

P.N. ABP-332
82838

CAMBODIA

NEEDS ASSESSMENT REPORT

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

APRIL 1993

TABLE OF CONTENTS

	Page
Acronyms/Abbreviations	i
Map of Cambodia	ii
Country profile and basic indicators	iii
I. Executive Summary	1
II. Needs Assessment Report	5
A. Scope and methodology	5
B. Country overview	
C. Analysis of sectoral needs and donors recommendations	9
D. Analysis of explosive mines eradication efforts	12

Appendix

- A. Compendium of donors activities
 - 1. Multilateral financial institutions
 - 2. Multilateral donors/UN agencies
 - 3. Bilateral donors
 - 4. Non-governmental organizations

- B. Compendium of sectoral analyses and donors recommendations
 - 1. Social sectors
 - 1.1. Education
 - 1.2. Health
 - 1.3. Vulnerable groups
 - 2. Productive sectors
 - 2.1. Agriculture
 - 2.2. Industry
 - 2.3. Tourism
 - 2.4. Forestry/Environmental protection
 - 3. Physical infrastructure sectors
 - 3.1. Transport
 - 3.2. Utilities
 - 4. Eradication of explosive mines

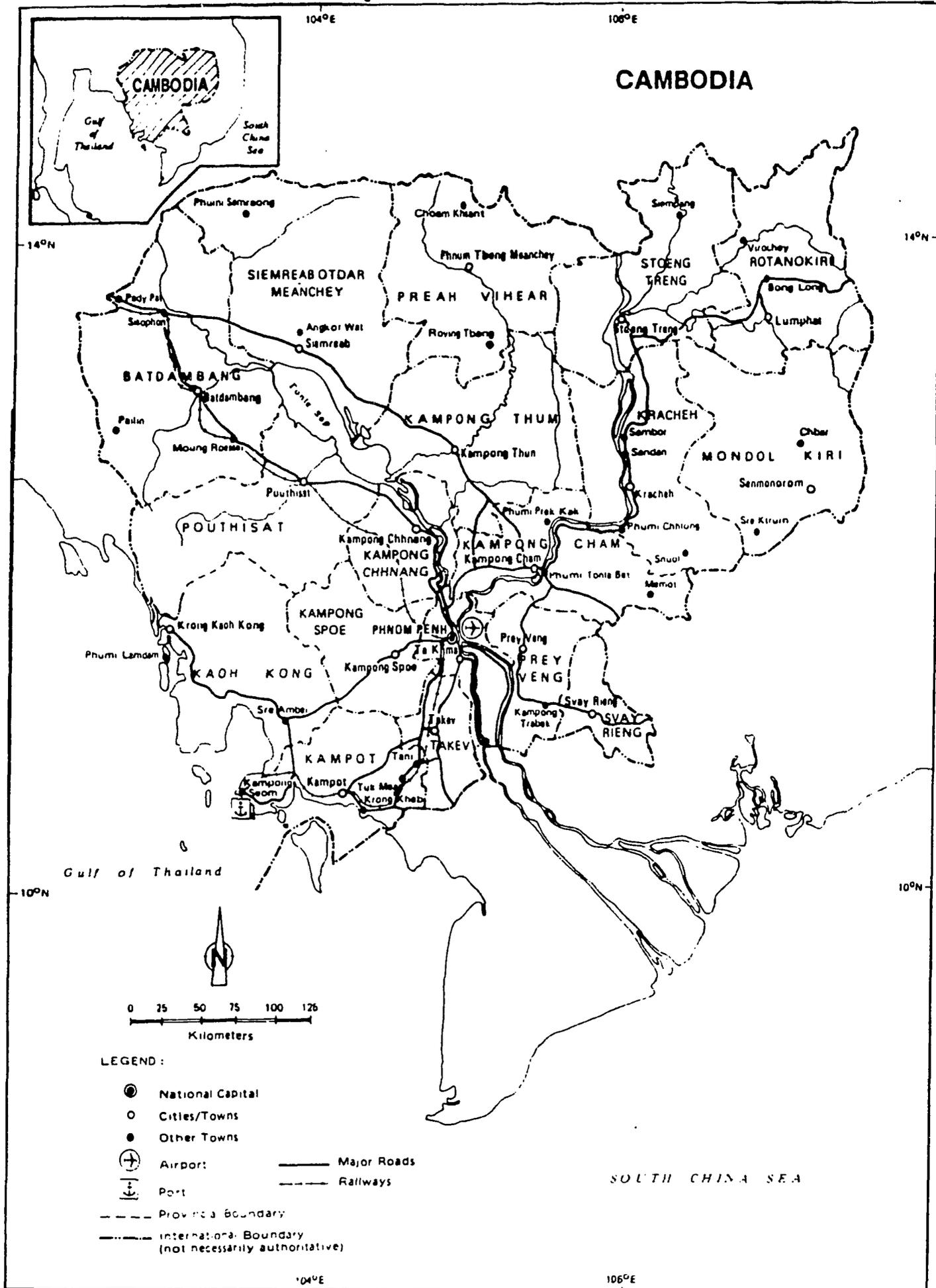
- C. List of meetings and contacts
- D. Documents reviewed

ACRONYMS

ADB	Asian Development Bank
CMAC	Cambodian Mine Action Center
CMEA	Council of Mutual Economic Assistance
EC	European Community
ESCAP	UN Economic and Social Commission for Asia and the Pacific
FAO	Food and Agricultural Organization
ICAO	International Civil Aviation Organization
ICORC	International Committee on the Reconstruction of Cambodia
ILO	International Labor Organization
IMF	International Monetary Fund
IRRI	International Rice Research Institute
NGO	Non-Governmental Organization
ODA-UK	Overseas Development Assistance - United Kingdom
SNC	Supreme National Council of Cambodia
UN	United Nations
UNAMIC	United Nations Advance Mission in Cambodia
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNTAC	United Nations Transitional Authority in Cambodia
UNV	United Nations Volunteers
USAID	U.S. Agency for International Development
WB	World Bank
WFP	World Food Program
WHO	World Health Organization

MEASUREMENTS

Km	Kilometer
Km/hr	Kilometer per hour
KWh	Kilowatt-hour
MT	Metric ton



From Cambodia: Socio-Economic Situation and Immediate Needs (ADB/IMF/UNDP/WB), May 1992.

4

CAMBODIA: COUNTRY PROFILE & BASIC INDICATORS*

Geography:

Land area	181,035 sq. kms
Climate	10-38 degree C

Society:

Population	9.5 - 10 million
Phnom Penh	0.9 - 1.2 million
Ratio of men to women	44 : 56
Ethnic group	over 90% ethnic Khmer
Religion	over 90% Theraveda Buddhism
Education	35.2% adult literacy rate
Health	
Life expectancy at birth	49.7 years
Birth rate	43 per 1000 population
Infant mortality rate	120 per 1,000 live births
Access to health services	53% (national average)

Economy:

GDP per capita (1991)	\$180
Inflation rate	
Before 1988	Less than 10%
1989	48%
1990	150%
1991	133%
1992	Almost 200%
Structure of production (1991)	
Agriculture	47%
Industry	16%
Services	37%
Main agricultural products	Rice, rubber, timber, beans, vegetables, tobacco, fish
Exports (1991)	\$25.5 million
Main exports	Rubber, timber, beans, tobacco, fish products
Imports (1991)	\$52.5 million
Main imports	Food fuel, fertilizer, raw materials, equipment, spare parts

* Source of data on geography, ethnic groups and religion are from Cambodia: A Country Study (Library of Congress, December 1987); data on health is from the UNTAC Office of Rehabilitation and Economic Affairs and ESCAP estimates (March 1993); and data on economy and population is primarily from Cambodia: Socio-Economic Situation and Immediate Needs (by Asian Development Bank/International Monetary Fund/United Nations Development Program/World Bank, May 1992), with some adjustments to include latest available figures.

I. EXECUTIVE SUMMARY

A. SCOPE AND METHODOLOGY

1. This assessment was conducted in accordance with Section 559(a) of the FY 1993 Appropriation Act for Foreign Operations, Export Financing, and Related Programs. This assessment reviews the present status of the assistance effort in Cambodia and the recommendations made by the international donor community in planning future assistance. Its purpose is to determine: (i) the requirements for Cambodia's development and (ii) the requirements for the eradication of explosive mines.
2. The report reviews all available literature relating to Cambodia's assistance needs and development constraints. The report also benefits from consultations with officials from international, bilateral, non-governmental, and academic organizations in Washington, D.C., Bangkok, and Phnom Penh as well as AID's experience on-the-ground in Cambodia since the signing of the Peace Agreement in October 1991.*

B. OVERVIEW

3. More than twenty years of internal warfare and extended periods of political and economic isolation from the West have resulted in unprecedented damage to the economy and society of Cambodia. While the situation has improved considerably in the last decade, Cambodia is still one of the poorest countries in the world, with crumbling infrastructure and very weak public services.
4. The development requirements in Cambodia are overwhelming. It has been extremely difficult for donors to prioritize the needs between and within sectors. To date, international donor support has focused primarily on meeting pressing relief and rehabilitation needs of returning refugees. Within that framework, many organizations have chosen to participate in areas which highlight their existing technical expertise and provide opportunities for immediate (or near-term) impacts.
5. Sectoral planning to address the needs of the country after the elections has been slow. Several factors have discouraged this process: the recent nature of most assistance programs in Cambodia; concerns about security and political stability; and uncertainties regarding the incoming government. Consequently, there exist few studies on options,

* Organizations consulted include UNDP, UNESCO, UNHCR, UNICEF, UNTAC, WB, WFP, WHO; SNC; governments of Australia, France, Japan, Thailand, UK, USA; the Cambodia Mine Action Center, Handicapped International, and a number of NGOs. For a complete listing, please refer to Appendix C.

costs, and benefits which would assist the "new" government in formulating policy agendas.

6. In broad terms, this assessment finds that future assistance plans, to the extent that they have been formulated, focus on the development needs of the social sectors and physical infrastructure. Relatively few efforts are being directed at the future needs of the productive sectors. Given that agriculture will be critical to economic and social development of Cambodia, the unmet needs for programming and planning in this sector are particularly acute.

C. DONOR FUNDING AND COORDINATION

7. During the February 1993 Donors Meeting in Phnom Penh, UNTAC reported that some US\$100 million of the US\$880 million pledged by international donors at the Tokyo Ministerial Conference on the Rehabilitation and Reconstruction of Cambodia in June 1992 has been disbursed. Given that many of the programs in Cambodia are relatively new, the progress of disbursement has been considered quite satisfactory by most of the donors interviewed, especially the bilateral donors. Nonetheless, the international aid community recognizes the need for a significant increase in the pace of disbursement and has resolved to implement quickly outstanding commitments and to emphasize quick-disbursing types of aid.

8. During the rehabilitation phase, donor coordination under the leadership of UNTAC and UNDP has been good. After the elections, according to the Comprehensive Settlement, this responsibility will shift to the newly-formed International Committee on the Reconstruction of Cambodia (ICORC). ICORC will provide an extremely important mechanism for coordinating and monitoring future assistance.

D. SECTORAL ANALYSIS

9. **Education** - Many donors report that the strengthening of the education system, particularly at the primary level, will continue to be an important requirement for development. With 20.5 percent of the total population under age four and 24.4 percent in the age range 5-14, the education system must expand significantly in terms of number of schools, textbooks, and teachers to maintain basic educational services to children who are the potential labor force for the economy after the year 2000.

10. **Health** - Many donors indicate that the near- and mid-term priorities are to provide access to health facilities for the population, to accelerate the implementation of the expanded program on immunization (EPI) and maternal & child health (MCH) services, and to develop a sustainable health system by strengthening provincial health

services. In addition, donors mention family planning and HIV/AIDS as new areas of activities which are increasingly important in Cambodia.

11. **Vulnerable groups** - Within the framework of community development, vulnerable groups, i.e. women, orphans, amputees, returning refugees, internally displaced persons, and others, will continue to need targeted assistance. As UNHCR and WFP phase out a number of activities, some donors indicate that it will be important to assure that the needs of these groups will continue to be met.

12. **Agriculture** - Since most of the population lives in rural areas, the development of the agriculture sector will be fundamental to the well-being of the Cambodian people. Aside from rice, a number of donors recommend that the country should promote the development of other crops and fishery products. It is expected that significant outside technical and policy assistance will be needed to bring about sustainable development in this sector.

13. **Tourism** - Some donors speculate that tourism could be an important revenue-earning industry for the country, provided that proper planning and private sector financing could be found.

14. **Transportation** - As transportation infrastructure in Cambodia is in a serious state of disrepair, secondary and tertiary roads rehabilitation continues to be an important element for Cambodia's growth and development. Road-building supports the growth of the rural economy (delivery of farm products to the markets and promotion of microenterprises) and allows the rural population access to previously unreachable health and education facilities.

15. **Physical infrastructure** - Large infrastructure investments, important for the overall future development of Cambodia, in both transport and public utilities are being studied by international financial institutions and by Japan, who are most likely to fund them. While some areas are being covered more extensively than others, it is expected that there will generally be significant improvements in the near- to medium-term.

E. MINES ERADICATION

16. The eradication of mines continues to progress at a relatively slow pace. The Cambodian Mine Action Center (CMAC), established in November 1992, is assuming UNTAC responsibilities in mine awareness, information gathering, and mine marking, training, and clearing activities. It will serve as Cambodia's national de-mining body.

17. Discussions with UNTAC, CMAC, and Handicap International indicate that there exist many reasons for the slow pace of de-mining in Cambodia. Technical constraints

include: lack of data on mine locations; lack of trained (Cambodian) de-miners; and lack of appropriate and efficient de-mining technology.

18. Financial constraints and poor management, however, are equally at fault for the slowness of de-mining efforts. UNTAC, a number of bilateral governments including the U.S., and NGOs have assisted through road rehabilitation programs and financial contributions to de-mining activities. The U.S. Office of Refugee Programs has pledged US\$2 million to UNDP, part of which may go to CMAC. However, both administrative and programmatic costs of de-mining activities continue to outpace contributions. In addition, given that many donors do not have the technical expertise to carry out de-mining activities on their own, poor UNTAC and CMAC management of donor resources thus far has discouraged further investments in this activity.

II. NEEDS ASSESSMENT REPORT

A. SCOPE AND METHODOLOGY

This assessment was conducted in accordance with Section 559(a) of the FY 1993 Appropriation Act for Foreign Operations, Export Financing, and Related Programs, which required that "not later than 120 days after the date of enactment of this Act, the President shall conduct an on-site assessment on a multilateral basis in cooperation with the United Nations or on an independent basis within Cambodia (including Phnom Penh) to determine the requirements for the development of social economic and social infrastructure and for the eradication of explosive mines". This assessment reviews the present status of the assistance effort in Cambodia and the recommendations made by the international donor community in planning future assistance. Its purpose is to determine: (i) the requirements for Cambodia's development and (ii) the requirements for the eradication of mines.

The report reviews all available literature relating to Cambodia's assistance needs and development constraints. The report also benefits from consultations with officials from international, bilateral, non-governmental, and academic organizations in Washington, D.C., Bangkok, and Phnom Penh as well as AID's experience on-the-ground in Cambodia since the signing of the Peace Agreement in October 1991. In all meetings with donors, AID requested: a briefing of current donor activities; a discussion of donor's plans for the near- and medium-term; an identification of needs/priorities for the development of Cambodia; and a listing of interventions (or constraints), whether technical, financial, or institutional, needed to carry out identified activities.

B. COUNTRY OVERVIEW

More than twenty years of internal warfare and extended periods of political and economic isolation from the West have resulted in unprecedented damage to the economy and society of Cambodia. While the situation has improved considerably in the last decade, Cambodia is still one of the poorest countries in the world, with crumbling physical infrastructure and very weak public services. The poor quality of life and the paucity of basic services leave most Cambodians prone to malnutrition, disease, and low life expectancy. The majority of the population, estimated at 9.5 to 10 million,¹ engages in subsistence agriculture and lives in rural areas which are frequently inaccessible due to

¹Latest UNTAC estimates at the Donors Review Meeting, February 25, 1993.

inadequate roads and limited communications. The UNDP's 1992 Human Development Index (HDI) ranks Cambodia 136th out of the 160 countries included in the index.²

1. *THE SOCIAL CONDITIONS*

While considerable headway has been made in the last decade, the level of social development in Cambodia remains very low compared with neighboring countries.

Life expectancy and vital statistics reveal the difficult living conditions in Cambodia. The average life expectancy for Cambodians is 49.7 years, up from a low of 35 years in 1970-75. UNICEF and WHO's latest figures put the crude birth rate at 40 per 1,000. Infant mortality rate is estimated at 120 per 1,000 live births and under-five mortality rate is near 188 per 1,000 live births. Maternal mortality rate is equally dismal at 9 per 1,000.³

Accurate sources of social data do not exist, but poverty, war, inadequate health care, and poor environmental hygiene have produced an environment where poverty-linked diseases are endemic. Malaria is the major communicable disease, with an estimated half million cases each year, resulting in an estimated 5,000 to 10,000 deaths.⁴ Dengue fever, relatively new to Cambodia, is now extremely common in some parts of the country. Moreover, Cambodia has the highest prevalence rate in the world for multi-drug resistant tuberculosis. There are some 20,000 new cases of tuberculosis each year.⁵ Inadequate access to water and sanitation facilities exacerbate the occurrence of other illnesses such as diarrhea and gastrointestinal infections.

In addition, deaths and injuries during two decades of war has left the country with rather skewed demographic figures. Women account for 63 percent of the active adult population, 35 percent of all heads of households, and 70 percent of the rural labor force.⁶ Almost 50 percent of the population is under 15 years of age. There are

²The human development index combines life expectancy, educational attainment and income indicators to give a composite measure of human development.

³UNDP, UNICEF, and WHO data, from reports written in 1992-1993.

⁴UNDP, UNICEF, and WHO data, from reports written in 1992-1993.

⁵UNDP, UNICEF, and WHO data, from reports written in 1992-93.

⁶UNDP estimates, March 1993.

approximately 350,000 permanently disabled people,⁷ due mostly to injuries from land mines.

Furthermore, the level of literacy in the country is very low, about 35.2 percent for the adult population.⁸ Although literacy training programs have been implemented, access to education is still severely limited, especially for women and for people in the rural areas. Illiteracy and low educational attainment pose serious problems for social and economic development.

Another important aspect of the Cambodian society which was systematically destroyed during the early 1970s is the Buddhist temples, which were the centers of rural life. Even now, distrust and insecurity pervade Cambodian society, making community mobilization for development activities difficult. At the same time, many communities have taken the initiative in renovating schools and pagodas throughout the country, indicating that mobilization and self-help are not impossible.

2. *THE ECONOMIC SITUATION*

Cambodia is in the midst of a difficult transition period, as it attempts to shift from a centrally-controlled command economy to one based on market forces and private enterprise. This transition is taking place while the country is concurrently repatriating a large number of refugees from camps in Thailand; arranging the resettlement of a substantial number of internally displaced persons; and looking for ways to cope with the imminent task of finding jobs for a sizable number of demobilized military personnel in an economy that is already operating with surplus labor.

The government coalition currently in place confronts recurring budgetary difficulties which, coupled with the lack of trained personnel resulting from the withdrawal by Vietnam and the former Soviet Union of key technical experts in higher education, vocational training and health programs, have continued to erode the capacity of the public sector to deliver basic services.

While there has been a modest growth in the economy in recent years, very little of that has been directly activated by domestic sources. Output in the agricultural sector, excluding forestry and livestock production, forms 47 percent of the GDP and has remained very sluggish.⁹ Industry, which makes up 16 percent of GDP, appears to be in

⁷The estimated 350,000 permanently disabled includes other categories of disability such as polio, blindness, and mental disorders. Land mine injuries disable nearly 1 out of every 240 people in Cambodia. Source of data is Cambodia: Agenda for Rehabilitation and Reconstruction (by World Bank), June 1992.

⁸UNDP, UNICEF, and WHO data, from reports written in 1992-93.

⁹World Bank assessment, March 1993.

a decline. Instead, the source of growth has been construction activities and the trade and service sectors, aimed at UNTAC and foreign presence, and has been limited mostly to urban areas, especially Phnom Penh.

Consequently, Phnom Penh and other urban centers are enjoying a modest, but possibly unsustainable economic boom. In the absence of effective tax collection mechanisms, the boom is not generating any revenue for the government to finance restoration of the country's economic and social infrastructure. Hence, a large part of the country's rural areas could remain poor and neglected for some time.

3. *THE POLITICAL SITUATION*

Significant progress has been made in advancing the Comprehensive Settlement of the Cambodia Conflict, signed in October 1991, despite serious and continuing difficulties. In May 1993, Cambodia is scheduled to have its first election in two decades to determine the composition of the 120-member Constituent Assembly, who in turn, will draft the country's constitution and decide on the holding of the presidential election.

UNTAC, the UN body which is responsible for the organization, supervision, and monitoring of the election, has reported that more than 4.6 million of 5 million eligible voters have been registered and nearly all of the 370,000 refugees from Thailand have been resettled in Cambodia.¹⁰ And despite rising political violence by different factions, in their attempts to expand territories of control and/or intimidate the opposition, 20 parties are now registered to participate in the upcoming election. The recent decision of the Khmer Rouge, one of the four main factions in Cambodia, to withdraw abruptly all of its officials from Phnom Penh, together with its earlier decision not to participate officially in the peace process¹¹ has made the political situation in Cambodia extremely complex. Nonetheless, the chief of UNTAC, Mr. Yasushi Akashi, reaffirmed in an April 10 speech that the elections will go forward as scheduled.

In the view of many international donors, peace and stability, and the legitimacy of the incoming government are important prerequisites for continued development. Many donors are reluctant to carry out long-term planning for their programs until the political and security situation in Cambodia can be resolved. In particular, heavy investments for infrastructure development are unlikely to begin until a free, fairly elected, and functioning government is in place.

In addition, since Cambodia has little history or sense of political pluralism, it is expected that long-term international assistance and support will be necessary to help the

¹⁰As reported by UNTAC and UNHCR in March 1993.

¹¹The Khmer Rouge failed to register its party for the May election by the deadline of January 1993.

country achieve political self-determination and create strong democratic institutions.

C. ANALYSIS OF SECTORAL NEEDS AND DONORS RECOMMENDATIONS

As discussed in further detail in the Compendium section of the report, the general assessment of the donors contacted is that the requirements for Cambodia's development are overwhelming. With urgent needs in every sector, it has been extremely difficult for donors to prioritize the needs for different activities. To date, international donor support for Cambodia has focused primarily on repatriation. Within that framework, many organizations have simply chosen to participate in areas which highlight their existing technical expertise, provide opportunities for immediate (or near-term) impacts, and are within their resource constraints.

When asked about programs following the elections, many donors responded that they will continue rehabilitation assistance already underway and will plan for development programs after the new, incoming government is in place. There was unanimous agreement that stability, both political and security, is key to donors' ability to continue activities in Cambodia.

1. SOCIAL SECTORS

Education - With the above constraints in mind, donors express that the strengthening of the education system, particularly at the primary level, will continue to be an important requirement for development. With 20.5 percent of the total population under age four and 24.4 percent in the age range 5-14,¹² the education system must expand significantly in terms of number of schools, textbooks, and teachers to maintain basic educational services to children who are the potential economic labor force for an emerging economy after the year 2000. Important recommendations for improving the capacity of this sector include: payment of staff salary to halt the attrition rate of teachers; construction of new classrooms; and production and distribution of textbooks. In addition, other human resource development programs, such as teacher training and vocational/technical education, are needed to address the needs of a young population as well as other groups.

Important actors in this sector have been UNICEF, UNESCO, a host of bilateral donors, and at least 20 NGOs. While many potential donors have expressed interest in this sector, little funding has yet materialized. ADB has agreed to invest in education and will provide financing for secondary and tertiary school rehabilitation, as well as books and technical assistance.

¹²UNICEF data, March 1993.

Health - Many donors indicate that the near- and mid-term priorities are: to provide access to health facilities for the population; to accelerate the implementation of the expanded program on immunization (EPI) and maternal & child health (MCH) services; and to develop a sustainable health system by strengthening provincial health services. A few donors also list the initiation of activities in the areas of HIV/AIDS prevention and control, mental health counseling, and family planning as important for the development of Cambodia in the years ahead. As in education, there exists a working partnership among a host of donors, including UNICEF, UNDP, WHO, and a number of bilateral donors and NGOs.

Vulnerable groups - Within many of the programs in the social sector, provisions to address the needs of vulnerable groups, including widows, orphans, amputees, etc. have been initiated. However, given that UNHCR and WFP are winding down their activities, a number of donors indicate that it will be important to assure that the needs of these groups will continue to be met.

2. *PRODUCTIVE SECTORS*

Agriculture - Given that most of the population lives in rural areas, the development of the agriculture sector will be fundamental to the well-being of the Cambodian people. To date, only a few donors have expressed interest in establishing a network of extension agents and of supporting programs in credit facilities, animal husbandry and fisheries training to enhance the capacity for growth. Furthermore, mines, poor roads, and banditry in the rural areas continue to have negative effects on production and growth. It is clear that future assistance for reconstruction and development of agriculture will depend very much on well-articulated policy and strategy options that may be pursued by the future government. Given that agriculture will be critical to the economic and social development of Cambodia, the unmet needs for programming and planning in this sector are particularly acute.

Other productive areas - Likewise, in industry, tourism, and forestry, there has been little comprehensive planning for future development. A number of donors speculate that with proper planning, the development of tourism could be an important revenue-earning activity for the country, provided private sector financing could be found.

3. *PHYSICAL INFRASTRUCTURE*

Transport - UNTAC, UNDP, AID, Japan, and a number of bilateral donors have committed hundreds of millions of dollars for the rehabilitation of transport infrastructure for repatriation (and some development) activities. However, the continued development of Cambodia's transport infrastructure, which is in a state of great disrepair, is expected to require huge amounts of capital, which probably can only be provided by the international financial institutions.

While construction is not yet underway, UNDP and ADB have launched a jointly-funded study to formulate comprehensive physical and institutional rehabilitation scenarios for roads and bridges, railways, and ports and inland waterways. AID has built some 500 km of secondary and tertiary roads to support rural economic growth and provided access to health and education facilities. AID is further considering a project to repair the national highway from Phnom Penh to the port to stimulate economic activities.¹³ WB also has plans for a number of activities, but will have to wait until the renegotiation of its failed Emergency Loan in March 1993 (See Appendix A on the World Bank). Thus far, there have been no comprehensive plans by international financial institutions for the development of airports.

Utilities - With regard to the development of utilities, a number of donors are focusing on Phnom Penh's electric power system. Over US\$50 million in projects has been planned by donors including Japan, ADB, WB, France, Ireland, Italy, and UNDP for the rehabilitation of distribution systems and installation of generation systems.

Fuel supply and distribution as well as telecommunications programs, however, remain unfunded. The UNDP has outlined a complete program to renovate the fuel supply system and recommends that the program be implemented either by a private sector investor or by a combination of private investment and international donor financing. Likewise, donors suggest that the private sector be the principal agent for setting up a completely new telecommunications system capable of serving the entire country.

In the area of water supply and sanitation, donors emphasize the importance of access to safe water to prevent a number of current health problems. No more than 12 percent of the rural population and 20 percent of the urban population have access to potable water. However, Phnom Penh's water supply system is receiving considerable assistance from a number of donors, including UNDP, WB, France, Japan, and Italy. The EC is funding a program for the immediate rehabilitation of Battambang and Pursat water supply system. Sihanoukville is covered by UNDP and possibly WB. Sewerage/drainage remains unfunded in this phase of activities. UNICEF, WHO, and a number of other NGOs continue to implement water and sanitation programs in the rural areas, through well-drilling and handpumps.

On the whole, the infrastructure sectors seem better funded than either the social or productive sectors. Aside from specific insufficiencies in areas indicated above, infrastructure development is well on its way. Progress over the near-term can be anticipated provided that political stability in the country can be maintained.

¹³This road was originally built by the U.S. government some 30 years ago.

D. ANALYSIS OF MINES ERADICATION AND DONORS RECOMMENDATIONS

Mines eradication - The eradication of explosive mines continues to progress at a relatively slow pace. UNTAC, a number of bilateral governments including the U.S., and NGOs have assisted through road rehabilitation programs and financial contributions to de-mining activities. The Cambodia Mine Action Center (CMAC), established in November 1992, is assuming UNTAC responsibilities in mine awareness, information gathering, and mine marking, training, and clearing activities. It will serve as Cambodia's national de-mining body.

Discussions with UNTAC, CMAC, and Handicap International indicate that there exist many technical reasons for the slow pace of the de-mining process in Cambodia. First, the lack of data on mine locations necessitate devoting a significant amount of time and resources to mine surveys, verification, and markings. Second, the lack of trained Cambodians to undertake the de-mining effort has hampered progress. This constraint has been relieved in recent months since training has been stepped up and at present the number of available de-miners is higher than the number employed. Third, de-mining in Cambodia is inherently laborious and time-consuming due to the fact that much of it has to be done by hand.

In addition, financial constraints and poor management are also at fault for the slowness of de-mining efforts. UNTAC, a number of bilateral governments including the U.S., and NGOs have assisted through road rehabilitation programs and financial contributions to de-mining activities. The U.S. Office of Refugee Programs has pledged US\$2 million to UNDP, part of which may go to CMAC. However, both administrative and programmatic costs of de-mining activities continue to outpace contributions. Furthermore, given that many donors do not have the technical expertise to carry out de-mining activities on their own, poor UNTAC and CMAC management of donor resources thus far has discouraged further investments in this activity.

APPENDIX A: COMPENDIUM OF DONORS ACTIVITIES

Introduction: Until the signing of the Comprehensive Political Settlement of the Cambodia Conflict in October 1991, international donor presence in Cambodia was quite modest and concentrated solely on the provision of social services. Since then, a wide range of multilateral, bilateral, and non-governmental organizations (NGOs) have begun a variety of activities in Cambodia. In June 1992, in response to the Appeal of the Secretary General of the UN in Tokyo, the international donor community pledged US\$880 million for Cambodia's immediate needs and national rehabilitation. (For a listing of contributions pledged by various countries, please refer to page 7 of this section.)

The following is an update of present donor activities in Cambodia and their plans for the future programs. In many instances, estimates of program funding were neither available nor accurate due to different methods of accounting and interpretation of the term "disbursement".¹⁴ Following the recent Donors Meeting in Phnom Penh in February 1993, UNTAC requested that all donors resubmit their financial figures (following a standardized method that it has developed), and hopes to have a comprehensive survey of donors activities and funding by mid-May 1993.

1. *MULTILATERAL FINANCIAL INSTITUTIONS*

Asian Development Bank (ADB): ADB's operational strategy in Cambodia is designed to support: macroeconomic management capability; emergency rehabilitation of key infrastructure facilities; sector work to develop strategies, policies, and programs for future development; and institutional building and human resources development. Loans and grants to Cambodia include US\$4 million in a macroeconomic management project, in conjunction with UNDP and the IMF, and US\$67.7 million for the Special Rehabilitation Assistance Project (SRAP) directed at technical assistance for sector work in transportation, energy, agriculture and education. In total, the ADB contribution to Cambodia, including co-financing, is expected to reach US\$75-80 million by the end of the rehabilitation period.

International Monetary Fund (IMF): The IMF has participated in special missions to evaluate Cambodia's financial and fiscal well-being. In October 1992, IMF concluded negotiations with the State of Cambodia on an economic stabilization program -- with the endorsement of the SNC and UNTAC. The French, Australian, and the Japanese have arranged to clear Cambodia's \$US 67 million arrears (including

¹⁴All financial figures reported in this section are from interviews with donors or from the most recent reports available (provided by donors). AID takes no responsibility for the accuracy of these figures.

accumulated charges) with the Fund to pave the way for full resumption of IMF operations in Cambodia in the near-future.

World Bank (WB): The World Bank has participated in a number of missions to Cambodia, including the UNDP missions for the Infrastructure Survey (1990) and the Water and Electricity Needs Assessment (1991), and the UNTAC mission for the Cambodia: An Economic Assessment of Rehabilitation Needs (1992). Starting in July-August 1992, the WB fielded two public finance experts with bilateral financing. In addition, two UNDP projects are executed by the WB, one for water and another for power rehabilitation, amounting to US\$4.1 million and US\$3.8 million respectively. In March 1993, the WB suspended the negotiations on a US\$63 million Emergency Rehabilitation Credit for projects in agriculture, transport, public utilities, health, and education sectors after failing to reach an agreement with the Cambodian factions on disbursement procedures. There is a reasonable prospect that these negotiations will resume in the near future.

2. *MULTILATERAL DONORS/UN AGENCIES*

Food and Agricultural Organization (FAO): FAO has a small presence in Cambodia and is providing emergency supplies of fertilizer. In 1992, the Netherlands and Swedish governments provided about 4,500 MT of fertilizer through FAO at the cost of US\$3.9 million. This assistance will partially compensate for the reduced supply from the former CMEA countries (Cambodia's former Communist allies). It is anticipated that the funds raised from the sale of this fertilizer to farmers will be used to fund the agricultural support activities of provincial authorities or to establish a revolving fund to finance future fertilizer purchases.

International Labor Organization (ILO): With funding from UNDP (approximately US\$11 million), ILO is beginning a broad employment generation program directed to the needs of returning refugees, internally displaced persons, and demobilized military personnel.

United Nations Development Programme (UNDP): UNDP has been the major focal point for donor coordination, facilitating fact-finding or programming missions of bilateral and international organizations. UNDP programs in Cambodia during the transitional period are concentrated in reintegration and rehabilitation activities and the preparation of future policy options. UNDP has also played an active role in creating awareness on environmental issues. It funded a report on natural resources situation in Cambodia for the U.N. Environment Development Conference which led to the September 1992 enactment of a logging ban in Cambodia. Its programs for the near-term include the Cambodia Resettlement and Reintegration Program (CARERE) to improve the livelihood of communities in returnee areas - repair of roads, provision of water, improvement of health care, education facilities, and the initiation of economic activities. In addition, UNDP will carry out a host of other reintegration activities

through its Office for Project Service (OPS) aimed at alleviating immediate needs while working towards long-term sustainability. UNDP's present available resources for programs in Cambodia is about US\$25 million; it appealed for an additional US\$39.8 million at the Feb 1993 Donors Meeting.

United Nations Educational, Scientific, and Cultural Organization (UNESCO): UNESCO activities focus on education, communications, and culture with a special focus on Angkor Wat. Assistance is being given to support basic education (non-formal adult literacy training and vocational/small business training), curriculum development and teacher training. UNESCO also funds a number of capacity-building programs, in the journalism and communications training, in the rehabilitation of national archives and libraries, and in the training the police, customs, and guards to prevent illicit traffic of antiquities. It has programs underway for the zoning and environmental management of Angkor and is planning to place the Tonle Sap Lake on the World Natural Heritage List. An important future activity under consideration is a master plan for the preservation, restoration, presentation, and maintenance of the Angkor Wat Archaeological Park.

United Nations High Commissioner for Refugees (UNHCR): UNHCR is the lead agency for the return and settlement of refugees from the border camps in Thailand. Since 1991, UNHCR has provided protection, transport, allotment of farm land, building material, and settlement kits to some 350,000¹⁵ refugees who were repatriated from the Thai-Cambodia border under its supervision. In addition, UNHCR is funding a number of quick-impact projects (QIPs) in transport, water and sanitation, health, education, and community services to ensure that returnees and the communities in which they settle are assisted in long-term development. It is anticipated that beyond 1993, UNDP will be the lead agency in the long-term development of returnee areas. UNHCR resources are estimated at US\$86.5 million, about US\$6 million less than what UNHCR believes is needed to cover operations to the end of the first quarter of 1994.

United Nations Children's Fund (UNICEF): UNICEF was the major donor agency during the 1979-1981 period. Since 1982, UNICEF has maintained an active presence in Cambodia, providing assistance to health, education, and water and sanitation sectors. The major donors to UNICEF are the U.S., Sweden, Australia, UK, and the Netherlands. UNICEF programs focus on education, water supply and environmental sanitation in rural communities, health (immunization, maternal & child health, essential drugs), family food production, women, and emergency assistance to internally displaced people. For 1993, UNICEF has approximately US\$16 million for programs. It plans to continue the same types of activities, but in a more expanded format, in both program size and locations, as additional funds become available.

¹⁵Late March 1993 estimates from UNHCR.

United Nations Transitional Authority in Cambodia (UNTAC): The UNTAC operation in Cambodia provides inputs which complement rehabilitation programs, such as emergency repairs to roads and bridges, access to cantonment sites, and other facilities required for fulfilling the UNTAC mandate. UNTAC also provides emergency airport repairs and navigational aids to allow UN air operations to function safely and efficiently. According to the terms of the Settlement, UNTAC forces will wind down its activities after the elections in May 1993 and transfer donor coordination activities to the International Committee on the Reconstruction of Cambodia (ICORC).

United Nations Volunteers (UNV): United Nations Volunteers (UNVs) provides technical expertise as needed on a voluntary basis to UNDP and other UN agencies. In Cambodia, UNVs are working primarily in the areas of health and agriculture. However, there are plans to utilize their skills to assist with programs in water and electric utilities. While no financial data was obtained on the costs of UNVs, it is likely to be low since the volunteers draw no salary from the agencies they are placed.

World Food Program (WFP): WFP continues to handle roughly 90 percent of all food aid contributed by bilateral donors to Cambodia. Since its presence in Cambodia in 1979, the Program has established an extensive, nationwide, and effective food logistics infrastructure which is able to respond rapidly to emergency food needs throughout the country. Its disbursement in 1992 was US\$31.6 million (63,700 MT of grain, oil, salt, and fish). WFP has four major programs: humanitarian assistance to vulnerable groups; repatriation/resettlement needs; food to internally displaced persons; and rehabilitation of infrastructure through food-for-work-programs.

At the request of UNHCR, WFP has agreed to assume responsibility for actual food distribution to returnees from April 1993 onward, in addition to its usual role of delivering food assistance to the distribution points. Due to an increase in both the number of beneficiaries and the extension of its monitoring and distribution network, WFP will require an additional US\$7.2 million in the 1993-94 period (above its current resources of US\$25.4 million) to ensure continuing food assistance to all returnees for 400 days following their return.

World Health Organization (WHO): WHO provides technical support in the health sector from a variety of funding sources. It relies on extra-budgetary funding from multilateral and bilateral organizations for a range of special projects. Its commitments as of mid-1992 totalled US\$2.9 million. Present priority areas for WHO operations are health planning and management, malaria control, hospital infection control, and HIV/AIDS control. It is also providing policy guidance to NGOs involved in health-related activities through the Coordinating Committee for Health (COCOM), under the Ministry of Health. WHO foresees additional future projects in pharmaceutical policy, birth spacing, and dengue control as well as control and treatment of tuberculosis and leprosy.

3. *BILATERAL DONORS*

Australia: Australia has provided humanitarian assistance to Cambodia for over 10 years, mainly through UNICEF and the International Rice Research Institute (IRRI). Its 1992-93 program, approximately at US\$35 million, includes support for the Cambodia Rice Research Institute, maternal & child health programs, English language training, bridge rehabilitation on national highways, and community development activities. For 1993-94, it plans to commit about US\$9 million. Australia's long term strategy for Cambodia will continue to focus on the agriculture, education, health and infrastructure sectors and additional programs in forest conservation, scholarships for training abroad, rehabilitation of the Kirirom Hydropower Project, and support for development planning and aid coordination.

France: The French government has had a bilateral cooperation program since 1990. Cooperation resources for 1991 and 1992 amount to US\$9 million each year, excluding considerable NGO programs and commercially tied aid. France's programs emphasize training, and concentrate on health, public administration and financial management, agronomy and rubber production, infrastructure, and education.

Japan: Japan is the largest bilateral donor in Cambodia, with more than US\$100 million worth of projects planned for both 1993 and 1994. The majority of its earlier activities focused on the needs of refugees on the Thai-Cambodia border. Now, Japan intends to concentrate on agriculture, energy, infrastructure, and public health. It has initiated a series of sectoral planning studies in these areas and has already committed fund for the reconstruction of a number of bridges.

Thailand: The Thai government has entered into a number of bilateral assistance agreements, especially for the use of the Thai military to rehabilitate transport facilities in Cambodia. A UNAMIC Thai battalion has rehabilitated Route 5 (a main highway for repatriation activities) and is continuing the work to Battambang through Swedish contribution to UNDP. In conjunction with Great Britain, plans for a bridge at Poipet are underway, which will facilitate road access between Thailand and Cambodia. The Thai government has been studying the prospects of rehabilitation of the rail link from Aranyaprathet to Sisophon with UN agencies. There is also a small program to train Cambodian government officials in Thailand. In total, Thailand committed about US\$7 million to Cambodia in 1992.

United Kingdom: The British government expects to provide US\$30 million in aid during the 1992-94 period to Cambodia for three main programs. The first is continuing support for malaria eradication and health management/planning through WHO. The second is assistance to NGOs in developing water resources, especially well digging. Starting this year, the UK has begun to expand its water resources program to some of the eastern provinces. It is also working with the EC to rehabilitate and extend a water supply project in Battambang and to upgrade the National Department of

Hydrology. The third area of focus has been the creation of an English language resource center in Phnom Penh, where it hopes to train secondary school teachers who will then develop provincial programs.

United States of America: Funding for AID activities in Cambodia, estimated at US\$52 million in FY 1993, is provided in three main areas. The first is the provision of basic services and humanitarian assistance to vulnerable groups such as children, widows, and the disabled through grants to NGOs in the areas of community development, health education, and sanitation, primary health care, vocational training, literacy, and prosthetics. The second program aims to enhance overall economic development through improving basic infrastructure such as roads and bridges and to make available technical assistance to help plan and implement development activities. The third supports activities aimed at fostering the growth and understanding of the democratic process, including training and institutional development in the areas of rule of law, political pluralism, and civil society.

4. *NON-GOVERNMENTAL ORGANIZATIONS (NGOs)*

NGOs: NGOs have made a special contribution to Cambodia's continued rehabilitation, reconstruction, and development. There are some 100 international and 20 local NGOs working in Cambodia, either with their own sources of funding or with bilateral donor support. Some NGOs are also serving as executing agencies for United Nations-sponsored rehabilitation activities, especially those in the areas of repatriation and resettlement.

Conclusion of Donors Activities: At the recent Donors Meeting in Phnom Penh, UNTAC reported that donors' disbursements of the aid pledged at the Tokyo Conference has been slow, with only some US\$100 million out of the US\$880 million pledged disbursed. During the next phase of Cambodia's recovery, it is likely that UN agencies, bilateral donors, and NGOs will shift their focus from assistance for repatriation and survival maintenance to assistance for development. To avoid duplication and ensure that aid programs are complementary, the Comprehensive Settlement has provided for the establishment of a donors-led coordination group, the International Committee on Reconstruction of Cambodia (ICORC).

**Contributions Announced
at the
Ministerial Conference on
Reconstruction and Rehabilitation of Cambodia**

June 22, 1992

(\$ in Millions)

<u>Country</u>	<u>Amount</u>
Japan	150
USA	135
Asia Development Bank (loan)	80
World Bank (loan)	70
France	57
UNDP	57
Australia	40
Sweden	38
Netherlands	31
Denmark	25
Italy	22
Germany	22
All Other Contributions	153

Total Contributions	880

Note: The amount of contributions announced is \$285 million over the Secretary General's appeal level of \$595 million. However, UNTAC (UN Transitional Authority in Cambodia) is reviewing contributions to eliminate doublecounting, overlaps, etc.

**APPENDIX B: **COMPENDIUM OF SECTORAL ANALYSES AND DONORS
RECOMMENDATIONS****

1. *SOCIAL SECTORS*

1.1 EDUCATION

Introduction: The country faces a very low base of human resources capacity. The adult literacy rate is 35.2 percent. The quality of instruction is poor. The curriculum at all levels is outmoded and inadequate. School buildings are in a state of disrepair. Pupil-to-teacher ratios are high. Training of staff is at a very low level, with teachers having virtually no education or skills in teaching.

*** General Primary Education**

Current enrollment rates for primary school are as high as 80 percent, but the dropout and repeat rates are very high. Furthermore, enrollment rates do not reflect actual attendance; often, children are only able to attend when they are not needed at home. Only 30 percent of children who enroll in first grade complete primary school (grade 1-5).¹⁶ Each year, 25-30 percent of the female students enrolled in primary school repeat each grade.¹⁷ Even among those who finish primary school, the acquisition level of basic skills in math and Khmer is low.

In addition, since 20.5 percent of the total population is under the age of four and 24.4 percent is in the age range 5-14, the number of teachers in primary schools (presently at 47,000) must double to maintain basic educational services to children who will form the labor force for the economy after the year 2000.¹⁸

Recommendation/Comment: UNICEF ranks primary education as the most important priority on its agenda. In the short-run, ADB, UNICEF, and UNESCO recommend the following measures to stop further deterioration of the educational system and to provide critical inputs to maintain a minimal level of performance.

- o Salary - Payment of staff salary at all levels of instructions.
- o Production and distribution of textbooks - Provide paper, printing, and binding equipment for the production of a minimum of 1 million textbooks. Finance

¹⁶UNICEF data, March 1993.

¹⁷UNICEF data, March 1993.

¹⁸Based on discussions with UNICEF staff, March 1993.

spare parts for the maintenance of trucks used for textbook distribution.

- o Construction of new classrooms - Finance imports required for the construction of up to 150 primary level classrooms in the provinces most likely to be affected by population surge following the repatriation of refugees.

*** Secondary and Higher Education**

Enrollments for education beyond the primary levels are also impressive. At the secondary school levels, there are 250,000 students in lower secondary schools and 45,000 in the higher secondary schools.¹⁹ In addition, there are 56 post-secondary training institutions, serving approximately 23,300 students. About half of those institutions are teacher-training colleges and 25 percent were in medical-related fields.²⁰ However, since the withdrawal of Vietnamese and Soviet instructors, the quality of the teaching has declined dramatically, since few of the Cambodian instructors have any specialized knowledge of the subjects they are teaching.

Recommendation/Comment: As in primary education, the bilateral donors, ADB, UNESCO, UNDP, WHO, and NGOs reported that lack of funds for maintenance and the lack of supplies for teaching materials seriously impede the learning process. Consequently, they have recommended more financing to provide necessary textbooks, supplementary reading material and teacher reference materials.

- o Procurement and distribution of textbooks - Finance procurement of textbooks for the secondary and tertiary levels on the international markets.

*** Teacher Training**

There are now 20 provincial level primary school teacher training institutes, six regional colleges for lower secondary school teachers, and three national institutes in Phnom Penh for the training of trainers and upper secondary school teachers. However, training is still at very low level. Less than one percent of primary school teachers have finished high school.²¹

Recommendation/Comment: UNICEF and UNESCO have recommended short-term courses for upgrading teacher skills. Australia is assisting the upgrading of English

¹⁹From Cambodia: Socio-Economic Situation and Immediate Needs (by ADB/IMF/UNDP/WB), May 1992, p. 8.

²⁰From Cambodia: Socio-Economic Situation and Immediate Needs (by ADB/IMF/UNDP/WB), May 1992, p. 8.

²¹UNICEF data, March 1993.

language teachers at the University of Phnom Penh as well as sponsoring the commercially-run Australian Center for English in Cambodia. Continued assistance is also needed to improve teaching methods and the quality of instruction.

- o Training - In-service training and short-term courses are needed to upgrade teaching skills and methods.

* Vocational/Technical Education

Vocational and technical education is now provided by numerous institutions and by several ministries and department. However, fewer than 1,200 are being trained to be skilled workers such as repairmen, masons, carpenters or electricians.²²

Recommendation/Comment: Bilateral donors, ILO, UNDP, UNICEF, and a number of NGOs have supported a variety of vocational/technical training to provide income-earning skills, especially for vulnerable groups of widows and amputees. No specific recommendation for the rehabilitation of this component of the education system was made by the WB or UNDP, except to provide training manuals and spare parts to prevent the complete halt of the system while preparations are being made for its overhaul.

Conclusion of Education Sector: While many potential bilateral and multilateral donors, including WB and ADB, have expressed interest in the education sector, very little funding for activities has yet materialized. Thus far, important actors in this sector have been UNICEF, UNESCO, a host of bilateral donors, and at least 20 NGOs. ADB has recently decided to invest more in education and has agreed to provide financing for secondary and tertiary school rehabilitation and books as well as technical assistance through a group of six experts.

1.2. HEALTH

Introduction: The health and nutritional status of the majority of the population, especially women and children, is one of the lowest in the world, as measured by life expectancy and mortality. The prevalence of diseases like malaria, dengue fever, tuberculosis, and leprosy is high. Large numbers of people suffer from physical and psychological trauma as a result of events in the past 20 years. HIV/AIDS, while only a few cases have been detected thus far, is likely to increase with more open borders. There are critical shortages of essential drugs, bandages and other medical supplies. The number of trained health personnel has increased dramatically since the early 1980s, but at the cost of declining quality of training.

²²From Cambodia: Socio-Economic Situation and Immediate Needs (by ADB/IMF/UNDP/WB), May 1992, p. 8.

*** Maternal and child health (MCH)**

While health data and statistics for Cambodia are sketchy, it is estimated that the infant mortality rate is 120 per 1,000, under-five mortality rate is 188 per 1,000 live births; the maternal mortality rate is 9 per 1,000.²³ The malnutrition level is around 10 percent in Phnom Penh and 20 percent in the provinces.²⁴ Diarrhea and other intestinal diseases are responsible for up to 50 percent of infant and children deaths (before the age of 5).²⁵ Anemia, night blindness (due to vitamin A deficiency), and iodine deficiency disorders are widespread. Immunization coverage of children under one year old is improving, but is still far from the target goal of 80 percent.

Recommendation/Comment: Already active players - UNICEF, WHO, UNDP, and a number of NGOs will continue to take the lead in this area with the following proposed programs:

- o Expanded Program in Immunization (EPI) - Acceleration of immunization activities to reach 70 percent coverage in 12 provinces by the end of 1994 and to increase coverage to 60 percent in the remaining 9 provinces.
- o Maternal and child health (MCH) services - Increase MCH services through training staff and traditional birth assistants; through planning, management, surveillance assistance; and through the Diarrhoeal Disease and Acute Respiratory Infections program.

In addition, WB and UNDP have made the following recommendations for the health sector. While these suggestions may not target MCH directly, they will also impact MCH concerns.

- o Salary - Payment of salaries to public health personnel to slow the unregulated development of a parallel user-pay health care delivery system.
- o Drug kits - Purchase of essential UNICEF standard drug kits for district hospital and commune health centers.
- o Laboratory and surgical equipment - Purchase of microscopes, refrigerators, centrifuges, operating tables, surgical instruments and sterilizers.
- o Technical assistance - Retraining of existing health personnel.

²³UNICEF and WHO data, March 1993.

²⁴UNICEF and WHO data, March 1993.

²⁵UNICEF and WHO data, March 1993.

*** Malaria, tuberculosis, and other communicable diseases**

Out of 500,000 cases of malaria, between 5,000 to 10,000 deaths occur each year.²⁶ Tuberculosis has a prevalence of 150,000 cases with nearly 20,000 new cases per year.²⁷ Cholera and dengue fever have also killed many, particularly children.

Recommendation/Comment: The bulk of programs in this area continue to be coordinated by WHO, with assistance and support from UNDP, ODA-UK, and UNICEF. It is recommended that the following existing projects be continued:

- o Malaria eradication - Providing technical assistance to the national malaria control program.
- o Tuberculosis and leprosy - Reviewing additional needs for tuberculosis and leprosy control and treatment.

Documents from UNTAC, UNDP, WB, and ADB show that they have recommended the imports of drugs and vaccines for the treatment and control of these diseases.

- o Special drugs and vaccines - For the main vertical programs: malaria, tuberculosis, oral rehydration, and the expanded program in immunization, WHO will provide the drugs and vaccines with financial support from the above donors.

*** AIDS**

The true extent of HIV/AIDS epidemic in Cambodia is unknown. With little data or knowledge of the country's social patterns affecting HIV/AIDS transmission, WHO and UNDP hypothesize that Cambodia is at the early, "silent" stage of the epidemic. Routine blood screening in Phnom Penh shows that since 1991, there has been a tenfold increase in HIV cases from 0.076 percent to 0.84 percent, a rate comparable to that in neighboring Thailand.²⁸

Recommendation/Comment: WHO has deployed an advisor to assist the development of a short-term plan of action on AIDS awareness and control with the National AIDS Committee. UNDP is presently formulating a US\$5 million HIV/AIDS program which aims at strengthening the national capacity to lessen the personal, social,

²⁶UNICEF and WHO data, March 1993.

²⁷UNICEF and WHO data, March 1993.

²⁸From a UNDP Project Document for Cambodia HIV/AIDS Training Scheme, March 1993. Prevalence data is similar to those reported by WHO and news sources.

and economic consequences of the HIV/AIDS epidemic. Other international and bilateral donors have expressed interest, but are not yet involved.

*** Essential drugs**

In order to provide even minimal health care, it is critical to develop a comprehensive supply system for essential drugs and equipment. Outside of Phnom Penh, production and distribution of both locally produced and imported drugs covers only an estimated 10 to 20 percent of the needs of the public sector.²⁹

Recommendation/Comment: Aside from the import of necessary drugs and vaccines for the provincial, district, and community health centers throughout the country, a working drug supply system needs to be developed in the short-run .

- o Drug supply - Procurement, import, local production, licensing, quality control, distribution and management problems will have to be addressed.
- o Cost-recovery mechanism - Methods of cost-recovery in supplying essential drugs must be developed to maintain sustainability.

*** Mental health**

There is no figure on the status of mental health in Cambodia. However, many Khmer exhibit symptoms of post-traumatic stress disorders including attempted suicides, panicking at the sound of cars, gunfire, or any sudden noise, inability to concentrate, alcohol abuse and ulcers.

Recommendation/Comment: Very few international donor or NGOs are focusing in this area. UNICEF is planning a program for disabled children which does contain a trauma component. Discussions with the aid community in general, however, reflect a consensus that more should be done.

There is an urgent need for a survey of mental health care needs, especially for the most vulnerable groups: the disabled, veterans, trauma victims, orphans and widows.

Conclusion of Health Sector: As in education, improvements in the health status of the Cambodian people will come as a result of a working partnership among a host of donors rather than the leadership of one or two multilateral institutions. Many donors indicated that the near- and medium-term priorities are to ensure a minimum level of public services in most districts and communes in order to provide access to health services for the population, to accelerate the implementation of the expanded program

²⁹WHO estimates, March 1993.

on immunization (EPI) and maternal & child health (MCH) services, and to develop a sustainable health system by strengthening provincial health services. As noted above, current and projected donor activities are especially weak in the areas of maternal and child health, AIDS, and mental health. However, a number of NGOs mentioned their interest in developing family planning programs.

1.3. VULNERABLE GROUPS

Introduction: The violence of the 1970s has left many vulnerable groups in Cambodia - women who were widowed, children who were orphaned, people who were maimed or otherwise handicapped by wars and mines, as well as returning refugees, internally displaced people, and demobilized soldiers.

* Women

In Cambodia, women account for 60 to 65 percent of the adult population and 30 to 35 percent of the heads of household. Cambodian women suffer from poor health caused by overwork, repeated pregnancies, inadequate nutrition, poor environmental hygiene, and the inadequacy of health services. In addition, the impact of agricultural liberalization since 1989 has further impoverished female-headed households since, without collective work arrangements, they lack the manpower and draft animals needed for agricultural production. Many have migrated to urban areas for survival. However, their less than proportionate rate of participation in the education system leaves them ill-equipped to find good employment.

Recommendation/Comment: Recommendations to address some of women's needs, as made by a number of organizations, are:

- o Rural areas - Provision of credit, skills-training, draught animals, and other equipment for agricultural production.
- o Urban areas - Credit and skills-training for self-employment or skills training for formal sector wage employment, i.e. office work, hospitality/tourism, maintenance of office equipment; and business. Child care services will also be needed since the extended family network is less strong in the cities.

NGOs are already conducting cattle breeding training courses for poor women in Svay Rieng and Siem Reap and assisting widows to obtain credit to hire labor for agriculture.

* The disabled

Disabled groups include up to some 40,000 amputees who have been maimed by mines,³⁰ the elderly, the physically disabled, and the mentally ill. Providing training and rehabilitation for the amputees and the physically disabled is difficult. Many are from the rural areas and have little or no education. Moreover, there is prejudice against hiring amputees, so even those who receive skills-training are unable to find productive employment. There is no reliable figure on the number of elderly and mentally ill people in Cambodia. It is expected, however, that the figures are high. These groups are usually heavy burdens on already poor and fragile family networks.

Recommendation/Comment: WHO, UNICEF, and a number of NGOs have provided a range of assistance to the disabled, especially the amputees. It is expected that they will continue to take the lead in developing new programs to address the needs of this vulnerable group.

- o Prosthetic workshops - Expand and improve the quality and capacity of the 11 provincial prosthetic workshops through training of local staff and physical expansion of the workshops and dormitories.
- o Vocational training - Increase assistance for vocational training of handicapped persons to assist their reintegration into society.

* Orphans

In 1979, there were reportedly some 200,000 orphans, but this number has dropped to about 75,000 as orphans have reached maturity.³¹ Most of these children have been looked after in the communities in which they lived, but a small percentage - about 3,000 - are in orphanages (which were unknown in Khmer society until the war).

Recommendation/Comment: A number of bilateral donors and NGOs focus on assisting orphans by providing for their nutritional and health needs, clothing, books and educational supplies. Help is also provided to aid (adult) orphans to become financially self-sufficient through promotion of income-generating activities. Adoptions, especially by Cambodian families, are now actively encouraged by the government. Two NGOs have also organized overseas adoptions of infants.

³⁰The number of amputees from land mine injuries vary from 20,000 to 40,000, depending on sources consulted.

³¹The actual number of orphans is unknown since many of the children who have lost their parents live with extended families or neighbors.

*** Returnees, internally displaced persons (IDPs), and demobilized soldiers**

There are some 360,000 returning refugees, 190,000 internally displaced persons, and up to 150,000 demobilized soldiers.³² Many are being assisted through a number of rural integration and quick employment programs, conducted by UNDP/Cambodia Resettlement and Reintegration Program (CARERE) and UNHCR.

Recommendation/Comment: More than other groups of vulnerable people, assistance to this category is sometimes resented by the local population. Consequently, aid targeted to assist these people should be carefully distributed in such a way to preserve a sense of equity within the local community.

Conclusion of Vulnerable Groups: The targeting of assistance towards vulnerable groups must be an important component of international assistance plans. Many groups still lack the basic supports needed for survival. With the winding down of UNHCR and WFP activities, it will be especially important to make sure that the needs of these groups will continue to be met.

2. *PRODUCTIVE SECTORS*

2.1. *AGRICULTURE*

Introduction: Agriculture is the largest sector of the Cambodian economy, accounting for nearly 47 percent of GDP and 85 percent of employment. Production generally meets only subsistence requirements and is still below the levels of the 1960s. Banditry, lack of access to mine-free cultivable land, and poor roads in the rural areas pose additional difficulties in enhancing the production and transport of farm goods.

*** Rice**

Rice cultivation accounts for nearly 18 percent of GDP, almost 80 percent of crop output value, and 1.8 million hectares of the 2.7 million hectares of arable land in Cambodia.³³ Most rice is grown during the wet season, with little fertilizer or irrigation. Consequently, the yield is quite variable due to fluctuating weather conditions. To minimize the risks from floods and droughts, farmers tend to use an average of two to three local rice varieties. Only about 10 percent of the area used for growing rice is under dry season cultivation. In general, the soils are not very fertile, with the best found in the central plains and the northwestern areas. It is estimated that

³²UNHCR estimates, March 1993.

³³From Cambodia: Agenda for Rehabilitation and Reconstruction, by World Bank, June 1992.

Cambodia's production of rice in the 1991-92 growing season fell 150,000 MT short of demand. The deficit may rise to as high as 250,000 MT short in the 1992-93 season.³⁴

Recommendation/Comment: Assessments of the agriculture situation by the international donor community seem to vary. In general, however, WB, ADB, bilateral donors, FAO, IRRI, and UNDP have identified the following recommendations as urgent for increasing rice production:

- o Fertilizer and other inputs - Quick import and distribution of fertilizer and other agricultural inputs.
- o Irrigation development - Repair and rehabilitate small to medium-sized irrigation works, especially those seriously damaged during the 1991 floods.
- o Paddy land reclamation - Begin the reclamation of nearly 800,000 ha of unused paddy lands, despite serious constraints including the presence of mines and lack of tractors and labor.

The International Rice Research Institute (IRRI) is interested in promoting more dry season cultivation. However, this will require improved seed varieties, high levels of appropriate use of fertilizers, and adequate irrigation. With 60 percent of agricultural land considered marginal and 80 percent of good rice growing areas probably mined,³⁵ in addition to poor seed banks, it is not clear that this is a cost-effective approach to increase rice production.

Furthermore, while ADB and UNDP are conducting a study to determine specific needs in the agriculture sector, the WB agricultural office has expressed doubt regarding heavy investments to increase rice production for the purpose of export. The thinking behind this is that Cambodia will not be able to compete either with Thailand or Vietnam, who are the first and third ranking world exporters of rice. Note that while there is some small scale border trade in rice from western Cambodia to Thailand, this does not imply self-sufficiency.

* Other Crops and Commodities

Rubber is the next most important crop after rice. Rubber has been grown in Cambodia since 1921 and is the second largest source of export revenue (after timber).³⁶ Since 1987, the amount of rubber tapped has been restored to late 1960s

³⁴WFP estimates.

³⁵WFP estimates.

³⁶From Cambodia: Agenda for Rehabilitation and Reconstruction, by World Bank, June 1992.

levels. However, this figure is expected to decline, since about 50 percent of the rubber area is already more than 30 years old.

Among other industrial or cash crops such as maize, mungbeans, vegetables, tobacco, sugarcane, soybeans, and sesame, only soybean has more than regained its 1960s level.³⁷ Their lack of expansion is largely constrained by poor coordination between the state and the private sector and lack of security.

Recommendation/Comment: Rubber has been pegged by many donors as a "spearhead" for economic recovery. The WB, ADB, FAO, and UNDP recommend that yield stimulation and replanting be given priority.

- o Rubber - Yield stimulation (fertilization and weeding) of old trees, replanting of new trees, and better management are needed to improve rubber production.
- o Soybean and maize - These cash crops already show good potential. Expansion can be encouraged through increasing the capacity of processing facilities, the size of the domestic market, and the export demand prospects.

* Livestock

Livestock numbers have caught up with their late 1960s levels. Significant surpluses of cattle in Takeo and Kandal provinces are being exported to Singapore and Thailand. While virtually all rural families keep a variety of livestock, i.e. a few cows, pigs, buffalo, and poultry, no large-scale livestock enterprises exist in Cambodia.

Recommendation/Comment: As incomes improve and the repatriation of refugees increases, the demand for livestock both for meat and for draught will rise dramatically. Consequently, important priorities in this area, as outlined by the multilateral and bilateral donors, FAO, UNDP, and NGOs, are disease control and expansion of pasture and breeding capacities.

- o Vaccination - Improve and expand vaccination programs to maintain the integrity of animal health for export.
- o Breeding - Expand and upgrade natural breeding of bovine, pig, and poultry.
- o Pasture development - Expand measures to supplement the feed (straw and feedstuff) and on-farm fodder production.

³⁷World Bank data, June 1992.

21

* Fisheries

The fishing industry is an important source of animal protein (70 percent) in the local diet and an important source of export earnings.³⁸ However, there has been a long-term decline in fresh water fish production. Factors contributing to this decline may include increased sedimentation of the Tonle Sap caused by deforestation and changing hydrological conditions.

Recommendation/Comment: Bilateral donors, UNDP, the Mekong Committee, FAO, and NGOs recommend a variety of approaches to address the problems which have destroyed breeding areas and impede natural migration.

- o Selective river dredging - Dredging of shallow streams and offtake canals of the Mekong and other key rivers with the additional use of small mobile floating dredges.
- o Facility improvements - Improve fingerlings for release into major reservoirs and inland lakes.
- o Aquaculture - Promote pond aquaculture and training.

Conclusion of Agriculture Sector: In addition to the above technical recommendations for different agricultural activities, it will be important to establish a number of support programs such as agricultural credit facilities, animal husbandry training and support, and the provision of agricultural extension agents to enhance the sector's capacity for growth.

Furthermore, Cambodia has undergone a series of radical changes in economic policy with severe repercussions on the performance of the agricultural sector. Future assistance for reconstruction and development of agriculture will very much depend on the policy and strategy options pursued by the future government. An agricultural sector development options review is being planned to assist the post-election government in determining a policy agenda. Funding for this will be provided through a parallel mechanism between UNDP and the ADB.

2.2. INDUSTRY

Introduction: The industrial sector in Cambodia is relatively small, accounting for only 16 percent of GDP. Most industrial production is under state control, but there is an emerging private sector, and new legislation permits the entry of 100 percent foreign-owned companies.

³⁸From Cambodia: Socio-Economic Situation and Immediate Needs (by ADB/IMF/UNDP/WB), May 1992.

* Industrial production

Food processing is the largest industry accounting for nearly two-third of all industrial production. The only other significant industries are chemical and mechanical products, electricity and textile.

Recommendation/Comment: Given the many constraints to industrial development,³⁹ WB, ADB, and UNDP have agreed with the present Cambodian leaders that industry will have a lesser priority than agriculture activities in the short-term.

Conclusion of Industry Sector: Since Cambodia has a small domestic market, ample tillable land, and little unemployment problems, the recommendation to focus on the agricultural sector first is sound. Cambodia will continue to rely on imports for material needs in the reconstruction period.

2.3. TOURISM

Introduction: One of the most hopeful changes in Cambodia's economic potential since the pre-war period is tourism. The famous 160 square kilometer temple complex of Angkor in Siem Reap province has the potential to become a magnet for tourists from around the world. In addition, there are other sites of interest - beautiful beaches, unique tropical forests, and island resorts.

Recommendation/Comment: While tourism was not discussed in detail by any of the multilateral donors, many private business groups have speculated about the inputs needed to build up this industry. It is expected that the private sector, with foreign participation, would take the lead in providing accommodation, food service, local transport, guide services, and so on to the tourists. Joint public and private sector cooperation may also be developed between Thailand and Cambodia to provide side trips to the Angkor Wat from Bangkok.

Conclusion of Tourism Sector: The general rise in the flow of international tourists to East Asia could yield great benefits for Cambodia. While the number of tourists visiting Cambodia was a mere 1,532 in 1988 (compared to over 40,000 tourists in 1969),⁴⁰ the volume has been increasing. With proper planning and financing, this could be an

³⁹An ADB 1991 report identified the principal constraints to industrial development in Cambodia as: (i) insufficient and unreliable supply of electricity; (ii) obsolete plant and equipment; (iii) lack of raw materials and spare parts; (iv) scarcity of transport and communication facilities; (v) lack of technical and managerial skills; (vi) insufficient credit facilities; and (vii) unfamiliarity with foreign markets and marketing strategies.

⁴⁰Curtis, G., Cambodia: A Country Profile, p. 127.

important revenue earning activity for the country.

2.4. FORESTRY/ENVIRONMENTAL PROTECTION

Introduction: Timber extraction is a tempting option for quick foreign exchange earnings. Unfortunately, in Cambodia, too many groups have exploited this resource without regard to sustainable yield rates. Due to extensive, unregulated, and unofficial commercial logging since late 1980s, Cambodia now has one of the world's highest deforestation rates. While a logging ban was imposed by the Cambodia's Supreme National Council (SNC) in September 1992, it is not clear that the ban has been particularly effective in halting unauthorized logging. In addition, fuelwood consumption in rural areas has exacerbated the deforestation problem. Given that overt exploitation of the forests is rampant, the issue for the forestry sector is not one of further extraction, but rather preservation and sustainable use.

Other detrimental environmental effects of logging are the denuding of watersheds, reduction of forest land, and increased susceptibility to damage from floods and droughts. Commercial mining and unrepaired irrigation canals have also caused sedimentation of rivers, affecting fresh water fish production. Heavy siltation of the Tonle Sap has reduced its depth and destroyed breeding areas.

Recommendation/Comment: Bilateral donors, UNDP, FAO, UNESCO, and NGOs propose that an Environmental Advisory Team be established to assist the SNC, UNTAC, local authorities, and the donor community in assessing the environmental aspects of both rehabilitation activities and foreign investment proposals. Special attention should be paid to arresting deforestation and the siltation of rivers. Activities could include:

- o Inventory - A detailed inventory of remaining forest resources and preparation of a sustainable management plan.
- o Conservation of ecosystem - Due to the uniqueness of Cambodia's forest wildlife and biodiversity, steps should be taken to identify areas for protection.
- o Reforestation - Small scale reforestation programs, including tree nurseries, can be initiated in rural areas through NGO assistance.
- o Alternative sources of housing material - Assistance in finding suitable low-cost material for housing and support of local production of roofing material to alleviate needs on forest resources.

Conclusion of Forestry Sector: Since forests comprise one of the most valuable natural resources in Cambodia, their rational utilization will be vital for the preservation of the ecological balance and also for the country's long-term economic sustainability.

3. *PHYSICAL INFRASTRUCTURE*

3.1. TRANSPORT

Introduction: Transportation infrastructure in Cambodia is in a state of great disrepair. Severe shortages of material, human, and financial resources have made it difficult to maintain and upgrade facilities. Moreover, additional demands are being placed on the patchwork infrastructure to support the operations of UNTAC. Poor security, unexploded land mines, and the rainy seasons pose additional hazards and delays. At present, it is estimated that transportation infrastructure is functioning at about 40 to 50 percent of pre-war capacity.

* Roads and bridges

Over half of the nation's 3,000-km primary road network and a significant number of the country's 4,100 bridges require urgent repair. Most of the road network, established many decades ago, were designed for lightweight vehicles rather than heavy trucks and buses. Many bridges, originally made of reinforced concrete girder or steel, were blown up repeatedly during the last 20 years and have been patched unreliably to allow continued use.

Recommendation/Comment: Except for some UNTAC and Japanese funded projects, most the road and bridge rehabilitation work so far has been concentrated in the northwest, in conjunction with the UNHCR repatriation and resettlement programs. UNTAC, UNDP, and Thailand have done major repairs on Roads 5 and 6 (Sisophon-Siem Reap), main arteries for access to the northwest and Thailand. Australia and Britain have provided Bailey bridging and some permanent bridges along these routes.

AID has been a major player in the de-mining and rehabilitation of provincial and rural roads in Cambodia. Using an equipment-based approach,⁴¹ it has successfully completed nearly 500 kms of high quality roads on routes 68, 69, and areas of Banteay Meanchey and Siem Reap within a short period of time. In FY 1992, AID also granted UNDP US\$2 million to support the building of some roads through labor-intensive methods, to create employment opportunities for local people, returnees, and demobilized soldiers.

At the recent Donors Review Meeting in February 1993, several donors stressed the importance of this high profile activity - road rehabilitation - for the revitalization of the economy, by providing access to markets and by promoting microenterprises. Some NGOs also commented that the repair and maintenance of secondary and tertiary roads

⁴¹Using tractors, manned and unmanned, to clear land mines as opposed to hand-held detectors and manual methods.

have greatly facilitated their activities, especially in health and education, in rural communities.

Recommendations in this component of the transport sector, as shown by UNDP infrastructure surveys, are:

- o Continuation of repairs and rehabilitation - Many roads, both national highways and provincial/rural roads, are still in need of repairs, especially those in the east and northeast part of the countries where virtually no programs are underway.
- o Mechanisms for maintenance - Maintenance is an essential component of sustainable road works. A government tax system should be developed to provide financial resources for maintaining national and provincial roads. At the local level, the private sector may be used to provide sustainable maintenance for rural roads.
- o Investment in road building equipment - Almost all new road work projects need to be accompanied by investments in new equipment, to bring national roads up to pre-1970 standards.
- o Technical assistance and training - Technical training must be provided to upgrade technical and managerial capabilities and increase operational efficiency of road services.

Programs recently approved include: assistance from ADB and WB for national roads; from UNTAC for Bailey bridging for a number of national highways and rural roads; and from Japan and Thailand for a permanent bridge at Chruy Chan War and at Poipet, respectively. Japan is also proposing workshops and training to provide much needed technical assistance.

*** Railways**

The Cambodian railway system consists of two single line tracks of 1.00 meter gauge (narrow): the "old line" between Phnom Penh and the northwestern border town of Poipet, and the "new line" between Phnom Penh and the southwestern port city of Kompong Som on the Gulf of Siam. The roadbed is deteriorated, sleepers rotted, bridges and tracks blown up and repaired, often several times, rolling stock and loading equipment old and poorly maintained. Freight traffic is only about 20 percent of the volume of the late 1960s, and passenger traffic is down 75 percent.⁴²

Recommendation/Comment: Railway sector needs were first addressed by a

⁴²From Cambodia: Socio-Economic Situation and Immediate Needs (by ADB/IMF/UNDP/WB), May 1992.

UNDP proposal and the subsequent rehabilitation of the Poipet-Sisophon section. It was to be followed by rehabilitation of the most severely damaged sections of the old Sisophon-Phnom Penh and new Phnom Penh-Sihanoukville lines. Rehabilitation of the Sisophon-Phnom Penh section is predicted to have an immediate impact on the economic activities of the country's most heavily populated areas.

Consequently, UNHCR has provided financial assistance to rehabilitate coaches for the use in the "Sisophon Express". UNDP has recently initiated survey of requirements for the immediate rehabilitation of rolling stock and tracks/bridges. ADB and WB have included substantial provisions for railways in their respective Loan/Credit facilities. UNDP is going ahead with a minimum assistance package to the railway's workshop in the form of basic materials and a foreman. France is considering funding procurement of spare parts for rolling stock, including parts for the overhaul of locomotives, workshop equipment, and complementary technical assistance component.

Beyond the above programs underway or under consideration, no further recommendations have been made.

*** Ports and ferries**

Both major ports of Cambodia - the Phnom Penh port (at the junction of the Mekong and Tonle Sap rivers) and the Kompong Som (ocean port) - are in need of dredging and proper cargo handling facilities and equipment. Most ferries are already stretched to over-capacity causing long delays at major crossings.

Recommendation/Comment: The ports and ferries are sub-sectors which are expected to receive assistance from Japan (rehabilitation of Phnom Penh port) and Denmark (rehabilitation of four ferry sites). No donor has yet been identified for the rehabilitation of Sihanoukville port. Other river ports in Cambodia are not under consideration at this stage.

Improvements in port and ferry facilities are vital for the country's future economic development. As the main gateways for import/export activities, they must be upgraded to handle much higher volume and flow of traffic. The reports of UNDP, UNTAC, ADB and WB list the following specific near-term recommendations to address the inadequacies in this area:

- o Material inputs - Provision of spare parts, radio equipment, barges, cargo-handling equipment, access ramps, and workshops for major ports.
- o Technical assistance - Training to improve port management and operations.

ADB and WB have made allocations in their Loan/Credit facilities which could possibly address some of the above needs.

* Inland waterways

Inland waterways traditionally provide the primary mode of transport in Cambodia. During the rainy season, water transport is the only way to reach many parts of country where roads are impassable. Access to Tonle Sap, which provided a way to reach important areas in the northwest year-round, now stops in the dry season because of heavy silting in the channels.

Recommendation: Given the degraded condition of the road network, the reopening of the traditional water transport system may take on even greater importance. Until new machine tools and equipment can be procured, UNDP, WB, ADB, UNTAC, and bilateral donors are recommending:

- o Dredging - At present, the nation has only two operational dredgers. Dredging by contract with private firms should be considered as an alternative.
- o Material inputs - New dredges, patrol boats and channel-marking equipment to keep inland waterways clear and safe.

No funding for dredging and inland navigation systems have materialized yet. It is hoped that allocations of ADB and WB Loan/Credit will include this component. The elaboration of a Master Plan for the Tonle Sap is under consideration by France and UNDP within the framework of the Mekong Committee.

* Civil aviation

Only four civil airfields are presently in use in Cambodia: Phnom Penh, Siem Reap, Stung Treng, and Battambang. They are served by a small government-owned airline and a few helicopters, providing minimal domestic service. Regular flights between Phnom Penh and major cities in the region are quickly expanding through service by foreign carriers.

Recommendation/Comment: Aviation has been an important sector for UNTAC since a major part of its logistics depend on air transport. UNTAC has brought in radar and ground facilities, additional navigational aids, communication equipment, and fire trucks not only for Phnom Penh, but also the other three airports. UNTAC is in the process of upgrading the runway of Stung Treng airport. A number of firemen and air traffic controllers have been brought in from Malaysia since January 1993.

Since June 1992, UNDP has financed an International Civil Aviation Organization (ICAO)-executed project, designed to address the critical air traffic control situation. International air traffic controllers have assumed operational services at Pochentong Tower (in Phnom Penh) as well as the training of Khmer controllers up to international standards.

Substantial additional investments in equipment and training will be needed to bring facilities up to the minimum international operational and safety standards. Urgent priority areas reported by ICAO, UNTAC, UNDP, WB, and ADB are:

- o Ground support equipment - Upgrading of landing strips and equipping the runway with lighting system to accommodate higher traffic flow and large aircraft.
- o Navigational aids and communication equipment - Additional air traffic control systems are needed to handle higher volumes of traffic safely.
- o Training - Training and upgrading of civil aviation staff at all levels.

Conclusion of Transport Sector: Urgent rehabilitation has been the main theme during the transition period. After the elections, efforts are expected to focus on reconstruction/development with a longer-term impact. For the transport sector, UNDP and ADB have launched a jointly funded study to formulate comprehensive physical and institutional rehabilitation scenarios for the sub-sectors of roads and bridges, railways, and ports and inland waterways. Initially, it will focus on the identification of urgent projects and subsequently on the medium- and long-term needs.

3.2. UTILITIES

Introduction: Cambodia's utilities are woefully inadequate. Acute power shortages, poor and unreliable provision of water supply, sewerage, and telecommunication services are major constraints to economic recovery.

* Power

Due to the unreliability and high cost of electricity supply, there is a proliferation of privately owned diesel generators. Transmission and distribution losses are also excessive, averaging nearly 50 percent of the energy generated.⁴³ Management is inefficient and the present revenue collection system covers only 20 percent of the cost of production.

Recommendation/Comment: A number of donors are focusing on Phnom Penh's power system. Over US\$50 million has been programmed by donors such as Japan, ADB, WB, France, Ireland, Italy and UNDP for the rehabilitation of distribution systems and installation of generation systems. In addition, UNDP will provide technical assistance for management and operations of the power system. Japan is financing an ongoing master planning exercise for the rehabilitation/construction of the Phnom Penh power system; Siem Reap is included in this study.

⁴³From Cambodia: Agenda for Rehabilitation and Reconstruction (by World Bank), June 1992.

By late 1995, it is expected that existing capacity will have been expanded from some 24 MW to 50 MW. This excludes Australian assistance to rehabilitate the Kirirom hydroelectric station, which could produce some additional 10 MW for Phnom Penh by 1996, provided funds are available to restore the transmission lines to Phnom Penh.

Donors have also committed funds or formulated proposals for immediate rehabilitation of power supply systems in the provincial capitals of Sihanoukville (UNDP), Siem Reap (possibly UNDP/UN Capital Development Fund), and Pursat (possibly UNDP/UN Capital Development Fund).

* Fuel

Cambodia's continued economic recovery will depend on the regular supply and efficient distribution of fuel stocks. As the trend in the country has been toward increased fuel consumption, there has been a more than 50 percent shortfall (about 150,000 tons) reflected in the present level of imports. Some 30 percent of the present production is consumed by industry, 23 percent for generation of electricity in Phnom Penh, and 20 percent by agriculture.⁴⁴

Recommendation/Comment: There are presently no ongoing programs in the fuel sub-sector. However, WB, UNDP, UNTAC, and ADB agree that the present levels of fuel procurement, storage, transport, and distribution are highly inadequate for development needs and must be increased and upgraded.

- o Fuel procurement - Importation of more fuel is needed to meet basic requirements.
- o Storage and handling - Improvements in the unloading and storage capacity at the country's two ports are needed to facilitate entry of fuel supply.
- o Transport and distribution - An efficient field supply of fuel can be maintained through improvements in the transportation infrastructure.

UNDP has outlined a complete program to renovate the fuel supply system. It recommends that the program be implemented by either a private sector investor or a combination of private sector and international donor funding.

* Telecommunications

The once adequate telecommunication network of Cambodia has deteriorated from lack of maintenance and damage during the war. Recent efforts have restored

⁴⁴From Cambodia: Agenda for Rehabilitation and Reconstruction (by World Bank), June 1992.

some services in Phnom Penh, but communication with the provinces is primarily by a patchwork of individual radio connections.

Recommendation/Comment: The telecommunications sector so far has yet to receive substantial assistance from the donor community. UNTAC has set up its own system, with ready connections between Phnom Penh and the provinces and districts. Its private system is connected with the public network. Private sector involvement includes one Australian company in collaboration with an Indonesian company, and a number of mobile phone systems companies. UNDP plans to field a telecommunication advisor to assist the Department of Telecommunications with the planning and coordination of the telecommunications sector activities. It is expected that services already set in place by UNTAC for its work will remain following its departure.

A completely new system, capable of serving the whole country, is required. However, the international donor community is recommending that this function be provided by the private sector.

* Water supply and sanitation

No more than 12 percent of the rural population and 20 percent of the urban population have access to safe water.⁴⁵ The remainder of the population uses open wells, dug ponds, private vendors, and rivers and streams. There is extensive contamination and leakage of the water supply as well as theft and meter tampering. Out of the entire country, only a portion of Phnom Penh is serviced by a sewerage system. The rest of the city is on septic or open pits systems. Urban storm drainage usually goes directly into the river, carrying much of the sewage.

Recommendation/Comment: Phnom Penh's water supply system is receiving considerable assistance from a number of donors, some US\$13 million for physical rehabilitation (from France, UNDP, WB, and Italy) and US\$3 million for technical assistance in management and operations (UNDP). Japan plans to finance an 18 month master plan study to aid the formulation of Japanese assistance for the immediate and longer term. So far, donors are concentrating on water supply rather than sewage/drainage, which will be dealt with in the next phase. Reliable supply of potable water for households in Phnom Penh cannot be expected before 1994.

The EC is funding a program for the immediate rehabilitation of Battambang and Pursat water supply systems; it is expected to be finished by mid-1993. Sihanoukville is covered by UNDP and possibly WB. Japan may soon identify projects for provincial capitals, outside of the northwest areas, where the WB has made some commitments already.

⁴⁵UNICEF data, March 1993.

UNICEF, WHO, and a number of other NGOs have implemented water and sanitation programs in the rural areas, through well-drilling and handpumps. OXFAM, an international NGO, is involved in similar programs, channelling material and technical assistance through the provincial authorities.

Longer-term recommendations made by the WB and UNDP in this sub-sector are:

- o Water cost recovery mechanisms - Prohibit and fine illegal connections, meter sale of water from hydrants, and create cash payment facilities for the sale of water.
- o Sewerage control - Prohibit and fine dumping of refuse in unauthorized areas, provide garbage bins, and map sewage system for further rehabilitation.
- o Role for private sector - BOT (build, operate, and transfer) concession schemes or tax incentives to provide well-drilling, garbage collection, and septic tank cleaning.

Conclusion of Utilities Sector: Utilities are well-funded in some areas and lacking in others. A number of donors are focusing on Phnom Penh's power and water supply system. Likewise, others are funding water supply programs in Pursat, Battambang, and Sihanoukville. However, the development of fuel and telecommunications as well as sewerage/drainage remain unfunded.

4. *ERADICATION OF MINES*

Introduction: During the war and unrest from 1970 to the present, the number of land mines laid in Cambodia may have reached 7 million. Having already caused almost 40,000 amputees and almost as many deaths, some 2-4 million mines remain uncleared. Mines pose a great danger to farming communities, cause environmental destruction, and hinder economic growth.

Created in June 1992 under the auspices of the SNC and UNTAC to take the lead in mine-clearing in Cambodia, the Cambodian Mine Action Center (CMAC) will continue activities in mine awareness, information gathering, and mine marking, training, and clearing activities started under UNTAC. It will progressively assume control and effect the "Cambodianization" of the de-mining program. CMAC is expected to be independently operational by the end of UNTAC's Mandate period, i.e. late August 1993.

* Land mines awareness programs

The UN conducted a number of mine awareness programs in the border camps of Thailand. The education was designed to prepare people to return to unfamiliar

communities in their own country. However, in most mine accidents in recent years, the victims reported that while they were aware of mines (or possible mines) in the areas, they had no choice but to continue carrying out basic survival activities such as collecting water and firewood, herding animals, and fishing.

Recommendation/Comment: Owing to the density of mines in the four northwestern provinces, even if significant mine clearance is undertaken in the next few years, mines will continue to pose a threat to many inhabitants.

CMAC has recommended the use of various media to create a higher awareness of the problem as well as of solutions to make life in Cambodia safer:

- o Radio programs - Domestic and international radio programs on mine awareness.
- o Mine awareness material - Distribution of mine awareness materials already produced by the U.S. government and UNTAC.

*** Mine surveys, verification, and markings**

Mines in Cambodia (mostly smaller anti-personnel varieties, but also some larger anti-tank varieties) have been laid randomly according to no set pattern based on military tactical doctrine. No reliable maps or records are kept and specific areas for mine eradication operations must be defined, mapped, and marked.

Mine surveying began in late 1991, when UNHCR commissioned the Halo Trust to create maps of mine in the four western provinces - Battambang, Banteay Meanchey, Pursat, and Siem Reap - based on ground inspections and interviews with local residents. Further surveying of central and eastern provinces is being carried out by French teams from the UNTAC mine clearing and training unit. CMAC has expressed that it is now in a position to talk with confidence about the general mine situation across almost the entire country. Of the 260 1:50,000 scale maps which represent Cambodia, 137 have locations which are positively known to contain mines.⁴⁶

After surveying, the next steps are mine verification and marking. Through laborious meter-by-meter examinations, the teams verify if an area classified in the survey as "probably clear of mines", "probably mined", and "heavily mined" are indeed so and marked as such. This process is being conducted by Handicap International and the Mines Advisory Group in Battambang province (NGOs).

Recommendation/Comment: This activity has had a rather slow start and is far

⁴⁶CMAC data, March 1993.

behind the pace of repatriation activities. Since the whole process of mine surveys, verification, and markings is rather imprecise, de-mining experts are concerned that the markings could produce a false sense of security about unmarked areas and have stressed that vigilance is needed virtually everywhere.

*** Training of Cambodians in de-mining**

The Mine Clearance Training program has been totally in the hands of UNTAC/Mine Clearance Training Unit (MCTU). This activity will be handed over to CMAC in late June 1993. There are currently 12 MCTU Mine Clearance Training Teams located in ten schools throughout the country which teach courses in: de-mining, supervising de-mining teams; training of de-miners, mine field marking, and explosive ordinance disposal. A team of 5 persons has received on-the-job training to operate the mechanical de-mining equipment.

As of early March 1993, some 2,000 de-miners had been trained and 32 more were currently undergoing training. In addition, 21 supervisors, 22 instructors, and 20 mined area markers - all Cambodian - have been trained.⁴⁷ A course in explosive ordinance disposal (EOD) for 15 students is currently being conducted in Battambang. With the Cambodian supervisor courses currently planned, some 40 Cambodian supervisory teams could be deployed by the end of June 1993. A centralized training facility will be opened in the Battambang area and is expected to be operational by the end of April.

Recommendation/Comment: At present, the number of available de-miners is higher than the number employed. As more Cambodian supervisors become available as the result of training courses, this will have a tremendous impact on employment opportunities for trained de-miners at relatively low costs. More effort should be made to employ the trained de-miners to step up the pace of mine clearance activities.

*** Mine clearing**

The most significant accomplishments in de-mining so far have involved the repair and clearance of major roads. Highway 5 was de-mined and resurfaced from Poipet to Battambang by a battalion of Thai engineers provided to UNTAC. The road to Talo, south of Highway 5 near Pursat and of Highway 6, between a ferry crossing and its junction with Highway 5 have also been de-mined under UNTAC supervision. USAID has also undertaken significant de-mining operations on Routes 68, 69, and areas of Banteay Meanchey and Siem Reap as a part of its road rehabilitation program.

A number of NGOs have been involved in de-mining operations in Cambodia

⁴⁷CMAC data, March 1993.

also; they are the Halo Trust (using UNAMIC-trained de-miners), Handicap International (with UNHCR and UNTAC), the Norwegian People's Aid, and the Mines Advisory Group.

The total area cleared in early March 1993 was 1,609,408 square meters, of which UNTAC cleared 1,367,602 and NGO teams 241,806 square meters. The average area cleared per month is 229,915 square meters.⁴⁸

Recommendation/Comment: Given that NGOs have performed indispensable and complementary roles, CMAC intends to expand NGOs' de-mining activities as soon as funding constraints (lack of funding, access to funding, etc) are resolved. CMAC will also provide support to special de-mining projects, such as the one sponsored by the French government and the European Communities, which will be in charge of de-mining the entire Angkor Wat complex and the surrounding areas.

*** Other mine clearance methods - using mechanical equipment and dogs**

While bulldozers and rollers can partially be used in the de-mining operations of roads, the clearance of paddy fields, access routes to villages, around forest edges and water sources is extremely laborious and time-consuming. Due to the nature of the terrain, de-mining in Cambodia must often be carried out by hand, meter-by-meter, with the use of hand-held detectors. UNTAC/ MCTU is currently investigating into the possibility of de-mining using armored tractors or a flail attachment hooked to a tracked excavator. The use of Thai dogs are now also being explored.

Recommendation/Comment: Faster means to stop the loss of life and injury caused by land mines among non-combatants and livestock as well as returning mined land to its peacetime use must be investigated.

Conclusion of Mine Eradication: Discussions with UNTAC, CMAC and Handicap International indicate that there exist many technical reasons for the slow pace of the de-mining process in Cambodia. First, the lack of data on mine locations necessitates a significant amount of time and resources to mine surveys, verifications, and markings. Second, the lack of trained Cambodians to undertake the de-mining effort has hampered progress. This constraint has been relieved since training has been stepped up in recent months, and at present the number of available de-miners is higher than the number employed. Third, de-mining in Cambodia is simply laborious and time-consuming due to the fact that much of it has to be done by hand.

In addition, financial constraints and poor management are also at fault for the slowness of de-mining efforts. UNTAC, a number of bilateral governments including the

⁴⁸CMAC data, March 1993.

4/1

U.S., and NGOs have assisted through road rehabilitation programs and financial contributions to de-mining activities. The U.S. Office of Refugee Programs has pledged US\$2 million to UNDP, part of which may go to CMAC. However, both administrative and programmatic costs of de-mining activities continue to outpace contributions. Furthermore, given that many donors do not have the technical expertise to carry out de-mining activities on their own, poor UNTAC and CMAC management of donor resources thus far has discouraged further investments in this activity.

While most donors regard the land mines as an important and long-term problem for Cambodia's development, they stress that Cambodia will never be entirely de-mined, much as areas of Europe still harbor mines planted during the world wars.

APPENDIX C: MEETINGS and CONTACTS

Dominic D'Antonio	Deputy-Representative, USAID/Phnom Penh
Jim Bruno	Deputy-Chief of Mission, U.S. Mission to the SNC/Phnom Penh
Bill Herod	Director (Indochina Project), Vietnam Veterans of America Foundation/D.C.
Meg Carey	(Former) Area Officer (Cambodia), UNDP/N.Y.
Choeng Hoy Chung	Senior Economist (Agriculture), World Bank/D.C.
Ann-Marie Cluckers	Area Officer (Cambodia), Southeast Asia Division, UNDP/N.Y.
Grant Curtis	Rehabilitation and Economic Affairs Office, UNTAC/Phnom Penh
Peter Deinken	Director, Office of Technical Resources, AID/Bangkok
Martin Frechet	Commercial Counsellor, Embassy of France/Phnom Penh
Bernard Gilbert	Deputy-Representative and Program Coordinator, UNICEF/Phnom Penh
Lawrence Hardy	Project Development Officer, USAID/Bangkok
Michael Honnold	Economic/Commercial Officer, U.S. Mission/Phnom Penh
Kathy Hopper	Country Director, Holt International Children's Services/Phnom Penh
Bill Howell	Vulnerable groups, World Food Program/Phnom Penh
Imamura	First Secretary, Embassy of Japan/Phnom Penh
Raoul Jennar	Consultant, NGOs Forum on Cambodia/D.C.
Shelly Kessler*	NY Regional Manager, CARE/Asia
Penelope Key	Senior Public Health Adviser, WHO/Phnom Penh
Kei Kimpara	Logistic Officer, World Food Program/Phnom Penh
Sergio Viera de Mello	Director (ad interim), Cambodia Mine Action Center/Phnom Penh and Special Envoy, Director Repatriation, UNHCR/Phnom Penh
Danai Menabodhi	Second Secretary, Royal Thai Embassy/Phnom Penh
Jean-Paul Menu	Representative, WHO/Phnom Penh
Eduoard Motte	Senior Economist (Water supply), World Bank/D.C.
Robert Muller	Director, Vietnam Veterans of America Foundation/D.C.
Ramanathan Natarajan	Chief of Southeast Asia Division, UNDP/N.Y.
Sarah Newhall	Country Director, Private Agencies Collaborating Together/Phnom Penh
Rajeev Pillay	Deputy-Resident Representative, UNDP/Phnom Penh
Nuttavudh Photisaro	First Secretary, Royal Thai Embassy/Phnom Penh
Mark Pierce	Country Director, Catholic Relief Service/Phnom Penh
Dinah Pokempner*	Lawyer, AsiaWatch/D.C.
Denny Robertson	Director, Office of Project Development and Evaluation, AID/Phnom Penh
Bernard Salome	Senior Economist (Education), World Bank/D.C.
Mintara Silawatshananai	Chief Engineer, USAID/Bangkok

Langdon Smith	Acting-Deputy Director of Operations, World Food Program/ Phnom Penh
Ida Smyer	Regional Legal Counsel, USAID/Bangkok
Margaret Stuart	Deputy-Representative, UNESCO/Phnom Penh
Lisa Studdert	Second Secretary (Development Assistance), Australian Permanent Mission to the SNC/Phnom Penh
Herman Stuurwold	Senior Program Officer, UNHCR/Phnom Penh
Phi Thach	Vice-Minister of Foreign Affairs, SOC party
Brian Thorpe	First Secretary of Development, British Mission to the SNC/ Phnom Penh
Lee Twentyman	Representative, USAID/Phnom Penh
Charles Twining, Jr.	Chief of Mission, U.S. Mission to the SNC/Phnom Penh
Susan Walker	Regional Director, Handicap International/Bangkok

* Discussions were conducted over the telephone, rather than in-person visits.

APPENDIX D: DOCUMENTS REVIEWED

After the Wars: Reconstruction in Afghanistan, Indochina, Central America, Southern Africa, and the Horn of Africa (A. Lake and contributors), 1992.

A History of Cambodia (D. Chandler), 1983.

Analysis Report: Opportunities for Democracy Program Activities in Cambodia (Coopers & Lybrand), September 1992.

Cambodia: A Country Profile (G. Curtis/SIDA), August 1989.

Cambodia: A Country Study (Federal Research Division/Library of Congress), December 1987.

Cambodia: Agenda for Rehabilitation and Reconstruction (World Bank), June 1992.

Cambodia: An Economic Assessment of Rehabilitation Needs (UNTAC), June 1992.

Cambodia: A Time for Return, Reconciliation and Reconstruction (Refugee Policy Group), October 1991.

Cambodia Chronicles VII, "Before it becomes too late," (R. Jennar), February 15, 1993.

Cambodia: Emergency Rehabilitation Project: Aide-Memoire (World Bank Preparation Mission), September 1992.

Cambodia: Post-Settlement Reconstruction and Development (R. Muscat), 1990.

"Cambodia: Problems of a UN-Brokered Peace," (D. Roberts), World Today, July 1992, Vol. 48, pp. 129-132.

Cambodia: Socio-Economic Situation and Immediate Needs (ADB/IMF/UNDP/WB), May 1992.

Cambodian Humanitarian Assistance and the United Nations (1979-1991) (Office of the Special Representative of the Secretary-General of the United Nations for Coordination of Cambodian Humanitarian Assistance Programmes), 1992.

"Clear-Cut: Rebels Sell Off Cambodia's Forests," (C. Wallace), Seattle Times, December 2, 1992, p. A6.

CMAC: Progress Report on the Implementation and Funding Situation of the Short-Term Plan of Operation [November 1992 to June 1993] (CMAC), March 1993.

CMAC: Short Term Plan of Operations and Estimated Financial Requirement [November 1992-June 1993] (CMAC), November 1992.

Comprehensive Paper on Cambodia (UNDP), March 1992.

Critical Needs Assessment in Cambodia: the Humanitarian Issues (N. Hirschhorn, L. Haviland, and J. Salvo), April 1991.

Donors Review Meeting, Addendum "Specific Programmes and Appeals," (UNDP), February 25, 1993.

Donors Review Meeting, Rehabilitation and Development in Cambodia: Achievements and Strategies (UNTAC, UNDP, specialized UN agencies), February 25, 1993.

Humanitarian Assistance in Cambodia 1993 (Cooperation Committee for Cambodia), January 1993.

Indochina: Vietnam, Laos, Cambodia Country Report (The Economist Intelligence Unit), No.3, 1992.

International Roundtable on Vietnam, Laos and Cambodia: The Path to Economic Development, " Cambodia: Rehabilitation and Reconstruction Process," (G. Curtis), Sasakawa Southeast Asia Cooperation Fund/Sasakawa Peace Foundation, November 9-10, 1992.

Inter-sectoral Basic Needs Assessment Mission to Cambodia Report (UNESCO), February 1991.

Land Mines in Cambodia: The Coward's War (AsiaWatch), September 1991.

NGO Statement for the Donors' Review Meeting (NGOs), February 25, 1993.

Political Control, Human Rights, and the UN Mission in Cambodia (AsiaWatch), September 1992.

"Prosperity, as much as peach, eludes Cambodia: Attempts to manage the economy," (V. Mallet), Financial Times, January 7, 1993, p.4.

Rebuilding Cambodia: Human Resources, Human Rights, and Law (ed. F. Brown), 1993.

Report Analyzing the UNTAC Cambodia Election Plan (International Foundation for Electoral Systems), June 1992.

"Report from Cambodia," (S. Sesser), The New Yorker, May 18, 1992, pp. 43-74.

Report of the Cambodia Infrastructure Survey Missions: Executive Summary (UNDP),

September 1990.

Report of the Kampuchea Needs Assessment Study: Executive Summary (UNDP), August 1989.

The Cambodia Repatriation Operation: Joint Appeal for the Reintegration Phase (UNTAC, WFP, UNDP, UNHCR), February 1993.

The Situation of Women and Children (UNICEF), 1990.

The Tragedy of Cambodian History (D. Chandler), 1991.

"The United Nations peace plan, the Cambodia conflict, and the future of Cambodia," (A. Peang-Meth), Contemporary Southeast Asia, June 1992, Vol. 14, pp. 33-46.

UNDP Cambodia: A Programme Approach to Humanitarian Assistance and Rehabilitation (UNDP/Phnom Penh), November 1991.

UNDP: Infrastructure in Cambodia (UNDP), Monthly Information Bulletin, December 1992.

UNDP Programme in Cambodia: Present Situation and Prospects up to 1994 (UNDP Phnom Penh Office), February 1993.

UNICEF-WHO: Provision of Essential Drugs and Consumables/ Initiation of Pharmaceutical System Rehabilitation - Project Proposal (UNICEF-WHO), February 1993.

UNTAC: The Secretary-General's Consolidated Appeal for Cambodia's Immediate Needs and National Rehabilitation (UNTAC), May 1992.

"U.N. Official Say Cambodian Election at Risk," (W. Branigin), Washington Post, February 15, 1993, p. A4.

United Nations Volunteers Mission to Cambodia (UNV), March 1991.

USAID: Briefing Book and Program Description - Cambodia (USAID), December 1992.

"War Scarred Economy Mires Cambodia," (R. Pura), Wall Street Journal, January 5, 1993, p. A10.