit duplication insofar as possible and to help ensure that credit is directed toward productive enterprises, which have the greatest likelihood of sustainability and linkage with other development projects.

Some limited assistance can be given to cooperatives and to "credit circles," which, in the manner of the Grameen Bank in Bangladesh, can assist certain disadvantaged groups. While the U.S. has already encouraged the Israeli authorities to permit the opening of the Cairo-Amman Bank in the West Bank, further intervention to relax the restrictions on credit and finance is urgently required.

Finally, the A.I.D. could assist the Palestinians in developing policy instruments with respect to the financial sector, including, for example, regulations governing savings and loan institutions. Such instruments would be useful whatever the outcome of the current political discussions and would certainly improve the current weak system, even if the GOI does not alter its restrictive policies.

The EC is planning to provide nearly $20 million of credit for the productive private sector and $50 million in credit for housing construction. Given the deplorable state of the Palestinian economy, this is urgently necessary but woefully insufficient. As is described in the companion sector report, Industry and Enterprise in the Occupied Territories, limited credit has served to encourage the expansion of only small-scale enterprises, and that only minimally. The level of credit that would be required to significantly expand Palestinian industry has not been forthcoming. Loans averaging $2,000 to $5,000 do not greatly facilitate the movement of Palestinian enterprise into the global economy.

In the long run, donors (including A.I.D.) will need to recognize that great expectations with regard to economic growth in the Occupied Territories will require infusion of sufficient funds as well as technical assistance and training, in order to stimulate jobs' creation and the development of a healthy, competitive economy.

## B. Recommendations

Specific recommendations are shown in Table 1.

TABLE 1

SUMMARY CONCLUSIONS AND RECOMMENDATIONS: FINANCE AND CREDIT RECOMMENDATIONS

| Conclusions | Recommendations |
|---|---|
| 1. The financial sector in the Occupied Territories -- including banks, cooperatives and credit institutions -- are weak, unable to meet credit demands and to adequately manage the limited financial resources which are available to the banking and credit institutions. These weaknesses are largely attributable to the bureaucratic and other limitations imposed by the GOI, but also result from inadequate Palestinian management structures and practices. | 1.1 A.I.D. should provide technical assistance, short-term training and other support for expansion of community-based savings and credit institutions (e.g., credit circles).<br><br>1.2 A.I.D. should provide technical assistance, short-term training and other support for banks, credit institutions and cooperative societies to strengthen their capacity to plan, management and evaluate their activities.<br><br>1.3 A.I.D. should provide technical assistance, short-term training, commodities (e.g., microcomputers and related software and published and unpublished documents) for the development of finance and credit data and information clearinghouses. |
| 2. The severe economic situation since 1990 has resulted in a decline in savings and availability of financial resources for private sector Palestinian investment in development projects and opportunities. | 2.1 A.I.D. should provide limited assistance for the expansion of credit for productive private sector, either through loan guarantees or engaging in policy dialogue with international or regional development or private banking institutions. |

3. Policy instruments which could be used by the private sector (and by quasi-public institutions) to improve the management of financial resources in general and credit management in particular, are inadequate or non-existent.

3.1 A.I.D. should provide technical assistance, short-term training and direct support for the development of management infrastructure (e.g., policy instruments for financial regulation, and standardized credit applications).

4. Only recently have donors begun to coordinate their information with respect to funding credit projects; significantly more coordination is required within and among donor agencies if Palestinian institutions are to adequately plan for and implement credit projects (e.g., housing or agricultural credit projects) and those related to such projects (e.g., physical infrastructure related to housing construction).

4.1 A.I.D. should continue to encourage donors to coordinate the planning of credit and related projects, including identifying the financial (and economic) implications of credit projects vis-a-vis related sectors (e.g., housing credit related to the cost of physical infrastructure required for such housing).

5. Private insurance, a critical component of the financial sector and an importance source of investment in local economies in most countries, is weak even in the areas in which it works and non-existent in other (e.g., crop insurance). Public insurance mechanisms are also extremely weak in some areas and non-existent in others.

5.1 A.I.D. should provide technical assistance and short-term training to improve the management capacity of private sector insurance companies.

5.2 In the event of political change, A.I.D. should provide technical assistance and training to the Palestinian public, quasi-public and private sector agencies and institutions to assist in planning for broadbased insurance needs.

6. No formal mechanism exists for macroeconomic planning of the Palestinian economy. This hinders the ability of Palestinian financial and other institutions to devise comprehensive plans and responses to the numerous and severe external shocks to the economy of the Occupied Territories.

6.1 A.I.D. should provide technical assistance, short-term training and other support (e.g., for the conduct of short-term studies and the preparation of reports) in order to improve the capacity of Palestinian economic and other related institutions to undertake macroeconomic planning and to conduct single- and multi-sectoral economic studies.

7. The Palestinian economy is essentially dependent on foreign labor markets and external donors for savings and investments in operating costs and capital expenditures, as well as, for social welfare programs. The economy is also neither sufficiently integrated with the Israeli economy as to derive the full benefits of that system, nor sufficiently independent to adequately design and implement economic development programs and remain insulated from the difficulties of the Israeli economy.

7.1 The A.I.D. should engage in policy dialogue with the GOI to determine what specific measures can be taken to alleviate unnecessary, bureaucratic requirements and facilitate the development of economic policy structures, which can ease the transition to a more sustainable Palestinian economy.

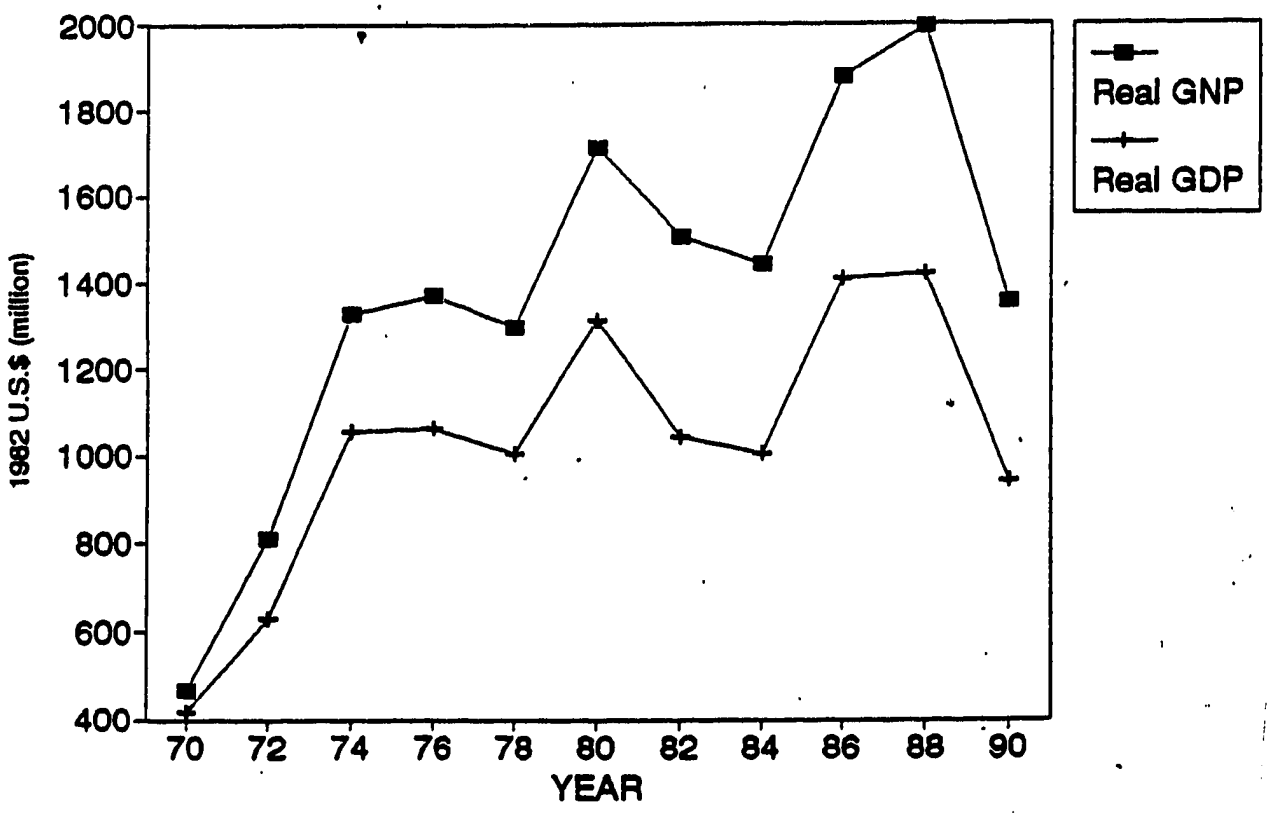
Table 2
REAL AND NOMINAL GNP AND GDP, OCCUPIED TERRITORIES, 1970-90

| Year | Nominal (current $, million) | | Real (1982 $, million) | |
|---|---|---|---|---|
| | GNP | GDP | GNP | GDP |
| 1970 | 196.3 | 174.9 | 82.45 | 73.46 |
| 1971 | 269.2 | 225.3 | 119.5 | 100.3 |
| 1972 | 377.1 | 293.3 | 175.4 | 136.38 |
| 1973 | 470.5 | 361.7 | 232.9 | 179.0 |
| 1974 | 718.2 | 571.6 | 387.8 | 308.66 |
| 1975 | 741.3 | 560.4 | 439.6 | 332.3 |
| 1976 | 866.0 | 671.5 | 546.4 | 423.7 |
| 1977 | 895.5 | 696.2 | 602.67 | 468.54 |
| 1978 | 937.9 | 726.2 | 677.16 | 524.3 |
| 1979 | 1167.2 | 857.8 | 917.4 | 674.2 |
| 1980 | 1469.5 | 1126,9 | 1259.36 | 965.7 |
| 1981 | 1392.1 | 979.7 | 1308.57 | 920.9 |
| 1982 | 1507.0 | 1044.5 | 1507.0 | 1044.5 |
| 1983 | 1662.7 | 1108.5 | 1727.5 | 1151.7 |
| 1984 | 1554.6 | 1084.9 | 1674.3 | 1168.4 |
| 1985 | 1378.3 | 1002.7 | 1517.4 | 1112.0 |
| 1986 | 2136.7 | 1606.4 | 2431.6 | 1828.0 |
| 1987 | 2490.3 | 1772.2 | 2923.6 | 2080.6 |
| 1988 | 2418.55 | 1726.15 | 2933.7 | 2093.8 |
| 1989 | 2087.5 | 1442.55 | 2636.5 | 1821.94 |
| 1990 | 1787.0 | 1234.0 | 2349.9 | 1629.285 |

Note: Real GNP and GDP: Nominal deflated by U.S. GNP deflator.

Source: Nominal GNP and GDP for 1970-87: Hamed and Shaban, Economic Integration and Israeli Occupation of the West Bank and Gaza; 1991. (Using Central Bureau of Statistics, Statistical Abstract of Israel Shekel figures converted at annual average exchange rates, from IMF's International Financial Statistics.) For 1988-90: UNCTAD, Recent Economic Developments in the Occupied Palestinian Territory. Report by UNCTAD Secretariat, NY; 1991.

FIGURE 1
REAL GNP AND GDP, OCCUPIED TERRITORIES, 1970-1990




Note: Real GNP and GDP: Nominal deflated by U.S. GNP deflator.

Source: Nominal GNP and GDP for 1970-87: Hamed and Shaban. Economic Integration and Israeli Occupation of the West Bank and Gaza; 1991. (Using Central Bureau of Statistics, Statistical Abstract of Israel shekel figures converted at annual average exchange rates, from IMF's International Financial Statistics.) For 1988-90: UNCTAD, Recent Economic Developments in the Occupied Palestinian Territory. Report by UNCTAD Secretariat, NY; 1991.



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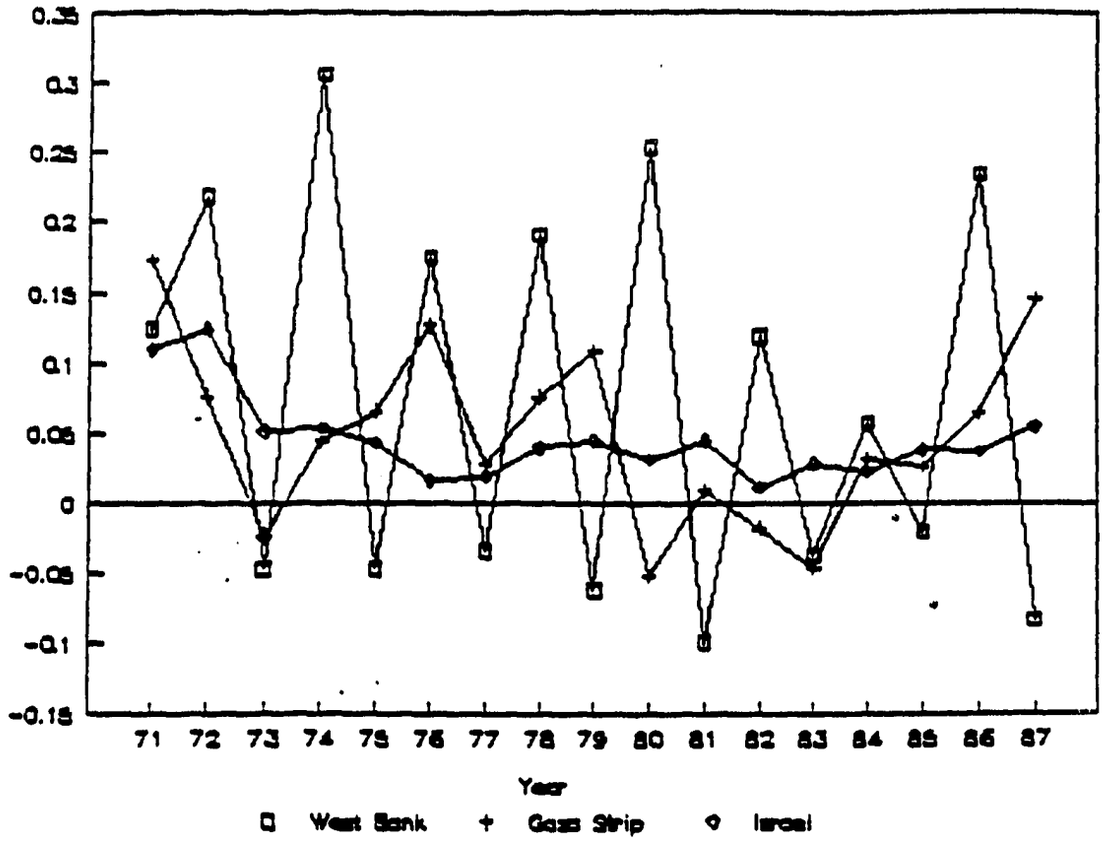
FIGURE 2
ANNUAL GDP GROWTH RATES, ISRAEL AND THE OCCUPIED TERRITORIES, 1971-1987




Source: Hamed and Shaban, Economic Integration and Israeli Occupation of the West Bank and Gaza; 1991.



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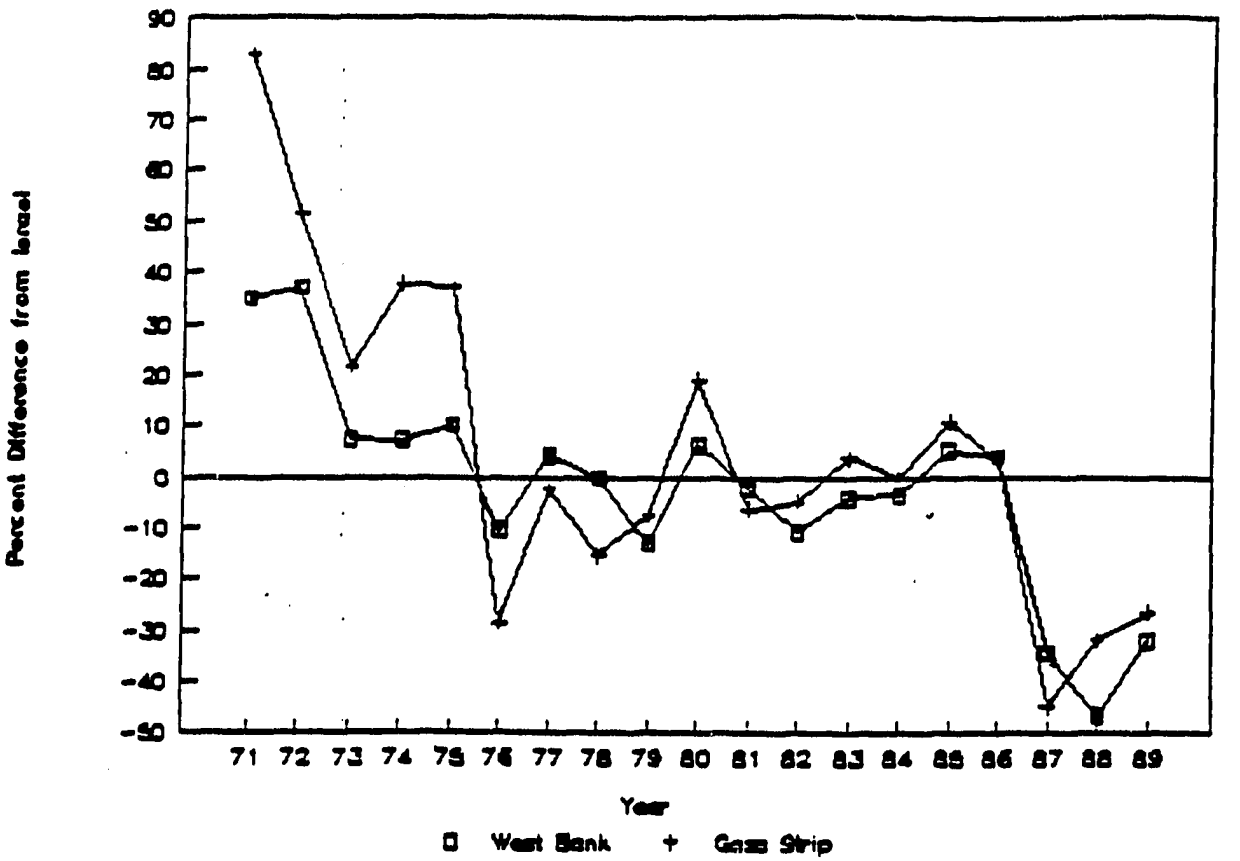
FIGURE 3
PERCENT DIFFERENCE IN INFLATION RATES BETWEEN ISRAEL & OCCUPIED TERRITORIES, 1971-1989




Source: Hamed and Shaban, Economic Integration and Israeli Occupation of the West Bank and Gaza; 1991.



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Table 3
EXTERNAL DEPENDENCE OF THE ECONOMY OF THE OCCUPIED TERRITORIES, 1978-1990

| Year | Net Factor Income Plus Net Transfers as % of Net National Disposable Income |
|---|---|
| 1978 | 32% |
| 1979 | 34% |
| 1980 | 31% |
| 1981 | 35% |
| 1982 | 35% |
| 1983 | 36% |
| 1984 | 34% |
| 1987 | 31% |
| 1988 | 33% |
| 1989 | 32-43%* |
| 1990 | 36% |

* The range for 1989 reflects the estimate of Palestinian researchers (43%) and the Israeli Central Bureau of Statistics (32%).

Source: Calculated from data in UNCTAD, The Palestinian Financial Sector Under Israeli Occupation. New York: United Nations; 1989 and UNCTAD, Recent Economic Developments in the Occupied Palestinian Territory, Report by the UNCTAD Secretariat, New York; 1991.



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16. See, for example: UNCTAD; 1989a and UNCTAD. Palestinian External Trade Under Israeli Occupation. New York: United Nations; 1989b. In addition, numerous individuals interviewed during the course of this project identified credit shortages as a key problem.

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47. UNCTAD; 1989a, p. 48.

48. UNCTAD; 1989a, p. 48.

49. UNCTAD; 1989a, p. 56.

50. UNDP; 1992.

51. Unclassified EC communication.

# HEALTH IN THE OCCUPIED TERRITORIES

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

August 1992

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FOR:

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**EXECUTIVE SUMMARY**

Available health status measures indicate a cessation of improvements or a deterioration in the health status of the population in the Occupied Territories over the past five years. They also indicate a significantly poorer level of health than that of Israelis, but comparable to those of populations of Egypt, Morocco and Jordan. The health status of the refugee population is comparable to that of Palestinian refugees within UNRWA's jurisdiction in other countries. Mortality and morbidity data for the West Bank are more comparable to middle-income countries (i.e., with chronic disease beginning to predominate), while the data for the Gaza Strip continue to reflect its status as comparable to that of lower-income countries.

More than half of the health services in the Occupied Territories are provided by the private sector, with the CIVAD (through the Government Health Services, GHS) and UNRWA providing the remainder, particularly in the Gaza Strip than in the West Bank. The private sector provides services directly and contracts with UNRWA for provision of services. Hospital-based care is predominant, although hospital beds are seriously maldistributed, with most hospitals being located in the Jerusalem/Bethlehem area and few in the Gaza Strip or northwestern area (Jenin/Tulkaram). The Gaza Strip has among the lowest hospital bed per capita ratios in the world. There is also no rational "system" of care (e.g., regional care with clearly delineated referral networks, centralized regulatory bodies, and central mechanisms for pharmaceutical purchase, supply, distribution, utilization and monitoring). Although the GHS, private sector and UNRWA operate primary health clinics, there is a scarcity in some areas and the range and quality of services is highly variable.

There is no mechanism for planning the training of health care personnel consistent with defined service and managerial needs. Moreover, there is no medical school, in fact no formalized system for medical education, nor for continuing education of health professionals in general, although a number of schools exist for training of nurses and technicians. There is a severe shortage of nurses, trained technicians and some medical specialties for which there are no practicing physicians. In part because during the height of the Intifada donors concentrated on providing medical equipment (to secondary and tertiary facilities in particular), the equipment is maldistributed, it is often not functioning, and physicians and nurses are not adequately trained in its use.

Rehabilitation services are also poorly distributed, and expensive, facility-based care predominates, although there have been recent efforts to expand community-based care. There are an estimated 15,000 individuals with severe Intifada-related injuries who require extensive rehabilitative care; this places a



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significant additional and continuing cost burden on an already-burdened system. Family planning services do exist, but because of political concerns are provided on request only; no outreach activities are carried out by the few organizations which provide such services. In a positive vein, at least two of the organizations which offer family planning services do so in the broader context of maternal health services, including health education.

While Palestinians can participate in the Israeli national health insurance system, the premiums are too costly for most and the benefits not seen as commensurate with the cost by others. There are embryonic efforts to establish private health insurance systems in the Occupied Territories, but these are hampered by the lack of a rational system of care and health status data on which to base detailed plans as well as on the increasing economic problems, which limit the ability of individuals or firms to pay health insurance premiums. This latter factor has also increased the proportion of patients who are classified as social cases, and thus are unable to pay for private sector care.

The total amount of funds expended in the health sector in a given year is an elusive figure. Obtaining accurate estimates of total health expenditures is hampered by the difficulty in obtaining cost data from the GHS, private facilities and donors. It is estimated that in the Gaza Strip between $36 million and $45 million were spent on health care by a combination of the GHS, UNRWA and private donors in 1990. In the West Bank, the range has been estimated at $50 million to $75 million. GHS budget allocations actually decreased over the period 1988-1991, in spite of continued population growth. Health and rehabilitation services in the Occupied Territories became increasingly dependent on donor support, perhaps more than any other sector. Even within donor agencies and organizations, such support has been uncoordinated, resulting in excess or inappropriate distribution of certain types of services or equipment and shortages in others. Also, few Palestinian administrators who work for CIVAD, the private sector and UNRWA have training in health systems management or planning; knowledge and experience in health care financing is particularly lacking.

The GOI has proposed that the GHS hospitals be turned over to the Palestinian health sector. However, with no existing tax mechanism within the control of the Palestinians, dependence on donors for more than half of all capital and operating costs, and minimal experience and training in policy-level planning and decision-making, it is not clear how Palestinians can readily assume responsibility for the public health care system, particularly in view of the fact that this system has been underfunded for some time.

Table 1 presents a summary of conclusions and recommendations.



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## II. INTRODUCTION

### A. Importance of Health and Nutrition for Development in the Occupied Territories

The importance of health and nutrition for development in the Occupied Territories cannot be overemphasized. In addition to the personal, familial and social consequences of poor health status, the relationship between health status of a population and economic productivity has been well documented. Moreover, health systems' costs comprise significant proportions of the GNP of most countries. While it is not possible to estimate the proportion in the Occupied Territories, what is clear is that the private sector bears a large proportion of the economic burden of health care costs - thus diminishing available investments in the productive private sector. Given the importance of health and nutrition, it is imperative that development efforts be undertaken to ensure, insofar as possible, quality health care and efficiencies throughout the health care system.

### B. Key Sectoral Issues

Two issues are paramount in the health care system in the Occupied Territories: quality of care and health care financing. Unfortunately, minimal data are available with respect to quality of care, thus making it difficult to determine what the priority needs are in this critical area. The ability of the health care system to sustain its costs is related to quality of service delivery. Since mid-1991, there has been considerable discussion among Palestinian health professionals of the proposals to "privatize" the GOI health services in the West Bank and Gaza Strip. As a result, these proposals engendered considerable debate, exacerbated by the fact that documents describing the proposals were not available to Palestinian organizations. In April, 1992, as part of the formal peace discussions in Washington, D.C., it was formally proposed that authority for the Government Health Services (GHS) hospitals be given to the Palestinian private health sector, although it is not clear whether individual organizations or local "authorities" are to assume such responsibility.

The ensuing debate centers around the recognition by Palestinian health planners and officials of the cost and financing burdens of the health care sector. Many are thus wary of assuming such responsibility in the absence of the ability to create a rationally-designed system (health care industry) with an appropriate and sustainable public and private sector mix of services. They are also concerned that, in the absence of a fully-functioning tax system, and in the face of economic problems, they will be unable to cover basic operating costs.

The fact that the GHS system has been underfunded since 1987, with resulting deterioration in physical infrastructure, is of further concern.

## III. SECTORAL STATUS AND TRENDS

This part of the health report presents population and health status data, followed by a description of health services provided through the mixed public/private system which pertains in the Occupied Territories. Demographic factors related to health status - such as education, employment, access to potable water, and income level - are discussed in detail in companion sectoral analysis reports.

### A. The Population

Accurate demographic data for the Occupied Territories are virtually impossible to obtain, as the most recent census was conducted in 1967;[1] since that time, all population data have been estimated. The three primary sources of information regarding population are the Central Bureau of Statistics (CBS), the Interior Ministry (MOI), and estimates prepared by the Jordanian Medical Association in 1986.

In the summary of demographic and other data published by Benvenisti and Khayat in 1988, it was noted that the Palestinian population data presented by the CBS and by the MOI for the Occupied Territories differ. For example, the data for 1987 showed CBS estimates for a total Palestinian population of 858,000 for the West Bank, while the MOI estimated the population to be 1,252,000.[2] The CBS estimates exclude East Jerusalem; the Palestinian population in East Jerusalem was estimated at 141,000 in 1987.[3]

Using the 1[illegible] Statistical Abstract of Israel, with 1990 data as a basis, and assuming a 3.5% annual growth rate in the West Bank and a 4.5% annual growth rate in Gaza, the following estimates were calculated for 1991 (see Figure 1):[4]

| | |
|---|---|
| West Bank (including East Jerusalem) | 1,104,799 |
| Gaza Strip | 1,010,640 |
| Total: | 2,115,439 |

This estimate is only 6% less than that published recently by the Center for Engineering and Planning, which used a different basis for population estimates. Given that no census has been taken since 1983, this difference is not significant.

The Palestinian population is a youthful one; nearly half (47.4%) of the Palestinian population in the West Bank is under the age of 15, as is the population of Gaza (49.5%).[5] This age distribution and the high birth rates have important implications



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for health service delivery, indicating, for example, a need for extensive pediatric and obstetrical/gynecological treatment and preventive care, which are minimally available.

As of January, 1992, 451,695 individuals (or approximately 40% of the population) in the West Bank were registered as refugees, of whom 119,172 (26%) lived in UNRWA camps. In the Gaza Strip, 549,675 Palestinians were registered refugees (approximately 80% of the population); of these, 302,977 (55%) lived in UNRWA camps.[6]

In spite of the very high, natural rate of increase, until 1991 the population had a relatively low rate of growth, as a result of emigration to Jordan, the Gulf States and outside of the region (primarily for job opportunities). Even prior to the Gulf War, an important population variable in the Occupied Territories was the number of residents who return from the Gulf States annually for summer vacation. Reportedly, approximately 100,000 Palestinians returned to Gaza annually, for 2-3 months each year; no estimates of similar temporary residents were available for the West Bank. Since the Gulf War, an estimated 35,000 Palestinians have returned to the Occupied Territories; 40% of them are currently residing in the Gaza Strip.[7] Most are university graduates but are unemployed or underemployed. They are not eligible for social benefits from the GOI, although some are eligible for services through UNRWA as returned refugees.

## B. Health Status

Available health status measures indicate a cessation of decades of improvements or even a deterioration in the health status of the population in the Occupied Territories over the past five years. They also indicate a population health status significantly poorer than that of the Israelis, but comparable to populations in Egypt, Jordan and Morocco.

The health status indicators of the Occupied Territories reported by the Government of Israel (GOI) Government Health Services (GHS) depend primarily on reporting from government health facilities, which is variable at best. Although private sector facilities often maintain patient utilization records, these data are not aggregated across facilities by the GOI (which does not receive reports from all of the private sector facilities) or by any other organization. Moreover, the reports submitted by the GOI to the World Health Organization (WHO) include no morbidity data, but rather present narrative discussions of selected conditions (e.g., infant mortality, AIDS, brucellosis). The UNRWA makes available annual reports of the health conditions of the refugee population. While no such periodic, comprehensive reports are available from the private sector, individual institutions have produced reports on certain health status conditions (e.g., nutrition) or on regional health status and

service delivery. Nonetheless, to the maximum extent possible, mortality and morbidity data have been collected from published reports and unpublished sources (e.g., interviews at facilities), and are presented in this section of the report in order to serve as a general review of health needs of the population.

## B.1 Mortality

The statistical bulletins for the West Bank from the GOI from 1986 through 1991 show that the leading causes of death for those years have not changed appreciably. According to the most recent report,[8] which includes data based on death records from all sources, the five leading causes of death in 1990 for the West Bank were:

1) Diseases of the Heart
2) Malignant neoplasms
3) Respiratory diseases
4) Perinatal conditions
5) Diseases of the digestive system

These five causes accounted for approximately 60% of the reported deaths in the West Bank in 1990. Reports from hospitals and other sources indicate that there were more than 100 Intifada-related deaths in 1991,[9] a significant decrease from 1988, when there were nearly 400 deaths.[10]

These mortality data follow the patterns for industrialized countries, and for developing countries whose patterns have changed in the past decade. By comparison, the leading causes of death in the Gaza Strip in 1990 were much more reflective of developing countries:

1) pneumonia and respiratory diseases
2) prematurity and birth trauma
3) gastroenteritis and dehydration

This would be consistent with the comparative economies and support structures of the West Bank and Gaza Strip, with the West Bank being a middle-income economy and the Gaza Strip ranking with the lower-income countries.

No comprehensive infant mortality study has been conducted in the Occupied Territories; as a consequence, estimates rely on UNRWA statistics and on small population studies. Figure 2 presents a summary of the findings for the most recent years for which data are available, as well as comparisons with Israel, Jordan, the US and middle income countries. According to reports, the infant mortality rate (IMR) was 22-35/1,000 in the West Bank and 28/1,000 in Gaza in 1991.[11] However, estimates of infant mortality in the Occupied Territories range widely. For example, in the West Bank the ranges are from 40/1,000 to 97/1,000 (the



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latter for 20 villages in the Hebron District, based on studies conducted in 1987- 1988.[12] In UNRWA refugee camps in the West Bank, in which there is more access to health care than in the general rural population in the West Bank, infant mortality has reportedly decreased from 85.3/1,000 in 1975 to 17.5/1,000 in 1991.[13] The estimated infant mortality (IMR) rates for Gaza range from 50/1,000 to 70/1,000, with the 1991 rate for UNRWA refugees estimated at 40/1,000.[14] For purposes of comparison, it should be noted that the IMR in Jordan in 1990 was 51/1,000 live births, in Israel for the same year it was 10/1,000, in the US 9/1,000 and for middle income economies 48/1,000.[15]

B.2 Morbidity

Morbidity data are scarce; this is particularly important in view of the need to better plan for health service delivery at all levels of care. Presenting diagnoses for inpatient and outpatient hospital care are not included in the GOI statistical reports, although visits to government clinics are shown by ICD-9 codes and it includes reported incidence of infectious diseases. However, there have been few systematic studies of health conditions based on hospital or clinic records or community surveys.[16] Moreover, the questionable accuracy of health data could readily distort priority health needs in the Occupied Territories. For example, the 1988 GOI report for the West Bank showed no reported cases of diarrhoea and gastroenteritis, although there were 15 reported deaths due to intestinal infectious diseases (not specified as diarrhoea-related) in that same year, and 10,196 reported visits to GOI clinics for intestinal infectious diseases.[17] Moreover, the 1989 UNRWA report to the WHO showed 8,239 reported cases of diarrhoeal disease for 1988.[18]

The most common conditions among refugee and non-refugee children in 1988 were gastrointestinal and respiratory infections. This is based on presenting conditions at GHS, UNRWA and private health facilities as well an UNRWA household survey.[19] In 1988, the five most common presenting conditions reported by GHS clinics for all age groups in the West Bank were: respiratory infections (21%), other diseases of the respiratory system (11%), diseases of the skin and subcutaneous tissue (10%), diseases of the musculo-skeleton system and connective tissue (10%) and diseases of the digestive system (9%) (see Table 2). Of some concern is that hypertensive diseases accounted for 4.4% of all reported conditions, which may be underreported.[20]

The rates of communicable diseases are also a matter of concern, even among the refugee populations. For example, 1991 case rates were 288/100,000 for mumps and 246/100,000 for dysentery (amoebic and bacillary) among the refugee population in the West Bank; in Gaza, the rates were 375/100,000 for mumps and 1,072/100,000 for dysentery. This latter rate is three times that of UNRWA



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refugees in Jordan.[21] Given the reported problems with water quality (see Water and Sanitation report), the rates of dysentery should be carefully monitored.

Brucellosis, a cattle disease which is transmitted to humans through contaminated milk products, was unknown in the Occupied Territories prior to 1967.[22] Early detection and treatment with antibiotics results in successful cure, but late diagnosis leads to long-term hospitalization; it has also been associated with miscarriages. Reported cases in the West Bank have increased from the first diagnosed case in 1973, to 13 in 1976, to 192 in 1981 (when private physicians were trained and encouraged to report cases), to 737 in 1987 (when a public information campaign was mounted in local grocery stores).[23] In 1991, 620 cases were reported in the West Bank;[24] however, underreporting is estimated to be 50%.

The nutritional status of Palestinians has been a concern among donor agencies and Palestinian health personnel. During a recent A.I.D.-sponsored Food and Nutrition Assessment in the Occupied Territories,[25] it was confirmed that widespread malnutrition does not exist among the Palestinian population residing in the Occupied Territories. However, specific nutritional deficiencies such as inadequate growth, high prevalence of anemia, and protein deficiencies, are evident among segments of the population in the Occupied Territories. The most common nutritional deficiency found among children aged five and under (excluding organic causes of malnutrition) is caloric-protein malnutrition, manifested by inadequate physical growth. Results from two recent nutritional studies have shown significant improvements in growth measurements of children in the past few years. The 1990 UNRWA study found a marked improvement in height-for-age among refugee children under three compared with a similar survey in 1984. A study also found similar improvements in ht/age between a 1987/88 cohort and a 1989 cohort of Gazan children aged one to 18 months. Anemia is very prevalent in the Occupied Territories although the severity of anemia among the general population is not known. Rates of anemia are high among women, both pregnant and non-pregnant, as well as children and adolescents. For example, the 1990 UNRWA study found a prevalence of anemia of 58% and 70% among children in West Bank and Gaza Strip refugee camps, respectively. In the same study, 28% of the refugee women were assessed as anemic in the West Bank compared to 44% of the women in the Gaza Strip.

## B.3 Disability in the Occupied Territories

A number of studies have indicated that the prevalence of disabilities in the West Bank and Gaza Strip is comparable to the estimates made by the WHO for the world's population at large; i.e., 10%, including all levels of severity, with 1.5% being in need of rehabilitation.[26] In 1989, Giacaman et al concluded

that 150,000 Palestinians in the area are disabled at some degree of severity (from very mild to very severe). The authors also estimated that between 2% and 2.5% of the population were in need of rehabilitation services; that is, approximately 16,000-25,000 persons in the West Bank and 14,000-17,500 in the Gaza Strip.[27] Based on data obtained from facilities offering rehabilitation services throughout the Occupied Territories, the authors estimated that 9,000 persons were disabled due to hearing, speech and sight impairments, 1,100 persons had some other form of physical disability, 7,000 persons were mentally disabled and the remainder suffered from a combination of disabilities or other disorders.[28] These estimates excluded those requiring rehabilitation as a result of injuries related to the Intifada.

According to the UNRWA Board on Intifada Injuries, as of the end of 1991 there had been a total of 45,656 casualties related to the Intifada. In a detailed analysis of 473 of the 2,500 cases admitted to hospitals in the West Bank during the period March, 1988 to March, 1989, 22% were mild injuries with no permanent disability, but perhaps requiring short-term, community-based rehabilitation; 38% were moderate with no permanent disability, but perhaps requiring rehabilitation for a limited duration; and 40% were serious, with permanent disability, requiring both long-term institutional and community-based rehabilitation.[29]

## B.4 Mental Health and Drug Abuse

No population-based study of the prevalence of mental health conditions has been conducted in the Occupied Territories. However, data derived from primary health and other facilities, as well as other sources indicate a severe problem and a largely unmet need for services. For example, a recent assessment in the Gaza Strip estimated that approximately 15,000 individuals needed psychiatric/psychological treatment.[30] While no comparable estimate has been made in the West Bank, visits to clinics alone provide an indication of the need for services; for example, in 1988 there were 6,737 visits to clinics for mental disorders.[31]

A number of reports over the past three years have indicated increasing signs of the availability and use of illicit drugs in the West Bank and Gaza Strip. This is of considerable concern in view of the fact that efforts to prevent and treat such use are minimal and receive minimal support from donor agencies. Health professionals have reported substantial increases in availability and use of illicit drugs for the past several years; this increase reached alarming proportions during the Gulf War, but seems to have subsided somewhat since then. In the Gaza Strip, there have been reports of increases in the availability of illicit drugs (particularly among laborers working in Israel) and that physicians are themselves abusing prescription drugs.[32]

## IV. INSTITUTIONAL ARRANGEMENTS AND SERVICE DELIVERY IN THE HEALTH CARE SYSTEM

### A. Health System Organization

The Occupied Territories do not have a rationally-organized system of health care. Rather, there is a mix of public, private and UNRWA services, with donor agencies playing a major role vis-a-vis the private sector and UNRWA.

The three categories of providers of health services in the Occupied Territories are:

Government Health Services (GHS) which provides health care services under the aegis of the Ministry of Health in Jerusalem through the Coordinator for Health in the Occupied Territories. Direct linkage with health services delivery is through the Civil Administration, which is part of the Ministry of Defense. The GHS operates primary care facilities and hospitals (including one mental hospital) in the Occupied Territories and is responsible for immunizations and other preventive services. GHS services are gratis for children three years and under and for pregnant women; others must pay the required fees if they are not covered by the health insurance system. With the exception of the Israeli Coordinator for Health Services, virtually all employees of the GHS are Palestinians. The food distribution program is administered jointly by them and the Catholic Relief Services (CRS).

United Nations Relief and Works Agency for Palestine Refugees (UNRWA) has provided health services for Palestinian refugees since 1948. UNRWA's health policies and regulations are formulated at its headquarters in Vienna, Austria; the agency also has local administrative centers in Jerusalem (for the West Bank) and Gaza. UNRWA provides preventive, primary, curative and rehabilitative health services for refugees residing within and outside the camps, both in UNRWA-operated facilities and through the purchase of services in GHS and private facilities. The agency also has an environmental (sanitation) and food distribution program. UNRWA charges no fees for the services it offers directly, or for which it contracts.

Private sector services are provided primarily through regional and local charitable organizations; they operate primary, secondary, tertiary, rehabilitative and mental health facilities. The organizations which predominate in the private sector are:

-- Patient Friends Societies (PFS) and the Red Crescent Societies (which are independently operated throughout

the Occupied Territories and which operate primary and secondary facilities, as well as, ambulance services),

-- other independent charitable associations and health committees which either sponsor or operate services (e.g., the Mokassad and Ittihad hospitals and the Union of Palestinian Medical Relief Committees and the Health Care Committees).

All private organizations charge nominal fees for service, provide care gratis to those who demonstrate economic need (social cases), and do not charge for Intifada-related cases; most do not charge for preventive care of infants (e.g., immunizations).

Approximately 40% of inpatient and outpatient health services in the West Bank are provided in facilities operated by the private sector, including hospital and rehabilitation services provided for refugees referred by UNRWA. The GHS services account for approximately 40% of services and UNRWA for approximately 20% (the latter primarily in primary care facilities). In Gaza, approximately 20% of all health services are provided in facilities operated by the private sector, 40% in UNRWA facilities and 40% by the GOI; the private sector provides a somewhat smaller proportion of hospital care in the Gaza Strip.

The proportion of health services provided by the private sector has increased since the late 1970's, and has grown dramatically, perhaps by as much as 75%, since the Intifada, although it may have leveled off somewhat since 1990. Patient preference for private sector facilities is reportedly due to:

* In the past three years there has been a three-fold increase in the premium for national health insurance and a decrease in the proportion of those covered (estimated at 16% in the West Bank and 25% in the Gaza Strip).[33] Participation in the program has become more costly to patients than the use of fee-for-service private facilities, many of which have minimal charges, and charge fees on a sliding scale basis.

* Since the Intifada, there has been substantially decreased access to hospitals within Israel. Previously, there was a strong incentive to participate in the national health insurance program because of the comparatively high quality of care provided in these facilities.

* There have recently been substantial increases in fees for service in government hospitals (e.g., a three-fold increase in charges for delivery between 1988 and 1991). Because data are not available for review, there

is no means of determining the relationship between these substantial increases and the real cost of delivering services in the government hospitals.

* An increasing number of Intifada-related cases do not self-admit to government facilities, because of the fear of being either reported to the government (such reporting is required by the GOI), or of being forcibly taken from a government health facility by soldiers or border police. Seizure of Intifada-related patients from hospitals is reportedly more common from government hospitals.

The competition among the private organizations increased during the period of the Intifada, when donors were providing substantial funding for health facilities and services. With the current interest on the part of donors in economic development and their perceived decreased interest in the health sector, this competition among Palestinian NGOs for capital and operating funds has increased. In some cases, organizations are planning and implementing new services in areas which already have at least minimal coverage, while other villages have no services. At the same time, some organizations are decreasing the number of facilities which they support or operate because the operating costs have become unsustainable.

## B. Health Services Delivery in the Occupied Territories

Brief descriptions of primary, secondary and tertiary services and of mental health and rehabilitative services in the Occupied Territories follow, as does an overview discussion of health care financing in the area.

### B.1 Preventive and Primary Health Care and Outpatient Services

With the exception of immunization coverage, disease prevention and health promotion activities are not extensive, although some are carried out sporadically in primary health clinics. Both the GOI and local NGOs report that immunization coverage continues to be generally high, although periods of curfews and strikes hamper efforts. Government health authorities and UNRWA work cooperatively with private voluntary organizations to utilize their facilities and staff for immunization, particularly for children. While a few of the NGOs have developed health education programs which target health needs identified through morbidity and mortality data, there has been no comprehensive, coordinated regional or inter-regional prevention campaign and there is little linkage with related sectors. Thus, while many health professionals believe that poor water quality is related to the increase in high rates of dysentery in the Occupied Territories, only a few local assessments of water quality and water-borne diseases have been conducted.[34]



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Primary health care (PHC) access and quality continue to be problems in the Occupied Territories. Figure 3 presents the distribution of numbers of primary health centers in the West Bank by operating organization in 1988 (no comparable data are available for the Gaza Strip for that year); Figure 4 shows the geographic distribution of this level of care throughout the Occupied Territories. Even with the considerable expansion of primary health services in the 1980s, estimates of rural population centers with no immediate access to health services range from 20% to 30% in the West Bank. Although the Israeli government and UNRWA operate primary health clinics throughout the Occupied Territories, the private sector has played an increasingly important role in the past decade.

Government Services. According to official Israeli statistics, as of the end of 1991, the CIVAD operated 463 primary health sites in the West Bank[35] and 27 in the Gaza Strip.[36] However, in 1989, a WHO report indicated that the GOI operated 150 primary health clinics in the West Bank and 51 in the Gaza Strip.[37] Given the fact that the number of governmental primary health care sites has not increased substantially, it is unlikely that the 1991 figure is accurate. Moreover, a 1989 survey of health facilities in the Hebron area found a total of only 33 government PHC clinics, 10-15 of which included maternal and child health (MCH) services in the same facility.[38] In contrast, a 1989 report of the Israeli Ministry of Health stated that the Government of Israel operates 29 general clinics and 21 MCH centers in the Hebron District, for a total of 50 clinics.[39] In fact, the "clinics" listed were units of services rather than freestanding facilities. In the West Bank, two mobile health units are used by the GHS for both immunizations and minor curative care, but there are reports that the mobile units are used almost exclusively for immunizations.

According to GOI reports, their PHC clinics have a nurse on staff and regular visits from physicians, with the frequency of visits depending on the size of the facility; the norm is two visits for 2-4 hours each week. However, according to health providers and other observers in the Occupied Territories, the clinics do not have an adequate number of trained staff and are often short of supplies and essential equipment.

No independent survey of actual health facilities and PHC services provided by the GHS is available; however, in many villages these are the only source of preventive and primary care. Importantly, many of the Palestinian physicians presently working in private facilities gained experience in the government clinics.

UNRWA. UNRWA provides primary health care for refugees both within and outside the camps. As of April, 1992, UNRWA has 19 PHC facilities within refugee camps in the West Bank and five

outside the camps, in addition to 10 health posts (which provide basic services only).[40] In the Gaza Strip, the agency has nine PHC clinics and several health posts; all of these are within the camps; two of these operate 24-hours per day and seven operate in the morning and afternoon.[41] UNRWA provides MCH services, immunizations, early detection and screening as well as treatment for childhood and adult conditions, and basic emergency care referral for secondary and tertiary services.

Private Sector. In the West Bank, an estimated 140 primary health clinics were operated by non-profit organizations in 1988;[42] eight such organizations operated 20 facilities in the Gaza Strip in 1991.[43] In both areas, the facilities are often open on a daily basis and linked to other types of social or support services directly and indirectly related to health care; for example, nutrition programs, health education activities, literacy or cultural programs, income generating projects and outreach (home health) services. The organizations also conduct vaccination campaigns, supplementing the GHS immunization programs.

## B.2 Secondary and Tertiary Health Services

In total, there are 20 hospitals with a total of 1,151 beds in the West Bank, not including the small (i.e., less than 30-bed) maternity hospitals. Nine of these hospitals are operated by the GHS, ten by the private sector and one by UNRWA. Six hospitals are in operation in the Gaza Strip, with a total of 864 beds; five of the hospitals are operated by the GHS and one by the private sector.[44] Notably, the number of hospital beds represents a decrease from 1967, when there were 1,265 beds in the West Bank and 955 in the Gaza Strip. At the same time, there has been a 70% population increase in the Gaza Strip and a 114% population increase in the West Bank.[45] The hospital bed per capita ratio has thus decreased from 2.2/1,000 in the West Bank in 1967 to 1.9/1,000 in 1988; in Gaza, the beds' ratio has decreased from 2.5/1,000 in 1967 to 1.4/1,000 in 1988 (see Figure 5). This ratio is deficient overall, even given the trend towards non-hospital based care in middle- and upper-income countries; the present ratios also are significantly below those in Israel (with a bed ratio of 6.2/1,000 in 1988)[46] and Jordan. Moreover, the hospital beds are severely maldistributed; the bed ratio is .5/1,000 in Hebron, .8/1,000 in Nablus and 2.3/1,000 in the Jerusalem area.[47]

Reportedly, the general hospitals have been used at or over capacity at least since the beginning of 1980, and had 80% or more bed capacity utilization from 1986 to 1989. Recent, verifiable, bed utilization data for GOI or private hospitals were not available; however, with the expanding capacity (supported largely by donors), it may be that utilization has decreased in the past two years; this would have implications

for bed capacity and needs. Importantly, those areas which have had the lowest bed/population ratios (e.g., Jenin, Tulkaram and Hebron) presently have hospitals under construction. If completed within the next two years, they should considerably improve the situation.

There is a severe maldistribution of both basic and advanced medical equipment in the West Bank and Gaza. In some facilities, even the most basic equipment is not available that would allow for minimal diagnosis and/or treatment, including emergency treatment. In other cases, sophisticated equipment is available which may be underutilized or inappropriately utilized. An additional issue with respect to diagnostic procedures is that, while most procedures can be performed in the West Bank or Gaza, there are some types of procedures for which the patients themselves or specimens must be sent to Israel. This results in delays in receipt of test results, at best, and unavailability of any testing or results at worst.

Government services. The government operates nine hospitals in the West Bank (including a psychiatric hospital) and five in the Gaza Strip. As of 1990, the total number of hospital beds was 682 in general hospitals and 320 in the psychiatric hospital in the West Bank, and 789 beds in Gaza.[48] At least one hospital in the West Bank currently has the capacity for general and cardiac surgery, pediatric care, obstetrical and gynecological care, oncology (minimal) and general medicine. No government hospital in the West Bank has a neonatal intensive care unit (NICU) that would be considered comparable to Level II or III in the United States, and there are no government facilities for severe head trauma, cardiac catheterization, burns, or dermatology. The hospitals also have staff, equipment and supply shortages. Several of the facilities are also in deteriorating condition.

Private sector and UNRWA. The private sector operates four general hospitals and six specialty hospitals in the West Bank, with a total of 270 general beds and 267 specialty beds.[49] Only one private sector hospital operates in the Gaza Strip, with a total of 85 beds.[50] Importantly, several private organizations provide outpatient and short-term inpatient secondary care in both the West Bank and Gaza Strip. In the West Bank, the private sector hospitals have the capacity for general and cardiac surgery, pediatric care, obstetrical and gynecological care, neonatal intensive care, oncology (minimal), urology, general medicine and diagnostic services (including CAT scanning). The private hospital in Gaza has the capacity for only general and orthopedic surgery, pediatric care, obstetrical and gynecological care, emergency services and general medical care.

UNRWA operates one hospital in the West Bank (Qalqilia), which has a total of 36 beds. Importantly, UNRWA subsidizes a total of

208 of the beds in private hospitals in the West Bank and 50 of the 85 private beds in the Gaza Strip. This limits the availability of the hospital beds to the general (non-refugee) population.[51]

B.3 Rehabilitation Services

Virtually all rehabilitation services in the Occupied Territories are operated by the private sector. The Giacaman et al report identifies 32 facilities in the Occupied Territories that provide rehabilitation services for the physically handicapped.[52] Most of these facilities are located in the West Bank; for example, there are four inpatient rehabilitation facilities in the West Bank but none in the Gaza Strip.

Even in the West Bank, the distribution of rehabilitative services is heavily clustered around urban areas, particularly in the Jerusalem-Bethlehem area. Patients from Hebron and Gaza are referred to facilities in the Jerusalem/Bethlehem area for inpatient care. Even in the largest facilities, the occupancy rates are not high. In fact, one facility with 40 inpatient beds has never been at full capacity. This raises the question of whether there is now a surplus of inpatient rehabilitation beds, and what alternative use could be made of them. Unfortunately, these centers are not located in areas underserved by hospitals. While health care planners might consider alternative uses of these expensive facilities, they would not ameliorate the present need for secondary services in Hebron and Jenin/Tulkaram.

In the Gaza Strip, the Benevolent Society in Gaza City operates an outpatient physiotherapy center (for an average of 15 patients per week) and manufactures orthopedic devices for their patients. Physiotherapy services are also offered at five of the UNRWA health clinics in Gaza. The Society for the Care of Handicapped Children has provided services for handicapped children and their mothers for a number of years, as well as providing preventive services for at-risk children and their mothers. The Child Development Center in Gaza provides outpatient treatment and preventive services for children with a wide range of disabilities.

A number of private, voluntary organizations (e.g., the Catholic Relief Service and the Bethlehem Arab Society) have also initiated programs for at-home care of the physically handicapped in villages or refugee camps. In addition, Diaconia (a Swedish NGO) supports an expanding network of community-based rehabilitation centers in the West Bank and Gaza Strip.

B.4 Mental Health Services

Notwithstanding the need for mental health services, there are scant facilities in the Occupied Territories to provide such

care. The government's mental health services facilities for the Occupied Territories include the 320-bed psychiatric hospital in Bethlehem, which also has an outpatient department, and outpatient services provided in only five PHC government clinics in the West Bank. In the Gaza Strip the government has no inpatient facility and outpatient services in only two PHC clinics.

The private sector has begun to provide outpatient mental health services, but there are few trained psychologists or counselors (the services are provided mainly by trained social workers) and few donors support such services. For the most part, services are provided within the context of existing facilities or by small private organizations. Only one stand-alone private mental health clinic exists in the Occupied Territories: the Community Mental Health Center in Gaza. This center provides diagnosis and outpatient treatment and has an extensive training program for its own staff as well as for health care providers working in governmental and private health facilities. While not having a facility of its own, UNRWA has an agreement with the Gaza Community Mental Health (GCMHC) to provide outpatient services to refugees referred by the agency.[53]

It should be noted that in 1984, three years prior to the Intifada, the severe need for additional mental health services was identified in the annual WHO report on health conditions in the Occupied Territories.[54] Given the conditions of the occupation, including the extensive closures and curfews as well as armed and unarmed conflict between the Palestinian population, the Military forces and settlers, the existing mental health services are woefully inadequate.

## C. Health Care Financing

Primary data for costs and financing of governmental and private health services are essentially unavailable; the following description of findings is thus based on interviews with health care administrators and providers, and on published secondary data sources.

Almost all health services provided in the Occupied Territories are subsidized by the GOI (through taxes collected from Palestinians), external donors (to Palestinian private sector) or UNRWA (using funds provided by governments). The total amount of funds expended in the health sector in a given year is an elusive figure; however, in the Gaza Strip alone, it is estimated that the GOI expends $15-$17 million, UNRWA $12 million and external donors (other than funds through UNRWA) an additional $6.5 million.[55] This does not include funds derived from remittances or contributions from individual Palestinians or Gulf States and payments by individual Palestinians for health care services.

Government Services. Funds to support government facilities in the Occupied Territories are derived from revenues received from national health insurance premiums paid by the population, fees received for services provided in government hospitals, and general taxes paid by the population in the Occupied Territories. According to a 1988 A.I.D. report, "the Occupied Territories are 'closed systems' financially speaking: expenditures for the delivery of social services [including health-related services] do not exceed the revenues raised internally from taxes and other fees."[56]

While documentation is not available to verify this assessment, informal reports confirmed the "closed system" nature of the fiscal arrangement. According to several health providers and administrators interviewed, fees paid to government facilities in the Occupied Territories are reportedly returned to the general budget of the GOI, rather than to the budgets for the facilities in the Occupied Territories. Further, fees paid to Israeli hospitals for specialty and other services not available in the Occupied Territories are estimated to total approximately $5-7 million annually. These include fees paid by UNRWA, those deducted from the budgets of government hospitals in the Occupied Territories for referred services, and those paid by individuals or private insurance companies.

Table 3 and Figure 6 present the current (operating cost) and development (capital) budgets for GHS health services in the West Bank for the period 1986 through 1992. The budget for 1992 ($33.8 million) is below that for 1987 ($44.9 million); in the interim, it had decreased, dropping to $31 million in 1991. The operating costs allocated for hospitals alone in 1992 totaled $22 million, or 71% of the total operating budget for GHS services in the West Bank. In 1988, the GHS mandated an approximate 45-60% reduction in the allocation for health services in the Occupied Territories, including a cessation of all development in hospitals and clinics (e.g., no hiring of new staff, no replacement of vacant positions, and termination of approximately 85 staff posts. In addition, no new equipment or instruments were to be purchased, and physical rehabilitation and new construction of hospitals and clinics was ceased, with the exception of new construction at the Shifa Hospital in Gaza). There was also an across-the-board 10% reduction in operating costs.[57]

In 1990, the average Israeli per capita expenditure on health services in the West Bank was just over $40, in comparison to $450 per capita in Israel.[58] This GHS allocation for health services in the Occupied Territories is the second lowest of the 36 low-income and lower middle-income countries included in the most recent comparison study by the World Bank.[59] No expenditure data were available for GHS services in the Gaza Strip.

All Palestinians living in the Occupied Territories are eligible for the GOI National Health Insurance (NHI) program. Those who are employees of CIVAD and of Israeli firms are required to enroll; in fact, the premiums are automatically deducted from their salaries. Palestinian health officials estimate that only 16% of West Bank residents are covered through the NHI program; 25% of Palestinians in the Gaza Strip are covered. This is reportedly a substantial decrease since 1987, when overall enrollment in the Occupied Territories was estimated at 30%. This decrease in population coverage is likely due to three factors: 1) the increase in premiums, 2) the decrease in Palestinians employed by the GOI, and 3) the overall economic recession among the Palestinian population. The 1992 premium for a family is approximately $33 per month. Given that the average income per capita for Palestinians is estimated to be $250/month, health insurance premiums would consume roughly 13% of monthly income.

For those not covered through the national health insurance program, fees are charged for services in government facilities. These fees have increased significantly since the mid-1980s, with the current hospital inpatient (per night) charge being $150; an outpatient consultation is $17. This is reportedly much higher than for comparable services in government hospitals in Jordan. It has been suggested that the policy of increasing fees may be attributed to the strategy of encouraging voluntary enrollment in the national health insurance program.[60]

As is the case in most national health systems, fees are not charged for certain types of services and for certain populations. Specifically, government health facilities do not charge fees for: childhood immunizations, care for children under 36 months of age, services for those with contagious diseases and those certified as indigent by the Ministry of Labor and Social Welfare.[61]

UNRWA. For specialty care not available in the West Bank, UNRWA refers patients to Israeli hospitals. This is a costly arrangement for UNRWA. For example, in 1988, UNRWA paid $816,000 to Hadassah Hospital for the care of 341 refugees. In 1991, the total amount paid by UNRWA to Hadassah was approximately $200,000; this decrease resulted from UNRWA efforts to decrease dependency on Israeli hospitals as well as the expanded capacity of Palestinian private sector hospitals to provide more specialized diagnostic and treatment services. While UNRWA must reimburse the GOI fully for services received by refugees in Israeli hospitals, private sector organizations in the West Bank and Gaza Strip are usually not reimbursed in full for health services they provide to refugees. As a result, these facilities

are often unable to plan for reimbursements because the agency's funds are depleted prior to the end of the fiscal year; the facilities nevertheless usually continue to provide services to the refugees.

Private Services. The substantial decreases in GOI allocation for health services has effectively resulted in the system deteriorating over the past six years, with the burden for medical care costs shifting to the private sector and to the population, which has few resources to bear such costs. As a result, the dependency on external donors for capital expenditures and operating costs has increased. This dependency relationship is both volatile and detrimental to the effective delivery of services. During and subsequent to the Gulf War, external sources of funds (with the exception of European and US donors) all but evaporated. The decrease in funds available to the health sector resulted from a significant decrease in contributions to health facilities directly on the part of individual Palestinians residing in the Gulf States and a significant increase (estimated at 20%-40%) in the number of social cases (i.e., medically indigent patients) whose economic support was derived largely from relatives working in the Gulf States or who have been unemployed since the Gulf War.

Fees for private in-patient services vary widely, but virtually all private facilities which charge fees do so on a sliding scale basis, and patients who cannot afford to pay are not required to do so. Furthermore, no private facility charges a fee for Intifada-related cases. A typical fee for an outpatient visit is US$3.00. Inpatient obstetrical delivery ranges from US$100 to US$300. These fees are comparable to those charged for private sector services in Jordan.

Only one private health insurance company is in operation in the West Bank, the Ibrahim Abohil Hadi Insurance Co. Only 10,000 Palestinians are covered through this private company, which charges a premium of US$132/year for family coverage, including those up to 60 years of age.[62] Reportedly, most participating families are in the middle and upper income strata. The Union of Palestinian Medical Relief Committees (UPMRC) initiated an experiment in private insurance in the Jordan Valley, with a premium of US$180/annum, but the effort was halted after several months.[63] According to the UPMRC, insufficient planning resulted in the lack of success of the program. Several other organizations are exploring the potential for implementation of private health insurance schemes, including the Engineers Association in Gaza, which is planning for implementation of a system linked with Ahli Arab Hospital, the Patients Friends Society and local private practitioners.[64]

The Beit Sahour Health Cooperative was identified in a 1989 report for A.I.D. as an example of the type of Palestinian health

facility which could serve as a model for alternative health care financing mechanisms.[65] This cooperative, has for several years had a membership of approximately 1,200. It provides discounted ambulatory and surgical services to its members and also provides ambulatory care and other services on a fee-for-service basis for non-members. A more recent development is that the cooperative has initiated a contract with a Palestinian labor union for coverage of services for 5,000 persons (union members and their families) and with a local bus company (for a total of 150 persons).[66] Other multipurpose outpatient health facilities also have a patient load sufficient to be considered as a site for the demonstration of alternative forms of health care financing. However, A.I.D. is cautioned that the current economic climate is not propitious for this type of project. The failure of pre-paid programs serving low-income populations in the U.S. and developing countries is widespread; A.I.D. and Palestinians involved in exploring these alternatives should carefully review the experience of such mechanisms.

## D. Health Manpower Development and Training

In 1990, there were reportedly 1,243 physicians registered by the Arab Medical Association in the West Bank[67] and 850 in Gaza, of whom only 760 actually reside in Gaza.[68] As of 1990, there were an estimated 3.5 physicians/10,000 inhabitants in the West Bank; the ratio for Gaza was 1.4. These ratios are below those of Israel but comparable to those of Jordan. There is a severe lack of some medical specialties; for example, there is no trained oncologist or hematologist in the West Bank, and there are few trained technicians to perform critical diagnostic services.

In spite of the maldistribution of physicians, reports from a variety of sources indicate that between 200-300 physicians are currently unsalaried - or underemployed - because GHS services have not been expanded or because the FY 1988/89 budget has been decreased. Reportedly, most of these physicians are working part-time in village clinics operated by a variety of medical relief committees. This begs the question of the means by which a Palestinian health system will be able to pay the salaries of these, or newly trained and hired physicians.

Physicians in the Occupied Territories are employed primarily in government-operated facilities and privately-operated facilities. In addition, some have their own clinics in which they work exclusively, and 50 work for UNRWA.[69] As is the case in most countries which have a national health system, most physicians in the Occupied Territories who work for the government also work part-time in private facilities or have their own "clinic" (usually providing services in a small office) in the afternoon.

The total number of nurses working in the West Bank and Gaza Strip was 2,320 in 1990, of whom 70% were employed in hospitals.

The shortage and maldistribution of nurses is apparent: the ratio ranges from 5/10,000 population in the north (Jenin and Tulkaram) to 30/10,000 in the Jerusalem District.[70] This would parallel the shortage that pertains in most countries, now considered a worldwide problem.[71] In particular, as a result of injuries sustained during the Intifada, physiotherapists are much in demand. As of 1990, there were reportedly 25-30 trained physiotherapists in the West Bank and 25-30 in the Gaza Strip, with an estimated 50 in training.

The shortage of trained technicians and staff able to maintain and repair equipment has been identified since 1989.[72] This is of particular concern given the fact that the amount of sophisticated equipment being introduced to the Occupied Territories appears to be increasing, and there is scant availability of service from the equipment suppliers in Israel. In fact, in many cases, vital equipment such as x-ray machines had been in disrepair for as long as 6-8 months because Israeli suppliers will not enter the West Bank (or Gaza) to repair non-functioning equipment.

There is no medical school in the Occupied Territories and no other formalized system for training of physicians. Although Palestinian physicians have participated in residency training in Israel (with U.S. funding for the Israeli institutions), this training does not qualify the Palestinian physician as a full specialist in the field of study. Most Palestinian physicians with specialty training have participated in residency programs in Arab countries, Europe or the United States.

There are, however, two schools offering BSN degrees (Arab College of Medical Professionals and Bethlehem University). In addition, 18-month nursing programs are offered at Caritas, St. Johns, Mrs. Habash Nursing School, St. Luke's Hospital and Makassad Hospital; there is also a three-year nursing diploma program at Ahli Arabi Hospital in Gaza. The government also has three nursing schools in the Occupied Territories. The Arab College of Health Professionals also trains Medical Technicians and X-ray Technicians. The Union of Palestinian Medical Relief Committees has trained 60 village health workers since 1988, and approximately 200 community health educators have been trained through Catholic Relief Services. Unfortunately, the closure of schools of higher education between 1987 and 1991 exacerbated the problem of shortage of nurses and technicians.

Although donors' involvement in continuing education of health professionals has increased significantly over the years - with AMIDEAST and other U.S. PVOs sponsoring local, regional and U.S.-based short-term training courses, for example there is no system for approval of courses and ensuring the quality of continuing medical education. Moreover, there is no link between continuing education and either licensure or monetary or other rewards for

the health professional.

Because of the lack of adequate continuing education and training of health providers, medical and technical staff have simply not kept up with the new equipment being donated, thereby effecting the ability of health providers to appropriately and safely use the new technologies; the same is true for new pharmaceuticals and treatment procedures. One glaring example of problems with use of new technology is mammography equipment, which two physicians in two separate facilities indicated would be used on a routine basis every six months for women over 35 years of age. This would not only be excessive, but would likely be dangerous; it far exceeds the recommended use of this procedure in the US.

## E. Planning for Health Needs.

Several local committees are involved in development of plans for the health sector; these include:

* locally-formed committees (in both the West Bank and Gaza Strip) comprising representatives of several interest groups (these are addressing health care issues at the primary, secondary and tertiary level as well as rehabilitation and health personnel development and training); and

* a Jerusalem-based committee supported by Medical Aid to Palestinians/Canada (MAP/Canada); the committee includes representatives of the GOI health services, local NGOs and consultant health advisors and has been in the process of reviewing and reformulating the Draft "National Health Plan," which was first released in 1990.

In addition, the technical committees related to the peace process have recently been preparing planning documents related to the health sector. Other organizations (e.g., the Health Development Information Project and the Arab Medical Relief Association) have prepared studies of specific levels of care, geographic areas, or specialties. Few comprehensive assessments of the health care system in the West Bank and Gaza Strip have been conducted. In fact, such assessments are limited by the paucity of data from both the public (GOI) and private sectors and hindrances to data collection and analysis by health researchers. Further, the annual GOI statistical reports are incomplete, as they do not reflect services provided in or health problems diagnosed through the private sector.

Notwithstanding this paucity of data, there is considerable interest on the part of the private health sector in the West Bank and Gaza in developing the capacity to plan for both individual facilities and service provision, and to plan

cooperatively for provision of services in given geographic locales. A number of individuals and organizations have initiated development of health information systems (albeit not standardized within or across facilities) that could provide a basis for health information systems which would support improved facilities and services planning.

The lack of clarity with regard to funds available from the UN sister agencies (UNRWA, UNDP, UNICEF and WHO) and from other sources for the health sector severely impedes the ability of Palestinian organizations to identify funding needs and plan for services. The criteria used by donors to determine the facilities which should receive the funds, and what the funding levels should be, are often unclear, leading to confusion, raised expectations, and increased competition among the numerous organizations in the health sector. Recently, the UNDP has spearheaded an effort to compile information concerning donor funding for development projects, including health-related activities. This should substantially improve the rational planning for and allocation of donor funding.

## F. Donor Involvement in Health and Nutrition

From 1984 to 1991, donors have contributed nearly $48 million to health care projects in the Occupied Territories, not including Arab donors and contributions to UNRWA for refugee health services. The total dollar amount for planned health projects is estimated at $10.3 million, not including the estimated $15 million contribution through UNRWA for the UNRWA hospital in the Gaza Strip. Of the total amount provided by donors for health projects thus far, A.I.D. has contributed $3.5 million, not including their support for the food distribution program.[73]

Only recently has there been formal coordination of donor funding in the Occupied Territories. This is, perhaps, understandable for a variety of reasons, but nonetheless renders rational allocation of scant resources difficult. This lack of coordination has been problematic because, while the Intifada has focused attention on the health needs of the Occupied Territories, the donations have not always been based on a clear definition of needs on a regional or territory-wide basis. The recent coordination (which has resulted in the UNDP compendium donor-funded projects) is laudable and bodes well for the future of health project planning. The participating organizations are also coordinating more frequently than in the past with Palestinian planning organizations. Unfortunately, the possibility thus arises that the health care services in the Occupied Territories will be "donor-driven"; that is, that they will be linked as much to the policies, programs and capabilities of the donors as to the needs of the Palestinians they are intended to benefit.

## G. Family Planning

In spite of the high birth rate in the Occupied Territories - the rate in the Gaza Strip may be among the highest in the world - and the comparatively high infant mortality rate (which may be related to high parity), few family planning programs exist, and those which do have often maintained a low profile, for political reasons. In most reports of health in the Occupied Territories, no mention is made of family planning services. Increasingly, however, organizations are making intrauterine devices (IUDs) and, to a lesser extent, oral contraceptives, available to women upon request. And increasingly, women of all political affiliations are requesting these services.

UNRWA provides family planning services upon request to refugee women in the West Bank and Gaza Strip, making such services part of their overall women's health program (i.e., including health education as an integral part of the provision of the IUD or oral contraceptives). The UPMRCs also provide IUDs to women upon request in the West Bank and are planning to do so in the Gaza Strip by late 1992. The UPMRC provides this service as part of its comprehensive women's health program, which includes, for example, health education and pre and post natal care. Private physicians also make IUDs (and oral contraceptives) available to women upon request. The Jordan Family Planning Program (JFPP) has a network of services in the West Bank. Recently, the JFPP conducted a seminar for health professionals to discuss family planning issues.

# V. CONSTRAINTS TO IMPLEMENTATION OF HEALTH SECTOR PROGRAMS

The two overriding constraints which impede the development and implementation of quality health services, access to care, and efficiency of service delivery are:

1) an inadequate financial base from which to derive sufficient resources to support health care, and

2) the complete absence of an independent, coordinated system of care which is within the control of Palestinians.

Unfortunately, if health services are to be devolved to Palestinians in the near future (as may be the case, given discussions being held during the Peace Talks), it is not clear how the services currently provided by the GHS will be supported financially and how long it will take for Palestinians to gain the managerial and planning capacity to ensure that an effective health system is in place. The related issues are many and complex; for example:



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* When and how will existing health-related regulatory systems be transferred to Palestinian control, and what assistance will be provided to Palestinians in the development of related policy instruments?

* What funds will be available to Palestinians for operating and development (capital) costs from the health and general budget, for what period of time, and with what degree of discretionary spending on the part of Palestinians?

* How long will Palestinian control of the tax system have to be in place and functioning prior to devolution of responsibility for the health (and other social sectors)? This is critical, if Palestinians are to be assured of adequate public resources to support health services for those unable to afford care.

* Will authority for health services be transferred after elections are held in the Occupied Territories and after appointments of Palestinian health officials have been made?

Palestinians are keenly interested in assuming responsibility for their health care system. However, as has been discussed previously, they are aware of the cost of this system under present circumstances. Given the significant decreases in funding for government facilities between 1987 and 1991, extraordinary amounts of funds will need to be available to cover both capital and operating costs. While donors have supported private health services in the past, they have been reluctant to cover operating expenses (with the exception of Arab donors, who have provided operating costs). The private sector has never been self-sufficient financially in the Occupied Territories (nor in any country, including the US). With a minimal tax base, the Palestinian "public" sector can ill-afford to ensure adequate coverage for those unable to pay for services. The essential question is, what is the most appropriate mechanism and timing for transfer of authority for the health services in order to ensure that services are not disrupted, that the quality of care is maintained (if not improved) and that efficiencies in care are realized? Donors can play a key role in guiding the Palestinians in deliberations with respect to this conundrum.

Additional constraints which impede the effective and efficient delivery of health care services are: bureaucratic policies, an inadequate managerial infrastructure, inadequate data and information, and lack of coordination among donors and among Palestinian institutions. The problem with respect to donor coordination has been described in Part IV; the remaining constraints are highlighted below.

## A. Bureaucratic Policies

Certain policies of the GOI have significant impact on the health status of the population, either directly or indirectly. Incidents reported by UNRWA officials and Physicians for Human Rights have included:

* imposing extended curfews and in some cases withholding electricity and water from refugee camps or areas of conflict for lengthy periods of time; such curfews have resulted in shortages of food and cooking gas, which can be considered to constitute a serious public health hazard; the withholding of water impedes sanitation and contributes to dehydration (a leading cause of death and illness in the Occupied Territories);

* imposing excessively difficult and time-consuming bureaucratic mechanisms for the submission, processing, and approval of licenses and permits for the construction and rehabilitation of health care facilities;

* the pass-system imposed by the GOI, which impedes travel by PVO staff and representatives of their sub-grantees and thereby limits the degree to which projects can be effectively supported, implemented and monitored; and

* the project-level permit system imposed by the GOI, which impedes the degree to which projects can be effectively planned and implemented.

This latter constraint has posed particular problems for health planning. Consideration of plans for health care facility construction and rehabilitation must take into account the fact that the GOI has the authority to require and approve licenses for construction and operation of such facilities. While an accepted practice in virtually every country (to limit excess hospital beds and ensure adequacy of services, for example), the process of licensure in the Occupied Territories has no clearly delineated criteria or health systems rationale. For example, Hebron Patient's Friends Society received the license for its proposed hospital after a five-year delay. This delay in approval, with no defined guidelines, makes it difficult to project with any precision how many hospital beds (or what types of acute care services) will be available within, for example, a five-year period. The same applies for other types of health care facilities.

## B. Inadequate Data and Information

The lack of adequate data and information with respect to Palestinian health status, direct and ancillary health services, health manpower, health care costs and financing, and other health-related issues has been described for some time.[74] With the advent of a Palestinian health system approaching, the paucity of such data is abundantly clear. Of critical importance are the absence of financial and other managerial data, the lack of independent studies of the quality of care (none has been identified during the preparation of this report), and the lack of quality assurance systems in hospitals and other health care settings. The issue is distinct for each of the three entities which are responsible for health services:

Government Health Services. While simple mortality and morbidity data are available, they are inadequate, incomplete and contradictory. Given the high skill and experience level of the responsible Israeli officials, the condition of the data may reflect excessive workloads and lack of adequate training and experience on the part of Palestinian staff. The critical data which are missing relate to cost and financing as well as quality of care. It is imperative that Palestinians, and those working with them, have access to the full range of cost and financing data required to plan for the management of health services. It should also be in the interest of the GHS to engage Palestinian health administrators and health providers in discussions with respect to health care financing, as a means of ensuring cost efficiencies during a period of transfer of authority.

Private Sector. Adequate data have not been maintained by the private sector because staff members have not been adequately trained in data collection and analysis. They have not had computerized information systems (or when they have been provided by donors, they have been developed *de novo*, rather than using compatible, generally available software). Given the disparate data collection and efforts on the part of donors, PVOs, and local NGOs, data are usually non-comparable (e.g., with respect to age groups and definitions of types of service). A large-scale household survey recently undertaken by a Norwegian donor may provide baseline data.

UNRWA collects and distributes mortality, morbidity and service data concerning the refugee population. These data often represent the only source of information on health status and health service in a given area. For example, many of the available nutrition studies have been carried out with the refugee populations. However, financial data are scarce and not generally available.

## C. Lack of Coordination Among Palestinian Institutions

The inability on the part of donors to adequately address the health needs of Palestinians is partially explained by the fact that there has been no clearly defined plan for the health system in the Occupied Territories. Perhaps more importantly, local private organizations are increasingly competing with one another for scarce donor funds; the health sector overall is also in competition for funds with the productive private sector, to which donors are increasingly providing funds as a means of improving the local economy.

Unfortunately, US private voluntary organizations (PVOs) have not been exemplary in efforts to coordinate their health and health-related activities. Linkages among distribution of equipment and training of health staff are minimal, and it is still possible to find multiple A.I.D.-funded projects in a single project site without having the PVOs aware of this reality. US PVOs have also supported primary health care centers in villages which already have either a freestanding facility or access to a mobile health unit. This contributes to the poor distribution of primary care services in the Occupied Territories and certainly does not provide Palestinian organizations with a model for health planning and coordination.

There have been some recent improvements in coordination among local health organizations. For example, over the past six months, a National Health Committee, comprised of representatives of most of the health services organizations, has been involved in a planning process. The committee has reviewed the National Health Plan (prepared by the Palestinian Red Crescent Society in October, 1990, and revised in Spring, 1991) and conducted a series of planning workshops. Other committees have also been involved in the planning process in health and health-related areas (e.g., rehabilitation). These activities will contribute importantly to the ability on the part of donors to link their potential contributions to consensually defined (rather than individually perceived) needs. Local NGOs are also committed to grassroots development, projects which encourage self-sufficiency and to alternatives to hospital-based, physician-based care. These NGOs, and many Palestinian health professionals, are also increasingly aware of, and concerned about the interdependence of sectoral development (e.g., health status and services with economic development and nutrition with agricultural development). These are encouraging signs for the future.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Development Opportunities

Mortality and morbidity data in the West Bank follow the patterns for industrialized countries and for developing countries whose patterns have changed in the past decade; however, data for the Gaza Strip are more reflective of the health status of developing countries. With the exception of illness and injury related to the political situation in the Occupied Territories, health status improvements are possible through the initiation of prevention campaigns -- particularly those targeted to prevalent health problems, improvements in the knowledge, attitude and practices of health personnel and improvements in the maldistribution of services.

This maldistribution is particularly problematic in the West Bank, but pertains in Gaza as well; it is exacerbated by the impediments to comprehensive planning (see previous sections of this report) and by inappropriate competition among local health organizations and to some extent, among international PVOs. Not only are facilities maldistributed, so too are health personnel and equipment. Some shortages do exist, for example, in terms of trained personnel and equipment for use in certain diagnostic and treatment procedures, trained community health workers, and mental health services. However, there are burgeoning excesses in others; for example, when obstetrical/gynecological services were seen as a source of revenue in the late 1980's, NGOs began to significantly expand their capacity in this area. Unfortunately, the expansion has been largely in relatively costly facilities (hospitals) rather than in community-based centers.

Few Palestinian health professionals have training or experience in health services administration, planning or management (including facility and manpower planning), health care financing, epidemiology, prevention and treatment of occupational and environmental diseases (e.g., those related to water quality). All of these are skills which are prerequisites for effective and efficient planning and delivery of health services.

The current economic crisis which exists in the health sector specifically and in the West Bank/Gaza Strip generally, may hinder opportunities exist for alternative approaches to financing of health services. However, a number of organizations and facilities have been seen as potential loci of alternative health financing demonstrations for several years and still are potential loci of such demonstrations. A caveat is in order: many of these facilities have experienced significant increases in social cases; moreover, many have expanded the types of services provided, without clearly defined plans for cost recovery. These expansions, undertaken largely through external



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donor support, have been followed by both a decrease in donor support and the deteriorating economic situation; these factors have combined to make self-sufficiency a longer term, more abstract goal. However, specific approaches to improved financial and facility management could be demonstrated at these and at other facilities.

Opportunities abound for donor investment to help develop efficient and effective health services in the Occupied Territories. Donors, and A.I.D. in particular, can contribute importantly to projects which focus on improving management and efficiency of services delivery at all levels as well as developing and implementing opportunities for least-cost preventive and curative services at all levels, with a focus on primary care. However, A.I.D. and other donors should be cognizant of the need to balance critical deficiencies in services (including improvements in quality and expansion of services delivery at some levels) with the economic realities which make it difficult for the private sector to continue to provide most of the services.

## B. Recommendations

Recommendations for A.I.D. funding in the health sector over the period 1993-1995 are made in the following categories: 1) health planning and management (including health care financing), 2) health personnel development and training, and 3) health facilities improvement and expansion (see Table 1).

These recommendations are, for the most part, applicable whatever the outcome of the current peace process. Whether or not the Palestinian population assumes authority and responsibility for GHS services, improvements must be made in the management and quality of services. Improving access through expansion of services should be supported only when determined to be clearly necessary and only if defined strategies to help minimalize dependence on donors have been identified.

Table 1

Conclusions and Recommendations

| Conclusions | Recommendations |
|---|---|
| **Health Planning and Management** | |
| 1. Few Palestinians have experience in health systems planning and management, which is imperative for the effective and efficient organization and delivery of health services at all levels. | 1.1 A.I.D. should support expanded local and US-based short-term training in health systems planning and management, including study tours to the US and other relevant health systems in the ME region and elsewhere, as appropriate. |
| | 1.2 A.I.D. should support limited expansion of graduate (masters level) training in health systems planning and management, with such expansion to be accelerated if Palestinians assume responsibility/authority for the GHS hospitals. |
| | 1.3 A.I.D. should provide expanded technical assistance in health systems planning and management, with particular attention to the organization and financing of health services and linkages with other sectors to address priority health problems. Such TA is required at the facility, regional and inter-regional level. |
| 2. Health planning activities are in embryonic stages, and planning techniques and tools are not readily available. Given the urgent need for such activities, they should be supported and encouraged. | 2.1 A.I.D. should provide TA and other support as requested and appropriate for health planning activities in the Occupied Territories. Additional support includes the provision of published and unpublished documents and planning software. Such support should encourage activities which include the broadest possible representation on the part of private sector groups and providers involved in the delivery of health care services, and of groups including representatives of the Palestinian user community. |



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3. Health data and information are scarce and of questionable reliability and validity. The GHS either does not collect and analyze data and information required for health care decision-making or does not make such data available to Palestinians. This is particularly true for data required for financial planning. Because no national planning or regulatory body exists, the private sector is not required (nor are there incentives) to collect health and health services data. It will be important for clear targets to be set for public health measures directed toward the OT's most common preventable diseases, and for the international health community to ensure that every possible action is being taken to ensure that such targets are met; however, unless and until adequate data are available, such targeting and its monitoring are severely hampered.

4. While regional and disease-specific health needs assessments have been conducted by NGOs, no comprehensive, inter-regional study has been carried out. Moreover, there are health status and utilization studies which individual providers or facilities have undertaken, but the data have not been analyzed and disseminated for lack of support; such studies could provide useful information for planning purposes.

3.1 A.I.D. should engage with the GOI in policy dialogue regarding access to health-related data for the Occupied Territories.

3.2 A.I.D. should provide training, technical assistance and other support for public and private sector health personnel in the collection, analysis and dissemination of health-related data, with such support for public sector personnel to accelerate if autonomy is assured and Palestinians assume responsibility/authority for the GHS health services.

3.3 A.I.D. should continue and increase its support for the expansion of information resources for the health sector, including published and unpublished documents and audiovisual training and education materials for use with providers and the general population.

4.1 A.I.D. should support community-based needs assessment studies which address such issues as health conditions, utilization patterns, and user ability/willingness to pay for services.

4.2 A.I.D. should support an assessment of existing studies and data sources and the analysis and dissemination of those data which are deemed to be valid and useful for decision-making purposes.

5. There is considerable interest on the part of the private health sector in the West Bank and Gaza in developing the capacity to plan for both individual facilities and service provision and to plan cooperatively for provision of services in given geographic locales. A number of individuals and organizations have initiated development of health information systems (albeit not integrated within or across facilities) that could serve as the basis for health information systems which would support improved facilities and services planning.

5.1 A.I.D. should support the development and implementation of facility and across-facility level health information systems, including but not limited to computer-based systems.

Health Services Delivery

6. There is a severe shortage of both staff and practical nurses, auxiliary health care providers (e.g., technicians and physiotherapists), community health workers, and occupational therapists.

6.1 A.I.D. should ensure that a sufficient allocation of A.I.D. training resources is available to train an additional cadre of nurses and auxiliary health care providers, including technicians who operate and maintain sophisticated medical equipment. However, A.I.D. should also determine in advance (insofar as possible) whether or not health facilities have sufficient job openings (slots) for the nurses.

7. Health personnel (physicians and nurses) lack training which would enable them to more appropriately request and interpret diagnostic and/or treatment tests and utilize available drugs, treatment procedures and equipment. In some cases, diagnostic and treatment equipment and drugs might be excessively and unnecessarily or inappropriately used, possibly resulting in iatrogenic effects. These problems contribute to deficiencies in quality of care at all levels.

7.1 A.I.D. should support the continuing education of health providers at all levels, to improve their capacity to diagnose, prevent and treat health conditions in the Occupied Territories. Such training should be planned based on existing studies of continuing education needs (e.g., for nurses) or on de novo studies for those areas in which needs assessments have not been conducted. Insofar as possible, local training resources should be utilized.

7.2 A.I.D. should support the adaptation of relevant US (or other, as appropriate) practice guidelines for use by Palestinian practitioners for general practice and specialty areas for all categories of health providers.



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8. Medical equipment is maldistributed and often in poor condition, limiting its utility and raising concern for inaccurate findings. Most facilities lack the capacity to appropriately manage the diffusion and use of new technologies.

8.1 A.I.D. should support the development of guidelines and materials for use by facilities in assessing their equipment needs and current equipment use, selecting among alternative sources of equipment, and introducing new or unfamiliar equipment into their facilities (including, for example, training of staff - see above).

9. Primary health care (PHC) services, and maternal and child health (MCH) services in particular, are maldistributed and many are deficient in quality of care. Given the high birth and infant mortality rates, particular attention should be paid to MCH services.

9.1 A.I.D. should support the expansion of primary health care services in villages which lack access to such services.

9.2 A.I.D. should support improvements in the quality of health services delivery through the provision of appropriate equipment and supplies and through training of health personnel (see above).

10. Primary, secondary, tertiary and rehabilitation services are maldistributed in both the West Bank and Gaza Strip.

10.1 The private sector should be encouraged and supported to develop health facilities plans which make the most effective and efficient use of resources and which at the same time meet the most pressing needs of the Palestinian people. This would include, for example, developing regional systems of care which link various levels and types of care through a defined system of referral and follow-up.

10.2 A.I.D. should provide support for rehabilitation services that are primarily outpatient and community-based and which include an occupational therapy component.



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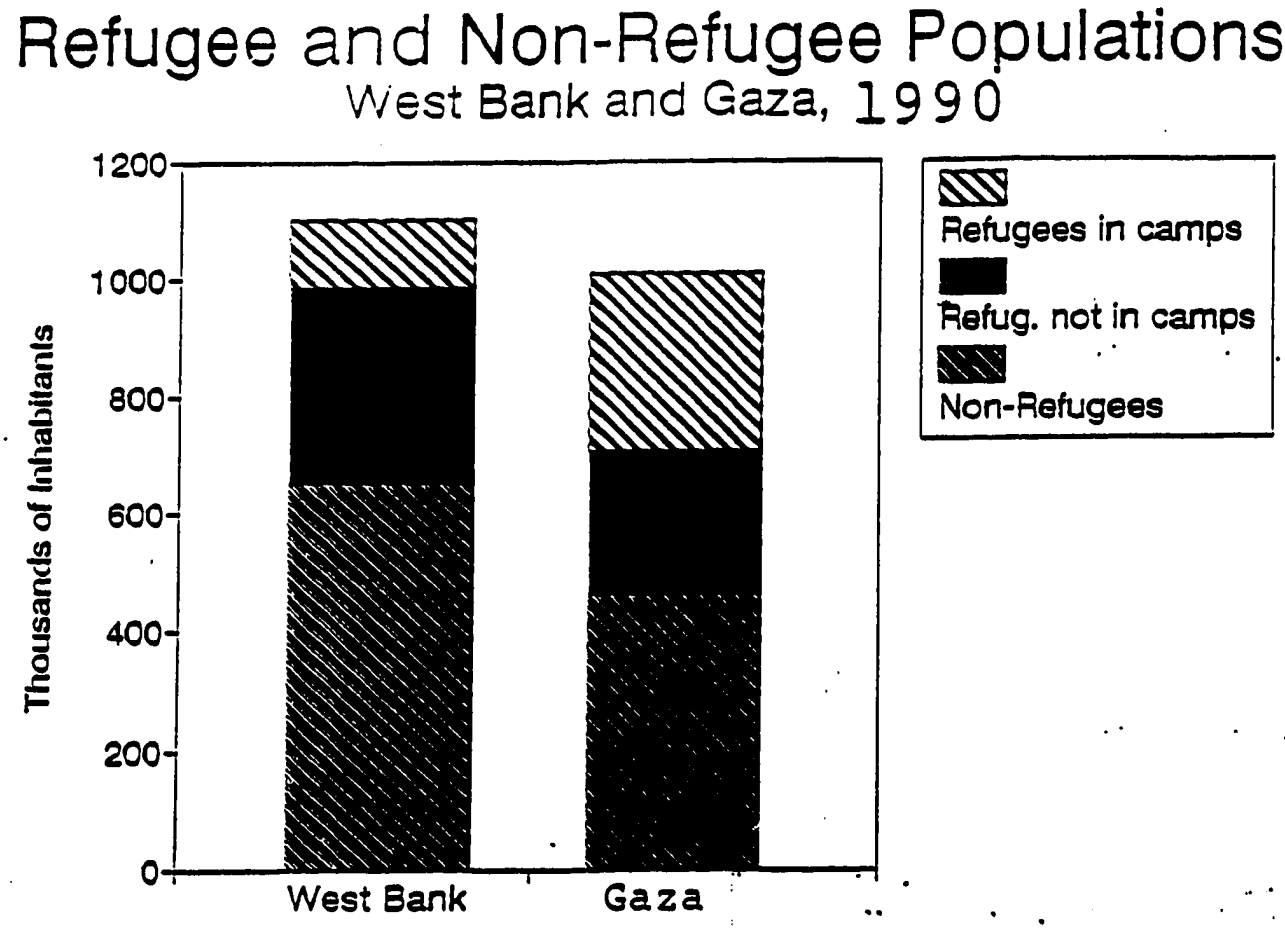
11. One of the health problems for which services are clearly deficient (rather than simply maldistributed) is mental health. Although mental health services are usually excluded from activities supported by most donors, donor support is strongly justified by the compelling needs and the fact that related physical health problems such as hypertension are among the most prevalent conditions in the OT.

11.1 A.I.D. should support training and technical assistance to the private sector in its efforts to upgrade and increase mental health service availability, support for staff, and support for additional resources required, other than for construction of facilities.

12. Health services at all levels require substantial improvements in facility and patient management.

12.1 Software packages for facility and patient management should be purchased for those facilities which have microcomputers available, and training provided in the use of such software. Where appropriate, health information systems should be supported (including the provision of microcomputers), with linked systems being established insofar as possible.

Figure 1




Source: Calculated by Policy Research Inc., Clarksville, MD, using data from Statistical Abstract of Israel; 1991.



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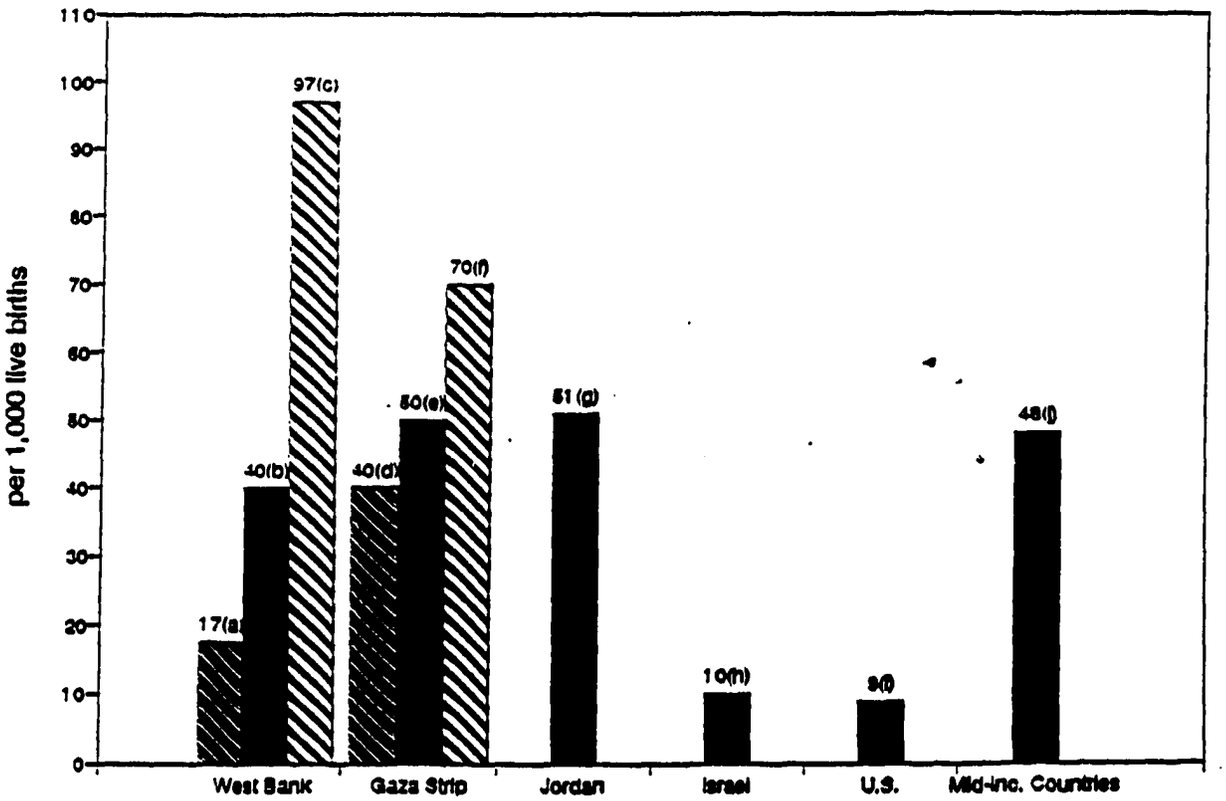
## Figure 2: Infant Mortality Rates by study, by area




Sources:
(a) Communication with Dr. Hidmi, UNRWA/WB, 1991.
(b) Husseini, S. Primary Health Care in the West Bank Report prepared for Policy Research Inc., Clarksville, MD; 1992.
(c) Ayed, N. Health. In: Palestine Studies Project. Master-planning the State of Palestine. Ramallah: Center for Engineering and Planning; 1992.
(d) UNRWA Headquarters, 1992.
(e)(f) Tarazi, J. Health Care in the Gaza Strip. Report prepared for Policy Research, Inc., Clarksville, MD; 1992.
(g) Jordan Central Bureau for Statistics; 1991.
(h) Statistical Abstract of Israel; 1991.
(i) NCHS. Vital Statistics for the U.S.; 1991.
(j) International Bank for Reconstruction and Development. World Bank; 1992.



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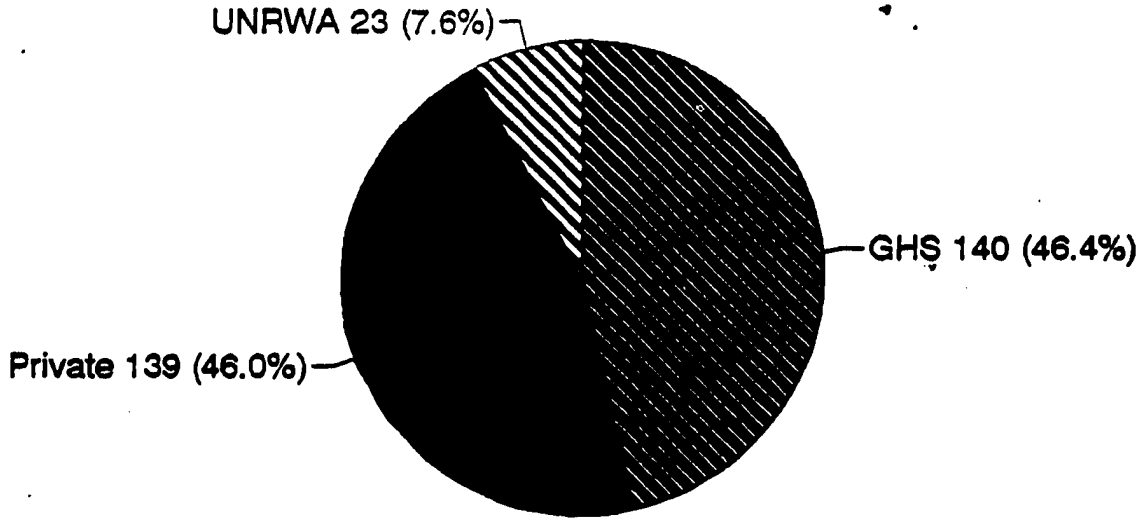
Table 2

Five Most Common Presenting Conditions at Clinics in the West Bank, 1988

| Presenting Condition | # Visits 1988 | % of Total Visits |
|---|---|---|
| Diseases of the upper respiratory tract | 94,425 | 21%.1 |
| Other diseases of the respiratory system | 48,777 | 10.9% |
| Diseases of skin and subcutaneous tissue | 46,709 | 10.4% |
| Diseases of musculoskeletal system and connective tissue | 44,078 | 9.9% |
| Diseases of other parts of the digestive system | 39,773 | 8.9% |

Source: Ministry of Health, December 1988 Statistical Report for Judea and Sumaria

Figure 3: Primary Health Clinics in the West Bank, by Operating Entity, 1988




Source: Ministry of Foreign Affairs. Rome, Italy. General Survey: Health Services in the Occupied Territories: Jerusalem; November 1989.



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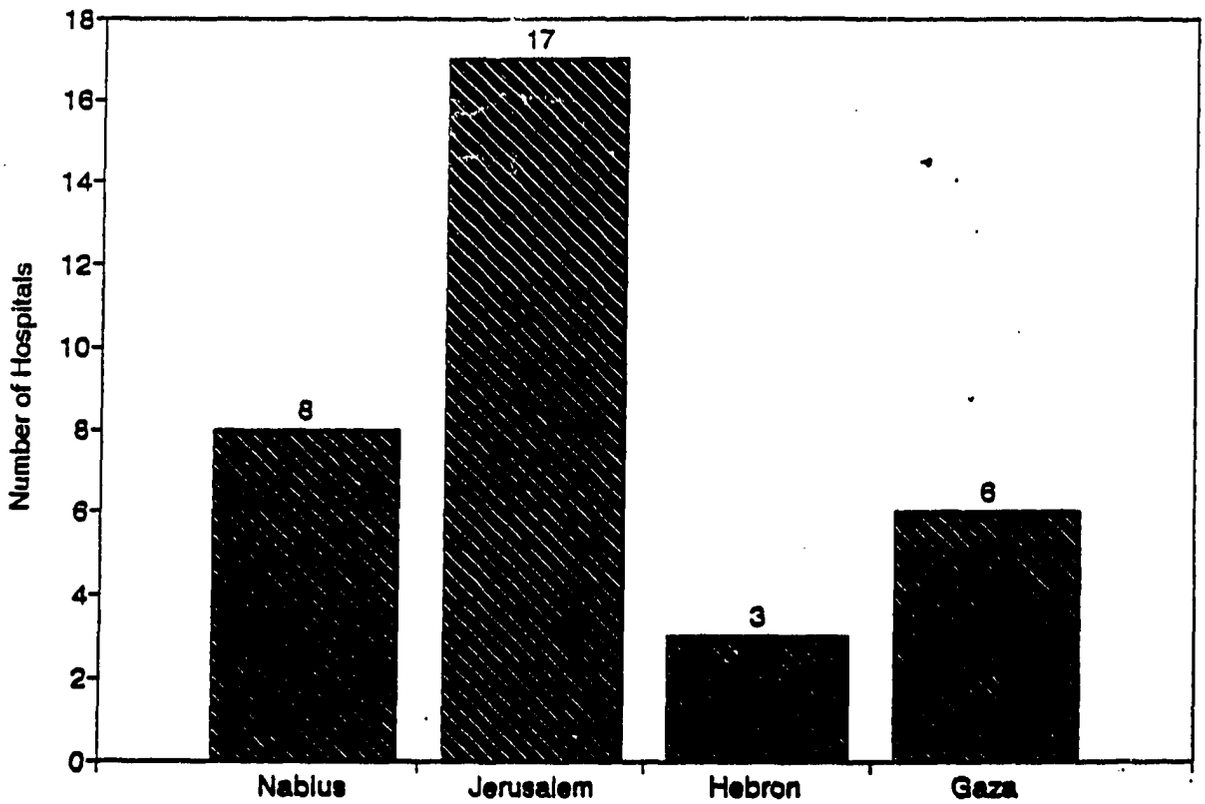
Figure 4: Distribution of Hospitals in the Occupied Territories, by District




Source: Ayed N. Health. In: Palestine Studies Project. Masterplanning the State of Palestine. Ramallah: Center for Engineering and and Planning; 1992.



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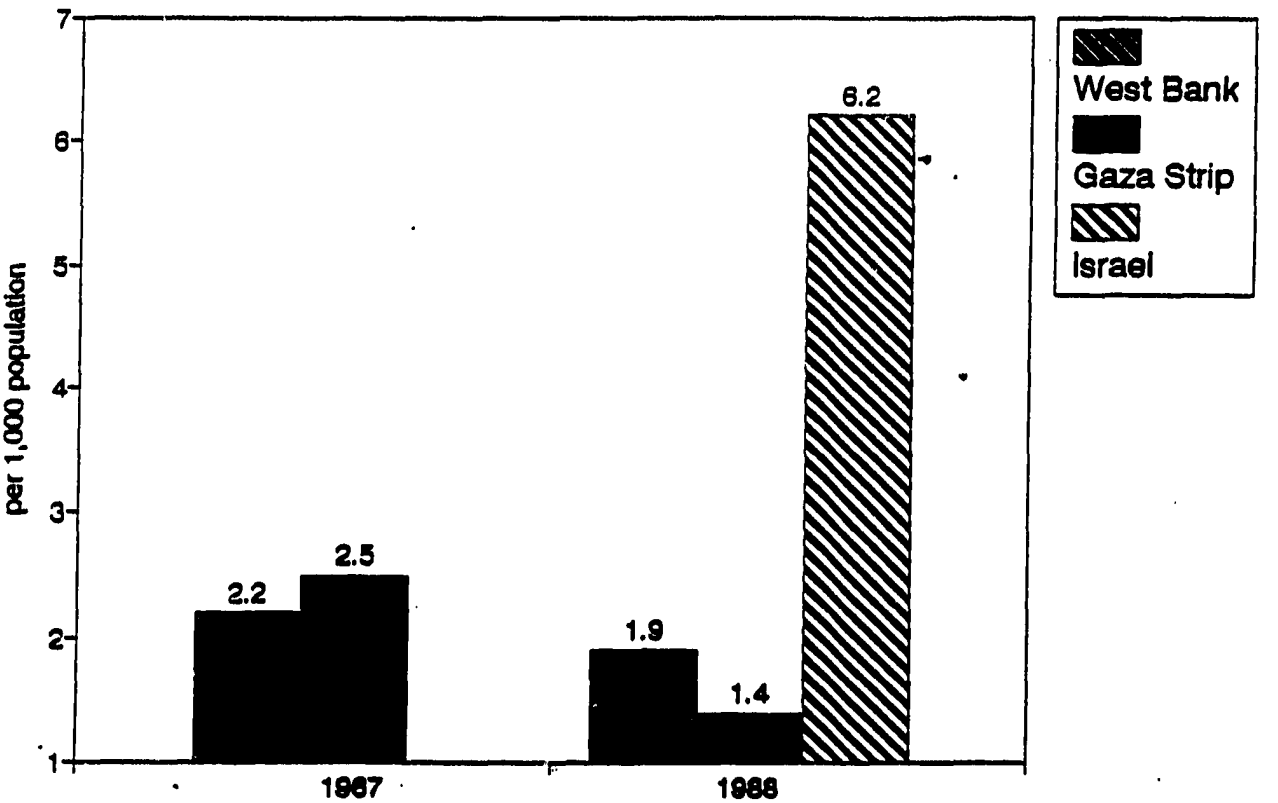
Figure 5: Hospital Beds per 1,000 pop, Israel, West Bank and Gaza: 1967 & 1988




Source: Population data obtained from the Statistical Abstract of Israel, 1967 and 1988. Hospital bed ratios obtained from Ayed, N. Health. In: Palestine Studies Project. Masterplanning the State of Palestine. Ramallah: Center for Engineering and Planning; 1992.



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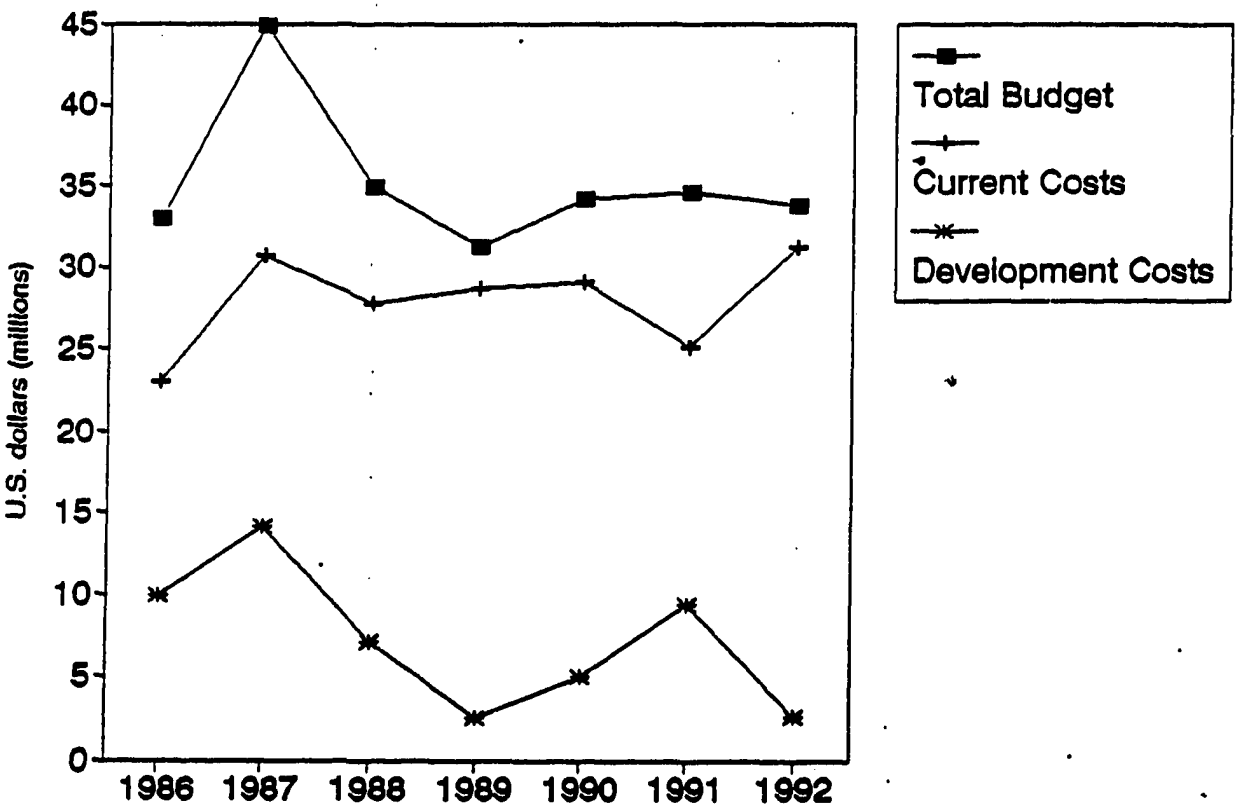
TABLE 3: CURRENT AND DEVELOPMENT BUDGETS FOR HEALTH SERVICES IN THE OCCUPIED TERRITORIES, 1986-1992

| | Total | Current | Development |
|---|---|---|---|
| | (U.S. dollars, millions) | | |
| 1986 | $32.95 | $23.00 | $9.95 |
| 1987 | $44.87 | $30.77 | $14.10 |
| 1988 | $34.88 | $27.78 | $7.10 |
| 1989 | $31.25 | $28.71 | $2.55 |
| 1990 | $34.16 | $29.11 | $5.05 |
| 1991 | $34.61 | $25.21 | $9.40 |
| 1992 | $33.81 | $31.18 | $2.63 |

Source: Policy Research Incorporated (PRI), Clarksville, MD; 1992

Figure 6: Current & Dev. Budgets for Health Services in the O.T., 1986-1992




Source: Policy Research Inc., Clarksville, MD; 1992.



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31. Ministry of Health; Table 6.

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33. Interviews conducted in May/June, 1992.

34. Based on interview conducted during field trips of December, 1991, January/February, 1992 and May/June, 1992.

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# INDUSTRY AND ENTERPRISE IN THE WEST BANK AND GAZA STRIP

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

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## I. EXECUTIVE SUMMARY

The Occupied Territories lack most of the essential factors which ensure successful industrialization. These include: a) raw material (with the exception of sand, salt and stone quarries), b) indigenous investment capital, c) access to markets, d) supportive managerial and regulatory infrastructures, e) self-determination with respect to laws and regulations pertaining to industrial development, and f) the ability to educate, train and provide experience for both the skilled and unskilled work force. However, even in the absence of these essential factors, some industrial expansion has occurred in the past 20 years, although it has decreased more recently. As of 1989, the most recent year for which data are available, the industrial sector represented approximately 12% of GDP for the Occupied Territories. The primary types of industry and enterprise include clothing, textiles and leather, fishing, tourism, construction, pharmaceuticals, quarries, plastics and paper products.

Investment in the private sector in the West Bank and Gaza Strip derives from the owners and investors in the private sector, Arab donors (primarily through grants) and other donors (primarily through credit arrangements). Investment in Palestinian companies rests primarily with the "large" (i.e., more than eight employees) firms, derives largely from the family-owners, and is significantly smaller than investment in Israel. As is true with many developing countries, "industries" in the Occupied Territories comprise primarily owner-operated businesses. For example, in 1987, of the total of 4,255 "industrial" firms in the Occupied Territories, only 2,431, or 57% have employees. As of 1989, 19,849 workers (17% of the work force) in the West Bank worked in industry, as did 7,990 workers in Gaza (13.5% of the work force). In the West Bank, the proportion of the work force employed in industry remained relatively stable from 1980 to 1989; in the Gaza Strip, however, it declined by 16% over the same period. This shift has been due in part to employment of Gazans in Israel and is reflected in changes in employment by type of industry; for example, the proportion of Gazans working in the construction industry rose appreciably from 1987 to 1990 and rose slightly in the West Bank during the same period.

The economies of the West Bank and Gaza Strip are inextricably linked with Israel, both as the occupying nation and as an economic "competitor"; this is particularly true for industry and enterprise. A specific example of the link between the industrial sector in the Occupied Territories and Israel is the fact that, as with the West Bank, Israel is the primary source of raw materials used in manufacturing in the Gaza Strip, providing just over 40% of such materials in 1990. In 1986, the Occupied Territories exported more than 80% of their industrial goods to Israel (no data are available with respect to the types of goods exported).

Subcontracting arrangements, which entail Palestinian enterprises subcontracting to Israeli firms for small-scale production, have been an important factor in Palestinian industry since the Occupation. These subcontracting arrangements are primarily for the production of goods requiring labor-intensive finishing (final stage of production), including clothing, shoes, wood and leather products, and, in addition, the repair of durable goods, including electrical appliances and motor vehicles. Although subcontracting has provided employment for large numbers of Palestinians, these arrangements -- which make use of low-wage workers -- have been criticized by some Palestinians hindering expansion of small-scale enterprises. In the event that the bureaucratic and economic climate would change in the Occupied Territories, subcontracting would hold promise for economic expansion as has occurred in other developing areas (including, notably, the Pacific Rim).

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

It must be noted at the outset that, as with other sectors in the Occupied Territories, the statistical data available from the Government of Israel (GOI) -- that is, those published in the Statistical Abstracts and other governmental sources -- which relate to the industrial sector do not include East Jerusalem. This significantly skews the data and inhibits analysis of trend data which could be used for economic planning purposes. This flaw in the data should be considered by the reader of this sector analysis when examining tables and figures. What is more, as Benvenisti has suggested,

> "For statistical purposes the West Bank and Gaza Strip are considered by Israel's Central Bureau of Statistics to be units independent of Israel. Economic activity there is investigated and reported as though it constitutes a 'national economy' united with Israel in a 'common market.' The official reporting of GDP, GNP, exports and imports and balance of payments of the territories is, however, inaccurate at best and misleading at worst. The daily, complex, economic interaction over the nonexistent 'green line,' lacking any effective monitoring and control, call the reliability of the statistics into question."[1]

Unfortunately, because of the impediments to the conduct of empirical studies in the West Bank and Gaza Strip, most of those who have described or assessed the economy of the Occupied Territories depend primarily - and necessarily - on GOI statistics, notwithstanding their limitations. Insofar as data are available with respect to East Jerusalem, they have been included, either as part of data relating to the West Bank, or separately, as appropriate or necessary.

### A. Importance of Industry and Enterprise for Development in the Occupied Territories

The contribution of Palestinian industry to the GDP of the Occupied Territories, which has remained at 9% since 1987, belies its importance for the economy of the area, in particular in terms of potential future growth. Land and water resources limit the potential for the agricultural sector to expand (although productivity can be substantially improved). However, the opportunity for Palestinians to compete in an open market with respect to industry and enterprise (including the important tourist sector) is substantial.

Traditional Palestinian manufacturing enterprises include food-processing, textiles, clothing, furniture, construction materials, plastics and pharmaceutical companies and souvenirs for tourists. Most of the companies are family-owned and



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controlled and few have made recent significant investments in new technology or worker training. While industrial output has been relatively low, and has decreased over recent years, most of the impediments to industrial expansion are related either to externally-imposed constraints or technical or managerial problems (which can be alleviated through technical assistance and training as well as support for newer industrial technologies). Expansion of credit is also sorely needed if the industrial and enterprise sector is to contribute to economic development. Related issues are discussed in the companion report, Finance and Credit in the Occupied Territories.

## B. Key Sectoral Issues

The Occupied Territories lack most of the essential factors which ensure successful industrialization. These include raw material (with the exception of sand, salt and stone quarries), indigenous investment capital, access to markets, favorable infrastructures and self-determination with respect to laws and regulations pertaining to industrial development, and the ability to educate, train and provide experience for both the skilled and unskilled work force. However, even in the absence of these essential factors, some industrial expansion did occur in the West Bank during the Jordanian period and some -- albeit minimal -- expansion occurred in Gaza under Egyptian control. This demonstrates the degree to which Palestinians are able to overcome obstacles to economic development. However, the industrial sector continues to be dominated by comparatively small and predominantly family-owned companies which are heavily dependent on Israel for imports and on Israel and Jordan for exports.

### B.1 Economic Link Between Israel and the Occupied Territories

The economies of the West Bank and Gaza Strip are inextricably linked with Israel, both as the occupying nation and as an economic "competitor." However, the economy of Israel completely overshadows the economy of the Occupied Territories. For example, Israel is classified by the World Bank as a high-income country; in 1988, the Bank defined as high-income those countries with a per-capita income of $6,000 or more. In 1988, Israel ranked 22nd of all countries in per-capita GNP.[2] In the same year, the estimated per-capita GNP of the West Bank (excluding East Jerusalem) was $3,195; in Gaza it was $1,976.[3] According to World Bank criteria, this places the West Bank in the upper-middle income category and Gaza in the lower-middle income country category. Published GOI statistics do not provide adequate information by which to estimate per capita GNP for Israeli-occupied East Jerusalem.

According to a 1989 UNCTAD report on Palestinian external trade under Israeli occupation, the capacity of the Palestinians to

plan, regulate and support their economy have been "eroded" since 1967.[4] The agency also noted that "exclusion of the Palestinian people from authority and responsibility over their own economy covers a wide range of functions." The functions listed by UNCTAD, which comprise traditional roles for the public sector, included:[5]

* industrial and commercial licensing and regulation;
* agricultural production planning (cultivation and planting quotas, marketing contracts, water distribution and input provision);
* trade regimes (e.g., tariffs, levies, import and export licensing);
* industrial, agricultural, trade and other credit facilities, in both the private and government sectors;
* agricultural, industrial and residential land use and construction;
* the development and provision of public utilities and infrastructures; and
* the establishment of appropriate public services.

UNCTAD warned that "the increasing concentration of such activities within the jurisdiction of the Israeli military authorities continues to inhibit economic performance and potentials in the occupied Palestinian territory."[6]

A specific example of the link between the industrial sector in the Occupied Territories and Israel is the fact that, as with the West Bank, Israel is the primary source of raw materials used in manufacturing in the Gaza Strip, providing just over 40% of such materials in 1990. The second most common source was Western Europe (25.5%). The Gaza Strip contributed only 16.8% of raw materials used in Gazan industry, and the West Bank provided only 6.4% (primarily leather and building materials).[7] However, just over 60% of industrial production in the Gaza Strip was consumed by the local market, with 13% each exported to the West Bank and Israel.[8] In 1986, the Occupied Territories exported more than 80% of their industrial goods to Israel (no data are available with respect to the types of goods exported). Olive oil and olives represented 42.5% of the monetary value of industrial goods exported to Jordan in 1986; dairy products accounted for 27.2% of industrial exports to Jordan, followed by stone and marble (20.3%).[9]



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## B.2 Israeli Industrial Subsidies

As is true with most industrialized and upper income countries, including the United States, the Israeli government provides extensive direct and indirect subsidies for its own industries. These subsidies are used by governments to ensure that their industrial base is competitive with those of other countries as well as to provide mechanisms for continued or expanded technological development in those industries most likely to contribute to their economy. In the U.S., the Small Business Innovation Research Program is specifically designed to provide grants to small business to encourage the development and adaptation of new technologies; both the agricultural and industrial sectors have been provided with governmental subsidies on which they have based their competitive advantage. Examples of subsidies which are available to Israeli companies, but not to Palestinian firms, include but are not limited to, tax incentives, concessions on foreign exchange earnings, protective customs duties, research and development programs, and protectionist policies with regard to imports. This creates a situation in which Palestinian industries are at a significant disadvantage relative to Israeli competitors.

## B.3 Palestinian Industrial Development

The industrial development of the West Bank and Gaza Strip, which have been, for all intents and purposes, without government subsidy for nearly 25 years, are models for private sector initiative. Development in the Occupied Territories has occurred under the most difficult circumstances for most Palestinian entrepreneurs. Such circumstances include:

* the inability to have free access to vital economic and other information available to the government of Israel and to Israeli competitors;

* difficulties in obtaining technical expertise from outside the Occupied Territories;

* impediments to travel to other countries (e.g., to assess the competitive advantages of other firms);

* diminished public sector education, with consequential problems of language and numeric illiteracy;

* difficulty in importing materials and machines required for production and expansion; and

* constraints on export, resulting from regulations ostensibly related to security and quality control.

These and other bureaucratic and legal constraints are described in more detail in Part IV of this report.

## B.4 Industrial Zones

In many countries, industrial zones are used to target economic development in depressed areas. A government (national, state or local) usually provides public domain property as well as tax benefits to attract firms to invest in the zone. Other types of subsidies or assistance may be provided as well. Industrial zones are not without problems, however. If located near residential areas, they can be a major source of pollution; if not well-planned, they can be little more than a collection of individual enterprises. The first industrial zone in the Occupied Territories was established in Jerusalem prior to 1967; this "industrial zone" is, essentially, a collection of garages. Since then, zones have been established in Beit Jala and Ramallah. The former has not been successful because the incentives and services have not been sufficient to attract new firms;[10] the latter has attracted industries, including a paper products company, detergent manufacturer and a chocolate factory. Palestinian companies located in the Israeli-operated industrial zones are, for the most part, engaged in subcontracting for Israeli companies. In spite of these difficulties, Palestinians, donors and the GOI are encouraging the development of industrial zones. In late May, the GOI gave final approval for development of an industrial zone in the Gaza Strip. The Union of Industrialists in Gaza will have primary responsibility for development of the zone, and is presently initiating efforts to coordinate planning and implementation with local credit institutions and donors. The GOI is providing no financial support for basic physical infrastructure (electrification, water hook-up, etc.).

## B.5 Role of Infrastructure

In addition, the importance of infrastructure for industrial development cannot be overemphasized. Huleileh and others have emphasized the importance of infrastructure required for industrial development, including electricity, water, telecommunications, roads, industrial zones, airports and ports. He suggests that the development of industrial-related infrastructure be coordinated "with the municipalities in most of these areas, and particularly with elected municipalities or municipal committees formed by national consensus."[11]

Abdallah and Dakkak have also raised the critical issue of industrial pollution, noting that significant trade-offs will have to be made by those involved in economic planning.[12] As elsewhere in the developing, as well as the industrialized world, the opportunity for investment in industrial development, with concomitant job prospects and other economic benefits, is more

immediately attractive than the long-term prospect of environmental pollution and its socioeconomic and health consequences.

## B.6 Future Palestinian Industrial Development

Given that the Arab countries, the most important potential market for the West Bank and Gaza, are also engaged in rapid industrialization, some Palestinians are understandably concerned about the realistic options for trade and industrial development. It will be critical for Palestinian industry to make the most effective use of its human resources, given the technological advantage of its regional and international competitors and the relatively low productivity that is possible under the current circumstances. It is also important to facilitate the transfer of new industrial technology, to allow for needed advances in productivity and quality.

However, the degree of technological change and industrial development which would likely be required to ensure competitive advantage is more than can be borne by the resources available to Palestinian industry; therefore, the issue arises with respect to the degree to which international capital -- from donors and international financial systems such as the World Bank and the IMF -- can or should offset the relatively scarce resources available from Palestinian sources. While Palestinians recognize that they urgently require large infusions of capital in order to have a viable economy and to develop the capacity to compete in the global economy, many are wary of becoming dependent on external donors.

The comparatively small size of the Palestinian domestic market, coupled with the competitive disadvantages faced by Palestinian firms with regard to exports, fuel the fire of the debate with regard to preferable strategies for economic development: export orientation versus import substitution. While the latter has been a political position for several years, interest seems to be waning, as there is increased concern for a balanced economy in the event of political change. Under the circumstances, it is impossible to plan for either option. A related issue concerns the degree to which protective measures should be taken to support Palestinian industry and develop some level of import substitution. The recently held Group of Seven Economic Summit attests to the complexity and political sensitivity of protectionist policies; one country's trade barrier is another's protection against dumping practices.

## III. SECTORAL STATUS AND TRENDS

### A. Growth of the Industrial Sector

Prior to 1967, in both the West Bank and Gaza Strip, the proportion of GDP attributed to manufacturing and mining was minimal: 4.2% for Gaza and 5.8% in the West Bank. By 1983, the proportions were 9.9% in Gaza and 6.9% in the West Bank.[13] The comparatively poor industrial development in the Gaza Strip reflects the economy of Gaza, more fragile even than that of the West Bank.

Tuma points to the conflicting data with respect to growth in industry in both the West Bank and Gaza, and to the disparity between the two areas.[14] For example, while gross fixed private capital formation increased sharply in both the West Bank and Gaza Strip between 1968 and 1989 (as it increased in most developing countries), the average manufacturing wages were only slightly above those for agricultural workers in the West Bank and less than those in Gaza. As Figure 1 shows, those working in the textile industry were among the lowest paid; this is one of the predominant subcontracting industries described previously.

According to Tuma "If wages may be used as indicators of productivity and level of technology, then manufacturing has not developed noticeably during the period under study."[15] Even emigration has played an important role in the lack of development of the industrial sector. As Abu Kishk pointed out, "in the late 1970s and early 1980s ... a large number of owner-managers of small establishments liquidated their businesses either because of Israeli competition or emigration in search of greater opportunities in the booming economies of the neighboring Arab countries."[16]

It is particularly difficult to estimate the "growth" of industry/enterprise in the Gaza Strip, given the paucity of data and the degree of dependence on Israel, which results in wide fluctuations of indicators such as employment and GNP. The contribution of the industrial sector to GDP in the Gaza Strip has fluctuated since 1980, decreasing during the period 1980-1985, increasing in 1986 and 1987 (to 13.7% of GDP in the latter year), but has fallen again in 1989 (to 11.6% of GDP).[17]

In 1986, Abdallah studied 49 Palestinian enterprises in the West Bank and Gaza Strip which had 20 or more employees.[18] He found that production in comparison to consumption was small - some 39%, which seems to indicate unmet demand; this unmet demand was most likely being met primarily by Israeli imports.[19] During the period 1978 to 1983, labor productivity and per capita industrial output in these larger firms increased, although contrary to expected changes during periods of industrialization, industrial productivity did not keep pace with agricultural

productivity. Notwithstanding the obstacles to industrial development that face manufacturers in the Occupied Territories, advances were evidenced in terms of both quantity (i.e., expansion in product lines) and quality in firms such as metal works, chemicals, plastics, pharmaceuticals and cosmetics and paper products. The data from these firms confirmed the findings of other research which demonstrate that Palestinian industry is labor, rather than capital intensive. Finally, data collected from these firms in 1986 - prior to the extensive curfews and strikes in subsequent years - indicated that industry operated for only 57% percent of the time. [20] This last point is critical; underutilization of productive capacity severely hampers the competitive advantage of any industrial enterprise, inefficiently utilizes capital resources and limits the degree to which Palestinian firms are amenable to absorbing labor. A previous (1981) ECWA/UNIDO study found that approximately 68% of the 182 firms studied were operating at 75% of capacity, while only 14% were operating at 90% or more of capacity.[21]

In 1989, UNCTAD expressed concern with regard to the underutilization of productive capacity in Palestinian industries:

> "While industrial decline since 1987 might be a passing manifestation of production and marketing re-orientations since the uprising, it also reflects the under-utilized capacity of most establishments ... and the continuing marketing bottlenecks faced by most sectors, and by industry in particular. This situation gives rise to serious concern owing to the sector's potentials for income and employment generation in the longer term as well as for market expansion to allow capacity utilization and economies of scale in output." [22]

While donors, Palestinians and some Israeli economists are in agreement that economic expansion (and related jobs creation) will be dependent in large part on expansion in the industrial sector, unplanned expansion, given limited investment capital, may be counterproductive. In late 1991, the GOI issued 73 licenses for new industries in the Occupied Territories, and 337 licenses for existing industries operating without a license. This compares with the total of 80 licenses for new industries issued during the period 1980-1990.[23] Notably, of the 73 industries for which licenses were issued, there are existing firms which do not operate at full capacity. Moreover, in many cases, the individuals (families) to whom the licenses were issued do not have the necessary capital to invest in the industries. It is simply unclear how the issuance of these licenses will benefit economic development in the Occupied Territories, without a clearly defined industrial development

plan and the removal of bureaucratic restrictions which impede industrial development.

For example, many licenses granted by the GOI for new industries in late 1991 were for quarries. If all of the Palestinians to whom licenses were granted were to establish their new firms, there could be more quarries operating in the West Bank than the economy can absorb at present. Although quarries have both jobs creation and export potential, it will be important to ensure that resources are not expended on companies which are undercapitalized and cannot compete on the open market. On the other hand, it would be inappropriate to discourage firms from entering this potentially lucrative market. Palestinians are also concerned about the political issues inherent in expanding quarrying operations, specifically the concern that quarried stone is to be used in the construction of settlements.

## B. The Labor Force

As of 1989, 19,849 workers (17% of the work force) in the West Bank worked in industry, as did 7,990 workers in Gaza (13.5% of the workforce).[24] In the West Bank, the proportion of the workforce employed in industry remained relatively stable from 1980 to 1989; in the Gaza Strip, however, it declined by 16% over the same period.[25] This shift has been due in part to employment of Gazans in Israel. For example, as Abu-Amr notes, in 1984, "8,000 workers were employed in local industry and 7,300 had industrial jobs in Israel."[26] Figure 2 shows employment of Palestinians in the West Bank and Gaza Strip by locality (i.e., place of residence and Israel and Jerusalem) for 1990. The Statistical Abstract of Israel data for the West Bank do not include East Jerusalem.

As is true with many developing countries, "industries" in the Occupied Territories comprise primarily owner-operated businesses, most of which have few employees (see Figure 3). For example, in 1987, of the total of 4,255 "industrial" firms in the Occupied Territories, only 2,431, or 57% had any employees other than the owner-operators. In that same year, 58% of the 2,433 manufacturing companies having employees in the West Bank and Gaza employed four or fewer workers, while only 30 companies (just over 1%) employed 50 or more workers.[27] In their 1990 survey of industry in Gaza, Okasha and Aba-Zarifa identified 1,563 productive industries, approximately 40% of which were family-owned and operated, having no other employees. Only 17% employed eight or more workers.[28] In contrast, the Statistical Abstract of Israel for 1991 shows that, of the 7,315 establishments on which data were available in 1988, none employed fewer than 5 persons, 7% employed 50-99, 4% employ 100-299 and 2% employed 300 or more persons.[29]

Palestinian wages are far below those of Israelis. In 1989, the most recent year for which data are available, the average annual wage for Israeli employees (i.e., workers excluding Palestinians from the West Bank and Gaza Strip) was $10,696 (exchange of NIS 2.3/1). In the same year, the average wage was $3,390 for the West Bank and $3,597 for Gaza.[30] The Israeli wages - more than three times those of Palestinians in the Occupied Territories - do not include the extensive social benefits which accrue to Israelis, including those available to settlers, but which are largely unavailable to Palestinians. For example, Palestinians pay higher rates for basic utilities (water and electricity), relatively few can afford the premiums for the national health system, and most are without unemployment insurance, or any type of insurance. This low average wage is of concern in part because of the dependence on family wealth for capital investment in industry and enterprise.

Most newly hired workers in the West Bank and Gaza are unskilled; as a result, more than 90% of workers are trained on the job.[31] This practice, which the World Bank terms "enterprise-based training," can have important advantages[32]. However, in the context of the labor market in the Occupied Territories, it is reflective of the absence of adequate industrial education and training resources outside of the firms themselves. Because the firms have few resources to use in this on-the-job training, and because they depend almost exclusively on skills-transfer by older (often less-educated) employees, there is no guaranteed mechanism for knowledge and skills enhancement.

Scant information with respect to trade unions is available. According to the most recent annual report of the International Labour Organization (ILO), based on a site visit to the Occupied Territories, the two largest federations of unions are the General Federation of Trade Unions of the West Bank (GFTU), which was closed down by the CIVAD from 1988 to 1990 and the GFTU Workers' Unity Block (WUB). The former includes approximately 90 unions in the West Bank (31 of which are registered by the GOI) and the latter includes 46 unions.[33] Together, they reportedly represent 90% of the work force of the West Bank.[34] The General Federation of Labour in Israel (the Histadrut) negotiates conditions of Palestinian workers in Israel and represents them in issues concerning Israeli labor laws. However, the GOI prohibits Palestinians from becoming members of Histadrut, even though 1% of their wages are deducted in recognition of the representation that Histadrut provides.[35] According to the Ministry of Labour of Israel, there are seven registered trade unions in the Gaza Strip, but only six are operational.[36] No additional information was available with respect to trade unions in Gaza.

## C. Investment in the Industrial Sector

Investment in the private sector in the West Bank and Gaza Strip derives primarily from family owners and friends, Arab donors (primarily through grants) and other donors (primarily through credit arrangements). Investment in Palestinian companies rests primarily with the "large" (i.e., more than eight employees) firms, derives largely from the family-owners, and is significantly smaller than investment in Israel. While accurate data are virtually impossible to obtain, the following may be useful for purposes of this discussion.

The fixed capital formation in industry in the West Bank was NIS 100.4 million in 1989 and NIS 23.4 million in Gaza.[37] In comparison, fixed capital formation in industry in Israel was NIS 4.6 billion in 1989.[38] Moreover, 39% of the productive capital in both the West Bank and Gaza Strip rests with larger firms and nearly all (95%) of capital formation in the Gaza Strip was financed by the company owners or their families, with commercial lending institutions having a minor role.[39] A 1979 study by Awartani found that 95% of fixed capital was in equity capital, which also accounted for 97% of current transactions. The remainder of fixed capital was from banks, friends and relatives. Only 17% of the companies had received credit from Israeli banks.[40]

Perhaps as a result of this dependence on family-owner investment, firms in the Occupied Territories are severely undercapitalized. A 1981 study by ECWA/UNIDO found that 79% of the firms in the West Bank and Gaza Strip had an initial investment of less than JD 10,000, 13% had investments of JD 10,001-JD 50,000, and only 7% had initial investments of more than JD 50,000.[41] In Gaza, 90% of the firms had an initial investment of less than JD 5,000.[42] Unfortunately, more recent data with respect to this important indicator of the capacity for industrial growth are not available.

What other investments have been available for industrial development? Funds provided through the Jordanian-Palestinian Joint Committee, supported by the Arab states, totaled just over JD 125 million between 1979 and 1983. Of this amount, JD 6.7 million was allocated for industry.[43] No significant investment has been made in Palestinian industry by Arab investors since that time. Other donors have not provided support for the industrial sector, with one exception. Through its Cooperation for Development office, established in 1986, UNRWA has provided credit for 32 industrial projects, each one averaging just over $8,000; the annual interest rate is 6-9%. Through its Planning and Development Department, in August, 1991, UNRWA initiated a program for provision of small loans (up to $30,000/industry, with 25-30% capital contribution from the borrower), at rates of 6-9% and with a three-year pay-back period.[44]



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Three local credit institutions have provided loans to industries and enterprises over the past four years; these include the Economic Development Group, the Technical Development Company and the Arab Development and Credit Company. During this period, the total amount of loans provided by these institutions has not exceeded $5 million. Most loans are relatively small ($5,000-$60,000) and loans to small and medium size enterprises predominate.[45]

Relatively scarce resources are thus available for expansion of the existing industrial base, for retrofitting of existing industries, expansion of the number of employees, or even for operating costs, including maintenance of equipment and retaining the current labor force. Given the paucity of investment capital, the opportunity to open new industry may be minimal, even given the approval of licenses for new industries by the GOI. The recent "Encouragement of Capital Investments Income Tax Reform" was issued by the CIVAD in November, 1991, but was made available in Arabic only in February, 1992. This law, which calls for a three-year "tax holiday" for new businesses (with certain restrictions), is implemented by a CIVAD-appointed committee comprised primarily of Israeli military officials. Economists, accountants and attorneys who have read the regulations maintain that the nature of the regulations is such that they are unlikely to result in significant (if any) increased private sector investment in the industrial sector, in part because the exemptions cannot be readily applied and most Palestinian factories cannot meet the conditions of the law.[46]

## IV. INSTITUTIONAL ARRANGEMENTS

### A. Palestinian Industry and Enterprises

Traditional Palestinian manufacturing enterprises include food-processing, textiles, clothing, furniture, construction materials, plastics and pharmaceutical companies and souvenirs for tourists. Most of the companies are family-owned and controlled and few have made recent, significant investments in new technology or worker training. The remainder of this section of the report presents summary information with respect to the industries and enterprises which are playing an increasingly important role in the Palestinian economy, or which have the potential to do so.

Clothing, textiles and leather continue to comprise an important part of Palestinian industry. In 1987, the most recent year for which data are available, 3,945 persons were employed in these industries in the West Bank (33% of the industrial work force) and 3,124 persons were employed in Gaza (44% of the industrial work force). These industries have total revenues of $2.7 million and $2 million, respectively. The average daily wage of workers employed was only $7.34 in the West Bank (the second

lowest after woodworking) and $7.13 in Gaza, where it was the lowest wage category.[47] According to a 1989 report UNIDO, as of 1987 there were 305 shoe manufacturing firms in the West Bank and six in Gaza, with a total of 1,000 employees.[48]

Tourism has been an important segment of the Palestinian economy for some time, primarily in the West Bank and East Jerusalem. This has been true in spite of severe restrictions on growth of the industry. For example, hotel expansion in the Occupied Territories has been frozen since the occupation, while hotel capacity in West Jerusalem has increased by 380%.[49] At present, 36 Palestinian tourist agencies are in operation (a decrease from the 46 in operation in 1967). Although 300 Palestinian tourist guides worked in the West Bank in the early 1970s, only 50 are currently active.[50] Although precise figures are difficult to obtain (Israeli data on tourism are not disaggregated for the Occupied Territories), it is estimated that tourist expenditures in the West Bank and East Jerusalem approximated $90 to $100 million in 1989. From August, 1990 to the summer of 1991, the period covering the Gulf War, the tourism sector lost approximately $100 million, including hotels, travel agencies, tourist transport companies, handicraft manufacturers and restaurants.[51] Yet, tourism has important potential for the economy of the Occupied Territories, as it does in other developing countries. According to a 1989 report in The Economist, "tourism earned poor countries about $55 billion in 1988, according to UN estimates. That makes it their second biggest earner of foreign exchange, after oil ($70 billion)."[52] The Economist predicted in 1989 that spending on international tourism, exclusive of fares, would increase by about 5% per annum, in real terms, until the year 2000. The Economist also pointed out that, in contrast to manufacturing which is faced with protectionist trade barriers (and the need for often significant expenditures on new technology), tourism creates many jobs and does not face such barriers.

In 1989, 11% of employed Palestinians in the West Bank worked in construction - primarily housing construction, a minimal increase over the 10.7% employed in this sector in 1980. In Gaza, on the other hand, there was a 42% increase in Palestinians employed in this sector, from 7.3% in 1980 to 12.6% in 1989.[53] While it was not possible to obtain more detailed data, it is possible that the relatively small increase in the West Bank is due to the fact that the data do not include East Jerusalem; Palestinians in the Gaza Strip, on the other hand, are employed in construction in Israel and in settlements, in addition to construction in the Gaza Strip.

Two examples of industries which have had some modicum of modernization since the occupation are olive oil production, including the introduction of new technology; and quarrying, in which the production process has been modernized.[54]

Importantly, in 1985, these industries accounted for a significant proportion of the industrial contribution to GDP of the West Bank in 1985: 34% for olive presses and 7% for quarries.[55] However, although olive pressing contributes significantly to the food processing industry in the West Bank, it is both seasonal and dependent on crop yields; the number of persons employed can range from 500 to 2,500 in any given year (see Figure 4).[56]

Finally, several new industries have been introduced, including plastics, pharmaceuticals, paper products, detergents and soft drinks. In each of these, there are examples of companies which have introduced new technologies and/or creatively adapted from existing equipment when it has been difficult to import new, more efficient equipment through Israel. According to Ahiram, it is the paper products industry which has "made probably the largest inroad of all Palestinian products into the Israeli market."[57] This is particularly interesting because the marketing of Palestinian paper products has been hampered by the same constraints as pertain to other companies. The degree to which these industries are involved in subcontracting to Israeli companies (for re-export to Israel) or import substitutions is not clear.

In the West Bank, rubber, pharmaceuticals and plastics "increased their share of manufacturing income from 8.7 per cent in 1969 to 17.8 per cent in 1984" (see Figure 5)[58]. While pharmaceutical companies contributed significantly to this expansion, plastics have also played a large role. Only one of the 17 plastics firms currently in operation in the West Bank[59] and none of the firms in the Gaza Strip was in operation prior to 1967. Several of the plastics companies have modern equipment for most of their operations and, within the constraints of the GOI, make creative use of their product lines, including scrap materials. Employment in the construction industry has increased significantly in both the Gaza Strip and the West Bank between 1987 and 1990 (see Figures 6 and 7).

The pharmaceutical industry has been an increasingly important one in the West Bank (there is only one company in Gaza, which is essentially a small-scale toiletries enterprise). Prior to 1967, there were no pharmaceutical companies in either the West Bank or Gaza Strip; as of the end of 1991, there were 10 companies in the West Bank and one in the Gaza Strip. According to Mansour, "the pharmaceutical industry ... has constituted the most significant development in West Bank industry since 1967." The fact that Palestinian doctors tend to prescribe pharmaceuticals from their own (or colleague's) companies (of which they are shareholders) has helped to ensure the growth of this industry.[60] However, most of these companies do not manufacture pharmaceuticals, but rather re-package imported chemicals.[61]



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Although the fishing industry in Gaza provides employment for just over 1,200 Palestinians (as of early 1992), its importance has diminished significantly since the occupation. Prior to that time, 7,500km$^2$ of land in Gaza were used as fishing areas; this has been reduced to 600 km$^2$. The tonnage of catches has decreased by 63%, from a high of 2,600 in 1972 to 962 in 1983, the most recent year for which data are available.[62] This reduction in fishing areas is not the only factor which has decreased the importance of the fishing industry in Gaza; other factors include: Israeli restrictions on hours in which fishing is permitted; competition from Israeli fishermen, who have modern boats and other equipment; allowable fishing boundaries for Palestinians; and disparity in taxes imposed on Gazan, as opposed to Israeli fishermen.[63]

## B. Indigenous Institutions for Development

Several institutions which have the potential to contribute to industrial development in the Occupied Territories are the Economic Development Group (EDG), the Arab Technical Development Center (TDC), Arab Development and Credit Company (ACCI), the Union of Industrialists, Cooperation for Development (CD), the Arab Thought Forum and the Ma'an Development Center (through the conduct of studies and workshops). The credit institutions are described in more detail in the companion report, Finance and Credit in the Occupied Territories.

Historically, the local Chambers of Commerce play roles of varying importance in their regions. These organizations, whose members include most of the medium and large-scale business owners in the Occupied Territories, have encouraged business development and supported industries which face legal and bureaucratic constraints from the GOI. The Chambers of Commerce have recently held elections in the major industrial centers (including Nablus and Ramallah, for example). They are currently playing a key role in facilitating export to Arab countries through the free-trade zone in Jordan. (See the companion Trade paper for a more detailed discussion of their role in this regard.)

The Union of Industrialists in Gaza (founded in 1990) and the Union of Industrialists in the West Bank (founded in 1991) are likely to play an increasingly important role in economic development, and are therefore highlighted here. The Union of Industrialists of the Gaza Strip initiated attempts to incorporate in 1986; the Israeli authorities gave final approval for establishment of the organization in late December, 1990. The Union represents more than 500 Gazan factories, includes an 11-member board of directors and has a four-member staff (primarily voluntary). Albeit with limited resources, the Union has initiated a wide range of activities, including, for example: collecting information concerning industries in the Gaza Strip

(for use by their members, investors, donor agencies); conducting exhibits of local industrial products; facilitating export arrangements through Jordan to other Arab countries and European markets; providing technical expertise to member industries through its consultancy research unit; and sponsoring training workshops for management and labor. The Union of Industrialists of the West Bank, founded in 1991, has comparable objectives.

B.1 Subcontracting Arrangements

These arrangements, which entail Palestinian enterprises subcontracting to Israeli firms for small-scale production, have been an important factor in Palestinian industry since the Occupation. These subcontracting arrangements are primarily for the production of clothes, shoes, wood and leather products, electrical appliances (primarily in Gaza) as well as construction materials. They also may include the repair of durable goods, including electrical appliances and motor vehicles.[64]

For the most part, Israeli companies engage in subcontracting arrangements for goods requiring labor-intensive finishing (final stage of production).[65] Moreover, the subcontracting arrangements are economically beneficial to the Israeli companies because of their comparatively low unit costs and wages plus benefits paid in Israel are much higher than in the West Bank and Gaza Strip. These subcontracting arrangements utilize low-wage workers, often women who are not protected by labor regulations, avoid capital outlay for equipment (costs borne by the Palestinian entrepreneur) and avoid other regulations which apply to Israeli industries (e.g., environmental and occupational health laws).

Although subcontracting has provided employment for large numbers of Palestinians, these arrangements have been criticized by some Palestinians. The ethical, legal and social arguments against this type of arrangement (particularly when it is abused) are countered by the harsh economic realities faced by Palestinians. Given these realities, subcontracting arrangements continue to exist, if not thrive. However, since 1990 there have been reported decreases in the number of Palestinian firms involved in subcontracting arrangements, as well as decreases in the number of employees of those firms which still exist. Several factors are related to this decrease:

* the increase in West Bank wages over the years since the subcontracting arrangements were initiated by Israeli firms, making use of subcontracted labor less lucrative to Israeli firms;

* the ability of Israeli industry to employ economies of scale and specialization and the increased utilization of capital-intensive techniques by Israeli companies,

reducing the need for use of Palestinian subcontractors for final processing of goods; and

* Palestinian companies are now usually required to pay cash in advance for raw materials received from Israel; there are no, or limited credit arrangements possible; under the current economic circumstances, fewer Palestinian companies are able to make such cash advances.

Palestinian firms involved in subcontracting have pointed to an additional problem which impedes their ability to survive or expand. When raw materials used in processing goods for Israeli firms are received from Israel, based on cash in advance payments made by the Palestinian firm, they are often of poorer quality or there is a shortage in the volume of materials ordered, sometimes by as much as 20%. The Palestinians believe that they have little recourse when this occurs. The result is that the Palestinians absorb the loss.

## C. The Role of Women in Industry and Enterprise

Salman and others have suggested that women play an insignificant role in the industrial sector in the Occupied Territories, with their employment centered in the clothing, food and chemical industries.[66] In fact, according to Salman, "Women's work [in the Occupied Territories] is overwhelmingly concentrated in 'pink-collar' occupations - cleaners, secretaries, clerks, nurses, teachers, waitresses, textile workers - employing the skills women pick up as part of their domestic role."[67]

In the late 1970's and early 1980's, Palestinian grassroots women's organizations began to move from the more traditional women's charitable associations to a focus on the role of women and work. Initially concerned with the conditions of women factory workers, the committees (including the Women's Work Committee, the Working Women's Committee (a separate organization), the mainstream Palestinian Women's Committee, and the Women's Committee for Social Work) began in the mid-1980's to support services for women, including literacy, child care and early childhood education, health education and training for small-scale production.[68]

Women have been only minimally involved in technical training for employment in industry and enterprise. Of 694 students enrolled in technical training in three "community colleges" in 1987, only 3.3% were women.[69] Moreover, only 6,870 women worked in industry in the West Bank and Gaza Strip in 1990, only 25% of the total estimate of 26,998 Palestinians working in that sector;[70] most of these are employed in the low-wage garment and textile industry.

Women's organizations have increasingly developed cooperatives which focus on the production and marketing of specific commodities. For example, the Palestinian Federation of Women's Action Committees (PFWAC) has sponsored such income generating projects as baby food production, sewing, dairy, and crafts.[71] However, in the broader economy, these efforts have had relatively little impact.

## V. CONSTRAINTS TO INDUSTRIAL DEVELOPMENT IN THE OCCUPIED TERRITORIES

The impediments to industrial development in the West Bank and Gaza Strip include those faced by other developing economies and those which are particular to the Occupied Territories. The impediments described in this section are, for the most part, distinct to the Territories, although it is often difficult to make such a distinction.

### A. Bureaucratic and Legal Constraints

The import/export policies of the GOI, combined with the policy of the League of Arab States Special Bureau for Boycotting Israel with regard to exportation from the Occupied Territories, have had significant impact on the type of Palestinian industries which have maintained or expanded their operations. Because the policies of the League restrict "manufactured exports to those relying on inputs available locally or imported through Jordan", and those of the GOI prohibit virtually all Jordanian imports, not only has the industrial sector's share of the GDP declined since 1975 (in contrast to Israel and Jordan), but the dominant exports to, or through Jordan have been refined vegetable and olive oils and building stone and marble. In fact, as Mansour has noted, "Exports of food products have constituted, since 1968, half of the total industrial exports to Jordan and, including olive oil, 75 per cent of the total."[72]

A number of studies[73] have described several types of bureaucratic policies which hinder the establishment of new industries and improved productivity of existing industries in the Occupied Territories. Those particular to the Israeli government include:

* the system of personal and corporate taxation, which is important in light of the degree to which industries are dependent on family wealth for investment capital;

* denial of or extended delay in approval of licenses, including import licenses for new equipment;

* the de facto suspension of the Jordanian law for encouragement of investment in the West Bank (In November, 1991, the GOI introduced a comparable law



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which was to be effective January, 1992; this law is discussed in C.2 above);

* provision of direct and indirect subsidies to Israeli producers, with little or no concomitant subsidies for Palestinian industries;

* import and export restrictions, including requirements for permits and licenses, the levying of customs and duties, and the prohibition of the production of certain products; these restrictions are protective measures against imports from all countries and are based in part on the determination that they do not meet official Israeli standards;

* inadequate development of physical infrastructure (e.g., electricity, water supply and sewage disposal, and telecommunications);

* scarcity of financial institutions to encourage savings for investment and provide loans for investment capital; and

* inadequate public, vocational education and post-high school technical and science education, which impedes the ability of the Palestinian labor force to remain competitive.

An additional bureaucratic constraint which is of increasing concern is the virtual absence of a civilian court and the use of the Military Court to adjudicate civil disputes, including those relating to corporate law. As the United Nations Conference on Trade and Development has noted:

> "The local courts are almost completely lacking in means of executing court decisions and judgements. This has increasingly weakened the legal framework within which contractual dealings are carried out."[74]

Jordanian policy measures which have impeded industrial development in the West Bank include:[75]

* restriction against exports to Jordan from Palestinian firms established after 1967;

* restriction against goods "produced from raw materials or by means of equipment brought from Israel or imported through it" (In view of the Israeli requirements that most raw materials and all equipment must be brought through Israel to the Occupied Territories, this places Palestinian companies in an effective vice); and

* discouraging Palestinian companies from expanding, or establishing, manufacturing companies in the West Bank, while at the same time encouraging the expansion of Palestinian companies in the East Bank (Jordan).

In view of the importance of taxation with respect to industrial development, issues relating to that bureaucratic impediment are summarized below.

## B. Taxation

Taxation policy - including the regulations themselves and the manner in which they are applied - impact directly and indirectly on industrial development. In the case of the West Bank and Gaza Strip, Israeli taxation policy is consistently described by Palestinians and international observers as a factor which has served to limit industrial development. Legally, an occupying power has the authority to collect taxes, but in the context of the Hague Convention IV (1907) and the Fourth Geneva Convention (1949). Two provisions underlie tax collection: a) all revenue collected from the occupied population is to be used in that area, and b) the taxes are to be collected in accordance with international law. According to most international legal opinion, the law which was in force at the time of takeover of the Occupied Territory is the one which applies until there is a final settlement of the disputed territory. In the case of the West Bank, that would be Jordanian law; in the case of the Gaza Strip, that would be Egyptian law. Both have elements of British and Turkish law.

According to the 1991 report of the International Labour Conference, during a mission to the Occupied Territories:

> "...the representatives of the Director-General heard widespread protests from academics, trade unionists, workers and employers, about the system of taxation and the methods of revenue collection in the occupied Arab territories. In general, the population of the territories were unable to understand, or to accept, the many different taxes imposed on them and the manner in which they were collected... The representatives of the Director-General observed that the system of taxation was a source of profound discontent among the population of the territories. It is a matter which merits thorough investigation by the authorities in order to remove any discriminatory or arbitrary factors that may exist in the taxation system."[76]

The tax issues which most affect industrial development are briefly described below.

1) Use of value added tax (VAT)

In 1976, the GOI introduced a "Excise Added Tax," corresponding to the value added tax (VAT) introduced in Israel in the same year. In introducing this tax, which is charged on all goods produced in the Occupied Territories, the GOI stipulated that it was necessary to ensure provision of adequate social services for the population; the VAT is 18% of the total production revenue.[77] Ostensibly, exported goods are exempt, with the GOI returning to companies that proportion of their paid VAT which applied to exported goods. However, many companies reported that the VAT is either not returned, a smaller proportion is returned than has been determined to be due by even Israeli accountants, or its return is considerably delayed, resulting in serious cash flow problems.[78] According to a 1987 UNCTAD report, "Generally speaking, VAT has evolved over the past few years to become one of the most serious fiscal constraints on the development of Palestinian industry and trade."[79]

2) Disparity between personal income tax rates as they apply to the Occupied Territories and Israel

A significant disparity exists between tax rates used for Israeli citizens and those used for Palestinians residing in the Occupied Territories. This disparity continues to exist even after the tax reform which took effect on January 1, 1992. Necessarily, this relatively high personal tax paid by Palestinians limits their available disposable personal and investment income. This is particularly important in light of the fact that most of the investment capital in industry is derived from the owners of the companies and their families, rather than from financial institutions.

3) Application of tax regulations

Since at least 1989, there have been reports of increased CIVAD collection of taxes from both industry and individuals, which have been perceived by Palestinians as well as by external observers (including representatives of the International Commission of Jurists) as being arbitrary and capricious. Just prior to the Gulf War, for example, the tax authorities demanded pre-payment for taxes due in January and February; subsequently, those companies forced to pay the taxes had minimal production.[80]

Importantly, collection measures, which have increased in number and intensity since March, 1991 - and in particular since October/November, 1991 - include confiscation of property (industrial and personal) and other measures which have been reported elsewhere. It should be noted that even when Palestinian business owners have hired Israeli accountants and lawyers (an expensive proposition) to assist them in the preparation and maintenance of necessary tax records, and when they have recorded "proof" of tax payment, property confiscation and other forms of harassment have still taken place. Thus, the suggestion that Palestinian individuals and business owners should maintain more accurate records and pay their taxes as required is an insufficient response to this issue.

Additionally, during 1990, the tax authorities frequently revised tax assessments for previous years, then demanded payment in one lump sum for the previous years for which assessments had been revised (up to five years). A number of the targeted businesses produced goods which compete with those produced in Israel.

Finally, an increasing number of businesses which have not been operational for some time (as long as three years) or which have been operational only minimally, have recently received very high tax bills for that same period.

4) <u>The tax rate on land in the Jerusalem area (and elsewhere in the West Bank) has also increased substantially, further limiting the ability of industries to expand.</u>

## C. Closures and Curfews

Certain actions concomitant with the Intifada, including strikes and early closure of enterprises, as well as GOI-imposed curfews, must be considered in any discussion of constraints to industrial development. According to a 1989 UNCTAD report, the uprising and Israeli responses to it had resulted in:

> "serious losses for small-scale Palestinian industries and entrepreneurs owing to the small domestic market and the rigidities of the industrial structure. A number of larger factories in the West Bank have been forced to shut down temporarily, while others have reduced production. There have been serious difficulties in maintaining raw material supplies from/through Israel, while the commercial strike has discouraged production in some branches (plastics, wood, metals and electrical appliances, and tourist goods)."[81]

During curfews, factory and business owners must continue to pay overhead and meet debt obligations even when production lines have ceased operation. During the Gulf War, three Bethlehem factories reported losses of $500,000 in the first two weeks' of curfew alone. These losses resulted from "foregone production, inability to fulfill already placed orders and spoilage of goods in storage."[82] During periods of curfew, factory owners are often not able to facilitate arrangements for permits for their workers to travel, nor for movement of raw materials imported from Israel, nor for the local or export marketing of products. At one point during the Gulf War, production fell to 10% of capacity.[83] Okasha has suggested that restrictions and targeted action against industries competitive with Israeli companies has resulted in the closure of certain companies.[84]

The three examples of extended curfews and closures which have had serious impact on the industrial sector are:

* the 42-day curfew imposed on Beit Sahour in the fall of 1989;

* the extended curfew imposed throughout the West Bank and Gaza Strip during the Gulf War, and for periods immediate prior and subsequent to the Gulf War; and

* the extended curfews imposed on Ramallah in late 1991 and early 1992 (the city is an industrial and commercial center in the West Bank).

It has been argued that the economic Intifada (the self-imposed restriction on importation of Israeli goods and a move toward import substitution) has had some beneficial results. Okasha, for example, points to the growth of the food and beverage industry in Gaza, which resulted from increased consumption of local products by Gazans.

## D. Managerial, Social and Economic Factors

Given the volatile political and economic conditions and the virtual absence of a normal financial system, the risk-aversion behavior of Palestinian entrepreneurs to industrial investment and decision-making, militates against success. This risk-aversion is revealed in such decisions as location of plants near one's residence, rather than in the most economically appropriate site and paucity of capital investment in equipment and plant construction or retrofitting.

Salman has identified several factors which impede the growth of West Bank industry:[85]



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* scarcity of technical schools and resources to support such education, fundamental for the development of the industrial sector;

* lack of clearly defined labor and personnel policies, including for example, fringe benefits and health and safety programs, which have been demonstrated in industrialized and developing countries as linked to labor productivity;

* lack of training in, and utilization of, accounting systems which could be used to both improve management decision-making (e.g., estimating unit costs of products) and maintain adequate records to calculate taxes and claim allowable deductions;

* limited degree to which market research and advertising are utilized by Palestinian companies; and

* the lack of higher education and experience on the part of many of the men who operate family-owned businesses.

Salman and others have also identified the predominance of family-ownership of Palestinian businesses as an impediment. Many of those who have studied industry in the Occupied Territories have suggested that this type of ownership 1) inhibits the identification and use of human resources outside of the family, 2) places a high level of dependence on family wealth, and 3) encourages conservative management practices (in particular with respect to expansion; one is less likely to risk family wealth for expansion in an uncertain environment). Family ownership of Palestinian firms has also been identified as a positive factor, primarily in terms of stability in small-scale industry. Although family ownership is predominant in the highly successful Pacific Rim countries, the distinctions between these and industries in the Occupied Territories are obvious. The investment climate has been positive for some time, the governments in these countries have encouraged and supported family-owned businesses, provided extensive subsidies and devised highly protectionist trade practices, and provided a sophisticated system of managerial, informational and technological support.

Industrial maintenance, a critical managerial factor in productive industry, is a serious problem in the Occupied Territories. In his 1990 report on industrial maintenance problems in the West Bank, Jaddu cited several causal factors for this problem:[86]

1) during start-up phases of development of specific industries, human resource needs are rarely studied and usually underestimated;

2) maintenance requirements are not assessed until the first instance of equipment break-down, personnel are not aware of correct maintenance procedures, and managers often prefer to wait until equipment failure, rather than stopping production for regular maintenance;

3) company owners/managers often do not ensure that new (or second-hand) equipment has the requisite technical manuals and service contracts, nor do they arrange for training of technicians in equipment maintenance and repair; and

4) on-site repair and maintenance capability is poor and managers hesitate to call on outside technical expertise for equipment repair.

This inattention to industrial maintenance is, perhaps, understandable in view of the lack of resources to support the productive private sector in these efforts, as well as the scarce resources available to the firms. Industrial maintenance, particularly with respect to preventive maintenance, may seem a long-term benefit in the context of economic survival.

Importantly, of the 51 companies in the West Bank studied by Juddu, only 20% (10 factories) had a "complete maintenance staff" consisting of one engineer, a mechanical technician, an electrical technician, a welding technician and a machine shop technician, although most (61%) of these maintenance technicians had no scientific background.[87] Seventy-three per cent of the equipment was manufactured outside of the West Bank, Israel or English-speaking countries; as a result, many of the operating manuals are in foreign languages which are not spoken by technical staff in Palestinian companies; this severely hampers the ability of the staff to adequately maintain and repair the equipment.[88]

Other factors which impede the ability of Palestinian industry to expand, or even survive, and which certainly foster their competitive disadvantage on the open market - include, for example:

* impediments to importation of new technologies,

* the inability to plan for consistent production (partially as a result of curfews and strikes),

* poor quality control, and

* lack of workers trained in new technologies and management.

Moreover, the types of ancillary systems which support industrial development, most of which exist to some degree in even the least-developed countries, are either nonexistent or minimal in the Occupied Territories. These include, for example:[89]

* industrial, trade and professional associations which provide professional/technical guidance (the Chambers of Commerce have only recently begun to re-activate and Unions of Industrialists have recently formed in both the West Bank and Gaza Strip);

* indigenous support organizations such as those which could provide managerial, industrial engineering and marketing expertise (Bethlehem University and Beir Zeit University are both developing capabilities in this area); and

* national regulatory and standardization bodies, including those which relate to industries in general, and to labor and management specifically (e.g., environmental and occupational safety and health, quality control, credentialing of employees).

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Development Opportunities

In spite of the apparent limitations - many of which have been discussed in previous sections of this report - some Palestinian industry has thrived. What are the factors which contribute to success in the face of the constraints described previously? The following have been derived from review of the literature, conduct of site visits to industries (large, medium and small-scale) in the West Bank and Gaza Strip, and discussions with representatives of the industrial sector:

* innovative, modern management which results in, among other benefits, improved quality of products; such management is reflected in some companies in the bottling and plastics industries, for example;

* access to external trade/competition information (through travel abroad);

* experience in managing productive enterprises abroad;

* family wealth and investment in the enterprise and the continuity provided by a family business (note that some have seen the predominance of family-owned enterprises as an impediment as well);

* creative use of limited resources, including inventive adaptation or development of technologies for use in the manufacturing process;

* the entrepreneurial spirit inherent in Palestinian companies, characterized by extensive owner-involvement;

* notwithstanding the curfews and strikes, absenteeism is rare in Palestinian companies; and

* competitive pricing (resulting from lower wages, rents and lower profit margins).

A.I.D. and other donors should take these factors into consideration in the process of planning for investments in the industrial sector in the Occupied Territories.

One can speculate about the possibilities for industrial development in the context of a true, free market economy, unfettered by legal, bureaucratic and other types of impediments not traditionally faced in other contexts. Palestinians in the diaspora represent an interesting "control group." Few would dispute the significant role that Palestinians have played in the Gulf States, for example, in developing and managing industrial and service enterprises (nor, for that matter, the public sector). In Europe and the U.S., examples, of successful Palestinian entrepreneurs abound. How, then, can A.I.D. best utilize the scarce resources available for industrial development programs in the West Bank and Gaza Strip, taking into account both favorable and unfavorable conditions in the Occupied Territories as well as global market and other developments?

In his 1989 essay on technological development, Vernon identified seven key lessons learned from the experience of developing countries with respect to the adaptation and application of existing technologies since World War II. The findings, based on the extensive review of literature and the author's own experience, were published by the Economic Development Institute of the World Bank. The key findings that are of particular relevance for industrial development in the Occupied Territories were:[90]

1) Developing countries that have a capacity to explore and assess foreign technologies are more likely to acquire technologies appropriate for their needs and as technological capacities change, it is increasingly important to ensure policy and organizational flexibility and to develop technological networks among cooperating firms.

2) While not a sine qua non of successful utilization of new technologies in industry, the existence of a strong scientific community or research and development capacity becomes increasingly important as a country begins to adapt or develop new technologies. In addition, firms must "engage in a continuous process of learning."

3) The size and structure of the local market, the potential for exports, the country's regulatory and educational policies are all important criteria affecting the choice of technologies.

The findings are instructive for industrial development planning in the West Bank and Gaza Strip, as they point to conditions necessary for technological enhancement of industry which, at this point, cannot exist in the Occupied Territories. However, they also are a source of clear, development strategies for the industrial sector.

Israeli technology has developed considerably over the years, with significant external support; some of its industries are presently competitive with world markets. In 1990, Abdallah and Dakkak suggested that it is in the mutual interest of Palestinians and Israelis -- indeed of neighboring Arab States -- to "work together on joint ventures to develop indigenous technologies ... Such cooperation would be particularly relevant to the solving of mutual problems such as arid land agriculture and the harnessing of solar technology where heavy investment is required" to ensure cost-effective development of related products.[91]

In planning for industrial and enterprise development, whatever the political circumstances, it will be important for Palestinians and donors to take into account a number of factors with respect to resource allocation toward that development; for example:

* the specific branches of industry have the most potential to create jobs over the immediate, medium and long term; and

* approaches to ensuring that short term strategies (e.g., housing construction) foster longer term ones (e.g., improving the productive capacity of Palestinian building material industries and physical infrastructure to support housing and industrial areas), in order to more effectively utilize capital urgently needed for long-term investment.

Unfortunately, the virtual absence of a macroeconomic planning and financial network (see companion report, Finance and Credit

in the Occupied Territories), as well as the paucity of data and information, severely inhibits the ability of Palestinians and donors to adequately consider the alternatives.

Perhaps one of the most critical issues for A.I.D. investment is the degree to which support should be provided for projects which have a potential to impact on the overall industrial environment (e.g., improving the capacity of universities and private institutes to conduct industrial research and provide technical assistance and training for industrial development), versus targeting specific firms in industries or enterprises of high potential for economic impact through technical assistance or facilitation of credit. Under normal circumstances, both strategies would be undertaken, of course, as part of comprehensive industrial development. This is particularly crucial given the urgent need to re-direct development in the Gaza Strip from agriculture to an industry/enterprise/service economy. However, given the circumstances of the Occupied Territories, with scarce investment capital and constrained circumstances for industrial expansion, devising priorities for development assistance will be difficult.

Preparing specific plans for industrial development in the Occupied Territories, including donor selection of priority projects, is an area in which coordination among donors, and between donors and Palestinian industrial and economic planning groups is particularly important, in order to set such priorities. Moreover, donors can and should play an important role in facilitating access to credit for private sector industrial and enterprise expansion. If donors see the private sector as a key for economic development, support should be provided to encourage such development, paralleling the type of support provided by governments in most countries.

## B. Recommendations

Table 1 presents recommendations for A.I.D. investment in the industrial and enterprise sector in the Occupied Territories. Where appropriate, recommendations are specified under alternative political scenarios.

Table 1
Conclusions and Recommendations With Respect to Industrial Development

| Conclusion | Recommendation |
| --- | --- |
| 1. Scarce investment resources are available for industrial development in the Occupied Territories. Expanded financial systems (banking, credit institutions) which are supported by external donors could significantly enhance the ability of the productive private sector to improve productivity, expand the industrial base, and develop competitive advantage through improved resource management. | 1.1 A.I.D. should study the capacity of the credit institutions to manage loans to industries and enterprises. If capacity-building assistance is deemed necessary, A.I.D. should provide such support (through training, technical assistance and other support).<br><br>1.2 Contingent upon the findings of the above-mentioned study, A.I.D. should continue or expand its loan program to Palestinian enterprises, utilizing mechanisms which can ensure an adequately planned and managed program of development assistance through credit. |
| 2. Palestinian industry, for the most part, lacks new (appropriate) technology for production and management, which technology is required to ensure competitive advantage. | 2.1 In addition to support through direct and indirect financing (see expanded financial systems), Palestinian industries could benefit from technical assistance and training, support for on-site visits to comparable industries, and enhancement of their research and development capacity through linkages between industry and local and regional universities and research institutions.<br><br>2.2 A.I.D. should support planning for comprehensive development as well as plans for regional industrial development (including support for plans and feasibility studies for industrial zones). |



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3. The public and private support systems which exist in virtually all countries to support industrial and enterprise growth and development are severely lacking and in some cases non-existent. This hampers the ability of Palestinian companies to compete effectively on the open domestic and foreign markets.

3.1 A.I.D. should provide technical assistance, training and other support to institutions which support industry and enterprise in the Occupied Territories, including, for example, the various development organizations, Chambers of Commerce, Industrial Unions and universities which provide business and management training.

3.2 Support for information systems (including industry-based systems, on-line access to regional and international market and other financial information systems) and the establishment of clearinghouses could improve the knowledge base in a relatively short period of time. This, coupled with direct and indirect financial support (see # 1, above) could contribute to Palestinian competitiveness.

3.3 A.I.D. should support applied research studies of production and quality control, environmental and occupational health, market analysis, personnel management and other managerial factors which relate to both productivity and short- and long-term return on industrial and social investment. These studies should include the provision of information and technical assistance to participating firms.

4. The existing bureaucratic and legal constraints to industrial development in the Occupied Territories severely limit the capacity of the productive private sector to contribute to economic growth. Of particular concern to industry are: a) the absence of a civil justice system through which contracts can be enforced; b) the current tax system and the way it is applied; c) restrictions on imports and exports; and d) curfews.

4. A.I.D. and other donors need to engage in policy dialogue with both the Israelis and with those Arab countries which have bureaucratic policies that restrict economic growth in the Occupied Territories. Unless and until some of these restrictions are removed (or alleviated), economic growth will continue to be hampered. However, given the fact that some industries have thrived even in spite of these constraints, the donors could build on those factors which have been related to success among Palestinian industries.



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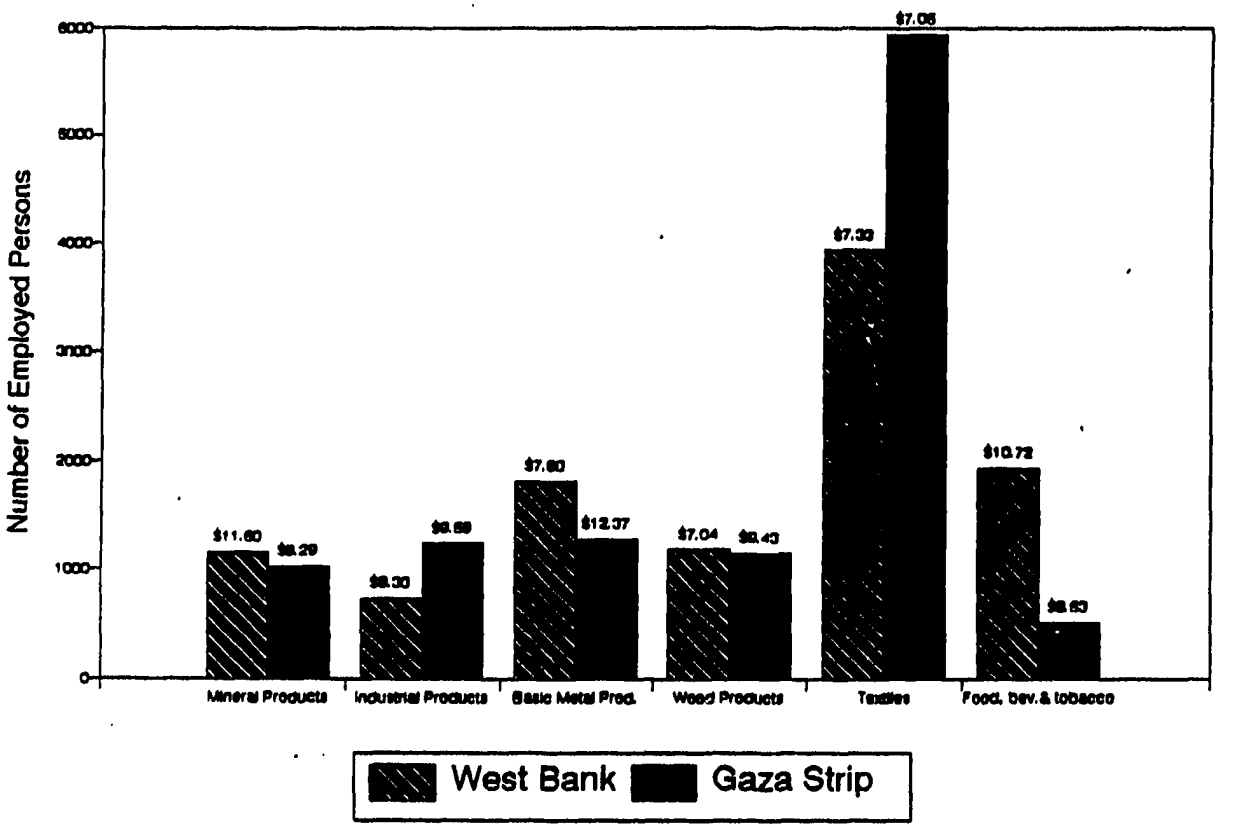
Figure 1: Employed Persons by Economic Branch, 1987 ($ employee daily wage)




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem; 1991.



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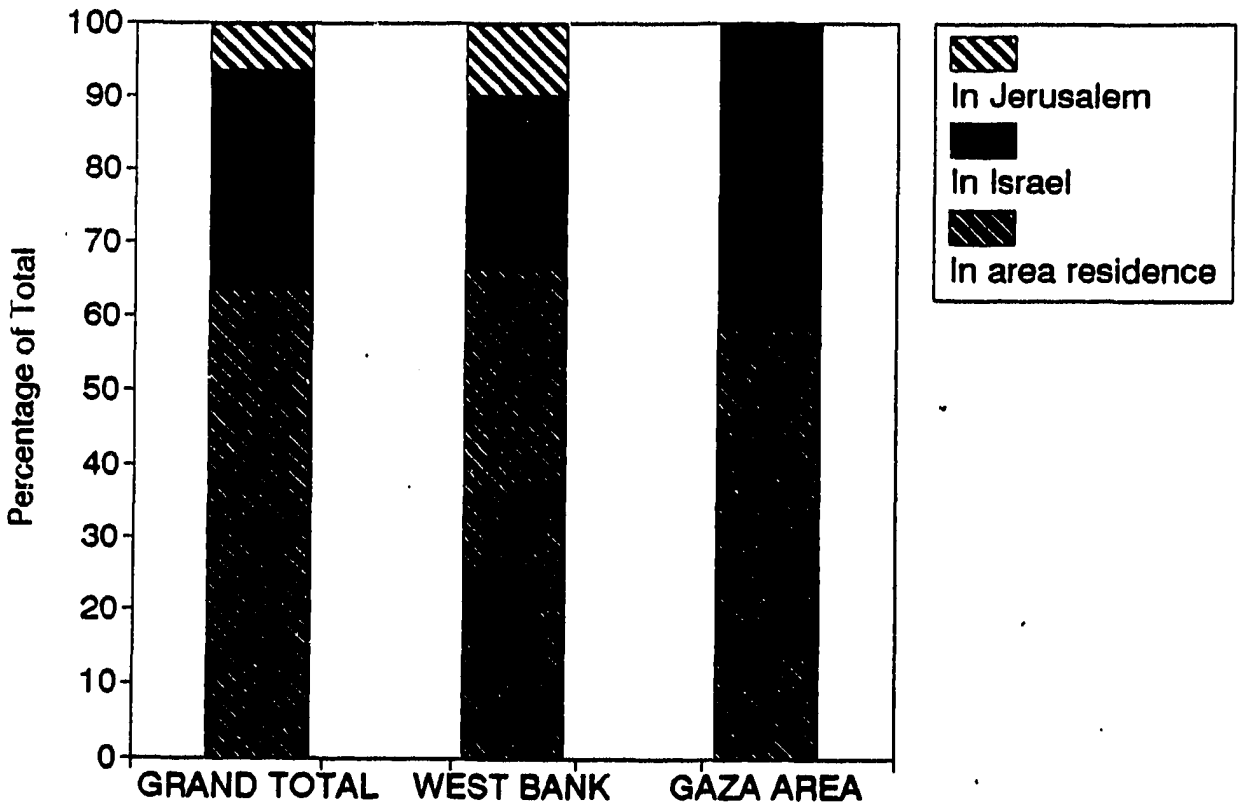
Figure 2: Employed O.T. Palestinians, by Residence, by Locality of Work, 1990




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem; 1991.



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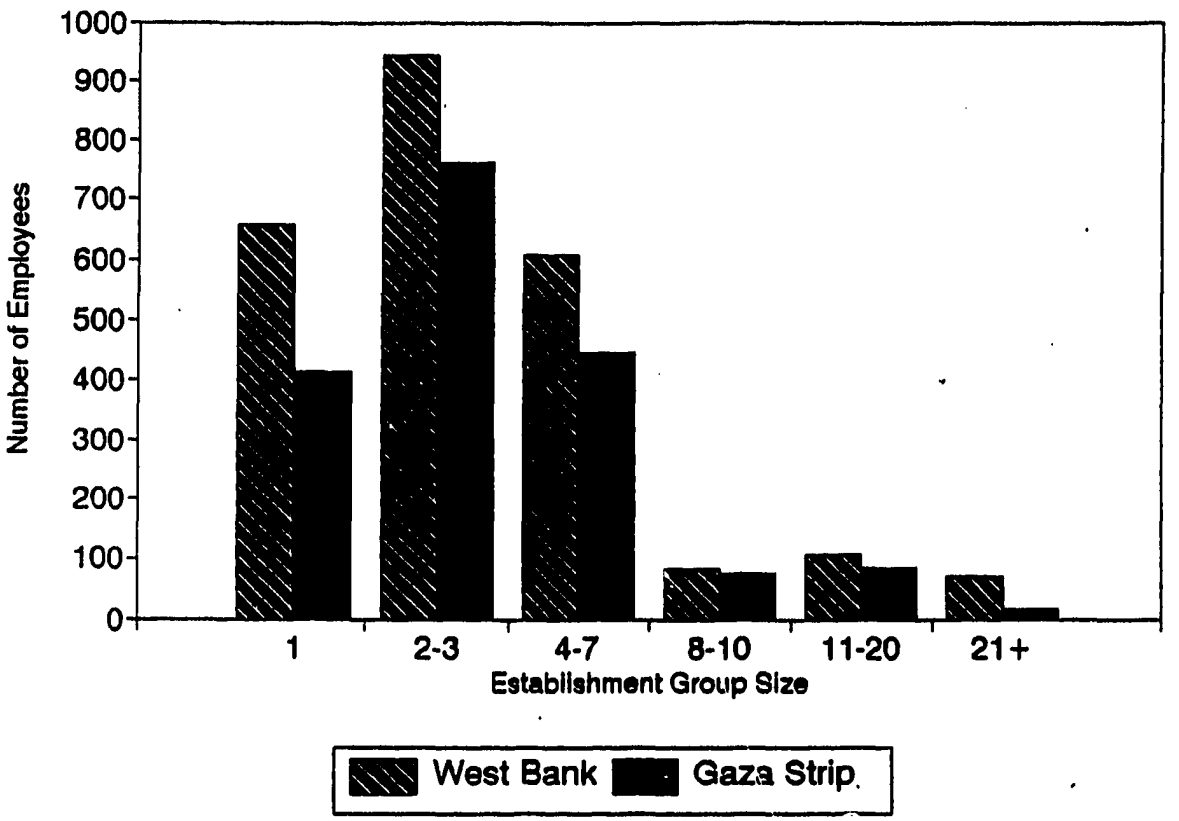
Figure 3: Total No. of Persons Employed by Size of Establishment, 1987




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem; 1991.



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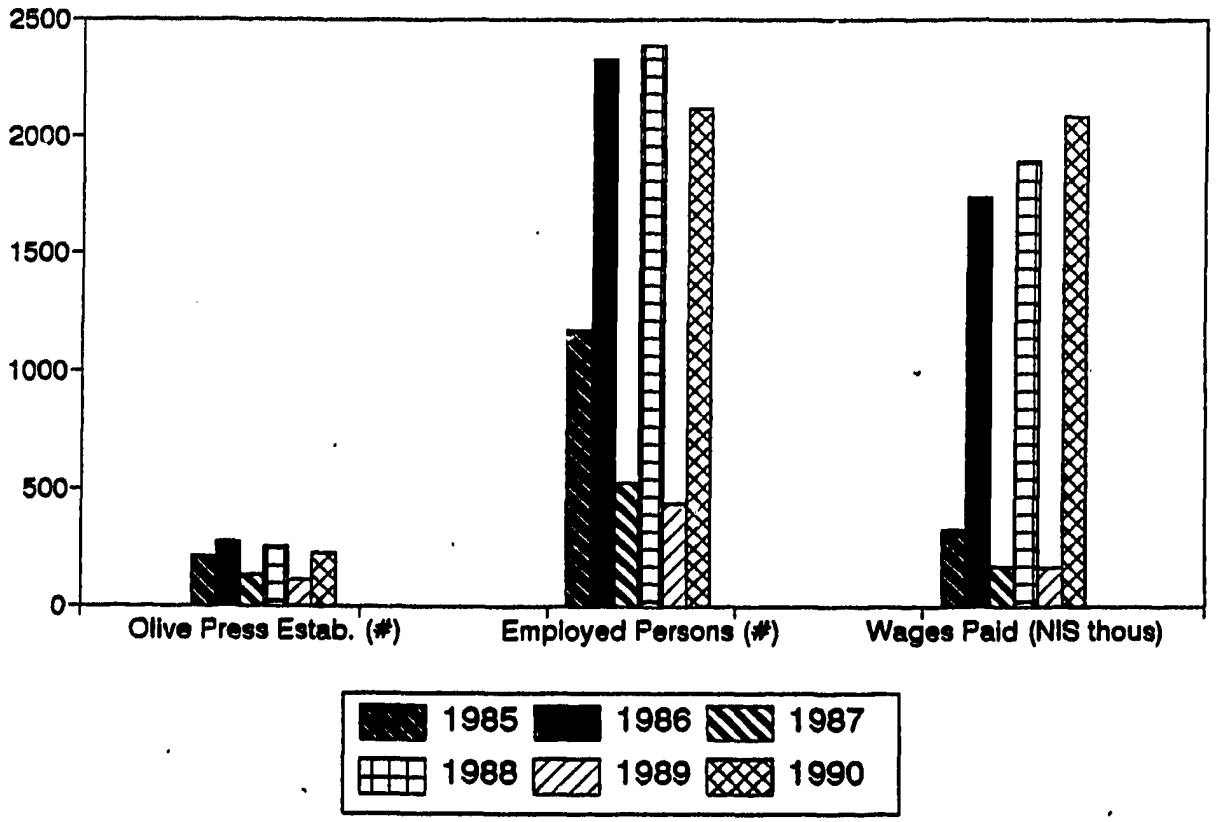
## Figure 4: Olive Presses - Employment and Extraction in the West Bank




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem;1991.



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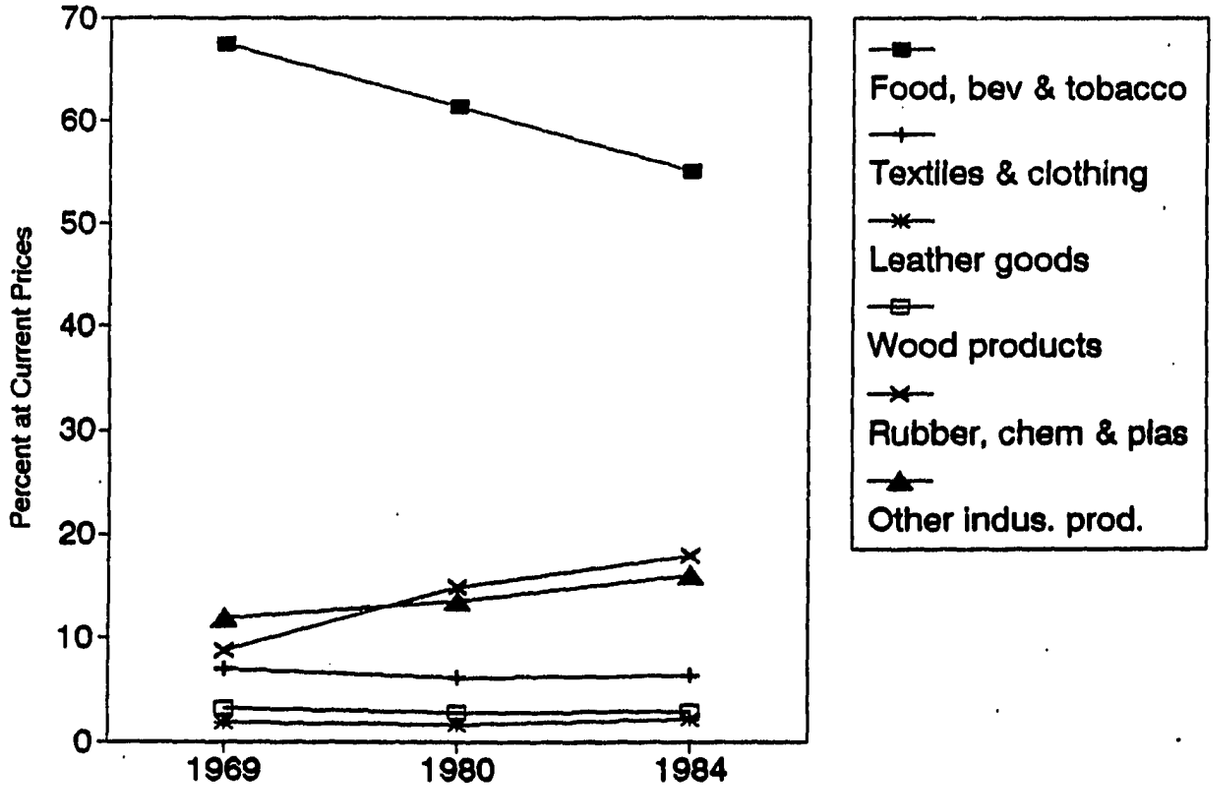
## Figure 5: West Bank Economic Output by Main Manufacturing Branches, 1969-1984




Source: Mansour, A. The West Bank Economy: 1948-1984. In: Abed, G. (ed.) The Palestinian Economy. London: Routledge; 1988, Section I, Chap. 4.



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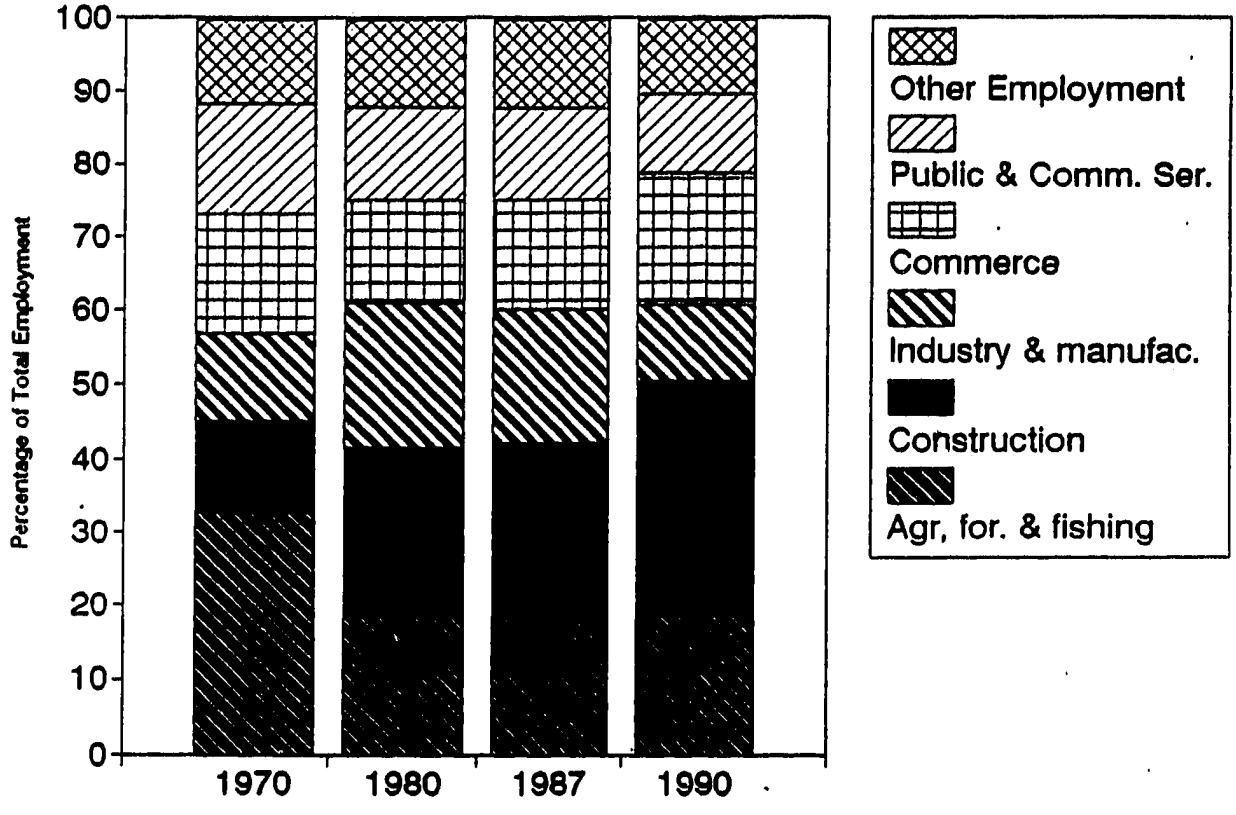
Figure 6: Gaza Strip Employment by Type of Industry, 1970 - 1990




Source: Israeli Statistical Abstract, 1991. Central Bureau of Statistics: Jerusalem; 1991.



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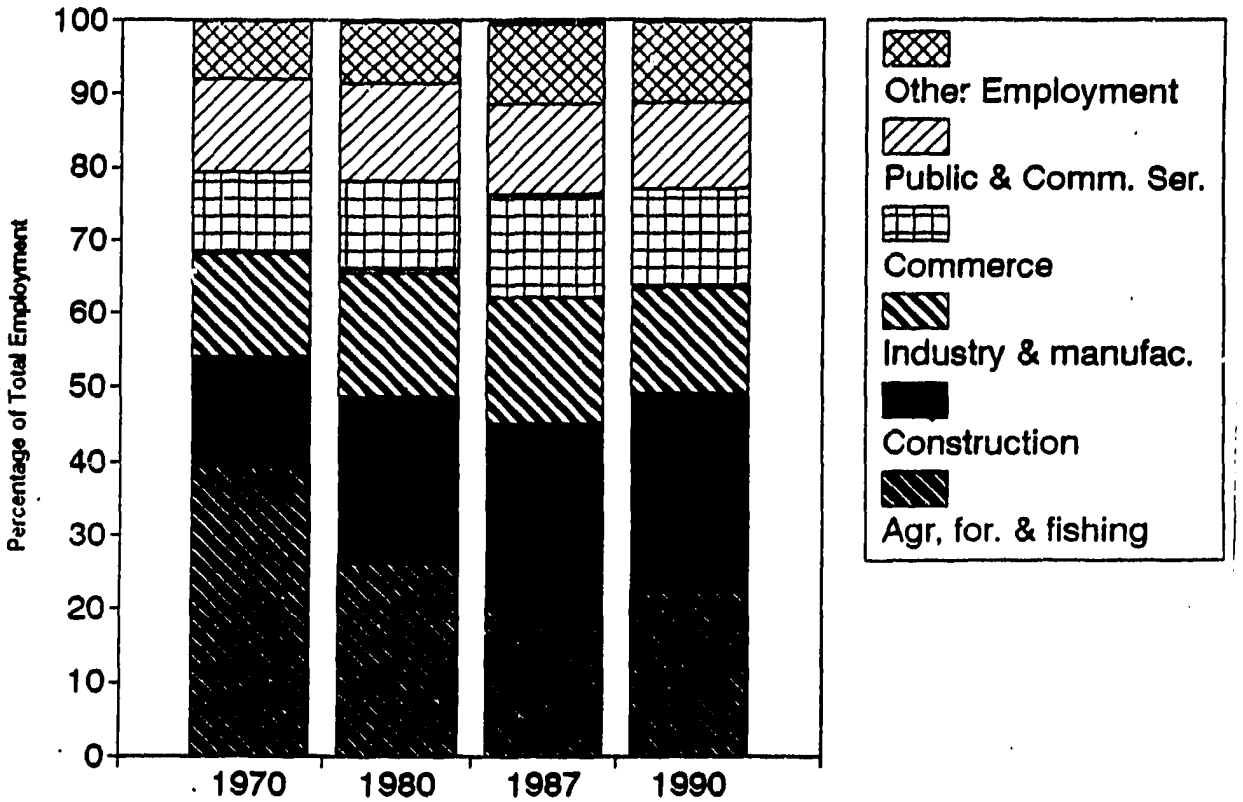
## Figure 7: West Bank Employment by Type of Industry, 1970 - 1990

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# INFRASTRUCTURE IN THE WEST BANK AND GAZA STRIP

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

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## I. EXECUTIVE SUMMARY

Physical infrastructure -- communications, energy and transportation -- is a vital link for economic and social development. Without adequate infrastructure, the productive private sector cannot adequately compete in domestic or global markets. In addition, the use of physical infrastructure projects as a means of jobs creation has historical bases, and is increasingly seen as an option in countries with increasing unemployment, including the U.S.. With the exception of relatively small investments in road networks and rural electrification projects, however, donors have not been involved in this sector. When donors have invested in the physical infrastructure sector, villagers have shared the cost of most road construction or repair projects.

Bezek, a semi-public Israeli company which liaises with the CIVAD, controls all telecommunications in the Occupied Territories. Of 400 villages in the West Bank, only 80 have telephone service; this is due largely to impediments to access to the communications network, rather than potential customers' ability to pay for service. Even in the urban areas, demand for telephone service far exceeds supply; for example, as of 1991, there were 12,500 applications for service pending in the West Bank. While no comparable data are available for the Gaza Strip, it is generally agreed that the communications system lags behind that of the West Bank. In both areas, repair and maintenance is minimal, with frequent service breakdowns and long delays before repairs are initiated. Notably, although several of the vocational/technical schools provide training in telephone repair, instruction in this area is restricted for security reasons by the GOI.

While 95% of urban areas in the Occupied Territories are supplied by electricity continuously, less than half of all rural areas have continuous access. More than 25 villages in the West Bank have no electrical supply whatsoever. Although quasi-public municipal electrical companies have existed in the Occupied Territories since 1928, the system has been, for the most part, tied to the Israeli grid since 1967. The municipal companies serve as distribution networks, purchasing electrical supply from the Israel Electric Corporation. However, they have little authority to adequately plan for appropriate distribution, and scarce finances for operations and maintenance, training of staff, or implementation of alternative energy projects. In part as a result of scarce funds, power stations and peripheral equipment have deteriorated significantly. CIVAD has not allowed the Palestinian municipal power companies to expand capacity and has disallowed most new rural electrification projects; however, the municipal companies have been permitted to expand their capacity to supply electricity to the settlements in their areas.



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Since there is no airport (to which Palestinians have access), no operating seaport and no railway system in the Occupied Territories, Palestinians are entirely dependent on the road network for transportation. Particularly in the rural areas, this road network is wholly inadequate, with minimal funds being allocated for maintenance. The Gaza Strip, as with other sectors, has a substantially poorer road system than does the West Bank. There is only one main road in the Gaza Strip from Gaza City to Khan Younis to which Palestinians have access; when that road is closed, there is minimal access from one end of the Strip to the other. The condition of the road network serving Palestinians in the Occupied Territories is poor, with minimal funds being allocated for maintenance. Because Palestinians may not themselves ship goods from airports and seaports in Israel, roads are particularly important for the productive private sector in the Occupied Territories since they are the only mechanism currently open to Palestinians for export of goods through Israel and Jordan to other export markets.

Finally, the GOI makes minimal investment in physical infrastructure in the Occupied Territories (encouraging donors to do so). Donors, on the other hand, have scarcely funded this sector (and do not seem inclined to support physical infrastructure which will benefit the productive private sector, with the exception of agricultural roads), and Palestinians have little if any means of supporting such projects.

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

### A. Importance of Physical Infrastructure for Development in the Occupied Territories

This report focuses on the physical infrastructure sector -- energy, transportation and communications. Because electrical energy is the dominant form of energy used in the West Bank and Gaza Strip, the sectoral analysis pertaining to energy will address electrification only. Water supply, usually considered part of the infrastructure sector, is such a critical issue in the West Bank and Gaza Strip that a separate analysis has been prepared in a companion report. The service sector, which is in some development literature termed "social infrastructure," is discussed in separate reports on education and health, with related physical infrastructure (health facilities and schools) considered within those reports. Economic infrastructure projects related to agriculture (e.g., slaughterhouses and cold storage facilities) are discussed in the companion report, Agriculture in the Occupied Territories. Finally, because A.I.D. is separately funding an ongoing study of housing in the West Bank and Gaza Strip (through ACDI), housing ("shelter projects") is discussed only briefly in this report.

Infrastructure, an often neglected topic in the discussion of economic development, is linked with every other sector of the economy and provides a foundation for economic development through jobs creation and as an essential part of the productive and service economy. The linkages between and among transportation, communications, energy and the productive sectors of agriculture and industry, for example, are well documented. Road networks facilitate the transfer of goods and services across sectors and the service and productive economies are dependent on energy and communications especially for agriculture and industry.

The population distribution of Palestinians is an important consideration for infrastructure, as large proportions of villages are without communications, electricity and/or adequate roads (see discussion in each of these subsectors). As of 1990, one-quarter of the population lived in 446 villages with populations of 5,000 or less, with 15% living in the 376 villages with populations of 2,500 or less. Communications are also deficient in the refugee camps, in which 17% of the Palestinians lived in 1990.[1]

### B. Key Issues

The Janus-like nature of infrastructure has confounded development experts for some time. While physical infrastructure undeniably contributes importantly to economic growth, it can also absorb a large proportion of the funding for the other

sectors. In a World Bank treatise on investment in development, Baum and Tolbert described the significant contribution of physical infrastructure as follows:

> "Often more effective than subsidies in alleviating poverty, while at the same time stimulating economic growth, has been the provision of infrastructure -- roads, electricity, water, schools, and so forth -- on which farm productivity and the quality of rural life depend."[2]

However, in view of the fact that physical infrastructure is traditionally funded by or through the public sector, the trade-offs between public sector services (e.g., health and education) and physical infrastructure are difficult. Therefore, because it requires significant investment of financial resources, physical infrastructure (including roads, bridges and rail networks) is often neglected in both developing and upper-income economies. The ability for a nation, state or community to manage infrastructure projects is of critical importance and requires trained technicians, modern equipment and energy-saving technology, as well as adequate systems for planning and managing the projects, including information systems. There must also be a vehicle for ensuring appropriate linkages between infrastructure projects and the residential, industrial, agricultural or social service sectors they are intended to support. Finally, there must be a mechanism to ensure cost-recovery, either through a tax system (for public projects) or through fee-for-service (for private, quasi-public or public projects).

Traditionally, development of basic physical infrastructure is the responsibility of the government, a quasi-governmental authority, or it may be a subsidized private sector institution, with fee recovery as appropriate (e.g., for electrification, communications). In the Occupied Territories, the GOI exerts control over communications, energy and transportation, through direct control (via the responsible CIVAD agencies, and the Israeli agencies and companies with authority for the sector), as well as through approval authority over all projects undertaken in the Occupied Territories. For example, although Palestinian municipalities and village councils are responsible for planning, designing, execution, administration and maintenance of roadway systems within their municipal boundaries, they do so only with the approval of the CIVAD. Communications, on the other hand, is the sole responsibility of the CIVAD Post and Communications Departments; the municipalities and village councils have no responsibility or authority in this subsector.

The proportion of the work force employed in transport, storage and communications in the West Bank increased minimally between 1980 and 1990, from 4.5% to 5.7% of the work force in the West Bank; the proportion decreased in the Gaza Strip, from 6.6% to

4.8%.[3] In 1986, the most recent year for which data are available, the total capital investment in transportation and communications in the West Bank and Gaza Strip was $7.7 million, with $4 million allocated for roads; however, most of these funds were used for construction or repair of settlement roads.[4]

Ensuring that the West Bank and Gaza Strip have an adequate physical infrastructure to support the productive private sector, health and social services, and the normal functioning of the jurisdiction, will help to ensure long-term economic development for the Occupied Territories. However, the current political situation and the scarce financial resources available for operating costs of both public and private sector projects raises concern with respect to the ability for infrastructure projects to be adequately maintained, even if funds are provided for their construction. The disinclination of donors to support operating costs (or even construction projects, if there is a possibility that they will be used by settlers rather than the population for whom they are intended), further heightens this concern.

Each of the subsectors of physical infrastructure is described separately, followed by an overview discussion of donor investments in physical infrastructure, constraints and opportunities for development.

## III. COMMUNICATIONS

### A. Importance of Communications for Development in the Occupied Territories

Adequate communications are vital to the effective functioning of public and private sector operations. Owners of firms in the U.S., Israel and elsewhere not only take telephones for granted in their conduct of business, but increasingly have access to, and depend on newer technologies which are based on sophisticated telecommunications systems which open doors to the global marketplace. In the Occupied Territories, the communications system is wholly inadequate; many villages are without telecommunications linkages and others fall far short of meeting demand and are often in disrepair. This hampers the provision of vital health and social services, obstructs social and intellectual exchange, and impacts severely on the ability of the productive private sector to compete on the open market.

### B. Institutional Arrangements

All mail and telecommunications in the Occupied Territories are administered by the CIVAD. The Post Office Department is headed by an Israeli military officer and has branches (post offices) throughout the Occupied Territories.[5] Bezek, a semi-public company which liaises with the Civil Administration, controls all telephone, telex and facsimile communications in the West Bank



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and Gaza Strip.[6] In both areas, the telephone grid (as with the electrification grid) is connected to a main Israeli grid.

## C. Sectoral Status and Trends

The telephone system was improved in the early 1980s, with automatic and semi-automatic systems being introduced in major urban areas using microwave connectors for intra-urban transmission and satellite stations for extra-territorial transmission. In some remote areas and refugee camps, manual machines with few connecting lines are still in use. According to Abu-Eisheh, as of 1990, there were 36,200 automated telephone lines in the West Bank and Gaza and 6,800 manual lines.[7] The ratio of telephone subscribers to total population in the West Bank and Gaza Strip was 1:46;[8] approximately 12,500 applications for telephone service are pending in the West Bank alone.[9]

Given the size of the population, the availability and quality of telephone service in the Occupied Territories is comparable to that of low-income countries. Of 400 villages in the West Bank, only 80 have telephone service; of these, many have only one connecting line;[10] no comparable data were available for the Gaza Strip. No Israeli towns are without telephone service. Few individual Palestinians or private productive enterprises have access to telex, facsimile machines or electronic mail systems. The lack of telephone service is not due to the inability of Palestinians to pay for such service, but rather to the fact that Bezek is unable to provide the required services for Palestinians residing in the Occupied Territories.

With regard to mail service, there is an estimated unmet demand of 4,000-5,000 new post office boxes in the West Bank.[11] No comparable data are available for the Gaza Strip. In view of the limited access to telecommunications for many Palestinians, the mail is a critical mode of communication for the Occupied Territories. Therefore, the control of the mail system by the CIVAD becomes, de facto, a form of information control, whether or not intentionally so. Notably, taxi services are often used as a means of transmittal for letters and other documents.

# IV. ELECTRIFICATION

## A. Importance of Electrification for Development in the Occupied Territories

Many villages in the West Bank are still without electrification and most have inadequate electrical power; this impacts on individual residents, health and social service delivery and the productive private sector, including industries and enterprises. Settlement areas in the Occupied Territories have well-developed and fully functioning energy networks (including electrical and solar power), and they utilize electrification grids designed for

Palestinian areas. The GOI currently devises and implements electrical and alternative energy systems for use only by settlers within the same geographic area as Palestinian communities. This is certainly not a cost efficient use of scarce resources.

## B. Sectoral Status and Trends

The first electrical company was established in Jerusalem in 1928; this company provided services throughout Jerusalem until 1948, at which time the GOI required that the services for West Jerusalem be provided by a separate company. In 1956, an additional company, Jerusalem District-Jordanian Ltd. was founded, with 2,000 shareholders and partnerships with six municipalities.[12] Electrification in the other areas of the West Bank proceeded after the early 1950s. The first electrical company in Gaza was constructed in 1950.[13] Notably, prior to 1967, there were virtually no linkages among the municipalities with respect to their electrical units, with the exception of the linkages among the municipalities served by Jerusalem District-Jordanian Ltd.

Since 1967, the GOI has, for the most part, tied electrical development in the West Bank and Gaza Strip to the Israeli grid.[14] The CIVAD has refused to allow Palestinian municipal power companies to expand their capacity by installing new equipment or purchasing additional electrical supplies through the Israeli companies. Thus, in spite of the relatively early development of electrical power by public, quasi-public and private Palestinian companies, they have, since the occupation, been restricted in their functions and now serve essentially as vehicles for the purchase of supplies from Israel, with minimal technical roles. Since 1988, the Jerusalem District Electricity Company has not been able to produce its own electricity, but rather purchases its supply from the Israel Electric Corporation. In fact, throughout the Occupied Territories, only less than 5% of electrical supply is produced by Palestinian companies.[15] The fact that separate Palestinian electrical companies have independent power stations results in weak and inefficient power systems and poor economies of scale in the Occupied Territories.

The Palestinian companies are, however, required to supply electricity to Israeli settlements in their areas.[16] Because of the control exerted by the CIVAD, municipal companies have little decision-making authority with regard to distribution of electrical supplies to Palestinian customers or to settlements. Cost/benefit and other issues, including energy conservation, are of little, if any, consequence in this context. The GOI has furthermore reduced or cut power to municipalities which have delayed payments to Bezek for electrical supplies. However, these charges, as well as those for individual residents and

industries, are in dispute. The most recent (and current) example of this action has been in the Gaza Strip.[17]

As with communications, the Occupied Territories lag far behind Israel in the distribution of electrification in both urban and rural areas. While 95% of the urban population in the Occupied Territories are supplied by electricity continuously, less than half of the rural areas have continuous access; thus, approximately 70% of the total population has continuous access to electricity (see Figure 1). Forty percent of rural villages have electricity for only a few hours each day; an estimated 25 rural villages in the West Bank (5% of villages) have no electrical supply.[18] CIVAD has also disallowed most new electrification projects in rural areas.

It is difficult to arrive at precise estimates of the amount of electrical power used by industry although the figure "10%" is most often cited.[19] This estimate must be considered with caution; the lack of an adequate electrification grid in the Gaza Strip, for example, has resulted in industries locating in residential areas in order to utilize the electrification grid available in those areas. Not only does this make estimates of resident versus industrial use difficult (hindering planning for generation and distribution of supply), but it results in diminished supplies for residences as well as shortages for industries and enterprises. The latter impact limits productivity in various types of enterprises and industries. No specific, detailed study of residential/industrial electrical use has been conducted.

In spite of the significant increase in population in both the West Bank and Gaza Strip, available data indicate that energy consumption has actually decreased or remained stable in the Occupied Territories; this decrease has been felt most keenly by the industrial urban areas.[20] In the West Bank, actual peak load demand (measured in megawatts - MW) increased steadily from 1968 to 1985, then remained stable for a year before increasing to its highest level 106 MW. Since then, it has decreased to an average of 75 MW per year. However, this decrease is counterintuitive and reflects the difficulty in applying traditional approaches to assessment of demand and supply in a situation in which the supply is strictly controlled. When expansion is not allowed to take place to maintain a balance between supply and increases in population, as well as changes in demand (which one would expect over a 25-year period), then "demand" as reflected in use data is rendered meaningless. If all areas were to have access to continuous electricity, the total and per capita peak load demand data would necessarily be higher. Kittaneh has forecasted a peak load need of 454 MW in the West Bank and Gaza Strip by the year 2000, assuming continuous electrification of all urban and rural areas as well as an unspecified population increase.[21]

Among the problems in the area of electrification in the Occupied Territories (apart from those described above) are the following:[22]

* all of the power stations, with the exception of that in Jerusalem, are under the auspices of the local municipalities, and the control of distribution networks, and of supply, rests with the CIVAD, rather than with the electrical companies. As a result, distribution of electricity does not reflect true "demand," nor is it possible for the companies to consider economic and conservation issues in the distribution of electrical power;

* the companies have scarce finances to:

  -- maintain or report power stations and peripheral equipment (including transmission links, distribution transformers and substations) which have deteriorated as a result of inadequate funds, and

  -- provide in-service training for technical staff, which impedes their ability to have adequate knowledge and skills with respect to new technological development or to enhance skills for use with older equipment; and

* data are poor and misleading, severely hampering the ability of municipal and private companies to plan for energy development projects and to manage the systems currently in place. For example, although consideration of forecasted and actual peak load demands is important for the design, operation, and assessment of electrical systems,[23] as has been discussed above, the existing data are essentially useless for this purpose.

## V. TRANSPORTATION

### A. Importance of Transportation for Development in the Occupied Territories

The importance of adequate transportation networks for the productive economy as well as social service delivery has been well documented. For example, improved roads "bring traders, truckers, and officials to villages ... and enable villagers to travel to markets and elsewhere."[24] According to the Organization for Economic Co-operation and Development (OECD), "the growth of the road transport sector is even more important for the countries' evolution from subsistence economies to market economies," and in developing countries in which neither railways

nor inland waterways supplement the road system (as in the Occupied Territories).[25] Notwithstanding the importance of an adequate road network for economic development, the condition of roads in developing countries is wholly inadequate. In one study, 26% of paved roads and 32% of unpaved roads were in "poor" condition, requiring reconstruction.[26] Unfortunately, the data presented in the OECD report aggregate data for the Middle East and Europe, limiting comparisons between the Occupied Territories' neighboring countries.

Investment in road construction requires significant expenditures, but investment in road maintenance does not; further, as important as is preventive maintenance, its economic advantages are significant. According to Baum and Tolbert, the cost of road maintenance (1%-2% of the road capital stock) "seldom represents more than a fraction of annual government revenues from road users and, provided it is efficiently spent, it almost immediately pays for itself severalfold."[27]

## B. Institutional Arrangements

In the West Bank and Gaza Strip, the transportation system is administered by four departments, each of which is linked with the Civil Administration. The four departments are:[28]

* the Higher Planning Council Committee and the Central Planning Department, responsible for planning and coordination of all transportation activities; these offices are based in Israel and staffed fully by Israelis;

* the Public Works, responsible for construction and maintenance of roads outside of the urban areas; Public Works has a central office in the West Bank (headed by an Israeli military officer) and four regional offices; there is one office in the Gaza Strip, also headed by an Israeli military officer. In total, five Palestinian engineers are employed in the Public Works Department;

* the Highway Traffic Department, responsible for traffic and safety regulation has one central office, headed by an Israeli military officer; one Palestinian engineer works in this department; and

* the Licensing Department, responsible for classification and registration of motor vehicles and registration and licensing of drivers; this department has offices throughout the Occupied Territories, all of which are headed by Israeli military officers.

## C. Sectoral Status and Trends

### C.1 Road Network

Many external donors and researchers have pointed to the discrepancy between the limited road construction and maintenance undertaken by GOI in Palestinian areas and communities and the extensive highway and road grid constructed as a means of connecting Jewish settlements with one another and with Israel. Prior to 1967, the West Bank had a relatively well-developed road network which included linkages to the East Bank. Following the occupation, the road network was developed to link the West Bank and Gaza Strip to the Israeli road system, with connections to Israeli urban centers and with a focus on linkages between settlements and major roads and highways.[29] In fact, according to Abu-Eisheh, only 367 km of roads were added to the network in the Occupied Territories since 1967, excluding settlement roads.[30]

As of 1991, there were 1,862 km of roads in the West Bank and 178 km in the Gaza Strip, not including agricultural roads (see Figure 2).[31] This road network includes three classifications of roads:[32]

* main roads (distinct two-way traffic with a minimum of one lane in each direction), comprising 568 km;

* secondary roads (two-way roads which are generally narrower than main roads), comprising 562 km; and

* local village roads (providing access between smaller towns and villages, having poor surface and shoulder conditions), comprising 979 km of local village roads,[33] of which 69 km are unpaved.[34]

In addition,

* agricultural roads designed to facilitate access to fields and from fields to market (usually unpaved and seasonal) comprise approximately 900 km.[35]

In 1990, Abu-Eisheh estimated that there were 61 villages in the West Bank with no paved access roads. This is in addition to smaller neighboring villages with no connecting roads. The total estimated population of these villages was 23,000 in 1990.[36] As of 1990, there were 13,181 km of roads in Israel, of which 7,790 km were urban roads, 1,303 km access road and 4,088 km non-urban roads;[37] no towns in Israel lack paved access roads.

In general, the condition of the road network in the West Bank and Gaza Strip is poor. According to a study carried out by Abu-Eisheh in 1989, approximately half of the paved roads were in a

moderately to seriously deteriorated condition. The horizontal curvature of the roads dropped significantly, particularly in the mountainous areas; vertical slopes in these areas can be more than 10%.[38] Moreover, the narrow width of the existing roadways (with few shoulders for use in emergencies) required immediate correction, according to road maintenance experts.[39] Most of the roads also require improvements in vertical and horizontal alignments. The poor condition of the roads not only impairs transportation under normal circumstances but makes passage all but impossible when there is flooding. There are minimal traffic control devices, driver education programs or other measures which reduce traffic accidents.

The only means of public transportation in the Occupied Territories are buses and taxis, both of which serve as inter- and intra-jurisdiction modes of transportation. According to the Statistical Abstract of Israel, there were 686 buses registered in the West Bank in 1990. In the Gaza Strip, there were 75 registered buses in the same year.[40] However, a 1989 study of transportation in the West Bank found that only 360 of the buses were in operation.[41] Notably, the number of registered buses increased by 35% in the West Bank during the period 1980-1990; only two additional buses have been registered in the Gaza Strip in the same period.[42] There are few central terminal facilities, even in the central areas of service in Jerusalem, Nablus, Hebron and Gaza City and the buses do not operate on a fixed schedule.[43] As a result, 45%-80% of the inter-urban ridership use shared taxis, in spite of the higher cost.[44]

In 1990, there were 1,088 registered taxis in the West Bank and 773 in the Gaza Strip.[45] Since the occupation, the GOI has restricted the number of licenses allowed for shared taxis in the West Bank and Gaza Strip. As a consequence, the number of registered taxis has increased by only 23% in the West Bank during the period 1980 to 1990. The number of registered taxis in the Gaza Strip actually decreased during the same period, from 790 to 773.[46] During the same period, according to the Statistical Abstract of Israel, there was a 35% population increase in the West Bank and a 41% increase in the Gaza Strip.[47] This discontinuity between population growth and availability of the only modes of public transport severely strains the capacity of the public transportation services and hampers movement in the Occupied Territories.

Perhaps because of concern for the cost of road construction, donor funding has been primarily for construction and improvement of rural access roads, although some urban roads have been constructed in the Gaza Strip. Abu-Eisheh notes that in most cases, the residents of the village in which the road construction was carried out contributed to the cost incurred. In addition, taxes collected by the GOI from the Palestinians are

sometimes used by the GOI to contribute to the cost of road construction or repair.[48]

C.2 Air, Rail and Water Transport

Prior to the occupation, the only airport in the Occupied Territories was in Qalandia (north of Jerusalem). This airport, constructed in 1952, has since been under control of the GOI, which does not allow Palestinian use of the facility. The airport consists of one runway (medium-length; and a terminal but no other support facilities.[49] Regarding other modes of transport, there has been no railroad system in the Occupied Territories since prior to 1948. The minimal system which did exist prior to that time was largely dismantled after 1948.[50]

Until 1967, Gaza had a seaport with two small jetties used for trade ships and fishing boats. Since the occupation, however, the GOI has not allowed the port to be used for shipping trade; it has also severely restricted deep sea fishing.[51] Although there has been considerable interest in the construction of a port in Gaza, no cost-benefit analysis, nor any detailed feasibility study of such a project has been conducted.

Because Palestinians may not themselves ship goods from airports and seaports in Israel, the only mechanism currently available to Palestinians for export of goods is the road network, providing access through Israel and Jordan to the other export markets.

## VI. DONOR INVOLVEMENT IN INFRASTRUCTURE

Various U.N. agencies, private voluntary organizations, and Palestinian and Israeli research institutes have described the need for significant investment in the construction, upgrading and maintenance of infrastructure facilities. This investment is necessary not only to ensure that basic services are available, but to ensure that economic growth can be attained. Importantly, investment in public and quasi-public infrastructure (e.g., electrification, communications) can also generate revenues.

Notwithstanding the identification of needs in the Occupied Territories by these agencies, and the dependence of Palestinians on donor agencies for road construction and maintenance and for electrification, donor funding for such projects has been minimal. The primary sources of funds for infrastructure development have been the Arab states, the U.N. and A.I.D.[52] No donors have invested in the communications sector, which is controlled and operated by the GOI.

Few external donors have invested in electrification, although A.I.D. has contributed to the development of the electric cooperatives in the Hebron Region (through ACDI), with a membership of 3,000. A.I.D. has expended approximately

$3,479,300 in road construction in the West Bank and Gaza Strip, primarily through Catholic Relief Services (with a total of $2,924,300 in road projects between 1980-1991) and Save the Children (with a total of $555,000 in road projects between 1980-1985).[53] The International Christian Society (ICS) has also participated in road development projects, but no data are available with regard to the types of projects they have supported nor the level of funding. The Jordanian-Palestinian Joint Committee (which is funded by Arab states) supported development programs in the West Bank and Gaza Strip from 1982 until 1988. During this time, they funded road construction and repair projects totalling $13.7 million, primarily focusing on interior and access roads within urban areas and villages and agricultural roads.[54]

## VII. CONSTRAINTS TO IMPLEMENTATION OF INFRASTRUCTURE PROJECTS

In addition to the paucity of financial resources available with respect to all three physical infrastructure subsectors addressed in this report, two types of constraints impede their development. These constraints (bureaucratic and human resources) impact on the design, development and implementation of infrastructure projects and on the ability of Palestinians working in the sectors to ensure sound financial management. The constraints are summarized below.

### A. Bureaucratic and Economic

A number of bureaucratic actions on the part of the GOI with respect to transportation, communications and electrification have hampered the development of these sectors and have severely strained the capacity of these systems to provide adequate services to the Palestinians in the Occupied Territories.

* Absence of development plans. The GOI has disseminated no development plans with respect to the provision of basic infrastructure which relate specifically to the Palestinian population in the Occupied Territories. The road network plan devised in the early 1980s concerns only access to settlements; the infrastructure projects included in the list of "essential" projects for the Occupied Territories (prepared and distributed by the GOI in 1991) does not consist of a development plan.

* Use of Donor-Funded Infrastructure Projects by Settlements. There are no assurances that infrastructure projects will not be within a settlement area in the future; and

* GOI Review of Infrastructure Projects Supported by Donors. GOI approval for road construction or repair projects can be (and has been in many cases) delayed

for months or years, and approval is not assured. Moreover, changes are often made in the design of these projects which restrict their utility for the target population(s). U.S. PVOs have had many projects denied, including, for example, six road projects submitted by one PVO during the period 1988-1991; no reason was given for the disapprovals.

## B. Human Resources

In both the West Bank and Gaza Strip, there is a severe shortage of trained personnel in each of the infrastructure sub-sectors, especially semi-skilled and skilled labor and managers. Moreover, as a result of the paucity of continuing education programs available for trained professionals (e.g., engineers, urban or land planners), the skills found in the Occupied Territories are often outdated with regard to the rapidly changing technology in the areas of communications and electrification. No basic or advanced training is available to communications and transportation professionals, although several universities and private research organizations are considering developing the capacity to provide such training.

A number of factors are determinants of the inadequate training available for personnel working in physical infrastructure; for example:

* The GOI places restrictions on the participation in training programs to which CIVAD employees might have access and on the type of training that can be provided by technical schools to Palestinians (whether or not they are CIVAD employees). For example, they are not allowed to train Palestinians in certain communication and electrification technology, even though they may need to use this technology in their work.

* Training institutions (e.g., vocational schools and universities) are constrained by the GOI from importing certain types of equipment for use in training in communications and electrification, even if the equipment is provided by donors. This further limits the degree to which skilled workers and professionals trained within the Occupied Territories are capable of utilizing the advanced technology which presently forms the basis of the telecommunications and energy fields.

## C. Lack of Resources for Use of New Technologies

The municipalities have scarce resources to plan for, or initiate demonstration projects for use of alternative sources of energy which could conserve scarce resources. In addition, few donors have invested in the design and application of alternative energy sources for the Occupied Territories or in training of Palestinians in the development and management of such appropriate technologies. This results in the Palestinians being largely dependent on electrification as their energy source for both residential and industrial use. Limited examples of donor-funded alternative energy projects include the use of solar energy for greenhouses in both the West Bank and Gaza Strip and for heating water supplies and the recently-completed feasibility study of the use of solar and fuel-cell supplemental power systems in remote villages.[55] While it is not possible to predict whether or not the CIVAD would approve of such projects, it certainly would appear to be in their interest to do so, given that scarce energy and financial resources would be conserved. Palestinians could build on the significant technological advances developed or implemented in Israel, which is noted for its use of solar energy, for example.

# VIII. CONCLUSIONS AND RECOMMENDATIONS

## A. Development Opportunities

As with other development programs in the Occupied Territories, investment in physical infrastructure must both build on the availability of highly educated Palestinians (now largely unemployed or underemployed) and develop an institutional capacity that will be useful for development notwithstanding the political circumstances. To what degree do the required skills exist at present in the West Bank and Gaza Strip? What will be the lag time to train and develop such personnel? The fact that Palestinians have worked extensively in the construction industry in the West Bank and Gaza (including in the construction of settlements and settlement roads) and, importantly, in Israel, may indicate that skilled labor may be available, but the availability of technical and management personnel is less certain. However, the return of Palestinians who have worked in managerial positions in various components of infrastructure in the Gulf States may well avert one of the most common problems faced by developing countries; that is, the shortage of skilled workers such as engineers, surveyors, estimators, foremen, equipment operators, which impedes the successful design and implementation of physical infrastructure projects.

In addition to extending the physical infrastructure systems to ensure adequate coverage of the population and to meet needs for the productive private sector, and enhance the capacity of human resources in this arena, it is necessary for the Occupied

Territories to move forward in the direction of sustainable growth. Baum and Tolbert describe the need for public support for projects which can comprise the development of a technological infrastructure;[56] as adapted for the Occupied Territories, these are:

1) development or enhancement of the capacity of municipalities and quasi-public institutions for testing, standards, and quality control;

2) development or enhancement of the capacity of universities and other research institutes to conduct multidisciplinary basic and applied research and technology development programs, including administrative mechanisms for their funding and management;

3) development or enhancement of the local engineering and consulting industry, with municipalities, quasi-public entities and the productive private sector as the user community; and

4) support for linkages among Palestinian public and private sector organizations involved in infrastructure and for linkages between these organizations and comparable organizations in the U.S. and countries in the ME region. Such linkages could facilitate, for example, the development of standards for construction quality and worker safety for use in all of the subsectors of infrastructure.

The beneficiaries of these services, at the present, would be Palestinians working for municipalities, quasi-public and private sector companies involved in the physical infrastructure subsectors (communications, electrification and transportation) and research and training institutions. Investment by donors in these areas would also provide an opportunity to build linkages across sectors as part of a broadbased development strategy. Development of these capacities eventually could be used to generate income both for the research and development institutions and for public or quasi-public companies responsible for physical infrastructure.

Such projects require a sustained political commitment and a "substantial measure of autonomy for the public institutions involved and a commitment to quality in staff and performance."[57] Under the current circumstances, such sustained commitment and autonomy for public institutions is not possible. However, if A.I.D. and other donors were to consider medium and long-term gains, investment in projects which have the potential to improve sustainability of projects and conserve scarce resources would be of interest. Even under the present

situation, donors could contribute to each of these types of projects, thereby providing essential capability for the present and a foundation for development in the future.

The GOI makes minimal investment in physical infrastructure in the Occupied Territories (encouraging donors to do so), the donors have scarcely funded these areas (and do not seem inclined to support physical infrastructure which will benefit the productive private sector, with the exception of agricultural roads), and Palestinians have little if any means of supporting such projects. Moreover, while there is substantial interest in the involvement of the private sector in infrastructure development in the West Bank and Gaza Strip (and although this is essentially necessitated by the lack of a national government), extensive research and development projects undertaken by the World Bank have shown that labor-intensive technologies have not attracted the interest of private sector contractors, who have been concerned about such issues as pricing distortions, escalation of wage levels, and inadequate funds to support the cash flow requirements of a large scale physical infrastructure project.[58] The reality is that, at some point, some entity will have to support large-scale physical infrastructure, if the economy of the Occupied Territories is to grow.

A key issue to be addressed by A.I.D. is the degree to which support should be provided to enhance the existing administrative infrastructure by improving the capacity of existing municipal and quasi-public personnel to manage electrification, communications and transportation systems and providing other support such as improved (or newly developed) information systems. This is critical, because, according to Uphoff,

> "while it has limitations, local government usually appears to be the most promising base for developing and maintaining rural infrastructure, especially if it can be supplemented by some form of local organization."[59]

However, he points out that "one of the conditions for an effective [local government] role in infrastructure is that it have a predictable resource base ... crucial for operation and maintenance, which are essential for deriving benefits from any infrastructure."[60] This is currently not possible in the Occupied Territories, but could change in the event of autonomy or independence. However, Palestinians (and the donors) must address the question of the most appropriate public/private mix of involvement in infrastructure planning and management. While the private sector usually plays a more limited role in decision making with regard to public goods infrastructure projects,[61] the capacity which existed until the mid-1970s on the part of the Palestinian private (or quasi-public) sector could be revised and updated. Membership organizations (e.g., cooperatives) also play a key role, but according to Uphoff in general they "appear

better at one-time activities where resources of money or labor are mobilized for a specific task."[62] As in other countries, cooperatives in the Occupied Territories have the potential to mobilize local resources to expand infrastructure at the local level, but they have not demonstrated that they have the capacity to respond to needs of the broader population (i.e., other than their own members) nor to adequately manage the resources available to them.

Finally, the use of physical infrastructure projects as a means of jobs' creation has historical bases, and is increasingly seen as an option in countries with increasing unemployment (including the U.S.). In the Occupied Territories, road construction has been a mechanism for jobs' creation, as Grossman and Derman point out:

> "In the first years which followed the Israeli takeover (1967-1970) there was concern about the problem of high unemployment in the West Bank. Road construction was one of the means for providing jobs ... Between 8,000 and 10,000 daily jobs were provided, but the work was not steady. The workers were deliberately laid off periodically, and the labor force was 'rotated' in order to benefit as many people as possible. Pay was low and progress was slow. The main emphasis in this period was on improving existing roads."[63]

## B. Recommendations

Communications, a vital link for economic development, must be improved in the Occupied Territories, with as much attention as possible paid to this subsector in the immediate term. Newer technologies (e.g., cellular systems) have significantly reduced the cost of expansion of telecommunications networks over the past few years, and the U.S. private sector, a leader in the telecommunications field, can contribute importantly to the development of this subsector in the Occupied Territories. While this is not likely to be an area in which A.I.D. would be interested, other branches of the USG could contribute. For example, the Trade and Development Program (TDP) could facilitate the (partially subsidized) sale of telecommunications equipment and the provision of technical assistance to the Palestinian private sector pending any political change. Arrangements could be made for private U.S. telecommunications companies and for the Communications Workers of America (CWA) to provide technical assistance and training, as they do in Israel and elsewhere. The USG should enter into policy dialogue with the GOI in order to obtain approval for A.I.D. support for the expansion of telecommunications networks throughout the West Bank and Gaza Strip. Alternatively, the support of other donors should be sought, or assurances that the GOI will invest in expanding telecommunications systems in the Occupied Territories unless/until the political situation changes.

Electrification is also vital for economic development in the Occupied Territories, and A.I.D. has already contributed to the expansion of electrification in the West Bank and could made additional important contributions through the support of alternative energy demonstration projects and the development of regional plans for electrification (and power in general). Such plans should have the involvement of municipalities, community-based organizations, industrial organizations, economic development NGOs, and others as appropriate. As with communications, the USG should enter into policy dialogue with the GOI in order to obtain approval for A.I.D. support for the expansion of the electrification grid, with priority for those villages with no electrical source and, secondarily, for those without continuous electricity. Alternatively, the support of other donors should be sought, or assurances that the GOI will invest in expanding electrification systems in the Occupied Territories unless/until the political situation changes.

A comprehensive energy plan is urgently needed for the Occupied Territories, one which would take into account the various alternatives (e.g., solar and wind power) and assuming an integrated grid within (if not across) the West Bank and Gaza Strip and linkages with the existing Israeli grid. If energy and financial resources are to be conserved, economies of scale must be taken into account. Sufficient resources must then be invested to ensure adequate supply of electricity for residential, public (and social) service and productive private sector use. Such investment might be used, for example, to add power stations and implement research and development projects for alternative sources of energy. It is also imperative that engineers and technicians currently working in the field receive continuing education to ensure that they are adequately trained in the design, development and maintenance of recent advances in electrification as well as newer energy technologies.

Immediate support for construction of agricultural roads, those linking villages with no existing road network, and upgrading and maintenance of existing road systems would both provide jobs (albeit temporary) and improve transportation for the public and for the productive private sector. Much discussion has centered around the possibility of donor investment in a seaport in Gaza. However, Baum and Tolbert have pointed out that "although the foreign trade of developing countries can be expected to continue its rapid growth, construction of new ports or, of additional berths in existing ports is likely to be justified in relatively few countries in the near future."[64] Pending review of a recent feasibility study carried out by Tel Aviv University,[65] and other studies which may be underway at present, the most appropriate utilization of development resources may be to ensure direct access by Palestinian shippers to existing ports and to expand the capacity and improve the efficiency of operations of these ports if necessary to meet shipping needs. This would seem

to call for regional cooperation between Gaza and both Jordan and Israel with respect to port facilities and militate against investment in a port in the Gaza Strip.

Specific recommendations are presented in Table 1.



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TABLE 1:
Conclusions and Recommendations

| Conclusions | Recommendations |
| --- | --- |
| 1. It is essential that Palestinian professionals and skilled workers have the capacity to plan, execute and manage physical infrastructure projects which utilize the most appropriate advanced knowledge and technology available, within resource constraints. | 1.1 A.I.D. should support the training of both municipal and private sector employees who are currently or who may potentially be responsible for the planning and management of physical infrastructure in the Occupied Territories. This includes short-term local and overseas training, and limited graduate (masters level) training. Such training should be accelerated if autonomy is assured and Palestinians assume responsibility and authority for physical infrastructure. |
| | 1.2 A.I.D. should support the development of computer-based information systems necessary for the effective and efficient planning and management of infrastructure projects, including support for design or adaption of required programs, provision of hardware and training of a cadre of personnel in the use of such systems. |
| | 1.3 A.I.D. should support the development of capacities at Palestinian universities, technical schools and research institutes for the development and implementation of continuing education projects (and certification/standards). |
| | 1.4 A.I.D. should support educational visits by Palestinians to developing countries in which innovative approaches to development and management of infrastructure projects have been successful. This would allow for them to learn appropriate, lower cost, techniques which may help to reduce their dependency on external donors. |

2. The existing road system is inadequate, both in terms of extent and condition. This severely hampers the productive private sector.

2.1 A.I.D. should support the construction and repair of agricultural access roads, road networks in rural areas which are identified as having urgent needs, and areas which are identified as requiring expansion or improvement in order to expand trade. If autonomy is assured and Palestinians assume responsibility and authority for physical infrastructure, A.I.D. should expand its support for road networks, particularly those which support the productive private sector and access to social services and new residential areas.

2.2 In order to help ensure that such road networks are responsive to clearly identified needs and to enhance the likelihood that they will be maintained, the Agency should also support the development of mechanisms for community involvement in the planning of road construction projects as well as support the development of regional level transportation plans for both the West Bank and Gaza Strip.

3. The communications system in the Occupied Territories is wholly inadequate, hampering the delivery of social services, the capacity of the productive private sector to sustain current activities and to expand their operations, and the "normal" communications among a population.

3.1 A.I.D. should immediately support the expansion and improvement of training for Palestinians employed in the communications subsector, in order to ensure that, even under the present restrained circumstances, communications function at the maximum level possible.

3.2 If Palestinians assume responsibility and authority for physical infrastructure, A.I.D. should support the development of improvements in the existing communications networks and expansion of service, utilizing the most advanced (low-cost) technologies available. Such expansion could be partially supported by user fees and would be expected to be fully supported in the long term.

4. The electrification system in the Occupied Territories is wholly inadequate, hampering the delivery of social services, the productive private sector, and linkages in general among the Palestinian population.

4.1 A.I.D. should immediately support the expansion and improvement of training for Palestinians employed in the electrification subsector.

4.2 A.I.D. should continue to support the expansion of electrification services to ensure that, at a minimum, all Palestinian villages have continuous access to electrification by whatever mechanism is most cost-efficient (i.e., through connection with the Israeli grid or independent generators).

4.3 Prior to expenditure of A.I.D. funds on expansion of electrification, however, A.I.D. should support the conduct of a region-wide assessment of electrification needs; such assessment should recommend the most appropriate technology(ies) under the existing and alternative circumstances.

4.4 If Palestinians assume responsibility and authority for physical infrastructure, A.I.D. should support the development of region-wide grids and improvements in existing electrification networks, utilizing the most advanced (low-cost) technologies available.

4.5 A.I.D. should immediately support the development/adaptation and implementation of alternative sources of energy, utilizing for example those technologies which are available in Israel and Jordan. Such projects could be implemented in villages with no access to electricity and in planned industrial zones.

5. While initial construction of physical infrastructure in Israel and the settlements in the Occupied Territories is fully funded by the GOI, and maintenance and use is at least partially subsidized by the GOI, few resources have been made available for construction and maintenance in the Occupied Territories. For Palestinian the unit cost of communications and electrification services is higher than for Israelis and settlers. Moreover, Palestinian public, quasi-public and private sector organizations have not had decision-making authority with respect to planning or management of physical infrastructure projects. Thus, it is highly unlikely that expansion of services to meet urgent needs will be self-sustaining for the immediate or medium term.

5.1 A.I.D. should engage in policy dialogue with the GOI with respect to provision of basic physical infrastructure services and differential rates charged to Palestinians, Israelis and settlers for equivalent services.

5.2 A.I.D. should assist Palestinian public, quasi-public and private sector organizations involved in the management and planning of physical infrastructure services and projects regarding financial management of such services and projects, including the development of appropriate fee structures for communications and electrification.

6. A number of GOI policies limit the degree to which economies of scale can be achieved and the maximum utilization made of scarce resources available for both Israel and the Occupied Territories.

6.1 The USG should engage in policy dialogue with the GOI with respect to: 1) direct access to Israeli seaports and the Qalandia airport (with the latter being expanded if the GOI agrees to access); 2) provision of automatic telephone communication services to rural areas currently served by manual exchanges, and 3) provision of postal services in all villages.



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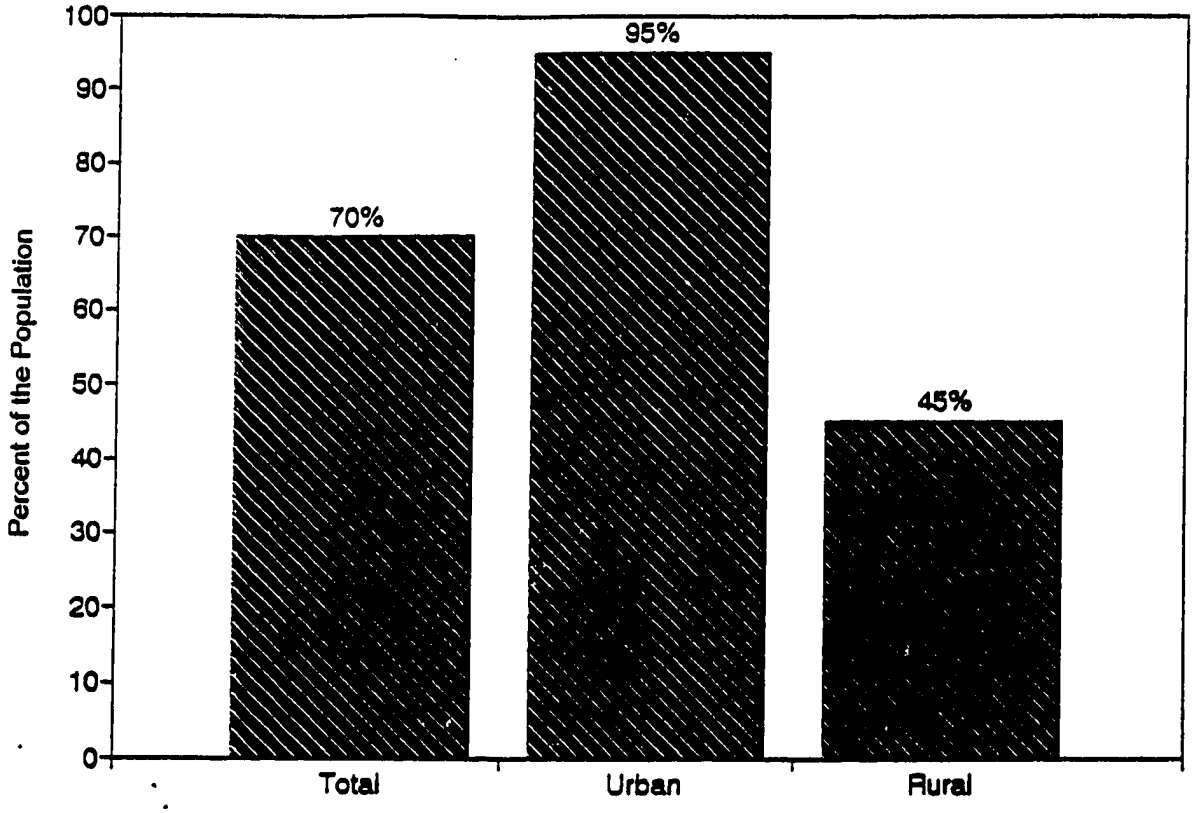
Figure 1: Access to Continous Electricity in the Occupied Territories




Source: Statistical Abstract of Israel 1991. Central Bureau of Statistics. Jerusalem; 1991.



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Figure 2: Total Road Networks by Area, 1991 (WB & GS), 1990 (Israel)

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# TRADE IN THE WEST BANK AND GAZA STRIP

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

August 1992

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## I. EXECUTIVE SUMMARY

Necessarily, over the 25 years of the occupation, Israel had become the most significant trading partner for the Occupied Territories. This is due in part to the elimination of trade barriers for Israeli goods to the Occupied Territories and the imposition of protective measures to hinder the export of certain goods from the Occupied Territories to Israel as well as to other countries. Moreover, Israeli tax and other import regulations result in substantial increases in the cost of goods imported to the Occupied Territories from other countries. In 1984, for example, 90% of goods imported to the Occupied Territories were Israeli, 8% were from other countries via Israel and 2% were directly from Jordan to the West Bank. Conversely, 54% of exports from the West Bank and 83% of those from Gaza went to Israel and 44% of West Bank exports and 13% of Gaza exports went to the Jordanian market.

As a result of these trade relationships, the balance of payments in the Occupied Territories has worsened considerably since 1967, and particularly during the period 1980-1987, when the trade deficit increased by more than 90% in the West Bank and by 140% in the Gaza Strip, in dollar volume. In 1986, the most recent year for which total balance of payments data are available, the total trade deficit was $512 million; the deficit with Israel was $532 million. In this respect, the situation is worse than it was just prior to the 1967 occupation, when the trade deficit for the West Bank was JD 20 million and that for Gaza was JD 7 million.

In consideration of the disparities in balance of payments with the primary trading partners of the West Bank and Gaza Strip, a key issue has emerged in the discussion of necessary and appropriate economic development strategies for the Occupied Territories. This critical issue, which must be addressed in formulating trade development strategies, is the determination of the appropriate balance between import substitution and export expansion. While not mutually exclusive, they require somewhat different emphases in terms of investment and focus. This is both an economic and a political issue which is being considered by the Palestinian representatives to the Peace Talks as well as by various economic development and research institutions.

Non-parity with respect to preferential trade agreements with potentially significant trading partners (i.e., the U.S. and the EC) also hampers the ability of Palestinian industry to compete effectively in the global market, as does the absence of economic and physical infrastructures and systems on which free market economies depend (e.g., access to domestic and foreign market pricing data, adequate transportation and storage facilities, ability to participate in trade fairs and deliberations, mechanisms for production and packaging quality control).

Moreover, the dependence on the Israeli economy (and to a lesser extent on the Jordanian economy) with respect to production and trade hampers the ability of Palestinian industry to diversify and expand. Finally, the dependence on export of Palestinian labor to Israel and the Gulf States as a means of income generation (both for families and for Palestinian society as a whole) is a volatile proposition, as has been proven since late 1990 in the Occupied Territories and more recently in countries from which labor capital has been "exported" to the U.S. (e.g., Jamaica).

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

For purposes of this paper, "trade" will include those activities and processes through which productive enterprises of any type procure imported inputs and deliver tangible output. Goods and services imported for the health and social sectors (e.g., medical equipment) and those imported and exported for private consumption are not considered. Because trade issues are integrally related to both the agricultural and industrial sectors, both of those sector analyses address trade concerns specifically related therein. The reports also discuss in more detail cross-sectional issues, including, for example, the dearth of natural resources, inadequacy of educational and training resources to enhance human resources development, and the scarcity of investments in the productive private sector.

Data and information are inadequate in virtually all public and private sectors in the Occupied Territories. The limited information resources available severely hampers analysis of issues related to trade. Moreover, although many reports have been prepared in the areas of agriculture and health, and fewer in industry and general economic development, only one comprehensive report has been prepared on Palestinian external trade. The primary source of information on exports and imports is derived from the Statistical Abstract of Israel, but that document does not provide disaggregated data and information, and the most recent report presents no trade data with respect to exports/imports to and from Israel since 1987. Therefore, much of the most recent data contained in this report is for 1986.

### A. Importance of Trade for Development in the Occupied Territories

In spite of the fact that just prior to the occupation the West Bank and Gaza Strip had a negative trade balance (albeit small in comparison with that experienced since the mid-1970s), trade had been an important aspect of the Palestinian economy prior to 1967, with Palestinians having longstanding linkages with trading partners in the Arab world and Europe.[1] In 1987, the most recent year for which data are available, trade comprised approximately one-third of GDP in the Occupied Territories - a moderate decrease from 1968. Export capacity (the ratio of merchandise exports to GDP) has also decreased in the Occupied Territories, from 42% in 1981 to 25% in 1986.[2] However, in order for the economy of the Occupied Territories to expand, for domestic jobs to be created and for sufficient resources to be available for urgently required physical infrastructure and social services to be supported, it is imperative that trade expand.

## B. Key Sectoral Issues

Palestinian trade is replete with complex issues which are largely related to systemic distortions resulting from the dependence of the Palestinian productive private sector on Israeli policies with respect to import and export of goods to and from the Occupied Territories. Two key issues are addressed here: the dependency on Israel and the non-parity of trade agreements; other constraints on free trade are discussed in Part V of this report.

### B.1 Dependency Relationship with Israel

The degree to which Palestinian trade is dependent on trade relationships with Israel is clear, as data in this report will demonstrate. This relationship often is circuitous: pricing and import policies in Israel result in distortions in the local markets. As a result, it is difficult for Palestinian firms to have explicit trade strategies; rather they often have to dispose of surplus goods at the same time that low-priced Israeli surpluses are being "dumped" on the Palestinian market. Israel has not only largely determined the export of goods from the Occupied Territories, but also the function of labor, with low-cost Palestinian laborers serving the Israeli productive sector. Thus, the important link between labor and economic development, for example, in terms of planned development of human resources to meet economic goals and to ensure competitive advantage, is nonexistent in an economy that is oriented primarily to serving the labor needs of a competitor (and competitive) economy.

The dependency on the Israeli economy is expressed further in the fact that the Palestinian productive sector and approach to investment is, necessarily, largely reactive to external forces. For medium- and large-scale Palestinian industry, the volume of exogenous commerce is greater than the volume of endogenous commerce at factor prices. Non-subordinated external trade relations in other countries have been found to stimulate upstream and downstream investment and the formation of internal linkages within the industrial and agro-industrial sectors. This is not, however, the case for the type of external commerce and trade which relates Palestinian points of production primarily to Israeli commercial interests.

The dependency of Palestinian trade on Israel and Jordan is clear from import/export data. In 1987, the most recent year for which data are available, 91% of goods imported to the Occupied Territories - more than $639 million - were received from Israeli suppliers.[3] In fact, since the occupation, between 85% and 90% of imports have been from Israel.

B.2 Non-parity of Trade Agreements

Exclusion from the U.S. Free Trade Agreement (FTA) preferences and effective non-parity under European Community (EC) preferential trade arrangements, undermines the ability of Palestinian producers to export their products directly in each of those major external markets. Israel enjoys the benefits of the U.S. FTA, having a trade surplus of over $752 million in 1990.[4] The proportion of goods produced or finished in Palestinian industries but exported through Israel to the U.S. (and other countries) by Israeli firms (e.g., as a result of subcontracting arrangements) is not known. However, it has been suggested that lifting of U.S. labelling restrictions on Palestinian goods would positively impact on the ability of Palestinians to engage in direct trade with the U.S. At the same time, it would be necessary to ensure that GOI export restrictions are removed.

Until 1987, the Occupied Territories' producers had no option to export directly to the EC countries. In that year, a decision was made by the Council of Ministers to establish unilaterally a preferential trading regime for the Occupied Territories. This decision had been taken in 1986 and the first direct exports under that policy were sent to the U.K. in 1987. However, for several technical reasons related to the lack of internal linkages within the economy of the Occupied Territories, the preferential trading policy for the Occupied Territories still does not allow most potential Palestinian exporters to qualify for the preference benefits.

Israel, on the other hand, enjoys the full benefit of both USG and EC preferential trade arrangements, and Israeli companies are able to market products produced in the Occupied Territories under more advantageous terms than the Palestinian firms themselves. As a result, they are deriving the main benefit of the preferences themselves and of Palestinian productive capacity in connection with these international trade preferences. This is of particular significance in consideration of the relative contribution to the economy on the part of Palestinian firms which subcontract to Israeli firms to produce goods for export. For example, the proportion of Palestinians working in subcontracting establishments in textile and shoe factories has been conservatively estimated at 80% of the total employed in that subsector.[5]

If Palestinian firms were eligible for participation in the FTA or EC preferential trade agreements, the Occupied Territories export income presently lost to Israeli firms would likely contribute significantly to an increase in GNP for the Occupied Territories. This non-parity also inhibits normal diversification and vertical elaboration of an industrial base established on subcontracting. It is that very process which has

stimulated economic growth in countries, in particular those in the Pacific Rim.

### B.3 Import Substitution and Export Expansion

In consideration of the disparities in balance of payments with the primary trading partners of the West Bank and Gaza Strip, a key issue has emerged in the discussion of necessary and appropriate economic development strategies for the Occupied Territories. This critical issue, which must be addressed in formulating trade development strategies, is the determination of the appropriate balance between import substitution and export expansion. While not mutually exclusive, they require somewhat different emphases in terms of investment and focus. This is both an economic and a political issue which is being considered by the Palestinian representatives to the Peace Talks as well as by various economic development and research institutions.

## III. SECTORAL STATUS AND TRENDS

### A. Profile of Exports, Imports and Balance of Trade in the Occupied Territories

Necessarily, over the 25 years of the occupation, Israel has become the most significant trading partner of the West Bank and Gaza Strip. This is due in part to the elimination of trade barriers for Israeli goods to the Occupied Territories and the imposition of protective measures to hinder the export of certain goods from the Occupied Territories to Israel, as well as to other countries. Moreover, Israeli tax and other import regulations result in substantial increases in the cost of goods from other countries, which must be imported through Israel.

In 1986, a number of factors resulted in the distortion of economic trends, most importantly the price controls introduced by the GOI and the surge in agricultural and industrial *ad valorem* output fueled by increased product prices in the Occupied Territories. As a result of the price controls, Israeli subsidization of its own production was curtailed, with a corresponding reduction in its supply volumes and surpluses. In turn there was an expansion in Palestinian demand for (and production of) locally produced goods. The "economic" Intifada, which began at the end of 1987 and the beginning of 1988, thus followed (and encouraged) import substitution which had already begun.

The price increases in Israel and the Occupied Territories artificially elevated agricultural and industrial factor costs as well as costs of living for the Palestinian population. Two important effects of the price increases on trade are the following:

1) the competitiveness of industry and labor-intensive agricultural and industrial production for export to markets other than Israel are compromised; and

2) opportunity costs, entrepreneurial resources and investment are focused on import substitution rather than on expansion of export.

A.1 Balance of Trade

The balance of payments in the Occupied Territories has worsened considerably since the occupation. Figure 1 shows total exports and imports for 1970, 1980 and 1987 (the most recent year for which data are available). In that year, the total trade deficit was $512 million; the deficit with Israel was $532 million. During the period 1980-1987, the trade deficit increased by more than 90% in the West Bank and by 140% in the Gaza Strip, in dollar volume.[6] The value of exports from Gaza demonstrated no overall growth rate and negative growth in real terms during the period 1980-1987, while the value of West Bank exports increased only moderately in nominal growth and negative growth in real terms. During this same period, the value of merchandise imports increased by more than 40%.[7] In nominal dollar terms, the total trade deficit in the West Bank was $411 million in 1987; it was $255 million for Gaza in the same year.[8] By contrast, in 1966, the trade deficit for the West Bank was JD 20 million and that for Gaza was JD 7 million (approximately $2.8 million, given an exchange rate of JD1 = US$ 2.5).[9]

Since 1987, the balance of trade has deteriorated even further. For example, in one year alone - between 1988 and 1989 - the trade deficit increased by 51% in the West Bank; comparable data are not available for the Gaza Strip.[10] Exports of both goods and services decreased an average of 30% per annum during 1988-1990, with the decrease far more dramatic in the Gaza Strip than in the West Bank: 50% versus 16%, respectively.[11] Imports of goods and services also declined during this period: 16% in the West Bank and 19% in the Gaza Strip.[12]

The Gulf War had a significantly negative impact on trade in the Occupied Territories, as on other aspects of the economy. UNCTAD has described the impact of the Gulf War on the economies of the West Bank and Gaza as follows:

> "The [Gulf War] resulted, inter alia, in reduced remittances to the occupied territory, new pressures on the already strained local labor market, the interruption of bilateral and multilateral transfers to the occupied territory and a halt in trade with traditional markets."[13]

Moreover, the external trade sector has not yet shown signs of improvement since the end of the Gulf War, in spite of efforts to

re-establish economic relations with traditional trading partners in the region. At least until the end of 1991, regional markets remained largely closed to Palestinian products. The decreased purchasing power of Palestinian consumers, resulting from the continued stagnant economy, resulted in decreased imports and domestic markets for Palestinian products as well.

Figures 2 and 3 show total agricultural and industrial imports to Occupied Territories from Israel, Jordan and other countries for the years 1980-1986. In the West Bank, only 1.5% of imports (valued at $9.4 million) were received directly from Jordan in 1987;[14] there were no imports to the Gaza Strip directly from Jordan and information with respect to direct imports from Egypt to Gaza is not available. The West Bank exports fewer goods to Israel than it imports (70% of exports versus 90% of imports in 1987), but Gaza exports to Israel are essentially equal to imports from that country. The situation with respect to Jordan is considerably better: in 1987, 30% of West Bank exports and just over 7% of Gaza exports went to, or through the Jordanian market, in contrast to 1.5% of imports. Importantly, exports to Jordan from the Occupied Territories decreased by 38% from 1982, when they reached a post-occupation high of $125 million, to 1987, when they were valued at just over $78 million.[15]

From 1977 to 1986, while the value of imports from abroad to the Occupied Territories via Israel more than doubled, the proportion of these goods relative to total imports remained at approximately 10%. Most of the goods imported from Jordan and a high proportion of those imported from Israel are for use in processing goods which are re-exported to these same countries, while goods imported from other countries are primarily for use in local processing and trade.[16] Moreover, a reportedly significant but undocumented proportion of goods imported to the Occupied Territories from Israel are produced in third-party countries, but imported by Israeli firms for re-export to the Occupied Territories. The cost of such imports to the Palestinian purchaser is thus further inflated by the commissions and profit margins excised by the Israeli importers, who have in many cases enjoyed a monopoly on the export of specific goods, which is protected by the Israeli customs and Ministry of Trade and Industry. A related issue, addressed in the companion reports, Health in the Occupied Territories and Industry and Enterprise in the Occupied Territories, is the fact that the Israeli suppliers often do not provide repair and maintenance agreements for equipment, further adding to the cost to the Palestinian importer. This has been a particular problem for hospitals and other health facilities.

## A.2 Relative Importance of Agricultural and Industrial Exports

Figures 4 and 5 show total agricultural and industrial exports from the Occupied Territories to Israel, Jordan and other countries for the years 1980-1986. Exports from the agricultural sector in the Occupied Territories decreased in value by 31% from 1980 to 1986 (from $108.4 million to $75.4 million). The decrease in agricultural exports can be seen specifically in the decline of export of citrus to Jordan, from a monetary value of $37.4 million in 1980 to $23.1 million in 1986. At the same time, total industrial exports increased in value by 34%, from $237.3 million in 1980 to $317.3 million in 1986. In 1986, industrial goods comprised 80.7% of total export volume in the Occupied Territories, while agricultural exports comprised just over 19%.[17]

Agricultural production in the West Bank (measured in tons of total fruit and vegetables) increased by approximately 10% (from 388,000 tons to 429,000)during the period 1980/81-1985/86, while exports to Jordan increased by 60% during the same time period, reaching a level of 161,000 in 1985/86. In Gaza, total fruit production slightly decreased over the same period (from 274,000 to 265,000 tons), with total exports to Jordan declining more substantially, from 131,000 to 82,000.[18] This decrease in the importance of agricultural products vis-a-vis trade comes in spite of efforts on the part of Palestinian and donor organizations to increase production and marketing capacity, including improvements in quality of goods as a means of enhancing competitive advantage. The benefits from these efforts have not yet been seen in improved export volume.

Industrial exports to Jordan have also decreased as a proportion of total industrial exports, from 25% of all exports in 1980 to 18% in 1986. Processed olive and vegetable oil, processed dairy products, stone and soap are the dominant industrial exports to Jordan; the relative contribution of these goods to total exports to that country has not changed substantially since 1980. During the period 1980 to 1986, industrial exports, to and through, Israel increased from 75% of the total to 81%.

The primary source of export data - the Statistical Abstract of Israel - does not disaggregate agricultural and industrial export and imports to and from Israel by type of agricultural or industrial product. This is unfortunate, because as Israel is the dominant trading partner, it is not possible to identify with any degree of precision the primary goods of trade for the Occupied Territories. However, the data are disaggregated for exports to Jordan, which provide some indication of the relative importance of goods traded. Figures 4 and 5 shows export volume of agricultural and industrial goods from the Occupied Territories to Jordan in 1980 and 1986.

Although citrus fruit still comprised more than half (54.2%) of all agricultural goods exported to Jordan in 1986, this is a decrease from 1980, when citrus comprised 77.6% of all exports to Jordan. On the other hand, export of other fruits increased substantially, from 15.6% of total agricultural exports to Jordan in 1980 to 31.7% in 1986. With respect to industrial exports to Jordan, olive oil and olives comprised 42.6%, samna and dairy products 27.2% and stone and marble 20.3% of all industrial goods exported to, or through Jordan. This represents a shift from 1980, when olive oil and olives comprised more than half (53.1%) and stone and marble only 8.1% of all industrial goods exported to Jordan; the export volume of samna and dairy products remained relatively stable, as did soap exports.[19]

The "export" of Palestinian labor, primarily for work in Israel and the Gulf States, plays a significant role in the Palestinian economy. However, while remittances from Palestinian workers have contributed positively to supplementing the decreases in exports of industrial and agricultural products, they demonstrate further the dependence of the Palestinian economy - and perhaps trade in particular - on that of Israel, and to a lesser extent, Jordan. As the developments during and after the Gulf War clearly show, this dependence can result in significant shocks to the Palestinian economy when Israel determines that the Palestinian labor force should be diminished (or for reasons of security barred) from Israel. Other socioeconomic effects of dependence on the exportation of Palestinian labor are described in the overview to the sectoral analyses reports.

## IV. INSTITUTIONAL ARRANGEMENTS

### A. The System of Domestic and External Trade in the Occupied Territories

External trade in the Occupied Territories is governed by the Department of Trade and Industry, headed by a military officer and organizationally located within the Civil Administration. The department has representatives in three areas of the West Bank (Ramallah, Nablus and Hebron) and in the Gaza Strip. Although extant laws at the time of an occupation are supposed to serve as the basis for trade (as is true with other aspects of life in the territories), the military government has issued hundreds of supplemental regulations and military orders which impact on trade. These orders include, for example, those relating to product labelling, operating licenses, export licenses and taxes, and permits.

The Department of Trade and Industry in the Occupied Territories receives applications for exports and imports and reviews and transmits the applications to the Civil Administration, which then submits them to the Ministry of Trade and Industry in Israel and to the relevant Israeli trade board in the case of

applications for exports to Israel. Potential importers must also obtain permits and clearances from tax and customs' authorities. (This latter requirement does not apply to Israeli importers.)

In December, 1991, an agreement was reached to relax the restrictions on the part of the Arab League, by arranging for export of Palestinian goods to Arab countries (as Jordanian products) through a free port in Jordan. Palestinian firms interested in these new opportunities are to request permits from the Ministry of Trade and Industry through the local Chamber of Commerce. They then complete a Certificate of Origin form, which is certified by the local Chamber of Commerce and sent to the Jordanian Ministry of Commerce and Industry (or the PLO in Amman) for approval. Once approved, the goods (together with the various documents, including a permit for the transport driver) are taken to the Zarqa Free Port in Jordan, from which they are to be exported to Arab countries (as Jordanian products). The volume of export thus far through this arrangement is not known, but it has important potential for expansion of Palestinian trade with its traditional trading partners.

Few local Palestinian organizations have been involved in trade specifically, although several agricultural institutions, and more recently industrial/enterprise organizations, have undertaken external trade activities related to their sector. The companion sectoral reports, Industry and Enterprise in the Occupied Territories and Agriculture in the Occupied Territories, describe these organizations in detail. Relevant activities with respect to exports to countries other than Israel have been supported largely by donors (including A.I.D., the EC and UNDP) and have included projects designed to improve quality control, packaging and shipping, marketing techniques (brochures and presentations at trade fairs) and contacts with potential external markets. With respect to agriculture, in 1991 the Union of Agricultural Cooperatives initiated a project to implement an agricultural marketing information system. In early 1992, a broadly-based Palestinian organization operating in the Occupied Territories, but legally domiciled in the Netherlands -- the Palestinian Trade Promotion Organization -- began to undertake trade promotion activities relative to Palestinian external trade.

## B. Donor Involvement in Trade

Some of the recent developments which have been supported by donor organizations to develop an adequate infrastructure for Palestinian export include the conduct of trade exhibitions in the West Bank and Gaza Strip and participation in trade fairs in Europe and elsewhere, the establishment of specialized economic development and trading companies, and the development of innovative arrangements for specific exports (e.g., Palestinian

olive oil to Italy, which Italy will recycle as commodity aid to developing countries).

## V. CONSTRAINTS TO DEVELOPMENT

### A. Governmental Policies Which Impact on Palestinian Trade

Bahiri has described the symbiotic relationship between Israel and the Palestinian Occupied Territories in a way that addresses the fundamental issue of economic development in the West Bank and Gaza Strip and clarifies the degree to which the Palestinian economy and its trade relationships are dependent on Israel:

> "In some ways Israel may be viewed as the core economy, its industry as the core industry, and the Occupied Territories as the colonial or peripheral economy. Both economies may now be viewed on one hand as systems in their own right, and on the other as sub-systems of an increasingly single (system) economy."[20]

But this relationship is by no means equal, and the Palestinian economy is by no means an integrated "system." A 1989 UNCTAD report pointed to the significance of this relationship for Palestinian trade:

> "Complementarities between Palestinian and Israeli manufacturing branches that might appear to be exhibited in the composition of Palestinian-Israeli merchandise trade have been largely manifestations of the ability of the more powerful Israeli economy to selectively import in line with its own industrial development prerequisites. Palestinian manufacturers which have penetrated Israeli markets (e.g., some food products, construction materials and some textile products) have done so by virtue of their relatively low prices rather than through any special ability and/or arrangement to supply materials which cannot be (or are not) produced in Israel. This export has entered the lower end of the Israeli market for such goods, permitting some Israeli manufacturers to shift into branches characterized by greater capital intensity and productivity. "...The role of domestic Palestinian market demand and non-Israeli export possibilities have become increasingly marginalized after two decades of Israeli occupation."[21]

As has been described previously in this paper, the consequences of the dependence of Palestinian trade on Israeli policies have also been seen in the retarding of a viable industrial base which builds on Palestinian advantages (e.g., a relatively highly educated and industrious population). Several specific Israeli

policies which impact negatively on Palestinian trade are described below:

A.1 Fees, Taxes and Price Supports

The high rates of fees and taxes imposed on goods imported into the Occupied Territories from countries other than Israel (including the traditional Arab trading partners) has been a causal factor in the dependence on Israel as a source of goods. For example, in 1976, the GOI introduced a "Excise Added Tax," corresponding to the Value Added Tax (VAT) introduced in Israel in the same year; the VAT is 18% of the total production revenue.[22] In introducing this tax, the GOI stipulated that it was necessary to ensure the provision of adequate social services for the population. However, according to a 1987 UNCTAD report, "Generally speaking, VAT has evolved over the past few years to become one of the most serious fiscal constraints on the development of Palestinian industry and trade."[23]

Israeli price supports (and other direct and indirect subsidies) for agricultural and industrial production as well as for exported products, with no comparable supports for Palestinian goods, places West Bank and Gaza Strip productive enterprises at an obvious disadvantage. Such subsidies include a cash subsidy delivered in the form of export currency exchange insurance, direct incentive payments and concession credit, all of which enhance the competitiveness of Israeli firms in international export markets.

While Palestinian goods are price competitive, this is at a cost, Israeli "dumping" of products in the Occupied Territories has had a negative impact on domestic trade and export, with Palestinians often in the position of being forced to sell products at a loss. Thus, having competitive prices may be not an advantage for either the individual farmer, cottage industry producer or factory owner. This is particularly important in view of the price supports Israel (and Jordan and Egypt) provides for basic infrastructure required for agricultural and industrial development, including water, electricity and communications.

A.2 Other Israeli Policies

Israeli restrictions on travel and movement of people and goods have severely restrained both domestic and external trade. In addition to both short-term and extended curfews, the requirements for passes and permits for free movement from one village to another, from one region to another, and between the West Bank and Gaza Strip, have impeded the transfer not only of raw materials and marketable products, but of knowledge, information and skills necessary for economic development and enhancement of trade. Moreover, the procedures used by Israeli security forces to inspect agricultural (and other) products

destined for export through Israeli ports have also had severe impact on the marketability of Palestinian goods, as has been discussed in the companion report, Agriculture in the Occupied Territories.

The deleterious way in which Israeli policies have driven the utility of Palestinian labor for economic growth in general, and for external trade in particular, cannot be overemphasized. The International Labor Organization (ILO) has, since 1978, been conducting an assessment of the situation of Palestinian workers in the Israeli occupied West Bank and Gaza Strip. The assessment is based on site visits to the Occupied Territories, Israel and neighboring Arab countries. The 1991 report found that Israel is "firmly in control of the keys to production and income: capital, labor, land and water, knowledge and skills".[24] The use of such labor in Israel for the Israeli productive sector encourages export of Israeli goods to the Occupied Territories and encourages the decrease in reverse trade, with "the deficit being covered by wages earned in Israel," a fact which increases the dependency relationship.[25]

A.3 Arab Country Policies and Practices

The policies of Jordan and other Arab countries have also severely restricted external Palestinian trade, although these policies have recently been relaxed (see Section III.) The policy which has had the most significant impact has been the prohibition on the importation to Arab countries of goods produced from raw materials or, by means of equipment brought from Israel or imported through it. Because Israel requires that most raw materials and all equipment be brought through Israel to the Occupied Territories, Palestinian companies are placed in an effective vice: they are prohibited by their former trading partners from trading in goods which are produced in a manner over which they have no control. For materials imported through Jordan, the Palestinian firm must pay both Jordanian and Israeli duties and import taxes; as a result, raw materials' imports from Jordan are essentially confined to those necessary to produce products for re-export to Jordan.

Ahiram and others[26] have described the policies of Jordan and other Arab states which have impeded industrial development in the Occupied Territories, including:

* restricting goods "produced from raw materials or by means of equipment brought from Israel or imported through it" (a restriction which is reportedly being lifted);

* restricting exports to Jordan from Palestinian firms established after 1967;

* restricting exports of Palestinian firms to no more than 50% of their total output; and

* discouraging Palestinian companies from expanding or establishing manufacturing companies in the West Bank, while at the same time encouraging the expansion of Palestinian companies in the East Bank (Jordan).

## B. Other Factors Which Impact on Palestinian Trade

Palestinians must surmount many obstacles to improving their balance of trade deficits, not the least of which is the scarcity of natural resources on which a firm foundation can be based. The relative scarcity of water resources (particularly in the Gaza Strip) and the lack of mineral resources (except stone) directly and indirectly affect the ability of the agricultural and industrial sectors to enhance their competitive advantage. The decrease in free and open trade with former trading partners has all but eliminated the ability of the Palestinians to utilize complementarities in trading ventures. The scarcity (or maldistribution) of water resources is of particular concern to both agriculture and industry. Issues concerning the water and agricultural development are addressed in the companion sectoral reports on those sectors.

Palestinians also lag significantly behind developments in other countries (including lower income countries) with respect to technological advances. Such advances can and have been used to make the maximum possible use of existing resources while at the same time conserving those resources. Technological advances are also used in industry and agriculture to improve the output and quality of production, and to successfully engage in domestic and international marketing. Few Palestinian industries have modern equipment, for example, few have adequate, computer-based accounting and management systems, and few have access to the data and information required to compete in an "open" market.

With the exception of some limited developments in individual companies, there is no research or development capacity in the Occupied Territories; such capacity is essential in the design and adaptation of new technologies for appropriate and effective use and has been the foundation of economic progress in the rapidly progressing Asian countries. The use of newer technologies is limited in part as a result of Israeli restrictions on importation of equipment, import costs of equipment and lack of awareness of new technological developments. Recent visits by Palestinian economists to Japan, European countries and elsewhere may improve this awareness, but economic and business interchange is still minimal.

## B.1 Investment and Marketing Systems

Investment in new technologies, human resource development and expansion of capacity is a sine qua non of external trade - enhancing the competitive advantage of local producers. In the Occupied Territories, while some donors have invested in agricultural programs, these investments have been uncoordinated, non-directed and largely unplanned. In the industrial sector, scarce funds have been invested, those which have been available are largely from the family-owners, and there has been little donor interest and few sources of credit. While donors have expressed increasing interest in the productive private sector (reflecting recent international interest in privatization and market economies), few have expressed a willingness to take steps to ensure that the Palestinian agricultural and industrial sectors have access to financial resources required to stimulate growth and enhance competitive advantage. Furthermore, the economic and political instability of the Occupied Territories is a serious deterrent to external private investment in manufacturing or in agriculture. Given the recent global financial shifts and recessions in many countries, these private investments are even more ephemeral. In fact, according to UNCTAD, the period 1988-1990 witnessed a 4% annual decrease in private investment.[27]

The absence of marketing systems, including for example, logistical planning for the transport of agricultural and industrial goods, severely impedes both domestic and external trade. Systems that most countries take for granted (e.g., private regional trucking companies and associations or a Ministry of Transportation which can help to coordinate and regulate trucking and other forms of transport) are simply non-existent. Security regulations further impede transport of goods across Israeli and Jordanian borders. For example, no Palestinian refrigerated trucks exist, because trucks must be open for inspection at checkpoints and borders. There are also no "national," regional or local computer-based marketing or other information systems, although there are some embryonic developments in this area (in agriculture, specifically). Because virtually every country with which Palestinians are competing has such systems, Palestinian firms are at a severe disadvantage. The investments which are now being provided to the newly emerging CIS and other East European countries will likely further diminish the potential for the Palestinian productive sector to be competitive unless marketing systems are rapidly developed and implemented in the Occupied Territories.

Public, quasi-public and private systems which enhance and regulate quality control, which are taken for granted in other countries (even in many lower income and most middle income countries), either do not exist in the West Bank or Gaza Strip or are in embryonic stages. Such systems include, for example,

regulatory mechanisms for ensuring quality of pharmaceuticals, processed food products, and other Palestinian products. Quality control is of concern in trade in two respects:

1) ensuring that Palestinian products meet the requirements of their domestic and export markets with respect to safety and efficacy (e.g., the EC), which has both societal benefits and an economic dividend in promoting consumer confidence and acceptance in both the domestic and export markets; and

2) ensuring that Palestinian products can compete on the basis of value for money, thereby maximizing the value added and return on investment achieved by individual firms.

In the past few years, there have been efforts on the part of the Palestinian private sector to develop the capacity for quality control in both respects. However, these efforts have received minimal support from donors and cannot presently be sustained through fee-for-service from the Palestinian private sector. One example of developments in the area of quality control for social protection is the environmental laboratory which has been established at Beir Zeit University. It has no authority to test products (and is thus somewhat controversial) but has established linkages with private industry in an effort to encourage improvements in quality control. An example of efforts to improve quality control with respect to value added maximization is the experiment of Mattin, a Palestinian clothing manufacturing enterprise. This company endeavored to experiment in the utilization of modern modes of production, including training of quality controllers and the development of a formal system of quality control in relation to an upscale export market penetration exercise. However, significant improvements are needed in this area if Palestinian private entities (including for profit and cooperative organizations) are to be competitive.

Since the occupation, the structures and mechanisms which enable free domestic and international trade in a normal economy (whatever the structure of the economy) have been all but nonexistent in the West Bank and Gaza Strip. These include, for example,

1) investment from sources in addition to equity capital (family-owners and friends);

2) fiscal and monetary arrangements for credit and financial intermediaries;

3) the ability to adjust production cycles and pricing of goods according to principles of demand and supply and internal capacity of the firm;

4) mechanisms to withstand economic "shocks" such as natural disasters and global economic recession;

5) participation in regional and international trade fairs and conferences;

6) the ability to develop and adapt new technologies which enhance competitive advantage;

7) institutional support organizations (to enhance human resources capacity and ensure quality control, for example).

As a consequence, the scope and nature of Palestinian exports are determined largely by external forces. For example, both Israel and Jordan adjust their import/export policies consistent with their own needs for certain goods and pricing conditions. This makes it virtually impossible for Palestinian farmers to adequately plan for crop production vis-a-vis their primary trading partners, with resultant waste and economic loss. Similarly, the industrial sector has largely focused on either production for domestic use or served as a subcontracting mechanism (that is, a low-cost source of labor) for Israeli companies.

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Development Opportunities

In spite of the impediments to domestic and external trade in the Occupied Territories, there are opportunities for improvement even in the current political context. Such developments should:

* build on recent efforts to develop trade in the Occupied Territories,

* take advantage of those factors which are likely to enhance competitive advantage (e.g., an educated and industrious work force),

* take into account the competitive advantages of their trading partners and likely competitors in both agriculture and industry, and

* insofar as possible, take steps to ameliorate the conditions which impede free trade and open competition, particularly between Palestinian and Israeli firms.

As has been demonstrated in this and the companion reports on agriculture and industry, the development needs and concomitant resource requirements exceed the likely investment which A.I.D.

can provide in trade. Moreover, a recent report prepared for A.I.D.[28] suggests that USG investment in export will be successful only if export policies of the beneficiary country are non-protectionist. Given that trade policies are not presently within the control of Palestinians (government export policies), somewhat lower expectations should apply to the Occupied Territories. Fortunately, the EC and other donors have begun to provide support in this area as well, albeit in limited amounts and without clear linkages among the economic sectors.

In order for Palestinian trade to expand, there is a need for policy dialogue between the USG and Israel and between the USG and the Arab states with respect to the policies which impede free trade. In its 1989 report, UNCTAD recommended specific measures which are needed to "contribute to a more secure and less hostile economic environment," including permitting the free movement of goods and people at all times within and between the two regions of the Occupied Territories (the West Bank and Gaza Strip), a comprehensive reform and streamlining of trade policies and procedures and the reform of the fiscal system.[29] However, free movement of goods is a necessary but insufficient prerequisite to free trade. In the absence of parity with the preferences accorded Israel under the Free Trade Agreement and the EC preferential trading policies, the Palestinian productive sector cannot exploit their potential to contribute as exporters to economic growth in the Occupied Territories.

It is also imperative that the Palestinian productive sector, as well as the supporting infrastructure including economic development institutions, cooperatives and universities, have free access to the data and information which is required for adequate planning and management of trade relations. Data and information which is held by the GOI but not made available to Palestinians is a prerequisite for development planning for both Palestinians and the various donor agencies.

## B. Recommendations

Table 1 presents summary conclusions and recommendations for A.I.D. investment in the development and enhancement of Palestinian trade.

Table 1
Conclusions and Recommendations

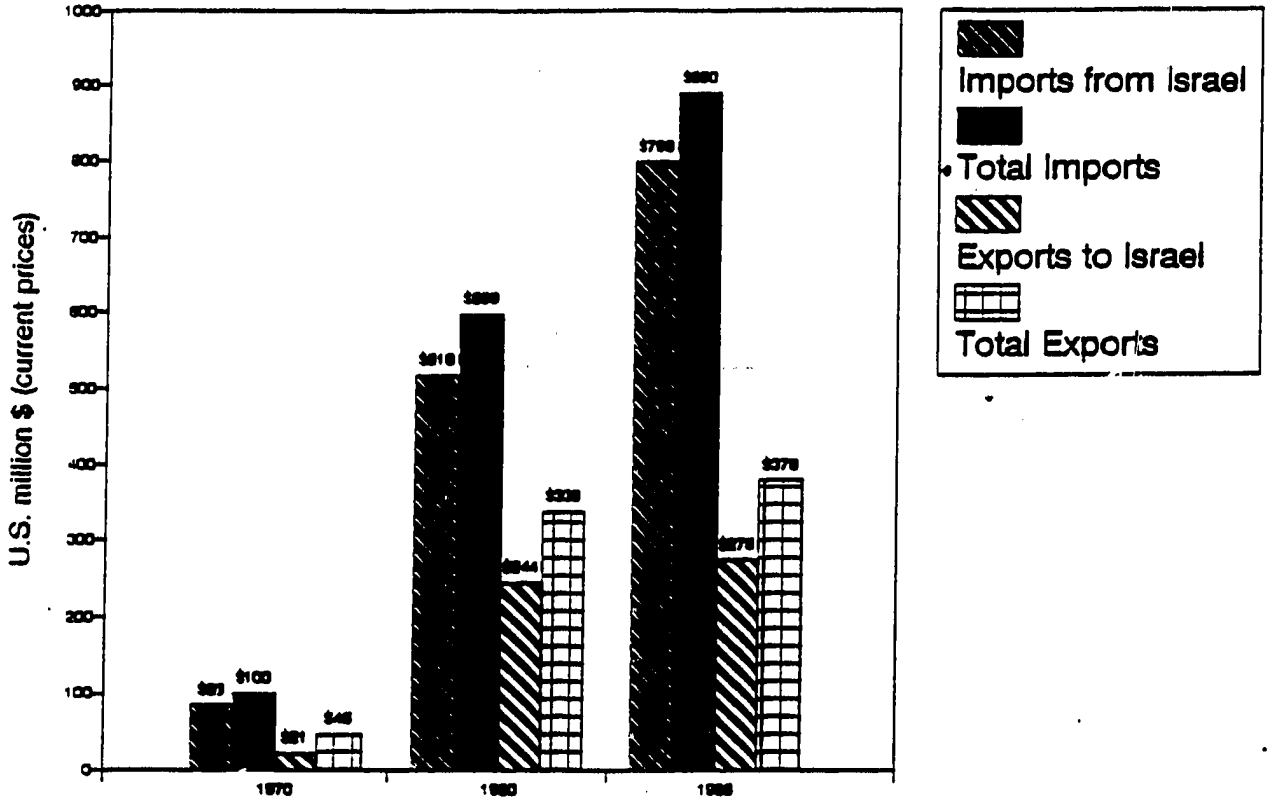
| Conclusions | Recommendations |
| --- | --- |
| 1. There is a paucity of data and information on which appropriate and effective trade strategies and specific projects can be based. | 1.1 In addition to support for the development of agricultural and industrial information systems (see companion reports), A.I.D. should support the development of computer-based market and trade information systems, utilizing existing software as appropriate and including on-line linkages with regional and international marketing and trade information systems.<br><br>1.2 A.I.D. should support the conduct of marketing studies and surveys which would generate data and information necessary for expansion of exports and improvements in domestic markets. |
| 2. There is a minimal support system and infrastructure for domestic and international trade in the Occupied Territories and a dearth of trained personnel, in particular with respect to product development, productivity enhancement and operations management. | 2.1 A.I.D. should provide training of personnel in the productive private sector as well as in the newly emerging support infrastructure (e.g., Chambers of Commerce and Union of Industrialists). A.I.D. should also support the provision of technical assistance to these entities. Such training would include, for example, short-term local, regional and U.S. training in management of production, new product development, quality control, environmental control requirements on the part of trading partners (e.g., use of pesticides with fruits and vegetables and environmental impact of soap products), packaging, marketing techniques, international trade and adaptation and use of new production technologies. |

| Conclusions | Recommendations |
| --- | --- |
| | Technical assistance should also focus on these issues. |
| | 2.2 Support for linkages between American business and trade institutions, technology research and development centers, and comparable groups in the Occupied Territories, which linkages could both enhance the potential for bilateral trade and serve as a technical assistance/training source for Palestinians. |
| | 2.3 A.I.D. should support the enhancement of economic infrastructures which improve domestic and export markets, including, for example: 1) capital projects such as cold storage and refrigerated transport of agricultural products, and 2) economic and regulatory infrastructure projects such as systems and standards for monitoring and/or enhancing the quality control of manufactured products. |
| 3. Quality control is a problem in both agricultural and industrial products, diminishing the ability for Palestinians to compete on the open market. | 3. A.I.D. should provide training and technical assistance to both private productive entities and the emerging support organizations. (Support for implementation of improvements in quality control is presented as a recommendation in the companion agricultural and industrial papers.) |

| Conclusions. | Recommendations. |
| --- | --- |
| 4. The Palestinian productive private sector is at a severe disadvantage in terms of the adaptation, development and use of new technologies, particularly those that absorb skilled labor and enhance labor productivity. | 4. A.I.D. should support small scale research and development projects which are designed to encourage the adaptation and use of appropriate new technologies in both agricultural and industrial production. In this context, A.I.D. should also encourage the expansion of credit to those firms which are interested in the use of appropriate new technologies and which have demonstrated an understanding of such use. (See also recommendations in agriculture and industry papers.) |
| 5. Palestinians have minimal contact with their competitors in other countries, with regional and international trading partners and trade or industry/agricultural associations and with potential markets. This lack of contact severely impedes the ability of Palestinians to engage in free trade. | 5.1 A.I.D. should support specialized marketing missions by representatives of the Palestinian private sector and support organizations in comparable firms in the U.S. and elsewhere, as well as foreign buying missions to the Occupied Territories.<br><br>5.2 A.I.D. should support attendance at regional and international trade fairs and topical meetings. |

| | |
|---|---|
| 6. In large part as a result of their isolation from regional and international markets, Palestinians have lagged behind their competitors in the development and production of newer and/or more marketable goods. | 6. A.I.D. should support demonstration projects which encourage the development and production of agricultural and industrial products which make the most effective and appropriate use of Palestinian resources, have market potential and require minimal investment. This can include, for example, production of alternative varieties of crops, support for organic farming projects, apparel and other commercial design and product development projects aimed at identifying areas of opportunity for local producers. |
| 7. Private firms in the Occupied Territories do not enjoy the same trade benefits as do their competitors in Israel and other countries. This places them at a severe disadvantage and effectively isolates them from the global economy. | 7.1 The USG should negotiate a change in trade policies with respect to direct import of Palestinian goods, including, for example, labelling and other requirements. |

Figure 1: Volume of Exports & Imports for the Occupied Territories, 1970-86




Source: Statistical Abstract of Israel, 1991. Central Bureau of Statistics: Jerusalem.



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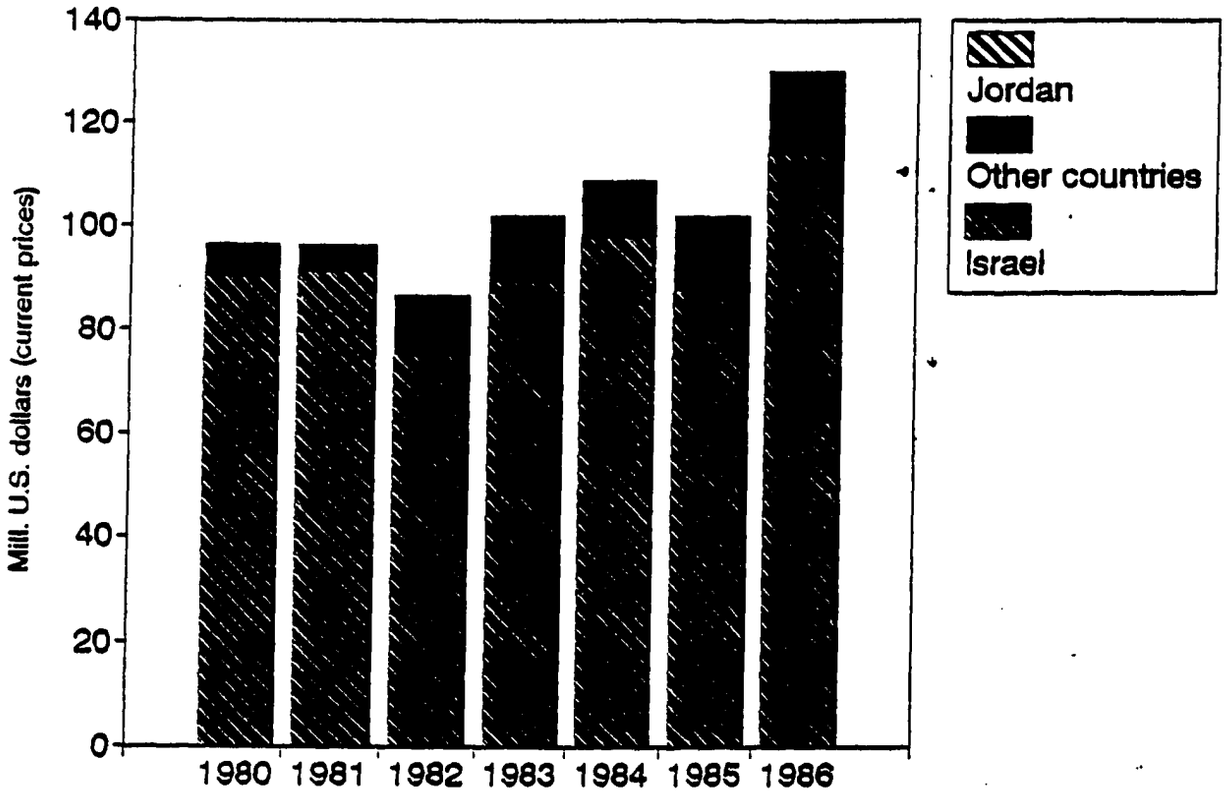
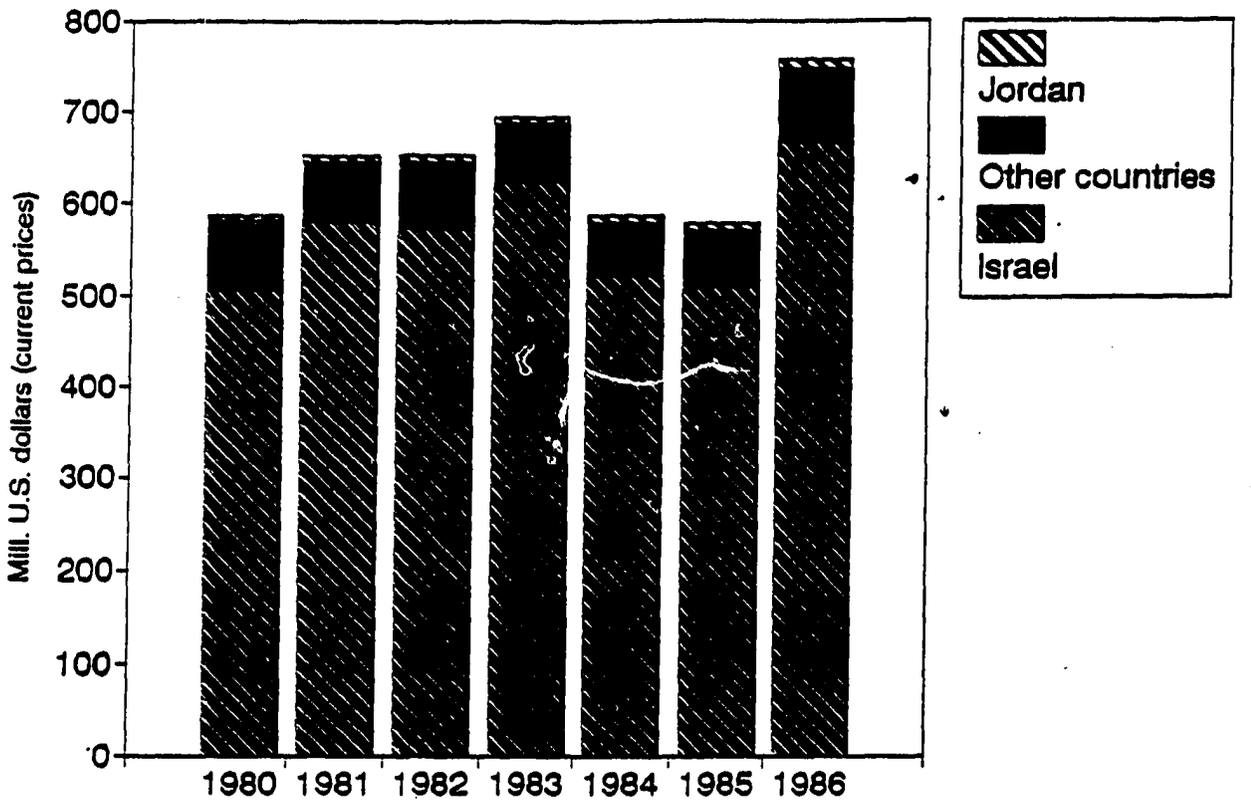
Figure **2** Total Agricultural Imports to the O.T., by Source: 1980-86



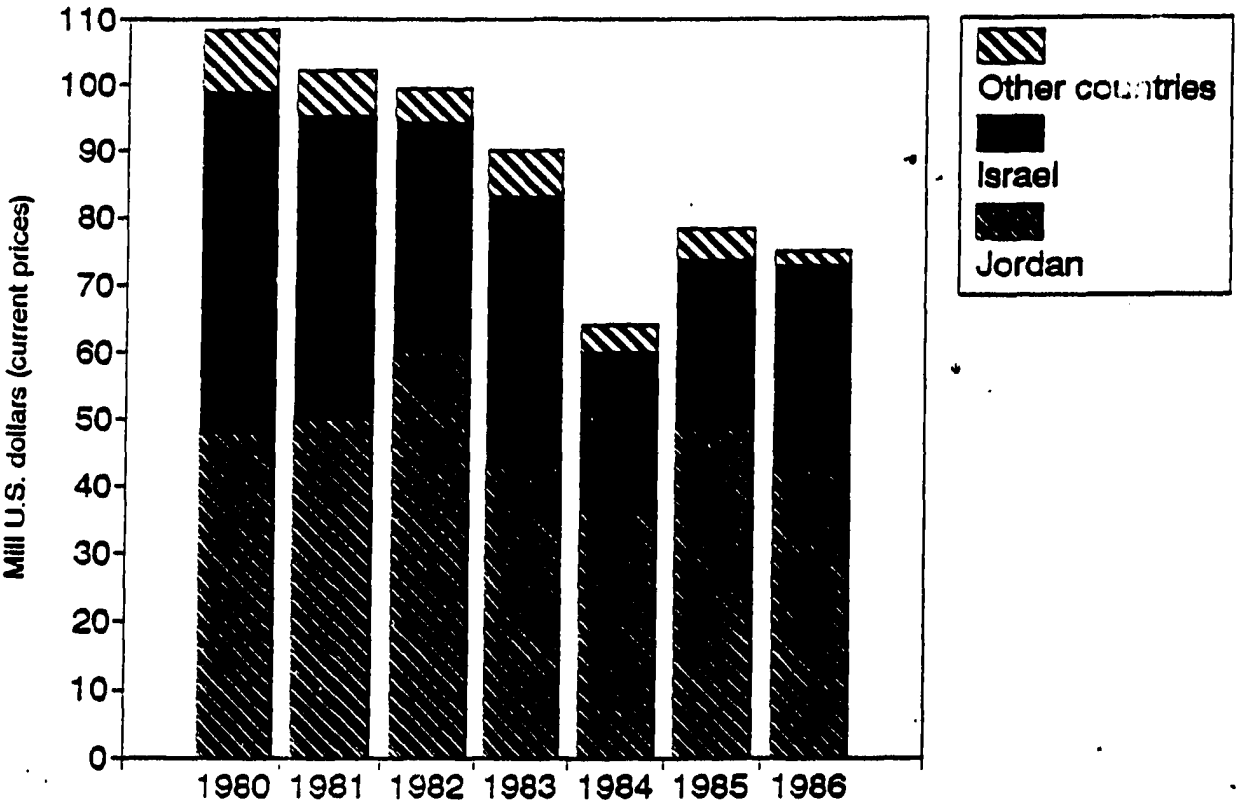

Sources: Statistical Abstract of Israel, 1991. Central Bureau of Statistics: Jerusalem and Administered Territories Statistical Quarterly, Vol. IX, No. 2 and Judeae, Samarai and Gaza Area Statistics, Vol. XVI No. 1 and Vol. XVII, No. 2.

Figure 3: Total Industrial Imports to the O.T., by Source: 1980-86



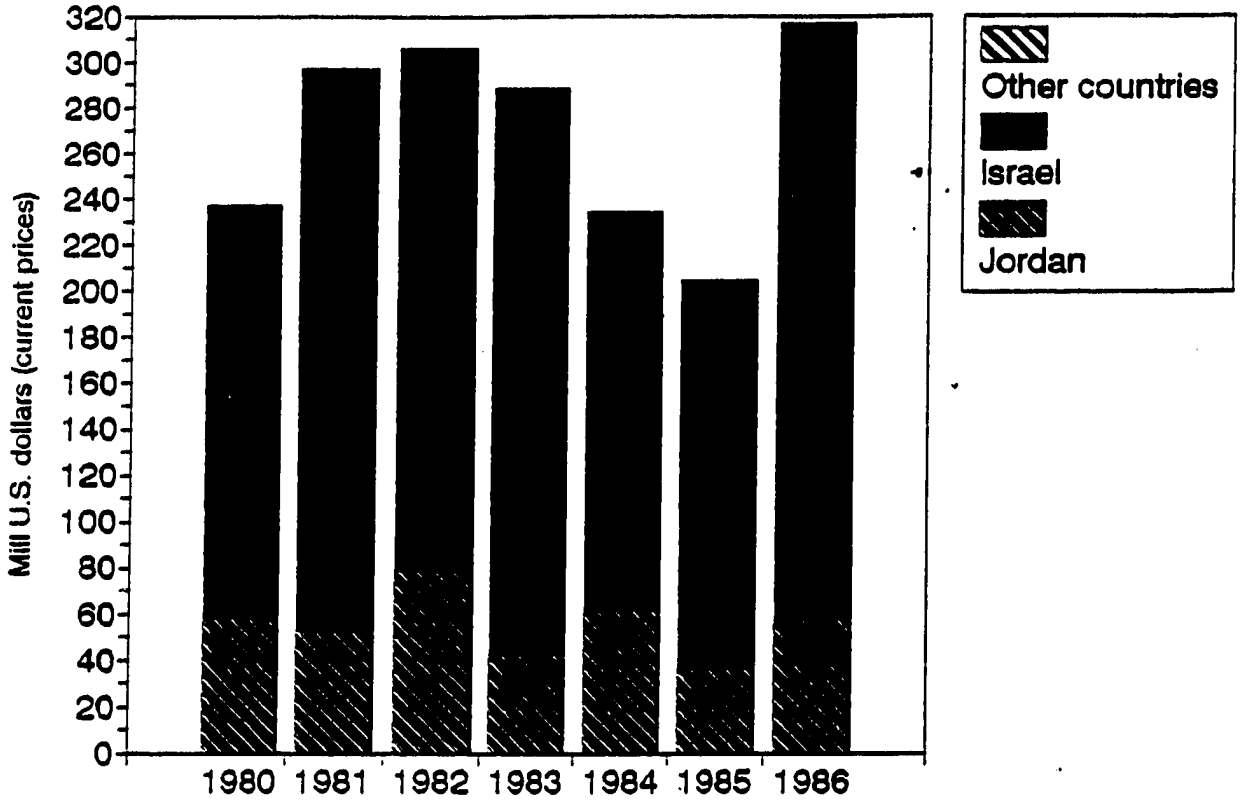

Sources: Statistical Abstract of Israel, 1991. Central Bureau of Statistics: Jerusalem and Administered Territories Statistical Quarterly, Vol. IX, No. 2 and Judeae, Samaria and Gaza Area Statistics, Vol. XVI, No. 1 and Vol. XVII, No. 2.

Figure 4: Total Agricultural Exports from the O.T., by Destination: 1980-86




Sources: Statistical Abstract of Israel, 1991. Central Bureau of Statistics: Jerusalem and Administered Territories Statistical Quarterly, Vol. IX, No. 2 and Judeae, Samaria and Gaza Area Statistics, Vol. XVI, No. 1 and Vol. XVII, No. 2.

Figure 5: Total Industrial Exports from the O.T., by Destination: 1980-86




Sources: Statistical Abstract of Israel, 1991. Central Bureau of Statistics: Jerusalem and Administered Territories Statistical Quarterly, Vol. IX, No. 2 and Judeae, Samaria and Gaza Area Statistics, Vol. XVI, No. 1 and Vol. XVII, No. 2.

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# WATER AND SANITATION IN THE OCCUPIED TERRITORIES

## DRAFT FINAL REPORT OF SECTORAL ANALYSIS

August 1992

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## I. EXECUTIVE SUMMARY

While the Israeli Water Authority is ultimately in control of all water resources in the Occupied Territories, and the Israeli Water Company (the Mekorot) is the distributor of water derived from Israeli-controlled sources, Palestinian municipalities and non-profit water authorities manage distribution networks. However, relatively few engineers work with these authorities, and there are minimal in-service training programs for any of the staff. Moreover, the management staff of these water authorities have virtually no experience or training in the economics of water management. There are no linkages with water supply management across the Occupied Territories, minimal linkages between water authorities and the small-scale, largely donor-funded water and sanitation projects, and minimal linkage between the water authorities, NGOs involved in water and sanitation, and organizations involved in health, agriculture and industry -- all sectors with inextricable links to water supply and usage. Few Palestinian institutions have the capacity for water quality testing and few donors have funded studies of water quality. Finally, the water authorities have few resources for use in repair and maintenance, resulting in general disrepair of many of the water systems; as a result, it has been estimated the more than half of the water supply passing through the system in the West Bank is lost through leakage or waste.

The West Bank water resources serve not only Palestinians in the area (who use an estimated average of 75-100 mcm per capita/annum), but also settlers (whose per capita use is not available) and Israeli residents (who use an estimated 354 mcm per capita/annum). In fact, Israel depends on West Bank aquifers for approximately 25% to 35% of its water use, depending on the assumptions of the total volume of water use. Current figures for per capita use in the West Bank are misleading, as many of the water departments pump the water supply for a total of only four to nine hours per week. Thus, the distribution of water (i.e., through pumping of the supply) does not necessary reflect the demand (if pumping were unrestricted). This contributes to the assumption on the part of some analysts that there may not be an actual water shortage in the West Bank. However, in addition to recognition of the "forced reduction" in demand, of considerable concern is the rapidly rising population in the area. Even without a larger influx of immigrants (both returning Palestinian refugees from outside the Occupied Territories and Israeli settlers), the population in Israel and the present Occupied Territories is expected to nearly double in 15 years.

The cost of water in the West Bank differs considerably. For example, the cost of water in Nablus is estimated at 40% of the cost of delivery, while the cost in Ramallah is estimated at 158% of delivery cost, with the "excess" covering repair and maintenance and water leakages. Farmers pay approximately half

of the cost of water delivery and receive a number of other agricultural subsidies which do not serve to encourage water-saving agriculture. Settlers pay approximately one-third the cost of water; one-third is subsidized by the government and one-third is paid by external donors.

Water supply in Gaza is markedly different from that of the West Bank. Current levels of water utilization in Gaza are clearly unsustainable, and are inflicting serious damage on the aquifer. While infiltration of irrigation run-off and waste-water (10-20 mcm) could be considered an important water source, it poses serious water quality issues: water draining from the east has already usually been used at least once in the chemical-intensive Israeli Negev agriculture, and Gazan agricultural water run-off also contains high levels of pesticide, herbicide, and fertilizer residues. Waste water usage is currently a major problem in Gaza, as untreated raw sewage and septic tank overflow seeps into and pollutes the groundwater. Substantial waste water treatment projects would be required to render this water source useful.

As in any system, irrigated agriculture consumes the large majority of water in the Occupied Territories. About 5% of agricultural land in the West Bank is irrigated, compared with some 60% of Gaza farm land and about 49% of Israeli farm land. However, Kolars reports that, in the past, Israel has 75% of available water resources for irrigated agriculture.[1] Subsidized agricultural water use is largely responsible for the "water shortage" in Israel. Current Israeli policy is to reduce water subsidies in 20% increments each year for the next five years. In addition to subsidies for Israeli farmers and settlers, the Palestinian production of water-consuming crops also contributes to inappropriate water demand. In the Gaza Strip, for example, more than one-third of agricultural land in Gaza is planted with citrus and flowers, both extensive water-consuming crops.

Several approaches to increasing the water supply have been discussed in international, regional and bilateral meetings, including for example, large-scale desalinization projects, importation of water from the Nile in Egypt and importation through the "Peace Pipeline" from Turkey. The latter two projects are considered by many to be impractical for political as well as technical reasons, and face considerable obstacles in their own countries. Desalinization, while initially expensive, is being considered by both Israeli and Palestinian engineers and planners. The options which are more feasible and less costly include rainwater collection and sewage treatment and effluent use. While not without problems, in combination with substantial improvements in demand, they could contribute to improvements in water scarcity.

Table 1 presents a summary of conclusions and recommendations.

## II. INTRODUCTION

### A. Importance of Water and Sanitation for Development in the Occupied Territories

The importance of water supply and use, and of sanitation with respect to development in the Occupied Territories cannot be overemphasized. Aside from the historic political issues inherent in conflicts over water rights, the availability of a clean water supply and adequate sanitation have significant health and economic impacts. The health impacts, including notably diarrheal disease (which worldwide results in more than two million deaths annually and which is a leading cause of morbidity and mortality in the Occupied Territories) are avoidable and costly. The direct and indirect economic impacts are many, including:[2]

* lost productivity resulting from both health effects of unsafe water and time spent in water collection;

* costly development of large-scale alternative means of accessing potable water (e.g., desalinization plants); and

* high cost to individuals, industry and society of investments in disparate and individual solutions to both water supply and waste disposal in comparison with central public systems.

In recent years, the growing concern for economic, health and social costs of inadequate and unsafe water supply and sanitation has given rise to a number of innovative projects which have shown demonstrably positive benefits (including economic benefits) to agriculture, industry and to the public and private sectors in general.[3] However, according to the recent World Bank report on Development and the Environment:

> "In most countries management of water resources is fragmented ... and is done by "command and control" ... The challenge is to replace this system with one that recognizes the unitary nature of this resource and its economic value and that relies heavily on prices and other incentives to encourage efficient use of water."[4]

This challenge raises myriad complex issues for all countries, including, for example, appropriate pricing policies for residential, agricultural and industrial use and the need to alter demand patterns, in general, and agricultural water use specifically. The latter is particularly difficult in historically agricultural societies which have scarce resources on which to base an industrialized economy.

In the Occupied Territories, water-related issues, which are difficult under any circumstances, are rendered highly complex given that the West Bank water resources serve not only Palestinians in the area but also settlers and Israeli residents. It has been estimated that the combined water deficit of Israel, the Occupied Territories and Jordan is 300 million mcm annually.

The primary source of water in the Occupied Territories is rainfall, which, after evaporation, is derived from groundwater sources using six major underground aquifers in the West Bank and multiple sub-aquifers in the Gaza Strip. The sources of surface water include the Jordan and Yarmuk Rivers, in addition to the Dead Sea, the Mediterranean Sea and various springs and seeps.

The total domestic water supply made available to the West Bank in 1989 was estimated at 110 million cubic meters (mcm), with a per capita consumption estimated at 35 cu.m/annum. In the Gaza Strip, the total estimated supply made available to Palestinians was 90 mcm, with per capita consumption estimated at 35 cu.m/annum.[5] However, estimates of total available water supply range widely, as is discussed in Part III of this report.

Approximately 60% of groundwater supplies for Israel derive from the two largest aquifers:[6] 1) the Yarqon-Tanninim Aquifer (shared with the West Bank, 94% of water from this aquifer was used in Israel in 1988[7]), and the Coastal Plain Aquifer (which borders on the Gaza Strip). The Jordan River basin provides Israel with approximately 35% of fresh water potential.[8] Although it represents a small proportion of water sources, Israelis use about 65% of wastewater, primarily for irrigation.[9] Comparatively, Israelis consume far more water resources than do Palestinians: 450 mcm/annum in 1988, with per capita annual consumption 100 cu.m, more than three times that of Palestinians in the Occupied Territories.[10] The consumption rate for settlers is not available. The scarce water resources of the Gaza Strip also serve both Palestinians and Israeli settlers.

As is true in many countries, irrigated agriculture consumes the large majority of water in Israel and the Occupied Territories. Accordingly, it is here that the major savings can be made. Notably, a far higher percentage of Israeli agriculture is irrigated than that in the West Bank, but less than that in the Gaza Strip - which has far fewer water resources. About 49% (2,153,000 dunums) of agriculture in Israel is irrigated, compared with 5% (97,350 dunums) in the West Bank and 60% (114,000 dunums) in the Gaza Strip (one donum = .23 acres).[11]

The economic, environmental, and health aspects of water resources pale in comparison with the political issues which are both cause and effect of the water crisis in Israel and the Occupied Territories. While one could conclude that "enlightened self-interest would lead the states of the region to cooperate in

maximizing the efficient utilization of existing resources and in developing additional sources of supply,"[12] as Gruen has suggested, history has not demonstrated that nation states act on such principles. Notably, however, during the multilateral session of the Middle East Peace Conference, held in January, 1992, a special working group on water resources was initiated and met in May, 1992. That working group, which included Palestinians as well as representatives of countries throughout the region and from the U.S., Europe and Japan, has the potential to serve as a focal point for the many complex issues which must be addressed, and as a mechanism for assembling the full range of data available with respect to water and sanitation concerns. This latter point is significant for planners and decision-makers.

Obtaining accurate data on water supply and demand, and related health and socioeconomic indicators, is difficult under the best of circumstances. In the Occupied Territories, the intrusion of politics into discussions of water supply and demand affect data collection, analysis and presentations, making it extremely difficult to determine what data are sufficiently accurate to use as the basis for discussion. Moreover, the Mekorot, the Israeli Water Authority, is ultimately in control of all water resources in the Occupied Territories and the Civil Administration (CIVAD) has approval authority over all water and sanitation projects, including those which are donor-funded. Palestinian municipalities and non-profit water authorities manage distribution networks, but within the context of decision-making authority by the Mekorot and the CIVAD. This decision authority also extends, necessarily to availability of data and information.

In this report, the full range of estimates of supply and demand are provided, insofar as possible, with caveats where appropriate. Because of the significant differences between water supply in the West Bank and Gaza Strip, sectoral trends in these two areas are described separately. While it would be beneficial to consider related environmental issues (e.g., air quality, industrial pollution of water supplies), these data are scarce and required data collection was beyond the scope of this sectoral analysis.

## B. Key Sectoral Issues

In order to place the presentation of the sectoral trends, constraints and opportunities in context, two key sectoral issues are addressed briefly: the politics of water in the Occupied Territories and subsidies provided to Israelis and to settlers in the Occupied Territories.

## B.1 The Politics of Water

Few subjects in the Occupied Territories are more politically charged than water policy; access to water is closely linked to land rights, and disputes over the latter constitute the core of the Palestinian-Israeli conflict. Although wastewater and sanitation issues have only recently begun to be addressed (either through studies or ameliorative development projects), that issue is also political, as it is perceived by Palestinians as closely related to Israeli settlements and wasteful Israeli residential practices, and by Israelis as a result of wasteful Palestinian industrial and residential practices.

Palestinians resent the effective prohibitions on their drilling wells. They perceive such restrictions as highly discriminatory, since they believe that settlers suffer from no such disabilities, nor do Israeli farmers over the Green Line (the 1967 border) whose activities rely on the common aquifers. Israelis counter that international water law sanctions "historical users," and that they have been using the aquifer since before 1967. However, the Palestinians and others argue that Palestinians have as much "historical" right as do the Israelis (if not more) and that in any case, the Palestinians never signed any agreements on use.

In part, because of the politics of water in the Occupied Territories and the distrust of Israeli data, Palestinians are highly suspicious of restrictions against overpumping groundwater, however justified they may be on technical grounds. For example, if one treats the Yarqon-Tanninim aquifer as a common-property resource, then some form of collective action is necessary to manage this resource. Unfortunately, because Palestinians do not regard the Israeli authority, Mekorot, as legitimate, and because they perceive that this institution discriminates in favor of Israelis, Palestinians denounce restrictions on drilling. Yet, some restrictions would be necessary under any political arrangement, and particularly in the Gaza Strip.

The types of ameliorative public and private policies described in the previously-cited World Bank report assume the ability for a government to make decisions with respect to a unitary economy, to establish linkages with its private sector, and to engage in negotiations with other countries. In economic terms, it assumes that only if water rights are tradeable can an efficient allocation of water emerge. It is not now possible to do this in Israel and the Occupied Territories, which share the same water sources, but dispute rights to these sources. Any system of trading water (or any commodity, for that matter) requires an initial specification of property rights.

## B.2 Israeli Water Subsidies

Israeli farmers, as is true with their American and European counterparts, enjoy a wide variety of output and input subsidies. Subsidies on outputs raise the marginal value product of water, thereby increasing demand. Subsidies on inputs which are complementary to water have the same effect. However, subsidized agricultural water use contributes to wasteful practices in any country. Israeli inefficiency of to water use thus directly impacts upon West Bank Palestinians, whose consumption is not subsidized in every jurisdiction.

Israeli agricultural water use is subsidized both directly and indirectly. A crude estimate of direct subsidies may be obtained by contrasting the price of water to farmers with Mekorot's estimate of the cost of supplying water. According to one estimate,[13] Israeli farmers pay about $0.18/cu.m. at the average 1990 exchange rate. This was reportedly less than 50% of the cost to Mekorot, the Israeli Water Company, of supplying the water.[14] Because 25%-33% of Israeli water comes from aquifers located in and shared with the West Bank, Israeli over-use of water significantly constrains the expansion of irrigation by Palestinians in the West Bank.

In recognition of the problem of excess water use, the Israeli government has taken administrative steps to curb agricultural water demand in recent years, including increased use of drip irrigation (invented by Israelis). It has been estimated that Israeli water use per irrigated acre fell some 20% from 1967 to 1981.[15] During the past decade, Israeli agricultural water use has increased very little, while real agricultural output has risen from approximately $1.7 billion to about $2.5 billion.

Current Israeli policy is to reduce water subsidies in 20% increments each year for five years. Such a policy shift is one of the most effective and efficient means of solving any "water shortage" in the West Bank and is in the interest of the overwhelming majority of Israelis and of all Palestinians. Notably, Palestinian farmers currently receive no subsidies for water use, for complementary inputs, or for outputs; indeed, their water use is greatly restricted by numerous CIVAD regulations. This places them at a competitive disadvantage with Israeli farmers, and with those in Jordan, as well. (For a discussion of Palestinian agriculture, see companion report, "Agriculture in the Occupied Territories.")

A final issue with respect to subsidies should be addressed. Settlers consume an estimated 25% of the total water in Gaza, although they are estimated at 3,000-5,000 individuals; this compares with more than one million Palestinians using the remaining 75%. In view of the severe water scarcity in the Gaza Strip, continued subsidization of water to Israeli settlers is

not only economically inefficient, it is ecologically destructive. From this standpoint, subsidization policies hasten the destruction of the aquifer on which settlers as well as Palestinians depend. Some have argued that the water shortage in the West Bank and Israel would largely disappear if Israeli agricultural producers were not heavily subsidized. On the other hand, because scant analysis of future demand given population growth has been conducted, it is not possible to make a categorical statement that there is no water shortage in the West Bank.

## III. SECTORAL STATUS AND TRENDS

This section will present a synopsis and synthesis of analyses of the water balance in the Occupied Territories and Israel. The task is impeded by both conceptual and data difficulties. Analysts do not always distinguish between water "use" and "consumption." These concepts are different: for example, all water which goes through a turbine is "used" to generate electricity, but only a small percentage is "consumed" or rendered unavailable for down-stream users. However, because "use" typically reduces water quality, even if it is not "consumed," most figures appear to refer to use, rather than consumption.

A second conceptual difficulty is more fundamental. Because the analysts who calculate water balances are usually engineers, they tend to present supply and demand for water as fixed quantities, which are independent of price. This presents an unbalanced picture, but in the absence of rigorous water economics studies, there is no alternative to presenting these numbers. However, readers should keep in mind the conceptual deficiencies which underlie these estimates.

### A. West Bank Water

#### A.1 Water Supply

Estimates of the availability of water from the principal source of water supplies in the Occupied Territories (rainfall-minus-evaporation) range from 600 mcm/annum[16] to 900 mcm/annum.[17] (See Table 2.) Figure 1 shows the principal drainage basins of the West Bank. The Yarqon, Alexander, and Hadera catchment areas replenish the Yarqon Tanninim aquifer; rainfall in the Qishon basin supplies the Northeast aquifer, while the basins to the east of the Mediterranean/Dead Sea drain into the Jordan Valley aquifer.[18] The first of these discharges water to the coastal plain at an estimated rate of about 335 mcm/year, the second at 140 mcm, and the third discharges about 25 mcm/yr into the Jordan Valley. Of considerable concern is evidence that groundwater is being exploited too rapidly in Israel, with diminishing supply for all residents of the area.

For example, the water table in the Yarqon-Tanninim aquifer has fallen at a rate of 0.3-0.4 meters per year.[19]

## A.2 Water Demand

The demand for West Bank water in the West Bank, Gaza Strip and Israel is shown in Table 3. As usual, agriculture is the largest user of water (75-86%). As Figure 1 shows, most irrigated farm land is in the Jordan Valley or the valleys of its tributaries. A little over half (50-60%) of the water used by Palestinians comes from the eastern source.[20]

Despite differing estimates of utilization, it is evident that the supply of water in the West Bank exceeds the quantity currently used by Palestinians alone. However, two additional demands on West Bank water exist. First, Israeli settlements in the West Bank consumed some 40-50 mcm/year in 1986,[21] of which 30 mcm was used by the Jordan Valley settlements. According to Benvenisti and Khayat, "by 1990, 60 mcm of water will be available to 30 Israeli agricultural settlements and 100 mcm for the total West Bank Jewish population...".[22] Tamimi estimates that settlements used some 65 mcm of water in 1991, 53 for irrigation and 12 for domestic use.[23] Note that when the data for Palestinian use (Table 3) are compared with these numbers, Israeli settlers (who number perhaps 120,000) in the West Bank are using nearly half as much water as the Palestinians who live there, and whose numbers total more than one million.

A second, and far more important, source of demand for West Bank water is Israeli use of the Yarqon-Tanninim and Northeast aquifers from wells inside the 1967 borders of Israel (the so-called "Green Line"). Israeli wells largely dating to before 1967 use 470[24] or 475mcm[25] per year from these two aquifers. This constitutes between 25% and 35% of the total Israeli water use, depending on the assumptions on the volume of total water use (see Table 3). Total Israeli use of water originating as rainfall over the West Bank comes to approximately 535 mcm[26] or 570 mcm (using the settlement estimate of 100 mcm and setting use of the northern aquifers at 470 mcm).

The total Israeli and Palestinian use of the waters originating in the West Bank is then approximately 650-700 mcm/year. This rough estimate falls between the estimates of supply given in Table 2. It has been argued[27] that there is no shortage of water in the West Bank, even if current levels of Israeli use are taken as given. However, these and other estimates ignore the artificially low "demand" for water by Palestinians. In reality, the "demand" is controlled by the CIVAD, which determines what quantity of water will be available to Palestinians in a variety of ways. For example, it is not uncommon for water supplies to be halted (i.e., by restricting flow to Palestinian communities) and for small-scale water projects to be delayed significantly

and to be altered such as to result in reduced water flows to the intended (Palestinian) beneficiaries.

## A.3 Sanitation and Water Quality

Although data are scarce, there are some indications of significant water quality problems in the West Bank. For example, in 1991 there was a case rate of 246/100,000 for dysentery (amoebic and bacillary) in the West Bank.[28]

A high rate of health problems associated with poor water quality and sanitation facilities should not be surprising. Even as recently as 1990, approximately 180 West Bank villages with some 355,300 inhabitants were not served by a central water supply system,[29] depending on local wells and other sources with no protection against contamination. Moreover, although wastewater systems exist in all cities and most towns, these systems do not always cover the entire municipal area. Even in the Jerusalem District, in which the collection system is managed by the Israeli Municipality, only 85% of the homes are connected to the system. In Ramallah and El Bireh, and in Nablus, only 75% of the population is connected to sewer mains; in Hebron, there is 65% coverage.[30]

About 40%-50% of urban wastewater, most village and rural wastewater, and a reportedly large, but undocumented, proportion of wastewater from UNRWA refugee camps is disposed of using septic tanks, latrines, subsurface drainage systems, percolation pits or is simply allowed to flow out into open channels.[31] Much of this wastewater is used for irrigation in the West Bank and in Gaza, creating considerable health hazards for farmers and consumers. The only wastewater treatment plant in the West Bank is in Ramallah. The plant, which became operational in the early 1970s, has not yet been evaluated for wastewater characteristics or management efficiency.[32]

As is true elsewhere, the West Bank has a serious and escalating solid waste disposal problem. Although municipalities, which have responsibility for solid waste disposal, have made efforts to organize the refuse collection process, technologies lag far behind that of other areas, including Israel. Disposal of waste in land fills which border residential areas is problematic, as is the dumping of refuse in undesignated areas; the latter is particularly true in rural areas in which no land fill exists. No solid waste treatment plant exists and there are no recycling systems.[33]

## B. Water in Gaza

### B.1 Water Supply

Water supply in Gaza is markedly different from that of the West Bank. Current levels of water utilization in Gaza are clearly unsustainable, and are inflicting serious damage on the aquifer.

There are major differences in the estimates of water supply in Gaza (see Table 2). This is not so much because of unexplained differences in the estimates for rainfall, but rather:

1) assumptions on the percentage of rainfall which reaches the upper (sweet-water) aquifers, and

2) the sustainability/desirability of including additional sources such as "groundwater draining from the East" (perhaps 5-10 mcm/yr) or the infiltration of irrigation run-off and waste-water (10-20 mcm).[34]

The latter alternative resources pose serious water quality concerns: water draining from the east has usually been used at least once in the chemical-intensive Israeli Negev agriculture, and Gazan agricultural water run-off contains high levels of pesticide, herbicide, and fertilizer residues. Waste water usage (described below) is currently a major problem in Gaza, as untreated raw sewage and septic tank overflow seeps into and pollutes the groundwater. Unless these sources are conceived of as potential future supply (i.e, after major projects for treatment and recycling are operative), their inclusion in "sustainable supply" is dubious. Notably, Haddad[35] explicitly describes the sources of supply in excess of groundwater recharge; other estimates rarely do so.

Sources also differ in their estimates of the percentage of rainfall-evaporation which recharges the aquifers. These estimates, however, do not range as widely as the estimates of "total supply," as discussed in the preceding paragraph. Estimates range from a high of 42 mcm to a low of 25 mcm, assuming a recharge percentage of 38.2% and 25%, respectively.

### B.2 Water Demand

As a comparison of Tables 2 and 3 show, current water use in Gaza far exceeds estimates of sustainable supply. According to the most thorough study of Gazan water use carried out thus far, Palestinian agricultural and domestic water use in 1990 was some 29 and 65 mcm per year, respectively. Settlers in Gaza (estimated to be 5,000 in 1990) consume an estimated 30-60 mcm for agriculture.[36] The resulting total is roughly 140 mcm per year, a number which excludes settlers' domestic consumption. Current water utilization in Gaza is today four times above

sustainable levels. By some calculations,[37] there is barely sufficient sustainable supply to cover municipal use in Gaza, with nothing left over for the major water user, agriculture.

The consequences of such overuse are grim: the fresh water aquifer is being rapidly depleted, leading to sea-water intrusion from the West and to the upcoming of the deeper brackish water aquifer from below and to the East. This is a dangerous situation, which has serious long-run consequences for Gaza. It is easy to damage aquifers, and very difficult to repair them, especially once salt water seeps into them. Many of Gaza's 1900 artesian wells have already been closed because their water is too saline for human consumption.[38]

B.3 Sanitation and Water Quality

In Gaza, the case rate for dysentery (amoebic and bacillary) was 1,072/100,000 for dysentery; this is three times that of UNRWA refugees in Jordan,[39] and indicative of serious water quality problems. Using World Health Organization (WHO) standards for testing drinking water in 50 wells in the Gaza Strip, Abu Safiyeh has estimated that as much as 85% of the water in Gaza wells is unfit for human consumption.[40] Gazan aquifers are further threatened by pollution from waste-water seepage. In spite of the fact that most of the towns in the Gaza Strip have wastewater collection systems,[41] only about 40% of all houses in the Gaza Strip are connected to a sewage system; the rest use unprotected boreholes and tanks for sewage disposal.[42] Of further concern is the fact that the existing sewage systems themselves are deficient. In Gaza City, for example, where about 80% of the houses are connected to the sewage system, the collected sewage is partially drained into the Mediterranean near Al-Shati Camp, while the rest is collected in lagoons south of Gaza City, where it remains to evaporate or, to percolate into the water table, polluting shallow wells in the area.[43] In the North Zone, the sewage is collected without treatment, which can contribute to numerous health and water pollution problems. A similar situation occurs in Rafah.[44]

In spite of the fact that 65% of the population of the Gaza Strip resides in refugee camps, these camps, in contrast to towns in Gaza (see above), do not yet have fully functioning wastewater collection systems - some 25 years after the occupation. In fact, UNRWA refugee camps should be of considerable concern to health professionals and water and sanitation specialists. The camps have deplorable sanitary conditions, a particular concern given that (assuming a population of one million), the population density in the Gaza Strip is 2,777 persons/sq.km., making it one of the most densely populated areas in the world. As a result of the continued use of public latrines, overflowing of private latrines and open wastewater channels, there are large accumulations of raw wastewater, which is used for irrigation of

vegetables in the camps and nearby areas.

As is true with all societies, social constraints with respect to water and sanitation abound. One example in the Occupied Territories is particularly noteworthy. Reuse of properly treated waste water effluent could contribute as much as 25-30 mcm/year to Gaza's water supply.[45] Many farmers refuse to use effluent because they fear that Mekorot will reduce their fresh water allocation, because they dislike the odor, and/or because treated effluent is not suitable for all irrigated crops.

## IV. INSTITUTIONAL ARRANGEMENTS

### A. Public and Private Sector Organizations

The foundation of water policy in Israel and in the Occupied Territories is the Israeli Water Law of 1959; authority for execution of the law rests with the Ministry of Agriculture. The Water Commissioner, who is responsible to both the Minister of Agriculture and the National Water Council (appointed by the Government) is charged with implementing the law.[46] Since the early 1970s, the Ministry of Health has had authority for drinking water quality and wastewater use.[47] Two other key Israeli agencies are:[48]

1) Tahal, the official planning agency with respect to water and sanitation issues; and

2) Mekorot Water Company, the national company through which approximately 65% of the water supply for Israel is sold.

Prior to 1967, a number of Palestinian municipalities had established water and engineering departments; since the occupation, all decision-making authority has rested with the Civil Administration. The role of the municipalities has been limited to operation and maintenance of existing water distribution systems and for wastewater collection and treatment facilities for non-refugees; approval for all new projects rests with the responsible Military Officer at the CIVAD.[49] Four regional water authorities predominate in the West Bank; these are:[50]

* the Israeli Jerusalem Municipality, which supplies water to Jerusalem and its environs;

* the (Palestinian) Ramallah Water Authority, non-profit organization;

* the (Palestinian) Bethlehem Water Authority, which provides water to Bethlehem, Beit Jala and its environs; and

* the (Palestinian) Nablus Water Authority.

Each of the Palestinian water authorities, and local authorities and municipalities, either purchase water from the Mekorot or use their own sources. In the Gaza Strip, all water is supplied to non-refugees by municipalities and village councils from artesian wells; refugees in the Gaza Strip receive their water through UNRWA from wells located in the camps.[51] Palestinian village councils (which exist in approximately one-fourth of all villages) have responsibility for "initiation and development of public services in the village, including water supply and sanitation. Most villages without local councils have formed committees to assume this role.[52]

Several Palestinian non-governmental organizations (NGOs) are actively involved in water and sanitation projects, including for example:

* the Land and Water Institute,

* the Palestinian Hydrology Group,

* the Palestinian Agricultural Relief Committees (PARC), and

* the Agricultural Engineers Association.

In addition, there are 91 engineering offices and contractors in the West Bank and 21 in the Gaza Strip, many of which have been involved in conducting studies of water and sanitation in the Occupied Territories. Al-Najah University has the capacity to conduct water quality studies, as does Beir Zeit University, which has an environmental sciences laboratory.

## B. Donor Involvement in Water and Sanitation Projects

Although donor support for water and sanitation projects is controversial (see Part VI), such support has been crucial in expanding the availability of water resources for Palestinians, in the absence of Israeli efforts in this regard. According to a recent report of the United Nations Development Program, since 1986 the total amount of donor funding for water and sanitation projects has been just over $25.8 million, with one planned project (a hydrology survey) budgeted at nearly $1 million. An additional $832,183 has been allocated by donors for irrigation projects. These figures do not include Arab donors.[53]

By far, the UNDP has been the dominant executing agency; 32% of all non-agriculture specific projects were funded through the UNDP. A.I.D. has donated just over $3.7 million (14%) through U.S. private voluntary organizations, primarily Save the Children (SCF) and Catholic Relief Services (CRS).[54] These figures should be viewed with caution, as they are not all-inclusive of A.I.D.-funded projects.

Donors have been involved in water resource development (from large scale projects such as the Ramallah Water Tower to small scale wells). They have also supported large and small-scale sanitation projects. For example, UNDP has started several sewage schemes in Gaza, the largest of which is the Greater Jabalia area sewage scheme. This project has the dual purpose of improving sanitary conditions and reusing treated effluent as irrigation water. Given the critical water shortage in the Gaza Strip, continued investments need to be made in improved sewage treatment in Gaza, even though the estimated cost of such systems for the entire Strip could approximate $80 million.[55]

Donor-funded projects have not been without problems. Recently, for example, UNDP terminated without completion its Khan Younis sewage project because the settlers wanted to use the effluent. An A.I.D.-funded water tower in Ramallah, which is now located within a settlement area, cannot readily be accessed by donors and is reportedly meeting the needs of both the settlement and surrounding army camps. One large ($1.2 million) stormwater drain project (funded by A.I.D. through ANERA) has faced constraints of design, management, and local practices such as garbage disposal in the lagoon and discharge of tile factories' waste water. Activities to ameliorate this situation are currently underway.[56]

There have been many examples of water and sanitation projects, planned by U.S. PVOs, which have been delayed for long periods of time, denied, or which have had radical changes required in their design, rendering them less cost-efficient and useful for the intended beneficiaries. Only if the U.S. can be assured that its projects will reach the intended beneficiaries, and would be favorably viewed by the local population, should such projects be undertaken.

## V. CONSTRAINTS TO DEVELOPMENT

Four types of constraints are highlighted: bureaucratic constraints, inadequate pricing structures, inadequate technical and managerial capacity to plan and execute water and sanitation projects, and paucity of data and economic analysis, in particular.

## A. Bureaucratic Constraints

The most significant bureaucratic constraint, Israeli subsidies for water for its population within the Green Line and for settlers in the Occupied Territories, is discussed in detail in Part I and will not be further described in this section. Additional constraints include:

* CIVAD delay and disapproval of urgently required water and sanitation projects;

* lack of access on the part of Palestinians, donors, PVOs and others to critical information required for planning and managing water and sanitation projects; data from Israel are judged by Israelis to be security-related - other possible sources of data (e.g., municipalities) have minimal data collection and analysis capacity;

* strict GOI control of water supply to Palestinians, which not only limits their access to potable water and water for agricultural use, but also distorts demand data.

## B. Pricing Structures

The cost of water in the Occupied Territories differs considerably by locality. For example, the cost of water in Nablus (a municipal water authority) in 1990 was $0.676 per cu.m, approximately 40% of the cost of delivery. In Ramallah, which has a non-profit water authority, the cost was $1.13 per cu.m, or 158% of delivery cost, with the "excess" covering repair and maintenance and water leakages.[57] Gazans pay an average of $0.37 per cu.m. for drinking water, with a range of $0.22/cu.m (Beit Hanon) to $0.52/cu.m (in Rafah).[58] In contrast, water charges for the domestic sector in Israel were $.26 per cu.m.[59]

Table 4 presents a recent estimate of the revenues, operating expenditures, and capital spending for potable water and sanitation in the West Bank and Gaza Strip. These services are underpriced; for sanitation, there is no direct charge, but only a connection fee.[60] Gaza's municipalities apparently face fewer problems of cost-recovery than do those in the West Bank. Indeed, it appears that revenues exceed expenditures for potable water and for recurrent costs of sanitation systems. However, given the poor sanitation conditions and inadequate services (see above discussion), the question of cost-effectiveness and efficiency of services vis-a-vis "return on investment" for the municipalities (or their funding agencies) should be further explored. Moreover, these municipal data have not been evaluated and the financial management of these, as well as the West Bank municipalities, is reportedly inadequate. Unless a reasonable

pricing structure is in place, any investment in water infrastructure would not be likely to be sustainable.

## C. Inadequate Managerial Capacity

While precise figures with respect to human resources are not available, it is estimated that there are only 6-8 water and sanitation engineers with a BS degree or higher in the Occupied Territories. Most of the engineers employed with the municipalities are civil or mechanical engineers or specialists in biological or agricultural sciences. A large proportion of the staff of municipal water departments are technical and semi-technical personnel. For example, in the Nablus Municipal Water Department, 82% of the 171 total staff members fall within this category, while 12% are management/administrative staff and 6% are engineers.[61] In the Gaza Strip, 629 persons are employed by municipalities or local authorities in water and sanitation (not including pest control).

Palestinian municipalities do not have an adequate managerial infrastructure to design, implement and maintain improved potable water and sanitation facilities. Moreover, the staff of the municipalities have had almost no opportunity for continuing education, and therefore lack important knowledge and skills with respect to new resource-conserving technologies and managerial practices. There is essentially no regular basic or advanced training available. One of the few courses which has been offered for water engineers was sponsored by SCF and the Association of Engineers in 1991.

## D. Paucity of Economic Analyses of Water Supply and Demand and Sanitation Issues

The analysis and discussion of water issues in the Occupied Territories and Israel has been carried out primarily by engineers, as is true in most countries. The result is that they tend to stress supply solutions at the expense of demand management and to treat "use" (demand) and "availability" (supply) as if they were fixed quantities, varying only with population for use or rainfall for supply. This analytic approach serves as a basis for the viewpoint, now echoed by many political analysts,[62] that Israel and the Occupied Territories are experiencing water shortage. The proposed pipeline from the Nile River to supply Gaza and the Negev and the "Peace Pipeline" from Turkey are two examples of the strategies which are based largely on this approach to analysis of water supply issues.[63]

Such discussions, however, often include minimal economic data, including, for example, to the role of prices in the allocation of resources. This is changing rapidly, as evidenced in recent meetings held to discuss resources in the Middle East, in general,[64] and in the Occupied Territories, in particular. As

engineers and economists are increasingly involved in joint efforts to analyze data and explore alternative solutions to this crucial problem, they face the difficulty that necessary economic data often have not been collected or, are of questionable validity. This is also true for sanitation issues in the Occupied Territories, although environmentalists in other geographic areas have been more involved in economic analysis of the issues. This is a fertile area for donor assistance.

## VI. CONCLUSIONS AND RECOMMENDATIONS

While there is some dispute with respect to whether or not there is presently a water shortage in the West Bank, there is little dispute that a severe water scarcity exists in the Gaza Strip. There is also little dispute with respect to the potential for future water shortages in the West Bank, given current population projections for the West Bank, Israel and Jordan. No question seems to exist with respect to sanitation: the situation is simply deplorable throughout the Occupied Territories. In terms of water quality, data have demonstrated clearly that much of the available water in the Gaza Strip is unfit for human consumption. Preliminary health and water testing data indicate that water quality in the West Bank may also be poor, although, given differences in water supply, it is not likely to be as grave a situation as in the Gaza Strip. In summary, the water and sanitation needs in the Occupied Territories are substantial, and in the case of Gaza, severe.

Notwithstanding these circumstances, under current political conditions, opportunities for large-scale A.I.D. assistance in water and sanitation may appear to be limited. The water supply is controlled by the Israeli Water Authority and the Israeli Water Company (Mekorot), although Israel has allocated scarce resource for Palestinian water and sanitation projects, depending largely on support from multilateral or bilateral donors. Palestinian municipalities and water authorities have little responsibility other than for distribution of water and management of wastewater and solid waste disposal. The CIVAD maintains strict control over all water and sanitation projects in the Occupied Territories. Thus, the systems planning and management functions, vital to the formulation of sound water and sanitation policies, are outside the purview of Palestinian institutions, and of donors which support them. Moreover, there is the distinct possibility that any investments in water and sanitation projects would be used by settlers. In both cases, assistance would be adverse to American interests and contrary to current foreign policy.

Nonetheless, both short- and medium-term development needs of varying size and scope abound, and the clear and compelling need for assistance makes donor investment in water and sanitation projects critical. This section discusses opportunities for the

Occupied Territories, in general, followed by a discussion of opportunities for the Gaza Strip, specifically. Table 1 presents a list of recommendations, linked to conclusions.

## A. Development Opportunities: Overview

It is essential that agricultural use of water in the Occupied Territories be reduced, particularly in the Gaza Strip. In the interim (and for continued application for local production), it is imperative that two options to reduce demand be followed; these are: 1) reorientation of cropping patterns, and 2) increased use of water-saving drip irrigation.

1) Reorientation of cropping patterns. Citrus is a relatively moderate water using crop (conventionally in Gaza, set at 1000 cu.m/dunum/year). Flowers, a crop introduced relatively recently to Gaza, use even more water: roughly 1700 cu.m/dunum/year. It is highly unlikely that production of such crops can continue on anything like the current scale into the next century. A shift towards vegetables is highly desirable on water use efficiency grounds, but this shift is hampered by political considerations. Palestinians find that it is more difficult for the Israeli government to confiscate land which is planted in orchards than in annual or seasonal crops. This is consistent with some readings of Ottoman Land Law, the ostensible legal basis for land administration in the Occupied Territories.

2) Use of Drip Irrigation. Only a small fraction of irrigation in the Occupied Territories currently uses drip methods. The increased diffusion of this water-saving technology should be an urgent priority for donors. Savings on citrus production in Gaza, for example, could approximate 300 cu.m. of water per dunum per year. However, drip irrigation is more expensive than other forms and requires considerable public investment in infrastructure and equipment such as the elevated water reservoirs which these pressurized systems require. Such systems also require sophisticated public and private sector management, which A.I.D. could also support.

Additional water conservation projects which would alleviate the present and future problems of water and sanitation include:

* rain-water catchment, conservation lagoons to recharge depleted aquifers and constructing small collection pools for rainwater draining off the roofs of houses and greenhouses; it is estimated that 7.14% of annual rainfall in Gaza (or 7.1410.28 mcm/yr) runs off into the sea;



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* wastewater treatment and solid waste disposal plants;

* recycling systems, including recycling plants which could be joint public/private sector ventures (these have important environmental impact and in many areas have been income-producing);

* immediate education of farmers and others in the use of treated effluent for irrigation;

* analysis of groundwater wells and repair as necessary;

* assistance in expanding water quality testing facilities.

A.I.D. could also contribute to the amelioration of the West Bank water situation:

1) by providing technical assistance and training to Palestinians working in municipalities, non-governmental organizations and educational and training institutions (including universities) to ensure that they have the necessary skills and knowledge to plan, manage, and evaluate water and sanitation projects at a variety of levels;

2) by supporting the development of information systems and clearinghouses which will help ensure that Palestinians have adequate data on which to base regional, local and project-level water and sanitation plans; there are important opportunities for regional cooperation with respect to information and data;

3) by continuing policy dialogue with the Israeli government concerning the adverse consequences of continued Israeli agricultural subsidies on efficiency and equity in water resources; and

4) by supporting regional cooperation projects in water and sanitation among the Occupied Territories (or its autonomous entity), Jordan and Israel, including information systems (see # 2 above), recycling systems, and water supply projects.

Political change would alter considerably opportunities for American assistance for water and sanitation projects in the Occupied Territories. In that case, A.I.D. could certainly provide capital, managerial, and training assistance to municipalities for the construction of fresh and wastewater supply systems. However, prior to the design and initiation of such projects, a more thorough analysis of the demand for, and supply of water (and related sanitation issues) is warranted.

This should include thorough economic analyses, which were not identified prior to the preparation of this report, but which would contribute important data and information to the planning process.

## B. The Gaza Strip

While it may be socially difficult to do so, broad-based economic planning must take into account the need to shift the Gaza Strip from an agricultural to an industrial and service base over the long term. In the meantime, utilizing less water-intensive agricultural techniques (see above) is critical. In addition to the other development opportunities mentioned in section A, several of the more general options to increase the supply of water in the Gaza area are briefly described here. Because they are not perceived as candidates for A.I.D. funding at this juncture, little detail is presented with respect to these policy options.

1) Reverse-osmosis desalination of water from the deep aquifer offers some medium-term relief to the Gazan water crisis. Such water can be produced at a cost of approximately $.30-.35 per cu.m..[65] However, this is only a "stop-gap" measure, since the brackish groundwater is a depletable resource.

2) Sea-water desalination plants have been studied in the context of Gaza. UNDP conducted a preliminary study in 1990 on the construction of a dual purpose, electric power and desalination plant, with outputs of 50 megawatts and 18 mcm of fresh water per year. IDE Technologies offered an alternative plan using fresh water. The estimated costs of fresh water were respectively $1.00 and $.48/cu.m. Such plants are, of course, both capital and energy intensive. The capital cost of the IDE plant was placed at $157.5 million.

3) In the late 1970s, Anwar Sadat suggested to Menachem Begin that Nile water could be transported to Gaza and the Negev.[66] The capital cost of supplying 105 mcm/yr of water to Gaza from this source has been estimated at $142 million, with the unit cost (inclusive of investment at 12% interest) just under $.30/cu.m.[67] Such a project encounters two major problems:

   -- It assumes that the riparian Nile states will have a surplus of water which they will be willing to sell to Gaza and Israel. This is very dubious. Egypt has ambitious land reclamation schemes, and its irrigation management system is plagued by deep-rooted inefficiencies (e.g., under-pricing

and an ineffective public sector). Sudan, Ethiopia, and Uganda also hope to increase their utilization of Nile waters.

-- The political and legal complications are numerous. Many Egyptian politicians are deeply hostile to the plan, while its legality has been questioned by Ethiopians and Sudanese. Such a project would be very difficult even if Gaza were part of an independent Palestinian state. Its chances under continued occupation are effectively zero.

4) purchase of excess water from the Litani River in Lebanon to Israel, the West Bank and to Jordan; this suggestion is not seen as feasible at this time, given political considerations;

5) construction of a "Unity Dam" which would be used to derive water from the Yarmuk River; and

6) purchase of water from Turkey through a "Peace Pipe Line" or "Mini-Peace Pipeline" (a smaller-scale version of the former); the Sea of Galilee and/or the Unity Dam on the Yarmuk river would be used as reservoirs for Palestinian and Jordanian water; the complex multinational nature of this project, and its start-up costs render this project unlikely, although it still has strong proponents.

It is the considered opinion of the authors of this report that, if Israeli subsidies of water for residents within the Green Line and for settlers in the Occupied Territories were eliminated, water conservation projects initiated immediately, and the economic base in Gaza shifted from agriculture to industry, it will not be necessary to import water from external sources. Desalinization is a possibility, but could await decreases in start-up costs.

## C. Recommendations

Recommendations are presented in Table 1.

TABLE 1: WATER AND SANITATION RECOMMENDATIONS

| Conclusions | Recommendations |
| --- | --- |
| 1. While data with respect to water shortage in the West Bank are somewhat conflicting, available evidence points clearly to a shortage of water given restrained demand and population growth. Evidence of water shortage for the entire geographic area, even given wastage resulting from pricing policies in countries in the region, supports this conclusion. The Gaza Strip suffers from an extreme water shortage at present and the population growth rate points to an alarming shortage in the near future. | 1.1 A.I.D. should provide technical assistance, training, commodities and other support for the design and implementation of small-scale water and sanitation projects in the West Bank and Gaza Strip, utilizing the most appropriate technologies which encourage water-savings; e.g., rain-water catchment basins, conservation lagoons, and collecting pools for rainwater runoff.<br><br>1.2 A.I.D. should provide technical assistance, training, commodities and other support to implement waste-water recycling, large-scale water-catchment and other projects in the Gaza Strip to alleviate that area's severe water shortage.<br><br>1.3 In the event of political change, A.I.D. should consider support for larger scale projects throughout the West Bank and Gaza Strip, developed in conjunction with other funding agencies and in view of the water policies of both Israel and Jordan. |

1.4 A.I.D. should ensure that, at a minimum, all of the agricultural projects it supports in the Occupied Territories are developed and implemented in recognition of the problem of water shortage and water quality in the entire geographic area, and in the Occupied Territories and the Gaza Strip, in particular. This includes, for example, support for crop development and production (e.g., discouraging citrus production in the Gaza Strip), pesticide use (which impacts on the water supply), drip irrigation, and education of farmers and others in the use of treated effluent for irrigation.

1.5 A.I.D. should continue policy dialogue with the Israeli government concerning its water pricing policies and encourage the GOI to make available data required for use in adequately planning water and sanitation projects in the Occupied Territories.

1.6 A.I.D. should support and encourage regional cooperation projects in water and sanitation among the Occupied Territories (or its autonomous entity, if political change occurs), Jordan and Israel.

2. Sanitation conditions, including solid waste disposal and water quality, are deplorable throughout the West Bank and Gaza Strip, including urban and rural areas and refugee camps. These conditions have both immediate- and long-term health, economic and social consequences, but represent an area for potential high impact for A.I.D. investment.

2.1 A.I.D. should provide technical assistance, training, commodities and direct funding for small-scale sanitation projects. In the event of political change, A.I.D. should support larger scale projects such as joint public/private sector recycling plants.

2.2 A.I.D. should provide technical assistance, training, commodities and direct funding support to conduct water quality studies in high-risk areas and to analyze the condition of groundwater wells and repair these wells as necessary.

2.3 A.I.D. should provide technical assistance, training and other support to municipal and private companies responsible for water and sanitation focusing on management and upgrading skills in existing and new technologies.

3. Palestinian municipalities and quasi-public water and sanitation entities have minimal capacity to adequately manage their operations. Private sector organizations involved in water and sanitation issues are few and relatively small, but nonetheless represent an important resource for both present and future developments in this area. A.I.D. is providing both general and specific assistance to upgrade the capacity of "public" (i.e., municipal) and private sector organizations to improve their effectiveness and efficiency at present and to serve as a foundation for improvements in the event of political change.

3.1 A.I.D. should provide technical assistance and training to municipalities and quasi-public agencies which are responsible for water and sanitation in the Occupied Territories. This assistance should focus on improving the planning, management and evaluation of their operations and specific projects and should include ensuring an improved capacity for maintaining cost and pricing data.

3.2 A.I.D. should provide technical assistance and training, commodities and direct funding to private sector organizations to improve their capacity to conduct broadbased assessments of water and sanitation issues, including in particular cost and pricing and utilization studies. This could include direct support for the conduct of such studies by the Palestinian private sector.

3.3 A.I.D. should provide technical assistance, training, commodities (e.g., laboratory equipment) and other direct funding to upgrade the capacity of Palestinian institutions (e.g., universities and private research institutes) to conduct studies of water quality and other environmental issues.

3.4 A.I.D. should provide technical assistance, training, commodities (e.g., microcomputers and related software and public documents) to enable the development of information systems and clearinghouses which will help ensure that Palestinians have adequate data on which to base regional, local and project-level water and sanitation plans.

Table 2

Estimates of the Supply of Rainfall-minus-evaporation Water Supplies for the Occupied Territories and for Israel (in millions of cubic meters - MCM - per year)

| Water Source | Estimates in MCM | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | WEST BANK | | GAZA STRIP | | | | | ISRAEL | | |
| | # 1 | # 2 | # 1 | # 2 | # 3 | # 4 | # 5 | # 1 | # 2 | # 3 |
| Rainfall | 2250 | 2800 | 110 | 144 | 100 | -- | -- | -- | -- | -- |
| Evaportation | 1530 | 1900 | 68 | -- | -- | -- | -- | -- | -- | -- |
| Total Supply | 720 | 900 | 57-72 | 35 | 25 | 65 | 60 | 1610-1650 | 1500 | 2050 |
| Proportion of supply.. | | | | | | | | | | |
| -- surface runoff | 50 | -- | 2 | -- | -- | -- | -- | 60-100 | -- | -- |
| -- surface flow | 22 | 176 | -- | -- | -- | -- | -- | -- | -- | -- |
| -- groundwater discharge | 648 | 724 | 42 | 35 | 25 | -- | -- | 950 | -- | -- |
| -- Jordan River & Lake Kinneret | -- | -- | -- | -- | -- | -- | -- | 600 | -- | -- |

Sources:
For the West Bank: (1) Haddad, M. Potable Water and Sanitation in the West Bank and Gaza Strip. Report prepared for Policy Research Inc., Clarksville, MD; 1992. (2) Tamimi, AR. Water: A Factor for Conflict or Peace in the Middle East. Jerusalem: Arab Studies Society and the Harry S. Truman Research Institute for the Advancement of Peace. Israeli Palestinian Peace Research Project, Working Paper No. 20; 1991/92.
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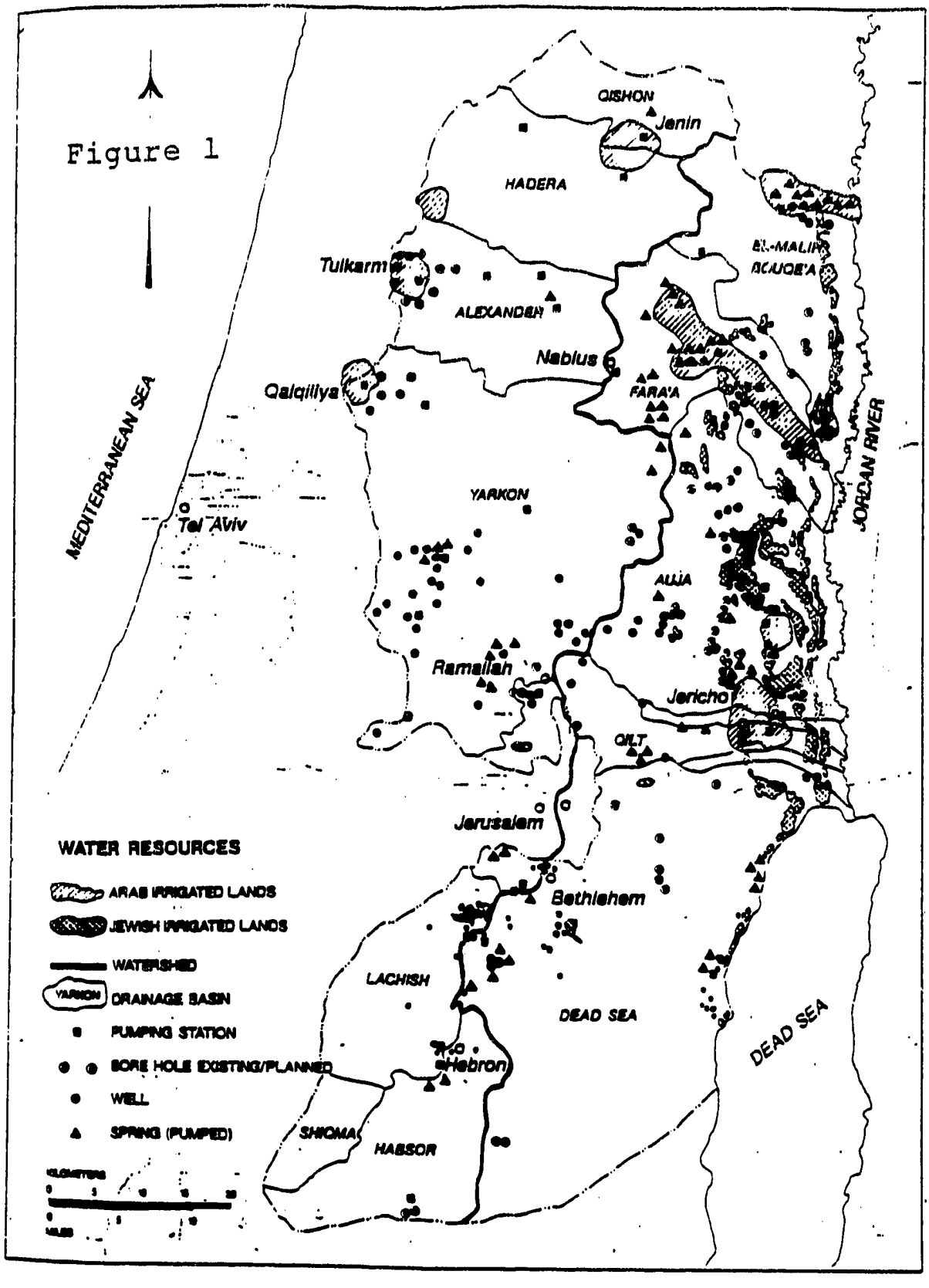
FIGURE 1
WATER RESOURCES




Source: Benvenisti, M. and Khayat, S. West Bank and Gaza Atlas. Jerusalem: the Jerusalem Post for West Bank and Gaza Data Project; 1986.



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Table 3

Highest and Lowest Estimates of Water Utilization for the Occupied Territories and for Israel, 1991 (in millions of cubic meters - MCM - per year, various years in late 1980's)

Estimates in MCM

| | WEST BANK | | GAZA STRIP | | ISRAEL | |
|---|---|---|---|---|---|---|
| Utilization | Lowest (1) | Highest (2) | Lowest (3) | Highest (2) | Lowest (1) | Highest (4) |
| Irrigated agriculture | 100 | 100 | 70 | 130 | 1100 | 1300 |
| Municipal & Industrial | 15 | 30 | 29 | 20 | 550 | 560 |
| Total ..... | 115 | 130 | 99 | 150 | 1650 | 1860 |

Sources:

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2. Kally, E. Options for Solving the Palestinian Water Problem in the Context of Regional Peace. Jerusalem: Arab Studies Society and the Harry S. Truman Research Institute for the Advancement of Peace, Israeli-Palestinian Peace Research Project, Working Paper No. 19; 1992.
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Table 4
Income Generation, Capital Investment and Current Expenditures by Municipalities in the West Bank and Gaza Strip: Potable Water and Sanitation, 1987/88 (in NIS)

| AREA | Income Generated | Investment Current | Capital | Total | Revenue (% of Expen.) Current | Total |
|---|---|---|---|---|---|---|
| **Potable Water** | | | | | | |
| West Bank | 8,294,867 | 8,660,329 | 2,280,911 | 10,941,240 | 96% | 76% |
| Gaza Strip | 4,330,249 | 2,661,973 | 1,237,199 | 3,899,172 | 163% | 111% |
| Total | 12,625,116 | 11,322,302 | 3,518,110 | 14,840,412 | -- | -- |
| **Sanitation** | | | | | | |
| West Bank | 614,184 | 1,630,774 | 573,643 | 2,204,417 | 38% | 28% |
| Gaza Strip | 321,456 | 149,468 | 518,026 | 667,494 | 215% | 48% |
| Total | 935,640 | 1,780,242 | 1,091,669 | 2,871,911 | -- | -- |

Sources: Data derived from: Government of Israel. Judea, Samaria and Gaza Area Statistics, Vol. XVIII, No. 2, Jerusalem: Central Bureau of Statistics; 1988, pp. 196-222
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# APPENDIX 1:

## SUMMARY DESCRIPTION OF METHODOLOGY

**APPENDIX 1**

**SUMMARY DESCRIPTION OF METHODOLOGY**

The political situation in the Occupied Territories made it necessary to alter considerably the approach to preparation of a general development strategy (and detailed sector analyses) which is commonly used by A.I.D. and other development agencies. The team was necessarily small, site visits in the field were often curtailed, data are even more scarce than is the norm for developing countries, and review of drafts with those interviewed in the field (in order to "reality test" findings and conclusions) were all but impossible.

Notwithstanding these practical difficulties, detailed sector analyses were prepared within six months of the initiation of the task. The team comprised three persons:

Vivikka Molldrem, M.A., Team Leader, Director of Program Development for the Middle East Bureau, A.I.D./Washington;

Alan Richards, Ph.D., International Consultant, Professor of Economics at the University of California, Santa Cruz; and

Irene Jillson-Boostrom, Ph.D., Senior Technical Advisor, President, Policy Research Incorporated.

In addition to the members of the team, PRI contracted with a Palestinian economist (Dr. Hisham Awartani, Professor at Al Najah University in Nablus) to coordinate the contributions of 20 Palestinian specialists who prepared analyses of reports and other available information in each of the sectors.

Prior to departure for the field, the team met with both A.I.D. and Department of State (DOS) staff responsible for programs in the Occupied Territories. In addition, Ms. Vivikka Molldrem, Dr. Jillson-Boostrom and the A.I.D. Representative for the West Bank/Gaza Program (Ms. Suzanne Olds) met in Washington, D.C. with headquarters' representatives of the PVOs receiving grants for projects in the Occupied Territories.

The first of three site visits was made in December, with all three team members participating. In the field, the work of the A.I.D. team was coordinated with Ms. Suzanne Olds, Molly Williamson, the Consul General, Jerusalem and Norman Olsen, the Foreign Service Officer assigned to monitor the A.I.D. program in the Gaza Strip. In December, the team met with the Palestinian consultants to provide guidance on preparation of their literature analyses, met with the field staff of the PVOs currently receiving A.I.D. grants, interviewed knowledgeable persons in each of the sectors, and collected available documents. It was determined during this site visit that in order to facilitate collection of data and information, given the

limited time available, Drs. Richards and Jillson-Boostrom would assume primary responsibility for four sector analyses each.

The second site visit was held in January/February; again, all three team members participated. The team met with the Palestinian consultants, obtaining drafts of their reports and commenting on those which were available prior to the team's departure from the field. Drs. Richards and Jillson-Boostrom continued the data collection process in their respective sectors, with Ms. Molldrem participating as time permitted. At least one of the team members met with field representatives of the PVOs. Prior to departure from the field, the team had prepared a draft Program Priorities Paper, which Ms. Molldrem reviewed with Suzanne Olds, Molly Williamson and Norman Olsen (and others) in the Embassy. A summary was also reviewed with field representatives of the PVOs. This program priorities paper was to be used as the basis for solicitation of PVO proposals. However, following discussions in the field and in Washington, A.I.D. determined that the timing was not propitious to issue a solicitation. This determination was based primarily on the recognition that insufficient information was available on which to base a solicitation.

Following the second field trip, Drs. Richards and Jillson-Boostrom began to prepare the sector analyses, providing preliminary drafts of the documents to Ms. Molldrem. At this point, draft the documents were essentially summaries of findings which could serve as the basis for identification of information gaps to be filled during the third and final field trip. This final field trip had been scheduled for mid-March, but circumstances necessitated a delay until mid-May, at which time it was not possible for either Dr. Richards or Ms. Molldrem to visit the Occupied Territories. The last field trip took place from 18 May through 3 June.

In preparation for the field trip, Dr. Jillson-Boostrom had developed a set of questions for each of the sectors. These questions were designed to ensure that, insofar as possible, missing data were obtained and to further explore several preliminary findings which required substantiation. Meetings were held with individuals particularly knowledgeable with respect to the required information. The preliminary draft sector analyses were revised by Dr. Jillson-Boostrom based on the information obtained during this site visit. In early June, the team met for three days to review each of the draft sector analyses and discuss overall findings and conclusions. The drafts were then revised by Dr. Jillson-Boostrom based on these discussions, comparative review of the individual reports and editorial suggestions made by PRI staff associated with the technical services contract. Additional data received in early June were also incorporated where appropriate.

During the course of this project, several hundred documents were obtained for use in preparation of the sector analyses. In view

of the urgent need for data and information useful for development decisions with respect to the Occupied Territories, PRI has prepared a computerized list of these documents (using DBase IV). This bibliography will be made available to A.I.D., DOS, and PVO staff.