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Engendering
Development in Asia
and the Near East:
A Sourcebook



**Engendering Development in Asia
and the Near East: A Sourcebook**

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Foreword

Efforts to integrate women into AID's development assistance begin with the understanding that gender distinguishes unique roles, contributions and constraints within the public life and development of nations.

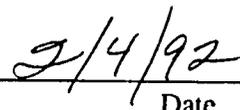
Women's varied market and non-market activities contribute significantly to national economies; however cultural perceptions and data deficiencies often negatively bias reporting of women's economic and social contributions. Their choices and productivity are constrained in many ways. Compared to men, women typically have limited skills and restricted access to resources.

This sourcebook examines trends in women's participation and contribution to the public life and economic activities of Asia/Near East. Country specific cases are presented. Gender issues and the potential for expanding women's opportunities and choices in private enterprise, agriculture, natural resources, education, health, population and nutrition are outlined and discussed. For each sector discussion a table is included that summarizes AID's current emphases in Asia/Near East and presents options to increase women's participation. The options illustrate gender integration strategies designed to further strengthen the sectoral development framework emphasized by the AID Bureaus and Missions.

We are pleased to present this sourcebook and hope it will be a useful tool for mainstreaming WID in the development policies, programs and projects of the Asia/Near East regions.



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Date

Preface

by

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In 1990 the then Asia and Near East (ANE) Bureau of the Agency for International Development, in response to economic and social progress in the region, began to shift the focus of development efforts away from poverty alleviation, emphasizing instead the promotion of the private sector and pluralism. Trends in the region that prompted this response included declining fertility rates, increased life expectancy, strong economic growth, and social progress reflected in improved literacy rates and educational attainment. The bureau recognized, however, that not all countries in the region, or all groups in the ANE countries, had made the same progress and there was concern that this might be particularly the case for women. The rationale for this concern lies in knowledge of the very different economic and social roles that men and women play in Asian and Near East societies — and, indeed, societies worldwide. This knowledge has been generated by the women in development (WID) field over the past twenty years. Through WID research and field interventions we have learned that, while women have important productive as well as reproductive roles in society, conventional measures of economic activity underestimate the magnitude of women's productive roles. National accounts assign women's unpaid work no value and women's paid work outside the modern sector is undercounted. Yet there is a direct relationship of the economic activity of women in poorer households to the economic performance of those households. Thus an important goal of development policy should be to increase the productivity and income of women in the lowest income households. In fact, supporting and strengthening women's economic and social roles can contribute to the effectiveness of development interventions, while at the same time improving women's status and their ability to promote the well being of their families. Although mainly responsible for household production, poor women have always — out of necessity — undertaken self-provisioning agricultural and artisanal work or work for cash income. Recognizing this work, as well as the conditions imposed by women's household and social roles, can translate into improved design and implementation of development policies and programs that will benefit not only women, but entire societies. While this sourcebook is, perforce, general in nature — covering a large and diverse region — our hope is that it provides information useful in determining the specific constraints or opportunities facing women in particular countries or project sites, and their pertinence for policy or program formulation.

1.

Regional Trends in the Asia and Near East Regions and A.I.D.'s Strategies for the 1990s

In response to changing conditions in the Asia and Near East (ANE) regions and to policy shifts within A.I.D., the Asia and Near East Bureaus are planning new strategies for the 1990s that will greatly affect the ways in which they address gender issues. First, due to marked progress in the regions, the bureaus' strategies are shifting away from poverty alleviation and toward sustainable development, especially in countries that have advanced notably. Second, the bureaus' two major themes in the Asia and Near East regions are to promote democracy and to foster the private sector. This chapter describes the programmatic implications of the bureaus' themes and recent demographic and socio-economic trends and projections for the two regions. The effects of these developments on the integration of women into A.I.D.'s upcoming programs is the subject of this sourcebook.

The Bureaus' Strategic Themes

One major strategic theme of the ANE regional bureaus is to strengthen the private sector. The bureaus believe that this is the best way to promote sustainable economic growth because it expands economic opportunities for individuals, encourages them to save and invest in the economy, promotes resource mobilization that is often lacking in developing countries, and improves efficiency (A.I.D. 1990 and A.I.D. 1989). Therefore, the bureaus will rely on the private sector in activities as diverse as generating electrical power, expanding research and development, operating and maintaining infrastructure, and managing natural resources and the

environment, and the more traditional areas such as expanding agribusiness.

The bureaus propose the following types of programmatic actions to strengthen the private sector:

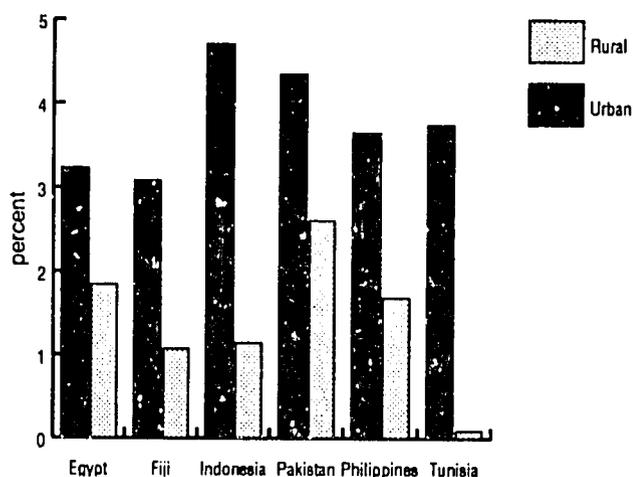
- supporting the development of businesses and jobs;
- initiating policy dialogue to support market-oriented development;
- encouraging increased foreign trade and investment;
- improving the policy environment for scientific and technical change; and
- promoting sustainable use of natural resources and the environment.

The bureaus' second major theme, enhancing democracy, is designed to complement and support private sector development by creating freer political, legal and regulatory systems (A.I.D. n.d. and A.I.D. 1990). A.I.D. characterizes the three areas of programmatic emphases as voice, choice, and governance. The voice category encompasses activities that support civic participation, association, and advocacy. Private groups, such as private voluntary organizations, labor unions, business and professional organizations, and universities would qualify for support in this category.

Activities qualifying for support in the choice category are those that support free and fair elections. They include supporting the conduct of free and fair elections, monitoring elections, and training people to register voters and organize campaigns. Governance-related activities include projects aimed at strengthening institutional capabilities in the various branches of government through such means as providing training in parliamentary procedures, encouraging decentralized public administration, training judicial personnel in civil and commercial law, and developing knowledge of human rights and commercial law among law faculties.

Figure 1.1

Annual Rates of Urban and Rural Population Growth, Selected Countries*



* For years 1980-85

Source: United Nations (1989)

Recent Demographic, Economic and Social Trends

The ANE regions are the most economically diverse of the regional subdivisions within A.I.D. In 1986, per capita incomes of countries within these regions ranged from a low of US\$ 150 in Nepal to a high of US\$ 1540 in Jordan (table 1.1). The regions include countries with high rates of poverty and slow growth (Bangladesh) and those whose economies have grown rapidly and exhibit considerable vitality (Thailand). Still others, like India, have had fairly respectable growth rates and good fiscal management but continue to grapple with widespread poverty. Still, a review of recent trends reveals some common regional patterns.

Demographic trends show declining fertility, higher life expectancy, and growing urbanization. During the

1980s, most countries of the ANE regions exhibited significant declines in fertility (A.I.D. 1990). However, rates in some countries including Nepal, Pakistan and Jordan, remained unchanged. Median age in the region increased and a growing share of the population was living past the working age. In addition, the population was becoming increasingly concentrated in urban areas (figure 1.1). Urban growth rates were 1.5 to 3 times higher than national growth rates and rural to urban migration was primarily responsible for the increase (A.I.D. 1990).

Economic growth was strong throughout the region in the 1980s, except in the middle-income countries of the Near East. Growth rates in India and Pakistan, for example, averaged over 5 percent per annum (table 1.1). Although growth rates were slower in the Near East, per capita incomes generally exceeded those in the faster growing South and East Asian countries.

Table 1.1

Per Capita Income and Growth Rates, Selected Countries
(US \$, percent)

Country	GNP per Capita	Average Annual GDP Growth 1980-87
Bangladesh	160	3.8
India	290	5.5
Jordan	1540	5.1
Morocco	590	3.4
Nepal	150	NA
Pakistan	350	6.7
Thailand	810	5.6

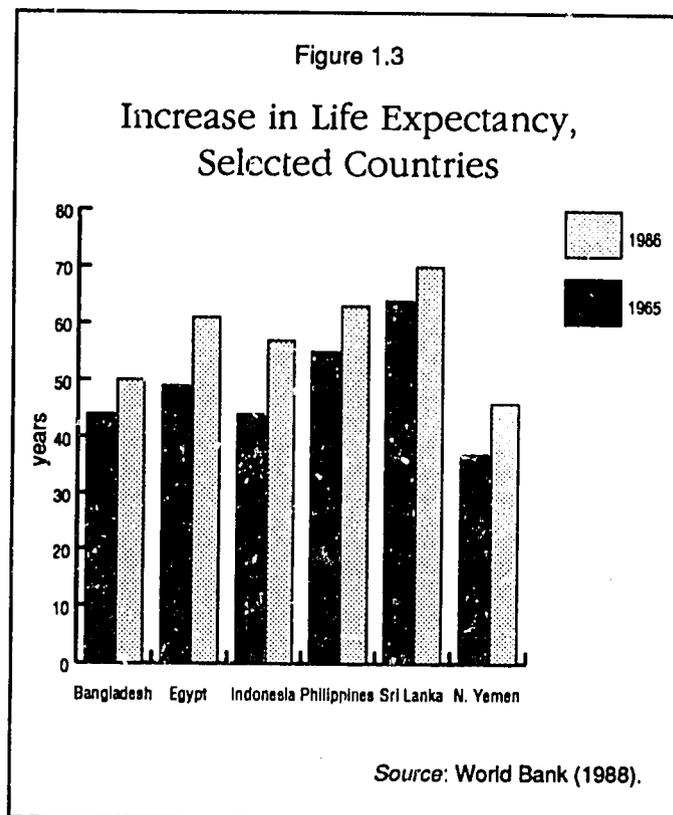
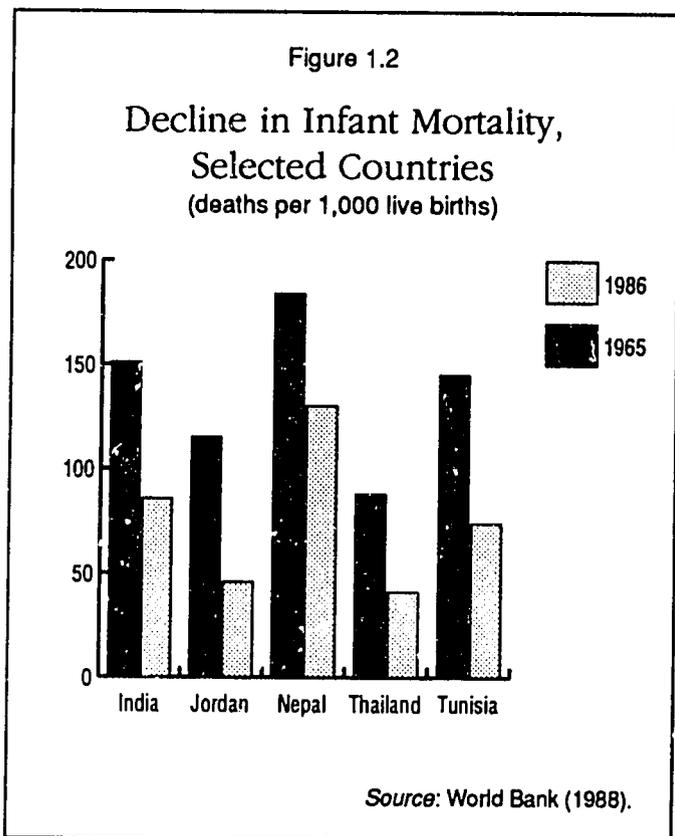
NA = Not available

Sources: World Bank (1988), World Bank (1989).

Economic growth resulted in significant reduction of poverty. In Indonesia, for example, the incidence of poverty fell from 58 percent in 1970 to 40 percent in 1984 (A.I.D. 1990). Regional economies also become more diversified. Manufacturing and the service sectors expanded rapidly, while the share of agriculture in GDP and employment declined.

- Thirty years ago agriculture contributed 70 percent of India's national income and 70 percent of the people lived in rural areas. The same percentage of people still lives in rural areas, but only 30 percent of the country's income comes from agriculture. While agricultural productivity has increased, industrial efficiency and output have grown even more (Coll, 1990).
- In east Asia, industry's contribution to GDP increased 11 percent between 1965 and 1985, while that of agriculture fell 15 percent.

Social progress accompanied economic growth, as evidenced by improvements in health and education.



Infant mortality in the Near East countries fell 40 to 60 percent from 1965 to 1986 (except in Yemen) (A.I.D. 1990)¹. In Asian countries it declined 30 to 50 percent in the same period, except in Bangladesh and Pakistan (figure 1.2). Life expectancy in the regions increased an average of almost ten years between 1965 and 1986 (figure 1.3)². Literacy and basic education improved. Primary school attendance grew, and by 1985, 90

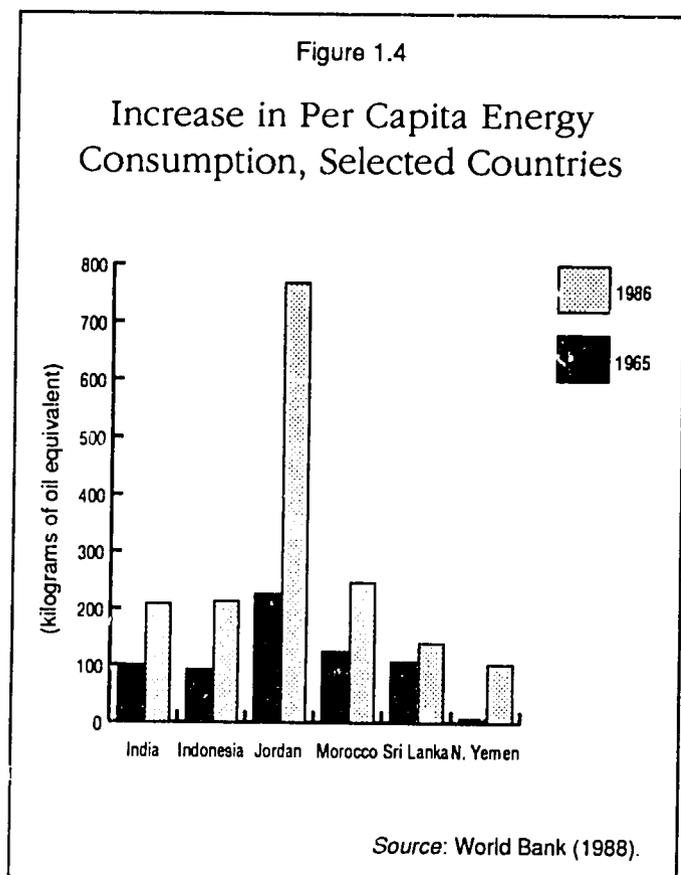
¹ Unless otherwise specified, throughout this sourcebook, Yemen refers to the former Yemen Arab Republic or North Yemen. Statistics from the Yemen Arab Republic are cited more frequently because, prior to the unification of the two republics in May 1990, they were more readily accessible than those for the People's Democratic Republic of Yemen (or South Yemen).

² Regional averages cited in this chapter are based on data for the following countries: Bangladesh, Egypt, India, Indonesia, Jordan, Morocco, Nepal, North Yemen, Pakistan, the Philippines, Sri Lanka, Thailand, and Tunisia.

percent of children were enrolled in schools in India, Indonesia, Jordan, the Philippines, Sri Lanka, Thailand and Tunisia. On average, secondary school enrollment went up almost 19 percent (World Bank 1988).

Per capita energy consumption, an indicator of improved living standards, increased dramatically (figure 1.4). It rose, on average, 143 kilograms of oil equivalent between 1965-86 for the region (World Bank 1988). Average increases were much lower for the poorer countries such as Bangladesh, Pakistan, and Nepal.

The generalized picture for the region is one of growing success in meeting basic needs. In many countries, population growth has slowed, infant mortality has fallen, and literacy has increased. The development challenges in these countries are changing rapidly as their economies develop and become better integrated into world markets. Emerging development issues include rapid urbanization, industrialization, development of international trade, and the internationalization of labor.



Other parts of the ANE regions have not yet succeeded in overcoming basic constraints to economic growth and development. The south Asia subregion, for example, accounts for over half of the total number of people living in absolute poverty in the developing world (A.I.D. 1990). High population density, low nutritional status, high infant mortality, and high levels of illiteracy are continuing problems. Still other countries, like India, for example, have experienced healthy growth rates but a large proportion of their populations continue to live in poverty.

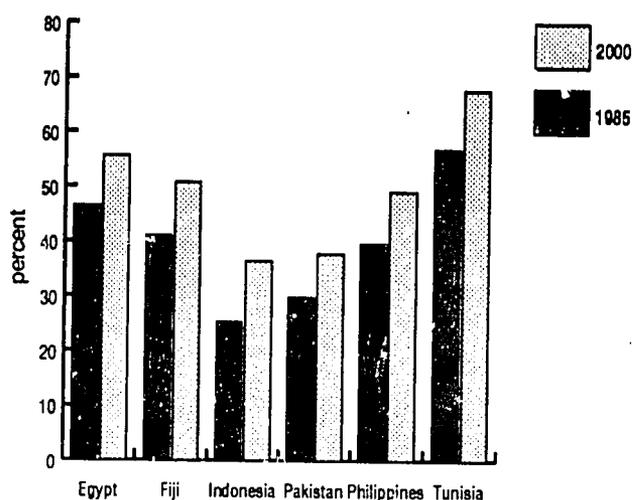
Emerging Needs and the Bureaus' Strategies

Projections for the region for the 1990s and beyond point to changing developmental opportunities and needs (A.I.D. 1990).

- Population will continue to expand into the next century. The age structure will change dramatically: greater numbers of people will enter the workforce and more people will reach retirement age, raising the demand for both employment and social services.
- Urbanization will continue, putting pressure on urban services, housing, and the environment (figure 1.5). Rural to urban migration will create the need for additional employment opportunities in the cities.
- Employment and income generated by agriculture will continue to decline. Food processing and distribution will grow in importance, creating opportunities for investment in agribusinesses and agroprocessing enterprises.
- International trade will grow in importance as a contributor to economic growth. Many policymakers regard the success of the east Asian economies in export-led growth as an exemplary developmental model. Trade has also become increasingly important to the economies of other countries in the region.

Figure 1.5

Urban Population in 1985 and 2000, Selected Countries



Source: United Nations (1989).

- As demographic and epidemiological trends change, health needs are gradually shifting towards prevention and the problems of aging populations. The emerging problems will require greater attention, for example, to improving people's nutrition, and to treating chronic and degenerative diseases.
- In education, problems include the growing discrepancy between female and male literacy rates, low rates of primary school completion in some countries, and continued low enrollments at the secondary level. Improvements will, therefore, be needed in girls' enrollment at the primary level, and in the enrollment of both sexes at the higher educational levels. In addition, the quality and financial sustainability of educational programs need to be improved.

A.I.D.'s regional bureaus have adopted two broad approaches to respond to the emerging opportunities and needs of the ANE regions. The first approach is to rely on policy and program actions, rather than the more usual projects, to address issues such as international trade and investment, social services, and energy, environment, and natural resources (A.I.D. 1990).

In the majority of countries whose economic performance has been good, the bureaus will emphasize the democracy and private sector themes, as they regard these countries to be more likely to achieve them. Policies and programs will, therefore, stress private sector participation, financial sustainability, cost efficiency, improved management, deregulation, and capacity building in public policy. Types of programs will include:

- skills training for young people
- improved fiscal management of cities
- increased and better managed health services delivery
- pollution control, and
- agribusiness development.

The second approach will emphasize project-based assistance that addresses critical needs such as alleviating poverty, reducing infant mortality, expanding agricultural production, and puts less emphasis on the democracy and private sector themes. The targeted group of countries includes Bangladesh, Nepal, Pakistan, and Yemen where economic growth has been slow and quality of life indicators lag. Wherever possible, and as opportunities present themselves, the bureaus will still try to introduce the democracy and private sector themes.

Implications for Women

The potential for A.I.D. programs to benefit women in the ANE regions is considerable if women's roles, needs, and contributions are properly identified and integrated into development policies and programs. The

purpose of this sourcebook is to demonstrate the particular opportunities presented by women's participation in the labor force and in public life, identify the constraints women face in being successful at their

varied market and nonmarket activities, and suggest ways in which women can be more fully and effectively integrated into A.I.D.'s programs to maximize their contributions to regional development.

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2. Trends in Women's Participation in Economic and Public Life

Efforts to integrate women into the design of development programs should begin with an understanding of the role women and men play in their country's economy, their contributions, and the constraints they face in enhancing their output and productivity. However, acquiring a true picture of the extent of women's economic participation is often difficult because official statistics do not accurately reflect women's paid and unpaid activities. In many countries of the ANE regions, the cultural belief is that, ideally, women should not work outside the home. This is true even in countries like the Philippines, where to all appearances, women play a significant role in the workforce.

Closer examination reveals, however, that women engage in paid and unpaid work both in the home and outside it. The task for development planners is to determine women's economic roles by examining not the cultural ideals, but the realities of women's daily lives. Data deficiencies complicate the task, but greater research interest and support and methodological improvements are gradually enhancing the depth and quality of available information, making it easier to understand women's economic roles.

This chapter highlights the major factors pertaining to women's participation in economic and public life and the effects of cultural differences on women's participation rates. It also suggests ways to obtain information on women's labor force participation and activity rates in political and civic affairs. Since the ANE regions are so diverse, A.I.D. mission staff will have to determine for themselves the relevance of each of these factors to the specific country and the mix of information they need for their particular policy, program, and project interests.

Women's Labor Force Participation

During the past 25 years, women's participation in the labor force has been growing in the ANE regions, increasing an average of 23 percent between 1970 and 1985.¹ In the Near East countries alone, women's economic activity rates increased even more dramatically, an average of almost 45 percent for five of the six countries shown in table 2.1 (Tunisia was not included in the average because the change there was too extreme).

Table 2.1

Increase in Women's Economic Activity Rates, Near East Countries, 1970 and 1985 (percent)

Country	1970	1985	Increase 1970-85
Egypt	5.7	7.8	37
Jordan	6.0	7.8	30
Morocco	11.8	17.7	50
Oman	6.1	8.2	34
Tunisia	10.8	23.6	118
Yemen	5.4	9.3	72

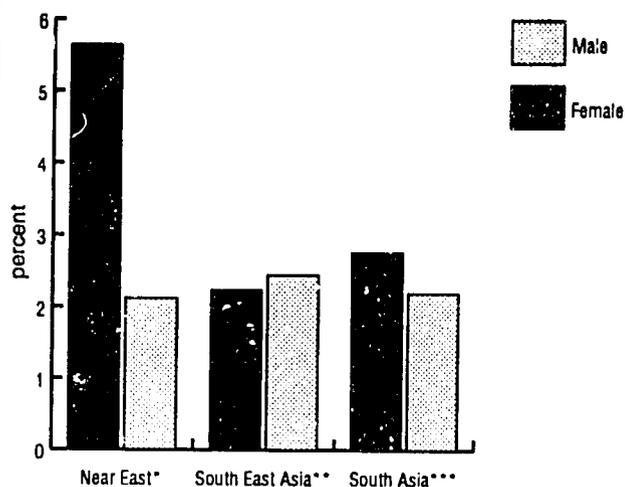
Source: United Nations (1989a).

Women's labor force participation grew at a faster pace than that of men in the Near East and South Asia and just a little slower than that of men in South East Asia (figure 2.1). According to the International Labour Organisation's projections, in most countries of the

¹ Average based on rates of increase in 14 countries: Bangladesh, Egypt, India, Indonesia, Jordan, Morocco, Nepal, North Yemen, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Thailand, and Tunisia.

Figure 2.1

Annual Rates of Growth in Economically Active Population by Sex, 1970 to 1985



* Includes Egypt, Jordan, Morocco, Tunisia, Yemen

** Includes Indonesia, Philippines, Thailand, Papua New Guinea

*** Includes Bangladesh, India, Nepal, Pakistan, Sri Lanka

Source: United Nations (1989a)

regions, women's activity rates will continue to grow to the end of the century, though at somewhat slower rates than they did between 1970 and 1985 (figure 2.2). However, if current trends continue, women's activity rates in South Asia are projected to continue to decline as they have done since 1950 (Nuss 1989).

Undercounting the female labor force

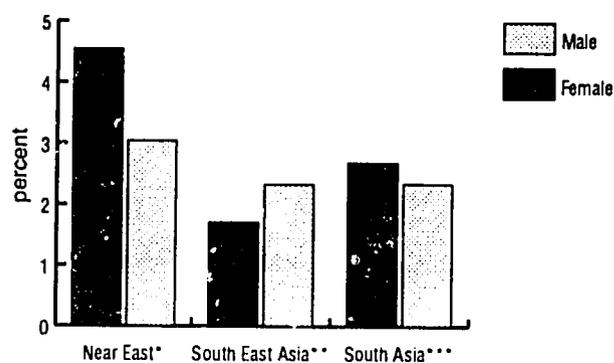
In most countries, obtaining reliable data on women's participation in economic activities is difficult. Statistics frequently underestimate women's participation in the labor force. Often, participation in the traditional or noncash economy is not counted, yet this can account for a significant share of the female labor force in developing countries.

■ In the South Pacific, for example, if traditional activities such as farming and fishing are included, women's economic participation rate ranges from 60 to 80 percent. If only formal employment is counted, women's work force participation amounts to 10 percent (Hetler and Khoo 1987).

■ Underestimation of women's participation in agriculture is a particularly serious problem. According to the Fijian population census (1976), women made up only 9 percent of the agricultural workforce, whereas the agricultural census showed that women made up 23 percent of full-time agricultural workers and 57 percent of part-time workers (United Nations 1987).

Figure 2.2

Annual Rates of Growth in Economically Active Population by Sex, 1985 to 2000



* Includes Egypt, Jordan, Morocco, Tunisia, Yemen

** includes Indonesia, Philippines, Thailand, Papua New Guinea

*** Includes Bangladesh, India, Nepal, Pakistan, Sri Lanka

Source: United Nations (1989a)

Box 2.1

Tunisian Women Disappear from the Labor Force

Tunisian census data illustrate the effects of cultural biases against acknowledging women's participation in economic activities. In 1966, 87,000 (23 percent) female farm workers "disappeared" from the labor force because the census classified them as housewives rather than unpaid family workers, as the previous census had done.

Source: Durrani (1976).

- Similarly, Egyptian statistics showed that in 1970 only 3.6 percent of the agricultural labor force were women. Yet a nationwide sample of rural households revealed that 55 to 70 percent of women participated in farm production activities. Moreover, at least half of farm wives ploughed and leveled the land, tasks often believed to be exclusively male (Hijab 1988).

In countries where social norms do not favor women's work outside the home, their work may be undercounted because data collectors are reluctant to acknowledge women's economic contributions (box 2.1). In fact, women themselves may underplay their employment outside the home.

Varying definitions of "activity" and "inactivity" can affect the correct estimation of women's labor force participation. For example, use of the term "principal" activity can be misleading. Most women in developing countries define themselves as housewives regardless of the amount of nondomestic work they actually do and whether or not they derive income from it.

- The census in Samoa classified as "not economically active" women who considered their income-earning activities as secondary to their household duties (United Nations 1987).

The way in which questions are phrased can also have important implications for the accuracy with which women's economic work is measured.

- In response to a question on a Syrian labor force survey that asked whether their wives worked, a large proportion of men responded that they did not. However, the majority answered yes when asked if they would have to hire a replacement if their wives did not assist them with their work (Hijab 1988).

In addition, there may be special reasons why women's participation is underestimated within particular sectors of the economy. In agriculture, for example, women may be undercounted because surveys are done in the off-season and data gatherers fail to count seasonal workers. This omission is likely to miss more women than men, because women farmers tend to be more concentrated in seasonal work such as harvesting and postharvest processing and storage.

Box 2.2

Dramatic Increases in Working Women in Egypt

Prior to 1983, statistics based on census data and labor force surveys reported that just 5 to 6 percent of women in Egypt participated in the labor force. In 1983, the estimates of female labor force participation more than doubled to 13 percent. The dramatic increase was not, however, due to any real expansion in women's participation. It was the direct result of improved reporting. Moreover, more detailed household-level studies that applied even more refined methodologies and included both paid and unpaid work, showed even higher levels of participation: 12 percent of sampled women engaged in wage work, 37 percent in other monetized activity, and as many as 80 percent in unpaid work.

Source: Anker and Anker (1989).

Box 2.3

Sources and Quality of Information on Women's Employment

When attempting to estimate women's work participation, investigators should keep in mind that it may be underestimated. Therefore, comparing data from a variety of sources and evaluating its quality before making conclusions is important. Alternative ways of obtaining data are as follows:

- Official statistics, including censuses, labor force surveys, and agricultural or other specialized surveys available through national government agencies, are often the most readily available sources of information, but for reasons discussed in the text, they tend not to be the most reliable for determining female labor force participation.
- Sample household surveys and other microlevel studies done by university researchers, research organizations, or international agencies can be more informative, particularly if they record in detail (as do time allocation studies) women's daily activities on the farm or in urban households. Information on women's informal sector activities are more likely to be available through microlevel surveys.
- A sample household survey for a particular project area is desirable if resources and time are available. Alternatively, including questions on women and work is useful in a baseline survey if one is planned as part of a project design.
- Rapid appraisal techniques, if properly conducted, can be useful for particular project sites, especially when supplemented with other types of statistics.

Women's work is most commonly underestimated by national statistics, such as census data and large-scale, countrywide, labor force surveys. Sector-specific surveys such as agricultural surveys tend to take better account of women's work. The most reliable sources of information on women's labor force participation tend to be microlevel, household surveys, particularly those that obtain gender-differentiated time allocation information (box 2.2). Box 2.3 lists different sources of information that investigators can use to estimate female labor force participation.

The Supply of Women's Labor

In many parts of the ANE regions the most notable increases in the supply of women's labor have been among urban migrants who are concentrated primarily in the informal sector, rural women working in agriculture, and women with higher education. Yet another source of increase in the labor supply is the growing number of woman-headed households.

Urban migration

Declining economic opportunities in the rural areas of some countries have caused women to migrate to the cities in search of paid employment.

- In the 10 to 19 age group, between 1971 and 1986, women migrated from rural to urban areas of Thailand at twice the rate of men. During the same period, women's participation in the urban labor force increased from 39 to 52 percent, a rate faster than in rural areas (Tonguthai 1988).
- Studies show that migrant women tend to be better represented in the workforce than the general population of women. Indian census data, for example, show that in the city of Hyderabad, migrant women participated in the labor force at twice the rate of nonmigrant women (Singh 1984).

- In Indonesia, 58 percent of migrant women were economically active compared with 30 percent of nonmigrants (Shah and Smith 1984).

Women from poor and landless households are disproportionately represented among the migrants, as are young and unmarried women who, presumably, have fewer household responsibilities, and are therefore more mobile and able to seek work away from home.² One study of five Asian countries concluded that single, illiterate women appeared to have a particularly great need for employment (Shah and Smith 1984).

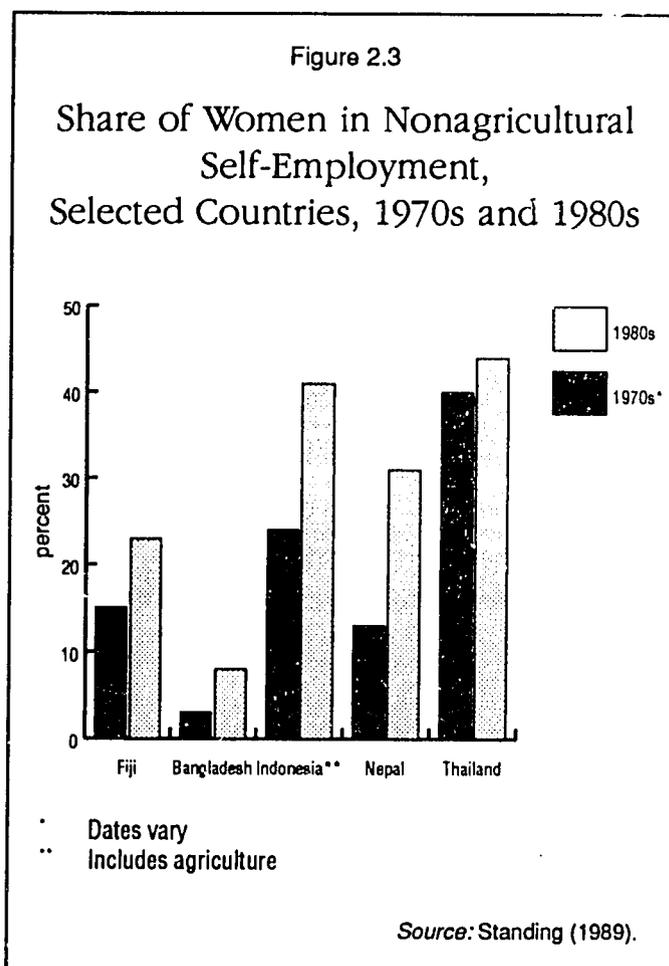
Since wage employment opportunities have not expanded as rapidly as the urban labor force, women's participation in the urban informal sector has increased rapidly. Economic recession is another factor contributing to the expansion of women's participation in the informal sector. High levels of unemployment associated with economic slowdown put pressure on women to enter the labor market. Lacking skills and training, and hence access to formal sector jobs, women seek employment in the urban informal sector in the service occupations, primarily domestic service. Others become self-employed as petty traders.

As shown in figure 2.3, self-employment among women was already high in Thailand in the 1970s. It increased in the 1980s in Bangladesh, Fiji, Indonesia, and Nepal.

Expanded participation in agriculture

High rates of male out-migration from rural areas have contributed to a significant expansion of women's participation in agriculture throughout the region. In the Near East, the trend started in the 1970s with men migrating from the oil-poor to the oil-rich countries within the region, or to Europe. It continued in the 1980s as internal migration from rural to urban areas. In many other Asian countries, migration is a more recent phenomenon. Men migrate to the Near East, or more commonly, from rural to urban areas within their own countries.

² However, the migrant women fulfill household responsibilities in a different way by sending home money.



As men migrate out of rural areas women are left with responsibility for farm operations, management, and decisionmaking (Shaw 1981). To a large extent, women also become responsible for day-to-day household support. Therefore, ensuring that women have access to new technologies and methods that enable them to maintain and increase farm output, productivity and income, is vital.

Spread of education

Because improvements in access to jobs and higher earnings is highly correlated with education, the spread of education among women in the ANE regions is an important factor contributing to the increase in female labor force participation. Girls' enrollment rates have been rising steadily throughout most of the region during the past two decades, with the improvements

most evident at the primary level, although some countries have also made significant gains at the higher educational levels.

Indeed, labor force participation has increased most significantly among women with postsecondary education, especially in the Near East.

- In Egypt, 85 percent of women with a university education and 53 percent with secondary education were employed in the formal labor force, compared with only 6 percent with an intermediary education (Loza n.d.).
- In Fiji, only 13 percent of women with less than eight years of education were economically active in 1976, compared with over 65 percent with postsecondary education. The latter were much more likely to continue in the labor force after marriage than the former (Hetler and Khoo 1987).

Note that women educated above the secondary level are a very small proportion of the population of the ANE regions. For the vast majority of women, their access to the labor market can be greatly improved by educating them above the secondary level, which in turn requires improvements in girls' enrollment and graduation from primary and secondary schools. These issues are addressed in more detail in chapter 6.

Rise in woman-headed households

An important factor contributing to increased economic activity among women is the growing number of households headed by women. Although data are very fragmentary, the incidence of woman-headed households may be lower in the ANE regions than in other parts of the world (United Nations 1989a). The proportion of woman-headed households among subpopulations in the regions is, however, comparable to other parts of the world. As in other regions, a disproportionate number of woman-headed households live in poverty and depend on women's incomes for survival. Studies around the world have shown that the poorer the household, the more likely it is to depend on a woman earner (Heyzer 1989).

- In rural Bangladesh, 25 percent of landless, rural households are headed by women, compared to 15 percent in the total rural population (Commonwealth Secretariat 1989).
- In Moroccan cities, a woman heads one in four households (Commonwealth Secretariat 1989).
- In Sri Lanka, officially, 17 percent of households were headed by women in 1981 but rates were higher in war-torn areas where a large proportion of households do not have an adult male in residence (McGowan and Bruns 1989).

In sum, the factors that affect the regions' supply of female labor vary greatly between countries. In practical terms, therefore, it is necessary to determine and analyze these factors in greater detail for each country under consideration for A.I.D. assistance. These data must then be combined with information about the determinants of demand for women's labor to design appropriate policies and programs.

The Demand for Women's Labor

Among the many factors contributing to raise the demand for women's labor in the ANE regions, the most important in recent years are the expansion of manufacturing industries, high levels of male migration, and favorable government policies.

Expansion of manufacturing industries

The demand for women's labor in nonagricultural employment expanded rapidly during the 1980s. In Egypt, for example, although the overall share of manufacturing employment remained steady between 1980 and 1985, the participation of women increased significantly from 11 to 16 percent (United Nations 1989b). In Asia, women workers now constitute 80 percent of employees in certain types of manufacturing, such as electronics assembly, garments, and textiles (Heyzer 1989). As table 2.2 shows, women represent from one-third to almost one-half of nonagricultural workers in Indonesia, the Philippines, and Thailand, while their rates of participation are expanding rapidly in Egypt, Jordan, and Sri Lanka.

Table 2.2

Share of Women in Nonagricultural
Employment, Selected Countries
and Years
(percent)

Country	1975	1980	1985
High participation			
Indonesia	37	34	37
Philippines	47	46	48
Thailand	42	42	44
Fast-growing			
Egypt	10	11	16
Jordan	14	17	23
Sri Lanka	18	18	25

Source: Standing (1989).

The demand for women workers in manufacturing has risen because expanding industries such as the garment and horticulture industries are those in which women have traditionally been employed and have expertise. Women workers are also in demand because they can be paid less than men and are perceived as being more reliable. Finally, many of the jobs require precision and manual dexterity and women are believed to have more of these skills. Women's participation in manufacturing and production work is likely to continue to increase as more countries adopt export-led strategies of development that result in the expansion of industries such as textiles, garments, agribusiness and agroprocessing, electronics, and data processing.

Male migration

Labor supply shortages due to male migration have raised the demand for women's labor. This has occurred throughout the region at various times during the past 30 years and in various sectors of the economy.

- The shortages became apparent in the Arab countries because of large-scale male migration to urban areas and foreign countries during the 1980s. Labor shortages were so severe in countries such as Jordan that governments were prompted to adopt policies aimed at increasing women's participation in the labor force (box 2.4).
- More recently in India, male migration has contributed to shortages of wage labor in agriculture and raised the demand for salaried women farm workers (World Bank 1989).

Government policies

Governments in some countries have been quite effective in devising policies that raise the demand for women's labor. Government policies can raise the demand for women's labor either by employing them

Box 2.4

Government Policy: A Double-Edged Sword

The case of Jordan provides an excellent example of effective government policies promoting women's participation in the labor force. Foreseeing severe labor shortages in the early 1980s, the government undertook a systematic effort through planning, legislation, and consciousness raising to encourage women to work outside the home and for employers to hire them. A measure of the success of these efforts was an increase in the economic activity of married women from just 4.0 percent in 1976 to 22.4 percent by 1981.

Unfortunately, changes in economic conditions, rising unemployment, and the return of male migrants seeking jobs led to a reversal in government policy. Although the policy was implicit rather than explicit, it marked a turning point for women, slowing both the enactment of social legislation enabling women to work and the process of women's absorption into the labor force.

Source: Hijab (1988).

Box 2.5

Obtaining Baseline Data on Women's Economic Activities

The following types of questions may be helpful in identifying both supply and demand factors that determine women's participation in the labor force and the types of activities in which they are engaged:

- What are labor force participation rates for women? What are women's rates of participation in the labor force of rural, urban, local or regional areas?
- What is projected in terms of female labor force participation rates for the near-term future? How are they likely to change based on projected demographic and economic trends?
- In what sectors, subsectors, or occupational groups are women concentrated? Which sectors and subsectors are likely to grow and expand?
- To what extent are women employed in seasonal occupations, part-time jobs, and multiple activities?
- To what extent are women employed in the informal sector and in what activities?
- To what extent are women employed in paid and unpaid production, processing, and marketing activities? Are these activities homebased or market based?
- What is the proportion of woman-headed households? What is the labor force participation rate among women-household heads? In what types of activities? Is the proportion of woman-headed households increasing?
- What are unemployment rates among women? What are the demographic characteristics of unemployed women?

directly in the public sector or by encouraging the private sector to hire women. In Egypt, the government raised demand for women's labor by a policy that guaranteed public sector employment for all graduates with at least a secondary school education (Loza n.d.). As the number of girls graduating from secondary schools increased, the policy boosted women's employment.

The advantages of public sector employment are better wages and more secure employment than in the private sector. In many countries, pay differentials between men and women are smaller in the public than in the private sector (International Labour Organisation 1989). A disadvantage of policy guarantees for public sector employment, however, is that over time the public sector tends to become too large and costly. When the sector has to retrench, women usually make up a disproportionate share of those laid off since they are generally the last hired, and in staff rather than management positions.

Note, however, that government policies can also be used to restrict women's entry into the labor force or, in more extreme cases, actually to deny employment to women. This has happened from time to time, either to ensure adherence to customs and traditions restricting women's public activities, or because unemployment among men is high. Implicit government support for discrimination against women workers may be as effective as explicit policies in limiting women's opportunities, as the Jordanian case also demonstrates (box 2.4).

Guidelines for program staff obtaining data on women's economic activities are provided in box 2.5.

Improving Women's Employment Opportunities

Economic trends in the ANE regions and patterns of women's employment suggest opportunities for increasing women's participation in the labor force and improving their access to more remunerative and skilled work. However, a number of factors pose

serious constraints for improving women's employment, including especially, high female unemployment rates and significant male female wage differentials. These will have to be addressed in order for women to have better access to employment and higher incomes.

Constraints

An important factor that limits women's employment in the formal sector is that the demand for women's labor has not kept pace with their entry into the labor force, especially the urban labor force. Unemployment rates among women are higher than for men, and women form a relatively large proportion of the unemployed (table 2.3). Women are also often affected by seasonal unemployment in both agriculture and manufacturing.

- In Thailand, 5.2 percent of rural women were unemployed in 1986, compared with 3.6 percent of men. More than two-thirds of those who were seasonally unemployed in the rural areas of Thailand were women. (Tonguthai 1988).

- In Tunisia, women in the manufacturing sector are more likely than men to be employed in seasonal industries such as foodprocessing, and therefore find themselves unemployed for much of the year (Astolfi and Damiba 1987).

In both agricultural and nonagricultural work, substantial differences exist between male and female wage rates. This is in part due to the concentration of women in certain sectors, such as services, and in the low-skilled occupations within these sectors. Moreover, women are often paid less than men even for similar positions. These disparities persist throughout the occupational spectrum, from low-skilled occupations through professional positions.

- On average, women earn only 70 percent of male wages in nonagricultural work in Thailand (Tonguthai 1988).

There is little evidence to show that wage differentials decline with improved economic conditions or as a result of legislation.

Table 2.3

Urban Unemployment by Sex, Selected Countries and Years

Country	Year	Percentage of Women in Total Unemployment	Percentage of Unemployed Workers	
			Women	Men
Fiji	1976	30.2	14.5	10.0
Indonesia	1980	32.9	3.5	2.9
Pakistan	1982	18.9	14.8	4.5
Papua, New Guinea	1980	18.6	8.6	7.7
Philippines	1978	54.1	11.6	6.8
Sri Lanka	1981	43.5	29.3	14.5
Tunisia	1975	23.4	14.5	13.0

Source: United Nations (1989a).

- In an effort to prevent sex-based wage discrimination, the Indian government passed the Equal Remuneration Act in 1976. The legislation was undermined by state laws that deliberately fixed differential rates for women and men (United Nations 1987).

Continuing large differentials between male and female wage rates can be a disincentive for women to engage in wage employment. This problem should be addressed directly. A.I.D. can help address these and other constraints by upgrading women's skills and training and making them more competitive and productive.

Opportunities

Economic opportunities for women are expanding in a number of areas where A.I.D. can help women make the most of them. They include:

- a. **Nonagricultural wage work in manufacturing enterprises.** Agroprocessing, electronics, and

Table 2.4

Women Administrators and Managers, Selected Countries and Years
(percent)

Country	Year	Women Administrators and Managers
Egypt	1980	12.4
	1983	16.1
Indonesia	1978	2.1
	1982	10.3
Sri Lanka	1980	9.9
	1984	10.9
Thailand	1980	17.8
	1982	19.8
Tunisia	1966	3.5
	1980	21.4

Source: United Nations (1989b).

dataprocessing offer new opportunities for women. While the expansion of these industries improves women's prospects for employment and income, it also raises questions about the quality of employment and prospects for advancement. This is because much of the increase in women's industrial employment has been in semiskilled work that is sometimes seasonal (agroprocessing, for instance) and does not offer long-term job security or opportunities for advancement. Chapter 3 addresses these issues, and potential policy solutions to overcome them, more fully.

b. **Informal sector self-employment** represents an area in which women's role is expanding. It offers A.I.D. an opportunity to support women's work that is in keeping with the privatization strategy. Self-employment in the informal sector is a precarious undertaking for poor urban women. Most such enterprises offer low returns and are vulnerable to bankruptcy. Successful interventions around the world have shown, however, that small amounts of assistance, such as credit and technical help, can go a long way in making women's enterprises more stable and remunerative. These issues are discussed more fully in chapter 3.

c. **Agriculture.** As noted above, women have increasingly been drawn into agriculture to fill the gap left by men attracted to nonfarm employment. This situation creates opportunities for donor support in improving women's access to whatever skills training and technical assistance is being offered to men in agriculture. In the longer term, the situation offers opportunities to educate and train women to enable them to become more competitive in nonagricultural employment.

d. **Professional and managerial positions** offer opportunities for women in countries where their labor force participation is growing (table 2.4). There is thus a pool of qualified women that could be tapped for advanced training under the private sector development strategies contemplated by A.I.D.

However, even in countries where women's representation in the professions is growing, women are employed primarily in traditionally female fields such as teaching and nursing.

Box 2.6

Improving Women's Access to Employment

The following types of questions may be useful in determining the appropriate ways to help improve women's access to employment and their potential for earning income.

- How will changes in the labor market structure affect women's employment? In which sectors or subsectors is the demand/supply of labor projected to rise/fall? Are these sectors or subsectors in which women are represented?
- What types of skills training do women require to improve their access to wage earning opportunities?
- Are wage differentials sectorally distributed in such a way that they may serve as a disincentive for women to work in certain sectors, thereby effectively closing off certain opportunities?
- Will changes in patterns of occupational concentration require different types of training for women and men? (if, for example, agriculture is becoming increasingly feminized, it may be necessary to target extension and training programs to women)
- Does the structure of occupational concentration suggest that special interventions will be needed to increase the participation of women in professional, technical, managerial, and administrative positions?
- What types of assistance do self-employed or entrepreneurial women require? What is the size of enterprises in which women make investments? Are women's enterprises concentrated in certain types of services or manufacturing?
- What are the educational and skill levels among women that head households? What strategies could help these women improve their access to wage employment or self-employment?

- In Thailand, for example, the number of women professionals more than doubled between 1971 and 1986, but the increase was primarily in teaching and nursing (Tonguthai 1988).
- Women are not well represented in management and administration. In the Philippines 10 percent of women are in white-collar occupations, but less than 1 percent hold managerial positions (Tonguthai 1987).

Neither are women in the South Asian countries such as Bangladesh, India, and Sri Lanka or in the South Pacific well represented in management and administration.

- In the South Pacific, 2 percent or fewer economically active women hold administrative or managerial positions (United Nations 1987).

Thus, in all these countries special efforts may be needed to improve women's access to administrative and managerial positions.

Box 2.6 offers guidelines to help improve women's access to employment.

Although there is considerable debate about the relative effectiveness of a women-specific versus an integrated approach to promote the economic and social development of women, if carefully designed and implemented, both types of projects can be successful. Depending on the country and stage of women's development, one or other type of approach may be more appropriate. USAID/Pakistan has chosen the women-specific approach in designing and implementing the Special Development Fund that holds great promise for having a significant impact on women (box 2.7, p. 21).

Women's Participation in Public Affairs

A.I.D. plans to undertake a major new focus on democratic pluralism in the 1990s which provides considerable scope for strengthening women's roles. As women are generally not well represented in governing bodies

or in civic and other associations in the regions there is considerable scope for improving women's participation. Women also do not have much of an influence on policymaking and policy implementation, and not surprisingly, policymakers tend to overlook women's concerns. There is scope also for advancing women's roles in the electoral process even though women have the right to vote everywhere in the regions except Oman, where men do not have voting privileges either (table 2.5).

Organizational membership

The limited available evidence suggests that few women participate in civic and other organizations such

as chambers of commerce, business organizations, cooperatives, and other associations. This is true even when women's membership is unrestricted, especially in places where their public roles are traditionally limited. Moreover, women's dual responsibilities for economic and household work limit the time available for civic activities. However, the region is diverse and women's participation in organizations varies greatly. Thus, investigators should determine the extent and nature of women's participation in public and civic life in each country. As organizational participation is often a critical factor in determining individuals' economic success, finding ways to facilitate women's participation is important. A.I.D.'s democratic pluralism initiative provides a unique opportunity to urge the organiza-

Table 2.5

Women's Participation in Public Affairs, Selected Countries

Country	Year Women Given Right to Vote	Year Women Given Right to Stand for Election	Percentage of Women in Unicameral or Lower Chamber (1934-87)
Bangladesh	1972	1947	9.1
Egypt	1956	1956	3.9
India	1949	1950	7.9
Indonesia	1945	1945	NA
Jordan	1974	1963	0
Morocco	1959	1973	NA
Nepal	1951	1951	5.7
Pakistan	1956	1947	8.8
Philippines	1938	1939	NA
Sri Lanka	1931	1931	4.7
Thailand	1932	1932	3.4
Tunisia	1956	1956	5.6
Vanuatu	NA	1980	0
North Yemen	NA	1970	0
South Yemen	1967	1967	10

NA = Not available

Source: Sivard (1985).

Box 2.7

**Pakistan:
The Special Development Fund**

USAID and the Government of Pakistan (GOP) have developed the Special Development Fund (SDF) to finance economic and social development projects of NGOs with a particular focus on women. The Fund is to be governed by a Board of Directors consisting of USAID, GOP, private sector, and NGO representatives — a structure intended to ensure the integrity of the grant process. Development of the Fund required arduous negotiations, as well as legislation to overcome legal constraints on its existence. The result: a direct means of funding projects focused on improving the economic and health status of women and their families that is likely to be well worth the effort.

Source: USAID/Pakistan

tions with which the bureaus work to adopt and implement policies that will encourage women's participation and to work more with women's organizations.

Women's involvement is more common in sex-segregated organizations. Since the effectiveness of such organizations varies greatly, they should be carefully assessed before the decision is made to support them. A danger in some organizations is their welfare-oriented approach to improving women's status that regards women's productive work as peripheral to their household work. However, other types of women's organizations can be very effective and should be identified and supported.

Governance

Apart from a few notable exceptions women are not well represented in high government positions, such as national legislatures or judiciaries. As shown in table 2.5 in most countries for which data were available, women have the legal right to stand for election, but the percentage of women actually holding office is extremely small.

- In the 55-year history of the Thai House of Representatives, only 40 women have ever been members. Neither has there been much progress over the years. In the 1988 election only 10 percent of candidates and 2.8 percent of those elected were women (Tonguthai 1988).

- Even though women's economic participation is accepted in Thailand, their role in administrative and political activities is not. In 1988, over half the women in the Thai civil service were employed at the lowest grade levels. They were almost invisible at the top levels and no woman had ever become a permanent secretary, the highest nonpolitical position (Tonguthai 1988).

Women's lack of representation in policymaking positions in the ANE regions is not unusual when compared with other countries. In 1984, a sample of countries throughout the world showed that women held just 10 percent of seats in national legislatures (Sivard 1985).

Box 2.8 offers guidelines on how to determine women's participation in public affairs.

Women's lack of representation in national governments is reflected in the slowness with which women have been accorded equal rights in countries around the world, including in the ANE regions. Women still do not have full equality under the law in some places, and in many others, legal guarantees for women's rights are ineffective since customary laws prevail in daily life.

- Thus, although India's constitution prohibits sex-based discrimination, and laws forbid the payment of bride prices, the practice persists. Some evidence suggests that with rising incomes due to development, the practice may be spreading (Agarwal 1988).

While some progress has been made in terms of family law, deficiencies persist in economic and social rights, including access to education, employment, equal pay for equal work, and leave benefits, which are particu-

larly important if women are to acquire equal economic opportunities. Other deficiencies include inequalities in contract and inheritance laws that restrict women's access to capital, land, and other productive resources.

These shortcomings can only be addressed by additional enabling legislation and programs that ensure practical implementation. It is not enough, for example, to legislate equal work for equal pay when women are occupationally segregated. More long-term policies are needed that will encourage women to train for new occupations.

It is not known for sure that having a larger number of women in policymaking positions actually results in greater attention to women's needs. What is known is that male-dominated governing structures have been very slow to implement changes that provide equal opportunities for women. Note also that the most progressive social legislation for women and families is found in the Nordic countries, where women have relatively more political power than in other countries.

Investigators have demonstrated that policy support for increasing women's involvement in public affairs is effective. In Thailand, for example, a change in local administrative law in 1982 allowing women to become village and subdistrict heads resulted in a sharp increase in female village heads from 43 to 288 in just two years (1984-86) (Tonguthai 1987).

A.I.D.'s democratic pluralism initiative provides an exciting opportunity to experiment with additional ways to enhance women's roles in government and policymaking.

Cultural Restrictions on Women's Public Life

Religion, customs, and traditions are commonly perceived as major constraints upon women's participation in the economic and public affairs of many countries in the ANE regions. Restrictions upon the public participation of women are commonly associated with Islam, but women's activities are also restricted in countries such as India and Nepal where religion, custom, and kinship structures clearly demarcate a private and a public domain. Women are associated with the private or household domain, and men with the public sphere,

which includes markets and politics. Thus, the cultural ethos that underlies restrictions on women's public roles is quite similar in Islamic and non-Islamic societies. The practical effects on women's work outside the home are also much the same.

Still, women are more restricted in Islamic countries than in non-Islamic countries as evidenced by the low economic activity rates for women in Bangladesh, Jordan, and Pakistan. However, there is considerable variation between and within countries in the extent to which women's participation in the public domain is accepted and supported (Moghadam 1990). Thus, women's economic activity rates in Islamic Indonesia and Tunisia more closely resemble those in India and Sri Lanka, which are non-Muslim countries, than in other Muslim countries. Within India, women's public activities are much more restricted in the north than in the south.

Box 2.8

Determining Women's Participation in Public Affairs

Relevant questions for determining the nature and extent of women's participation in public and civic life include the following:

- Do women participate in public affairs? Do they hold office at the local, regional, or national levels?
- Are women members of voter regulation bodies?
- Are women represented in the judicial system?
- Are women members of civic and trade associations and organizations? Do they hold office in such organizations?
- Do women participate in sex-segregated civic or other associations and clubs? What kinds of activities are these groups involved in and how effective are they?

Despite these cultural constraints, women make critical contributions to household support and to the economy even in places where their public movement is restricted. This is particularly true of women from poor households whose work may be overlooked because it is mainly in the informal or agricultural sector. Recent statistics, however, also reflect increasing participation by educated women in the formal labor force.

Economic necessity often compels women to work and contribute to household support regardless of cultural ideas. When financial need is great, tradition is cast aside or reinterpreted. Economic self-interest comes first, although the fiction of adhering to customs and traditions may be upheld.

- A study of Egyptian migrants to Iraq showed that women participated in marketing activities that would not have been allowed at home because it required contact with male strangers. However, in this situation, where women's incomes were sorely needed, the men supported their wives' work and rationalized it by saying that the women were working in a foreign place where nobody knew them (Hijab 1988).

Not only do women work despite restrictions, but they often do whatever is necessary to earn income. This may even mean that women are out in the marketplace or that they migrate for work independently of their families. In this context one must remember that cultural and religious objections are not really to women's work, but to their unrestricted movement in public.

- A study of female *jamu* sellers in Islamic Indonesia showed that many of them migrated periodically from rural to urban areas to engage in their trade.² Male respondents underplayed women's migration and rural elite women disapproved of the practice, but the women's earnings were of critical importance to their households (Hetler 1984).

² *Jamu* are drinks of traditional medicine sold by women in urban areas, either from house to house or along major streets and near offices.

Box 2.9

Overcoming Cultural Constraints on Women's Public Life

Several options are available to foster women's economic participation in culturally restrictive environments. Initially, practical strategies may include home-based production or sex-segregated facilities. Both options have been tried with some success.

Home-based production has the advantage of conforming to social norms that raise objections to women's work outside the home. Under the "putting-out" system of home-based production, women manufacture goods at home and a contractor does the marketing. There are, however, some disadvantages. A common problem, for example, is that male household members who interact with the contractors tend to keep all or part of the earnings. These issues are discussed in greater detail in chapter 3.

An alternative transitional strategy is to provide segregated facilities for women to work. This is done, for example, by the garment industry in Bangladesh. Another short-term strategy is to locate facilities in rural areas so that women do not have to move away from their families. Some export processing enterprises have done this successfully in Tunisia and Indonesia (Joeekes 1987).

In the long run, however, the objective should be to enable women to become integrated into the larger work force. Education can be an important avenue to bring about such change. Already, people in the Near East regard occupations requiring higher education as "respectable" and therefore suitable for women. We have shown here that educated women have higher rates of participation in the formal labor force. This is a positive trend because, growing work participation gradually erodes barriers to women's participation in other areas and eventually changes traditional attitudes towards women's public roles.

A paradoxical phenomenon observed in countries where female seclusion is the cultural norm is that development sometimes induces women's withdrawal from the labor force.

- In both India and Pakistan, women tend to withdraw from the visible workforce in households earning larger incomes as a result of improvements due to the Green Revolution (Agarwal 1988; Alavi 1988; Chaudhry and Khan 1987).

The women themselves are not necessarily made better off when the household becomes financially able to support women's seclusion. Women are frequently required to substitute less visible work within the home for field work, for example, preparing meals for additional hired help (Agarwal 1984). Moreover, greater seclusion of women is associated with increasing adherence to customs such as dowries, which in turn strengthen the view that women (and girls) are economic liabilities. These factors undermine the position of women and development efforts.

Other studies have shown that changes in the economic environment brought about through public policy can be effective in changing women's roles and the cultural ethos. When market forces are allowed to have a greater influence, the evidence shows that social inhibitions become less relevant. Studies show that supporting women's paid employment outside the home reduces social resistance to women's involvement in other types of public activity (Hijab 1988). Enhancing women's economic participation can be the key to improving their opportunities for greater participation in the social and political aspects of the development process and deriving benefits from subsequent changes. Box 2.9 offers guidelines to help program staff overcome cultural constraints to women's participation in public life.

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3. Private Enterprise

During the last twenty years, women's economic activity has consistently risen throughout Asia and the Near East. Much of the increase has been in non agricultural activities, most of which are in the private sector (table 2.2).

Three main factors account for high and/or increasing rates of women's economic activity. First, real wages have declined to the point where they cover only individual rather than family subsistence. Women's incomes have thus become increasingly necessary for family survival. Second, growing urbanization has replaced traditional work patterns and created many informal and formal sector employment opportunities for women. Finally, export-led industrialization that relies heavily on low-wage female labor has expanded employment opportunities for women.

Expanding Opportunities for Women in Private Enterprise

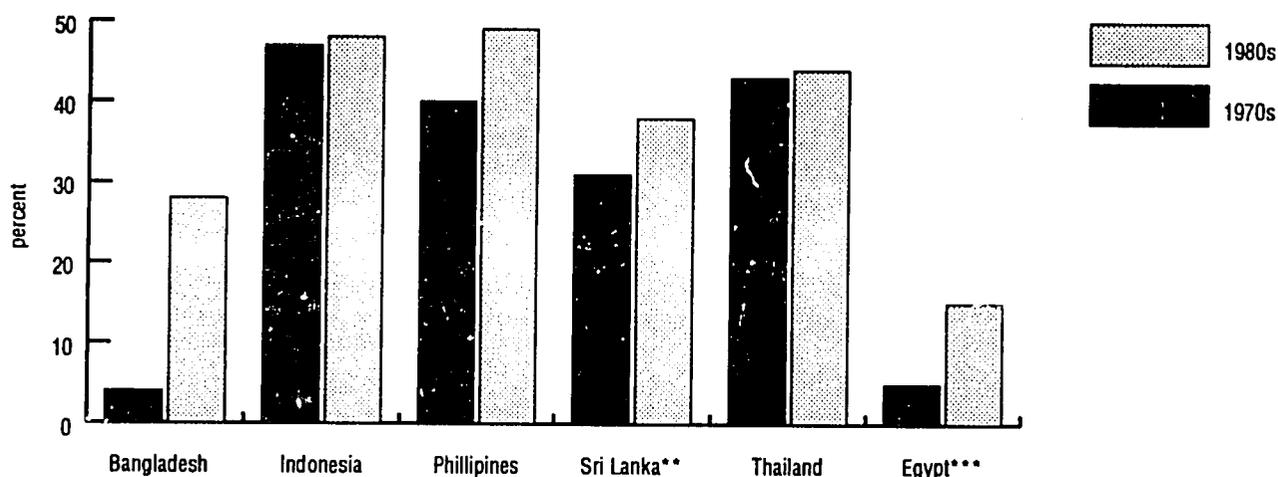
Women's growing role in the economy of the ANE regions suggests significant opportunities for A.I.D. to implement its private sector strategy. Increased reliance on the private rather than the public sector to produce and deliver goods and services is a cornerstone of A.I.D.'s policy in the region. Since women play a significant role in the private sector of many countries in the region, their integration into programs could help ensure the success of A.I.D.'s strategy. Opportunities for policy and program interventions to support and enhance women's work lie primarily in expanding women's wage employment in manufacturing, home-based production, and small and microenterprise activity.

Wage and contract work

Rapid industrial growth in the region has increased women's employment opportunities as wage laborers

Figure 3.1

Women in the Industrial Workforce, Selected Countries and Years



* Dates vary according to availability

** 1981 and 1984

*** 1980 and 1983

Sources: Heyzer (1989); United Nations (1989).

and contract workers. Although regional variation is considerable, women now constitute almost half of the total industrial workforce in some ANE countries and a rapidly growing proportion in others (figure 3.1).

Female wage employment has increased dramatically in the labor-intensive manufacturing industries that produce for the export market. Women predominate in the textiles, clothing, and electronics industries, where they work on the assembly lines operating or monitoring as many as 15 to 25 machines simultaneously (United Nations 1987).

Wage work offers women a measure of economic independence as wages in industry are generally higher and steadier than women can find in other occupations. Industries are located near urban centers and provide employment to the rapidly growing number of women who, with their families or alone, have migrated to the cities. Wage work also provides social benefits, in that working women have been found to delay marriage and childbearing, which may have a favorable impact in lowering fertility rates.

Home-based production

Women are also primary contributors to home-based production. In recent years, home-based workers have increasingly been brought into manufacturing production through the growing practice of "contracting out," whereby firms supply home-based producers with raw materials that they use to complete one or several steps in the production process. The firm collects the finished product and pays the producer on a piece rate basis. Women take advantage of the flexible hours and convenience to balance their household activities with income generating piecework. Home-based production is especially important in countries where female seclusion is practiced.

- In Pakistan, 53 percent of urban workers are home based, and half of these home-based workers are pieceworkers (World Bank 1989).
- A study in India found more than 9 million people working in home-based production, the majority of whom were women (Overholt et al. 1985).

Entrepreneurship

The strongest growth in women's economic activity has been in small and microenterprises, the majority of which are in the informal sector. Small and microenterprises generally operate beyond government recognition and regulation, making accurate measurement of the enterprises involved very difficult. Often the enterprise consists of just a single individual engaged in petty trade, artisan activity, or domestic service.

Box 3.1

Improving Women's Access to Business Information: The Jeddah Chamber of Commerce and Industry

In Islamic countries, women are often perceived as having little or no economic power. This perception leads most business and professional organizations to ignore women, thereby retarding the flow of business information to this segment of the population. However, even in the most orthodox Islamic countries, women's economic activity is significant.

In Saudi Arabia, some sources claim as much as 50 percent of invested wealth is in the hands of women. While some of these women may be passive investors, many others own and operate boutiques, schools, and a variety of industries. One prominent businesswoman, for example, is the sole proprietor and president of a business that employs between 1,700 and 2,000 employees, most of whom are men.

Realizing that women can be important contributors to business development, the Jeddah Chamber of Commerce and Industry decided to encourage the flow of business information to women entrepreneurs. The chamber now reserves its library for women every Thursday, sponsors meetings with the women's business community, and has published a brochure for women on how to start a business in Saudi Arabia. If the chamber realizes its goal, businesswomen will become even more prominent investors in the Jeddah area.

Source: A.I.D. cable.

Table 3.1

Share of Women in the Informal Sector, Selected Cities

City	Percent
Ahmedabad	5
Bangkok	49
Bombay	12
Colombo	12
Dhaka	2
Jakarta	25
Manila	57
New Delhi	42

Source: International Labour Organisation (1987).

- In Pakistan, the share of the urban labor force engaged in informal sector activities is estimated at 70 percent, while in Tunisia up to 40 percent of the labor force works in the informal sector (Kefi, Bouattour, and Boyle 1990; World Bank 1989).
- In Egypt and Punjab (India), the number of one-person firms was 63 percent and 65 percent of small-scale manufacturing firms, respectively (Liedholm and Mead 1986).

However, some small and microenterprises are larger, employ more people, and as a group contribute significantly to the gross domestic product (GDP).

- Industries with fewer than ten employees contribute 50 percent of manufacturing GDP in Bangladesh, 30 percent in Pakistan, and 26 percent in Indonesia (Liedholm and Mead 1986).

- Industries with fewer than ten employees employ 42 percent of the manufacturing workforce in India, 70 percent in Pakistan, 77 percent in Indonesia, and 58 percent in Thailand (Nabi 1989; Liedholm and Mead 1986).

The types of activities in which women participate and the extent of women's participation in and ownership of small and microenterprises varies in the informal sector across countries and regions (table 3.1). In Southeast Asia, for example, women often make up the majority of street vendors, but in Islamic countries practicing female seclusion, women street vendors are rare. In the latter case, women prepare food or produce goods at home that husbands or sons then sell in public.

Women-owned and women-operated firms are generally small and located close to the women's homes so that they can balance their economically productive work and their family responsibilities. Since the majority of women entrepreneurs are between 15 and 35 years of age (Stearns 1985), and since extended family support is not always available, women need to be near home so they can fulfill their child rearing obligations more readily.

The extent of women-owned and women-operated firms in the formal sector also varies by region, but is often significant. Even in a conservative Islamic country like Saudi Arabia, women's ownership of enterprises is high. Women hold nearly 20 percent of the commercial licenses registered with the Jeddah Chamber of Commerce and Industry (A.I.D. Cable) (box 3.1).

Constraints to Women's Participation in Private Enterprise

While income earning opportunities have grown significantly for women, several constraints limit the returns to women's individual labor and investment, restrict women's mobility in the labor market, restrain women's incentives for entrepreneurship, and lower women's potential contribution to national economic growth and development. Some of these constraints are

Table 3.2

Women's Earnings in the Manufacturing Sector, Selected Countries

Country	Year	Women's Earnings as a Percentage of Men's
India	1971	45
Jordan	1981	64
Philippines	1980	62
Sri Lanka	1983	73
Thailand	1983	70

Source: Heyzer (1989).

equally applicable to women wage workers and small and microentrepreneurs, including home-based industrial workers. Others are unique to each of these categories of workers, as discussed below.

Earnings differentials

Women entrepreneurs, wage earners, and pieceworkers receive lower returns on their labor and investment than their male counterparts. Earnings differentials prevail despite comparable levels of education.

- With equal levels of education, Tunisian women earn 12 to 37 percent less than men (Kefi, Bouattour, and Boyle 1990).

In industry, women wage workers earn significantly less than men (table 3.2). This is not only because the jobs they do are considered less skilled than men's, but also because the incomes they receive are perceived as mere complements to their husbands' incomes.

Similarly, women entrepreneurs do not earn as much as their male counterparts.

- In Bombay, 51 percent of the female heads of enterprises receive less than 200 rupees a month, while only 25 percent of male heads receive less than 200 rupees (Overholt et al. 1985).
- In the Indonesian batik industry, urban women earned 17,417 rupiah per month while urban men earned 46,500 rupiah (Joseph 1987).
- The median income of women in the informal sector in Bangkok in 1981 was estimated at 1,398 baht a month, compared to 1,783 baht for men (Overholt et al. 1985).

Women entrepreneurs' earnings are low because women-owned and women-operated firms are generally small, lack significant capital, and women who work in the enterprises are typically under onerous time constraints owing to their dual productive and reproductive responsibilities.

The true income of home-based pieceworkers is difficult to determine. When the costs of inputs and depreciation of tools are deducted from the payment workers receive, actual income may fall to a fraction of the minimum wage (Ibrahim 1989). Thus, women's earnings in piecework are often extremely low.

Lack of education and training

Women's lack of access to basic education and business and skills training poses significant constraints to their economic work. Lacking any or sufficient formal education, women entrepreneurs use domestically learned skills such as sewing, food processing, and handicrafts to generate production. However, these skills are insufficient in a competitive market economy. Moreover, women entrepreneurs who lack literacy and management skills have difficulty in acquiring capital, procuring raw materials and supplies, and gaining information about and access to profitable markets. Formal lenders often wish to see records of past performance before granting loans, but women seldom know bookkeeping and do not keep such records. Very often they are not even aware of the importance of keeping such records.

- In rural Bangladesh, only 6 percent of small entrepreneurs keep records of past transactions (Overholt et al. 1985).

Low literacy levels also inhibit women entrepreneurs when they are required to read and sign contracts for purchasing supplies or acquiring capital from formal sources.

- In Ahmedabad, only 15 percent of entrepreneurs were literate (Overholt et al. 1985).

Women's lack of education or training also hurts women in larger enterprises. Women rarely have technical training in fields such as engineering or economics. They are thus restricted from entering technical positions that pay well and have greater mobility than do administrative posts, such as administrative assistants and secretaries.

- When 100 women employed in public and private firms in Morocco were asked in which departments women are most often found, 88 percent of the women said in administrative departments, 56 percent said in commercial divisions, 8 percent said in financial sections, and only 1 percent said in technical divisions (women could give more than one answer) (Ernst and Young 1990).

Women industrial workers are generally employed in tasks that require little skill or training: they are typically assigned the most monotonous and mechanized processes on the production line. They are offered little training, and because the skills they use are specific to the tasks they perform, their prospects for upward or lateral mobility are limited. Furthermore, since assembly line production is easily learned, management has little incentive to keep more experienced and highly paid workers, and frequently replaces workers with young inexperienced entrants to the workforce. The average factory worker in Thailand, for example, has just three years of experience (United Nations 1987). Furthermore, without training the female workforce has difficulty adapting to newer and more efficient technologies, and is vulnerable to the effects of economic recession and competition from abroad.

- Modern, competitive leather and textiles firms in Asia have reduced the world market share controlled by Tunisian textile and leather firms which are increasingly unable to compete with the modernized industries. This has caused a recession in the industries that has eliminated 20,500 jobs held by women (Kefi, Bouattour, and Boyle 1990).

Limited access to banking and financial systems

This constraint hits women entrepreneurs the hardest since credit is often required to initiate, operate, or expand an enterprise, and without access to formal credit channels, women must borrow informally from family members, or from moneylenders who charge extremely high interest rates.

- Small enterprise surveys have found that less than 1 percent of initial investment funds for small producers come from formal sources (Liedholm, and Mead 1986).
- In Colombo, 72 percent of market women borrow privately from family members or local moneylenders (Blake and Goonatilake n.d.).
- Money lenders in Thailand and Bombay charge anywhere from 10 to 25 percent a month on loans (Overholt et al. 1985).

Several reasons prevent women entrepreneurs from receiving credit through formal channels. Since lending to small producers can often involve higher administrative costs per dollar lent and a perception of higher risks than lending to larger firms, formal financial systems avoid loans to small and microentrepreneurs altogether. Most banks extend credit according to the ability to meet collateral requirements, such as holding a title to land. Small and microentrepreneurs rarely have the necessary collateral, and women are especially affected because they are sometimes legally and culturally restricted from owning land. Loan applications require levels of literacy and financial sophistication that poor women entrepreneurs may lack. In addition, the time required to travel and apply for loans

may be costly for women who are already tightly constrained by family and work commitments.

Limited access to banking systems affects women wage earners somewhat differently. Wage workers are inhibited by lack of familiarity with formal bank procedures and lack of information about savings options. They are thus unable to invest their earnings in savings schemes, and forego the possibility of earning interest on their money.

Limited access to markets and information about market prices

Limited access to markets affects self-employed women who are marketers and home-based pieceworkers. Women entrepreneurs generally sell in markets close to their homes because of their household responsibilities. The need to provide childcare, cook, and do other household work reduces the amount of time available for travel to distant and perhaps more profitable markets. Markets requiring overnight travel are especially difficult for women to reach.

- In rural Egypt, direct sales to final consumers exceeded 80 percent of the total sales of small-scale manufacturers (Liedholm and Mead 1986).
- In a Manila-based small enterprise project, 85 percent of participants sold their goods to individuals, usually neighbors, or to small local stores (Overholt et al. 1985).

Home-based producers who do not market their goods themselves rely heavily on a firm or middleman to supply the raw materials and other inputs and to purchase the finished goods. Such dependency often leads to exploitation by firms or individuals who have greater access to information about the market. Moreover, women producers who do not market their own goods have greater difficulty retaining control of their income, which further reduces their incentives for entrepreneurship.

- During periods of slow demand in the Indonesian batik industry, middlemen frequently reduce their supply of inputs, refuse to pay for work, or pay a reduced rate to women batik makers (Joseph 1987).

- In Sind, Pakistan, researchers found that women who did their own marketing earned more and had greater control over how they used their income. The mean income of women who marketed their products was 250 rupees per month in 1984, while women who marketed through brokers or other intermediaries earned only 100 rupees per month. Moreover, of women who sold their products, 86 percent had full or partial control over their money, compared to only 53 percent of those who sold through others (World Bank 1989).

Poor working conditions

Working conditions in industry and in home-based production pose severe constraints to women's health and short- and long-run productivity.

a. Heavy workload: Women typically work long hours each week and are poorly compensated for overtime work.

- In the Philippines, 46 percent of women workers in one survey worked almost 60 hours a week and 25 percent worked more than 60 hours. In a study in Sri Lanka, 46 percent of workers worked more than 48 hours per week and 17 percent worked more than 55 hours a week (Joekes and Moayed 1987).

b. Lack of transport: Women's work days are often extended because their access to transport is limited. Infrequent, ill-coordinated, and expensive public transport systems compel many women to walk long distances to work sites. The resultant time and energy loss, combined with inadequate food, heavy work loads both at home and at the work place, and insufficient rest, impair women's health and productivity (Heyzer 1989). Export processing zones, where women make up the majority of workers, can be especially far from workers' homes.

- In Bangladesh, 68 percent of workers spend over an hour a day walking to and from the work place, and another 20 percent spend at least 30-40 minutes traveling by bus or rickshaw.

c. Health problems: The intense pace of work and heavy pressure in an atmosphere of rigid discipline causes health problems to the woman worker. In the electronics industry, for example, women work with microscopes for long periods and eye strain is common. In textile firms, women work near and with toxic chemicals.

- A survey of women wage earners in Thailand found that 95 percent of women complained of work-related health problems and 75 percent reported having had accidents while at work (Lin 1986).

d. Lack of access to health care: Women's health problems are compounded because their access to medical facilities is often limited. Medical care is often unaffordable for the majority of women working in factories, medical facilities are few, and access to health care can be restricted by distance and the long hours women work.

- The government hospital or dispensary closest to Sri Lanka's free trade zone area is five miles away. Because of the distance and limited opening hours, women workers are unable to use the free services the government provides and must instead rely on expensive private doctors (Rosa 1989).

e. Unionization: Women are often unable to act on their own behalf to improve their working conditions because management and government stifle unionization and collective bargaining. Where unions are permitted, women are rarely in leadership positions and issues of childcare and equitable pay for women rarely arise.

Home-based pieceworkers may be in the most disadvantaged position with respect to working conditions, as few controls and regulations govern their working conditions. Women will be exposed to work-related health risks if, for example, they work with toxic dyes or chemicals in producing garments. Moreover, in such cases women's work may also pose health risks to their households. Finally, home-based workers may find organizing to improve their working conditions difficult because they are spread over large geographic areas and seldom interact with each other.

Policy Solutions

A.I.D.'s private sector initiatives can play a significant role in addressing the constraints women entrepreneurs and wage earners in the ANE regions face. Women's rapidly growing participation in economic activities throughout the region offers a unique opportunity to strengthen women's place in the labor market, to support and expand their entrepreneurial activities, and to enhance their productivity. The type of policies and programs required are discussed below and are summarized in table 3.3 by areas of interest to A.I.D. in the ANE regions.

Macroeconomic policies

Macroeconomic policy changes, undertaken in some ANE countries, during the past ten years have been designed to improve incentives for private entrepreneurship and stimulate export production and trade. These measures could potentially benefit both self-employed women and wage earners in export manufacturing industries as these subsectors expand in response to trade liberalization measures. The impacts of policy changes are, however, very complex and not always as expected. They may vary from previous expectations because of market imperfections and rigidities that prevent them from having the intended impact. This is especially true in the case of women, whose access to productive resources, services, and market information may limit their response to policy changes. Micro-level impacts of macroeconomic policies must, therefore, be verified empirically.

The effects of policy changes can vary between large and small entrepreneurs. For example, policies that devalue the exchange rate are more beneficial to small entrepreneurs than to large-scale enterprises. An overvalued exchange rate, combined with tariffs and quotas on particular import categories, make nonrestricted imports cheaper than they would be in the absence of such intervention. Capital goods are almost always goods that can be freely imported and larger firms with access to capital goods benefit. However, small women producers may find that their capital inputs are mistakenly classified as consumer goods, and goods like sewing machines are taxed at the higher rate.

Table 3.3

Policy Options for Improving Women's Participation in the Private Sector

Private Sector Development Strategies	Potential Opportunities for Women	Constraints Upon Women	Gender-Relevant Policy Issues and Options
Small and Microenterprises			
Expanded opportunities for microentrepreneurs	Employment creation Income generation	Competing home and income-generating responsibilities	Increased credit delivery
Transfer of entrepreneurship from informal to formal sector	Income generation Small business development	Access to credit, markets, information Transitional costs are high, i.e. licensing, taxes Inadequate skills and capital for business expansion	Technical assistance in business and financial management, literacy, training Infrastructure development such as improved market facilities Business development support: credit, training
Trade and Investment			
Export focus	Job opportunities in export manufacturing Investors in joint ventures	Women may be trapped in low wage, low skill opportunities with restricted job mobility Employers favor young, unmarried workforce, limiting women's ability to continue in employment or for career advancement Women lack access to capital markets, contacts and information needed to enter and be competitive in large joint ventures	Support for export-oriented and other manufacturing industries that employ women: electronics, textiles, agro-processing, etc. Training programs to increase and modernize workers' skills Support for uniform health and minimum wage standards, savings plans near worksite, childcare, transportation. Strict monitoring of standards Financial market reforms, e.g., eliminate interest rate ceilings, create alternative collateral requirements for small loans Include women in business networks and information development

Table 3.3

Policy Options for Improving Women's Participation in the Private Sector (cont.)

Private Sector Development Strategies	Potential Opportunities for Women	Constraints Upon Women	Gender-Relevant Policy Issues and Options
Trade and Investment (cont.)			
Trade liberalization	Opportunities for women as investors, marketers	Poor access to credit, capital, and information	Formation of women's investment and marketing cooperatives, alternative collateral requirements, etc. Financial market reforms Increased credit delivery
Business and Investment			
Technical	Additional job opportunities	Few women have technical educational background	Technical training programs targeting women
Managerial	Job mobility	Employers rarely place women in supervisory positions	Reform educational system and provide management training opportunities for women
	Higher wage levels	Few women have business management skills to expand their enterprises	Encourage policies to advance women into management Management training programs targeting women
Business organizations (e.g., chambers of commerce, professional organizations)	Access to professional and business networks	Women's current membership is low and women's leadership is rare	Encourage organizations to attract women members
	Unions and workers' associations	Safeguard wages and working conditions	Women's current membership is low and women's leadership is rare
	Provide savings opportunities and childcare facilities		

- A study of small enterprises in the Philippines found that sectors that provided over two-thirds of small-scale employment had negative rates of effective protection, while sectors where large-scale enterprises predominated had effective protection rates ranging from 25 to 500 percent (Liedholm and Mead 1986).

Similarly, policy changes can have different impacts depending on the subsector involved. Liberalization of exchange rates and trade policy will negatively effect small entrepreneurs who previously supplied banned or highly taxed goods through the black market. However, liberalization that raises the relative price of exports will benefit entrepreneurs in the export market, and producers who rely on expensive inputs will benefit from the relatively cheaper imported goods. Export promotion will also increase the demand for piece goods produced in home-based production, thereby strengthening the link between informal and formal markets. The variety of responses to macroeconomic policy changes strongly suggests that researchers should examine empirical data carefully to determine gender differentiated impacts on employment and income.

Financial market policies: Credit

Policy changes that improve women's access to credit can have significant impacts on women's entrepreneurial activities. Financial market policies that address effectively the constraints women entrepreneurs face in obtaining formal credit are generally found either in environments where financial markets are fairly deregulated and decentralized, or as a result of innovations implemented by intermediary institutions that link entrepreneurs and commercial lending institutions. Deregulation of interest rates, for example, reduces the tendency to reserve "subsidized" loans for large producers, while the decentralization of the banking industry can foster greater competition among banks to reach a variety of people, with innovative programs introduced for small borrowers.

Intermediary institutions perform similar functions to commercial banks, but specifically target loans to poor borrowers. Some intermediaries receive funds and

Box 3.2

Women Owned and Operated: The Women's Cooperative Credit Society

Intermediary credit organizations that link poor borrowers with commercial banks confront red tape and bureaucratic hassles that slow disbursement and weaken the effectiveness of their loan programs. The Working Women's Forum (WWF) in Madras, India, has remedied this situation by breaking free of nationalized banks to become an independent corporation wholly owned and operated by its members.

The WWF began as an intermediary organization, linking nationalized banks in India and poor women entrepreneurs. It soon tired of working under the restrictions of nationalized banks, who were not accustomed to loaning small amounts to many people. To avoid dependence on the nationalized banks, in 1981 WWF opened its own corporation — the Women's Cooperative Credit and Social Services Society — owned and operated by women. It invited experienced borrowers to become shareholders at a cost of 20 rupees (US \$2.30) per share. The society extended lines of credit based on the number of shares owned. It had flexible repayment rates.

As an independent corporation unencumbered by traditional banking regulations, the Cooperative Credit Society has designed its own strategies to deal with small borrowers' needs. The corporation has provided employment opportunities for women, enhanced the human capital of its employees and strengthened the voice and confidence of home-based entrepreneurs.

Source: Leonard (1989).

work in close union with commercial banks, while others prefer to be independent (box 3.2). Some of the larger and better known intermediaries are the Grameen Bank in Bangladesh, the Badan Kredit Kecamatan (BKK) program in Indonesia, and the Self-Employed Women's Association Bank (SEWA) in India. While these intermediaries do not always target women, the vast majority of participants tend to be women. For example, nearly 96 percent of new Grameen Bank

Box 3.3

Puskowanjati Women's Cooperative: A Financially Sound Organization

The Puskowanjati Women's Cooperative (PWC), the largest independent women's cooperative in East Java, Indonesia, has been highly successful in offering credit, training, and savings services to its 16,000 members, primarily middle- and low-income women. It derives its capital from members' savings, contributions from donors such as A.I.D., membership and administrative fees, and interest on loans. Its operating procedures are similar to those of other financial intermediary institutions of this type, namely, group lending; simple, user-friendly procedures; and training for members in the basics of obtaining and repaying loans.

A large part of the PWC's success is due to a strategy that combines hard-nosed financial policies with flexible ones. On the one hand, the PWC charges interest rates as high as 2.5 to 3.0 percent per month; on the other hand, it waives initiation fees for low-income women until they can afford to pay. The result of this strategy is a financially viable organization able to serve a clientele, 40 percent of which consists of low-income women.

Source: A.I.D. (1989).

members in 1986 were women (Hossain 1988). The characteristics that make these intermediaries both economically viable and attractive to women borrowers include market-determined interest rates, innovative collateral requirements, and reduced transaction costs.

Intermediary institutions charge higher interest rates than commercial lending institutions, but lower rates than those informal moneylenders charge. By charging rates that are higher than commercial lenders, the intermediaries can meet some of the higher administrative and transaction costs of lending to poor entrepreneurs and move towards a more sustainable lending program (box 3.3).

- USAID/Bangladesh's microenterprise project on Women's Entrepreneurship Development negotiated to maintain a 16 percent interest rate despite a government regulation stating small industry loans should be 10 percent annually (A.I.D. 1989).
- The BKK charges nearly 2 percent interest per month on its loans (Goldmark and Rosengard 1983).

Collateral is not necessary for small loans from intermediaries because of an innovation that uses peer pressure to ensure loan repayment. The intermediary makes loans to groups of individuals who are collectively responsible for repayment. If one individual in the group defaults, the rest of the group is liable for that person's loan. This provides an incentive to repay loans or face the community's censure. The default rates on loans made by intermediary institutions that use solidarity groups have been very low.

- The recovery rates on loans from SEWA, the Grameen Bank and the BKK were 98 percent, 97 percent, and 94 percent, respectively (Hossain 1989; Goldmark and Rosengard 1983).¹

Policies that simplify loan application and repayment procedures can reduce borrowers' transaction costs. Applications can be less intimidating to individuals who have had little formal education if they avoid technical jargon and use the local language. A practice whereby lenders visit borrowers at their homes or work places to collect payments and provide technical assistance can significantly reduce borrowers' transaction costs.

The growth in the number of individuals that receive loans from intermediary credit institutions that use the above policies has been rapid. SEWA alone had 22,739 members as of 1985, and by 1983, the Women's World Forum had brought together more than 13,000 poor

¹ BKK loans that are delinquent more than six months are written off.

Box 3.4

Thai Danu Bank: Reaching the Medium-Sized Entrepreneur

The Thai Danu Bank and USAID/Thailand jointly operate a highly successful loan guarantee program for rural small- and medium-sized entrepreneurs. Women are often the beneficiaries:

- Suprani and Sanya Pulyawad, joint owners of a small ceramics firm, borrowed money under this program to purchase a gas-fired kiln. Since acquiring the kiln, the enterprise has flourished. The number of employees has grown from 3 to 20, production has diversified from vases to other kinds of pottery, and sales have increased from 1,555 baht to 1,943 baht per month.
- Boonyaluk Aksornsi is the sole manager of Chiang Moi Bangen Company, a wood carving antique reproduction enterprise, who borrowed \$76,000 to expand and diversify her business. She now produces both antiques and furniture, and company sales have increased from \$136,000 in 1984 to \$310,000 in 1987.

The loan guarantee program has significantly benefitted medium-sized entrepreneurs who wanted to expand or diversify production. All borrowers to date, have fully repaid their loans and, as a result, bankers' attitudes towards small and medium sized entrepreneurs have changed. Loan officers at Thai Danu Bank are more willing to loan to women and small entrepreneurs even without the assurance of the loan guarantee program.

Source: Management Systems International (1987)

urban women in a credit scheme (Krishnaswami 1985; Chen 1983).

Credit programs and policies can also be important for medium sized women-owned and operated enterprises. While these enterprises may maintain capital, keep accounting records and employ formally educated and trained personnel, they still may be considered too small to qualify for loans they need to expand and

diversify production. Loan guarantee programs that underwrite some of the perceived risks in lending to medium sized enterprises would encourage commercial banks to loan to these firms (box 3.4).

Financial market policies: Savings and investment

For women small business owners and wage earners, savings policies may be more important than lending policies. Policies that encourage savings and provide competitive returns on this investment provide an excellent opportunity for women small business owners to save regularly and time their investment and expansion aspirations to prevailing market conditions.

For wage workers savings plans, especially those available near work sites, allow women wage earners to derive the maximum long-run benefit from their earnings for themselves and their families. Women typically devote more of their income to family welfare than men and would likely be very interested in savings plans that permit them to save current earnings for future family welfare.

- Women in the export processing zones of the Philippines, for example, reported sending home half or more of their monthly salaries (North South Institute 1985).

Women who have never participated in a savings scheme before will probably need help with managing their finances.

Human resource development policies

Policies that seek to expand educational opportunities for women and offer them skills training would greatly enhance women's competitiveness, productivity, and long-run job mobility. Options include literacy training, nonformal education, and on-the-job business and financial management or technical training. By enhancing women's incentives to perform well and remain longer at their jobs, such human resource development policies benefit employers. Women themselves benefit because they acquire new skills, they gain the confidence to expand their own businesses, and they are

more marketable in the search for new employment or career advancement. Furthermore, with development increasing the capitalization of industries, women will need new and more technical skills to keep abreast of employment opportunities, and investment in education and training will be even more critical.

Investigators have found that literacy and basic education programs are very cost effective ways to increase women entrepreneurs' productivity. "Minimalist" training programs that target many people and offer the trainees very basic management skills can reach more women and are generally more effective than in-depth programs that offer more extensive training to fewer individuals. The Grameen Bank, for example, requires all loan recipients to attend weekly classes that teach management and other skills. Classes are held in villages to make them more accessible to women who may not otherwise be able to attend.

Women entrepreneurs may also require more specialized types of training, such as business and financial management (inventory control, accounting, and so on), or technical training in a particular type of production or process. Chambers of commerce and professional organizations with an active female membership are an excellent vehicle to provide specialized business services and training for women entrepreneurs.

Policies affecting working conditions

Policies that set and enforce reasonable working hours and healthy conditions and provide workers with

medical and childcare programs promote worker welfare and enhance productivity, for example:

- Policies that provide women with affordable and accessible **childcare** could reduce absenteeism, improve productivity, and allow women to extend their years in the formal labor force. Employers would benefit from a more steady and experienced workforce.
- Policies that provide more frequent and affordable **transportation** could ease long commutes and allow women to fulfill their multiple economic and domestic responsibilities more effectively and under less stress.
- Policies that permit organization of **worker associations or unions** could enable women to air their needs and grievances about personnel and management issues, resolve disputes, and encourage a sense of participation in collective decisionmaking. It is, however, necessary to ensure that women have rights to equal membership and access to leadership positions in such associations as this does not always occur automatically.

A.I.D. can play a role in policy dialogue with governments and private employers to encourage them to adopt such policies by demonstrating that they are mutually beneficial to workers and employers, as they help build and maintain the quality of the human resource base, and thus help promote long-run economic growth and development.

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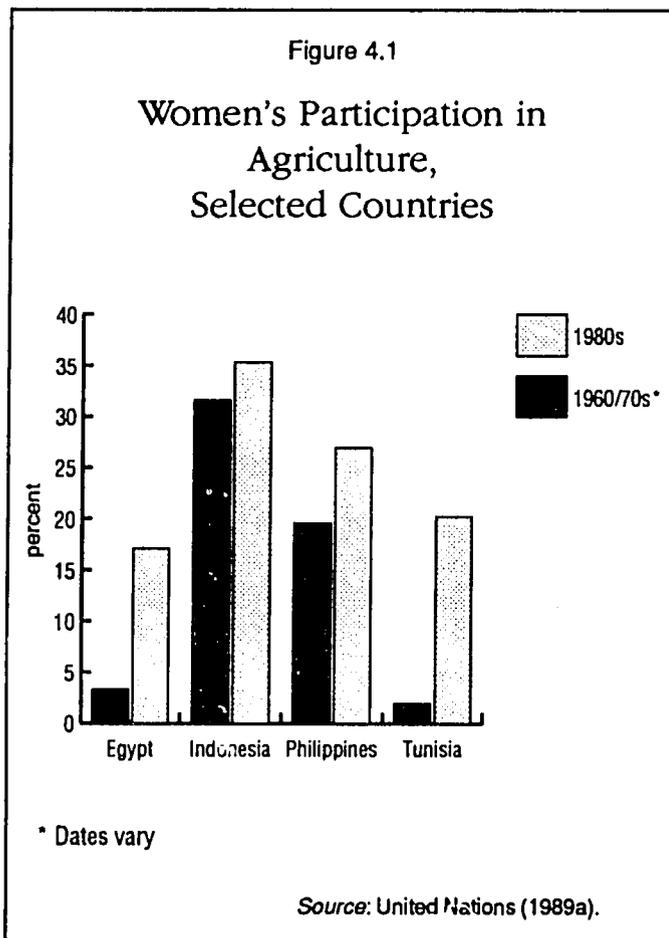
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4. Agriculture

Agricultural growth has contributed significantly to overall economic improvement and structural change in many countries of the ANE regions. India and Indonesia, for example, suffered from food deficits just 20 years ago. They are now self-sufficient. Thirty years ago, agriculture was the region's dominant sector, however, as countries' economies have diversified, the sector's role has become less significant. Nevertheless, it remains important, especially in countries such as Nepal and Bangladesh that face increasing pressure to expand food production to keep pace with rapid population growth.



For women, agriculture represents a major source of employment and earnings throughout the region, even in countries such as Morocco, Tunisia, and Jordan, where agriculture contributes a fairly small share to national income. Moreover, women's roles in farm work and agricultural decisionmaking are expanding in many parts of the region because of male migration (figure 4.1).

The Importance of Women in Agriculture

The extent of women's participation in agriculture and the specific activities they perform vary greatly according to the country or region, class, ethnic group, and prevalent technologies. They also vary according to whether women are themselves cultivators, joint producers with spouses, farm housewives, wage laborers on plantations or other farms, or employed in agroprocessing industries. Women's farm work is, however, grossly underestimated in many countries for the reasons discussed in chapter 2. A closer look shows that women throughout the ANE regions are employed in all aspects of farm work, and in some cases, such as in Vanuatu, they are the primary farmers (Heller and Khoo 1987).

Production, processing, and marketing

Women make significant contributions to farm labor, often working longer hours than men in a combination of farm-related and household tasks.

- In the Kasserine region of Tunisia, for example, women and girls spent 12-15 hours per day in farm and domestic tasks. They contributed from 40 to 60 percent of the labor in harvesting, irrigation, digging holes for fruit trees, weeding, and thinning (Larson 1988).

Women participate in a wide range of farm activities, including sowing, planting, weeding, fertilizing, and harvesting. In many places women predominate in postharvest processing and storage.

- Women carry out 75 to 85 percent of the manual weeding in the rice fields of India and Sri Lanka (Ahmed 1987).

- Women do almost all the work involved in transplanting rice in south Asia (Ahmed 1987).
- A study conducted in Madhya Pradesh, India, a region where researchers previously assumed that women did not participate in agriculture, showed that they contribute at least half the labor used in paddy production (table 4.1).

Women play a major role in the care of both small and large livestock (for example, dairy cattle in India) and in aquaculture. Aquaculture provides employment for 40,000 women in Thailand and 20,000 in the Philippines (United Nations 1989b).

In some parts of the ANE regions women are engaged in small-scale marketing of farm produce and other foods. They are particularly important in the small-scale fish trade, especially in western India and the rural coastal areas of Bangladesh, Oman, and Fiji.

Table 4.1

Female Share of Labor Used in Paddy Production, Selected Tasks, Madhya Pradesh, India (percent)

Task	Farm Size		
	Small	Medium	Large
Land preparation	0	45.85	52.14
Sowing	50.09	49.89	39.78
Transplanting	66.69	51.59	61.67
Irrigation	0	50.00	48.45
Fertilizer Application	0	48.05	48.48
Weeding	52.49	53.88	61.59
Harvesting	73.24	58.04	65.87
Threshing and Winnowing	49.60	50.30	58.27
Total labor	50.56	51.72	57.43

Source: Marothia and Sharma (1985).

Women's roles in agroprocessing activities are becoming more important as employment opportunities in agricultural production dwindle in some areas. Wage employment in agroprocessing industries may be especially important for landless women or those displaced from traditional wage employment in agriculture due to mechanization or other structural changes.

- Processing of milk and other livestock products is an important source of employment for women in Bangladesh, especially those displaced from rice processing, which is now done mechanically (United Nations 1989b).

Farm decisionmaking

Less well known than women's participation in farm production and marketing is their important role in farm decisionmaking in many countries.

- In regions of Nepal where farmers use high-yielding crop varieties, women make 81 percent of the decisions pertaining to seed selection, 60 percent of those concerning the use of improved seeds, and 40 percent (versus 32.5 percent by men alone) of decisions about fertilizer use (Ahmed 1987).
- In rural Thailand, women manage household budgets and are responsible for financial decisionmaking. Thus, local moneylenders require men to obtain their wives' approval before giving them loans, but a husband's approval for a loan to his wife is not considered necessary (Tonguthai 1988).

In many cases, when husbands or other male relatives are absent for long periods of time women become the principal farm decisionmakers.

- In Tunisia, women's participation in agriculture more than doubled between 1970 and 1985 as men emigrated from the rural areas in response to expanding opportunities in the cities and in other countries (United Nations 1989a).

- In Indonesia, the low productivity in transmigration or resettlement areas compels male out-migration, leaving women in charge of agriculture. Women are at a disadvantage in production because support services such as the provision of credit, inputs, and extension are geared towards men (United Nations 1989b).
- Due to male out-migration, estimates suggest that Yemeni women comprise at least one-half of the agricultural labor force (Warnken and Nicholson 1989).

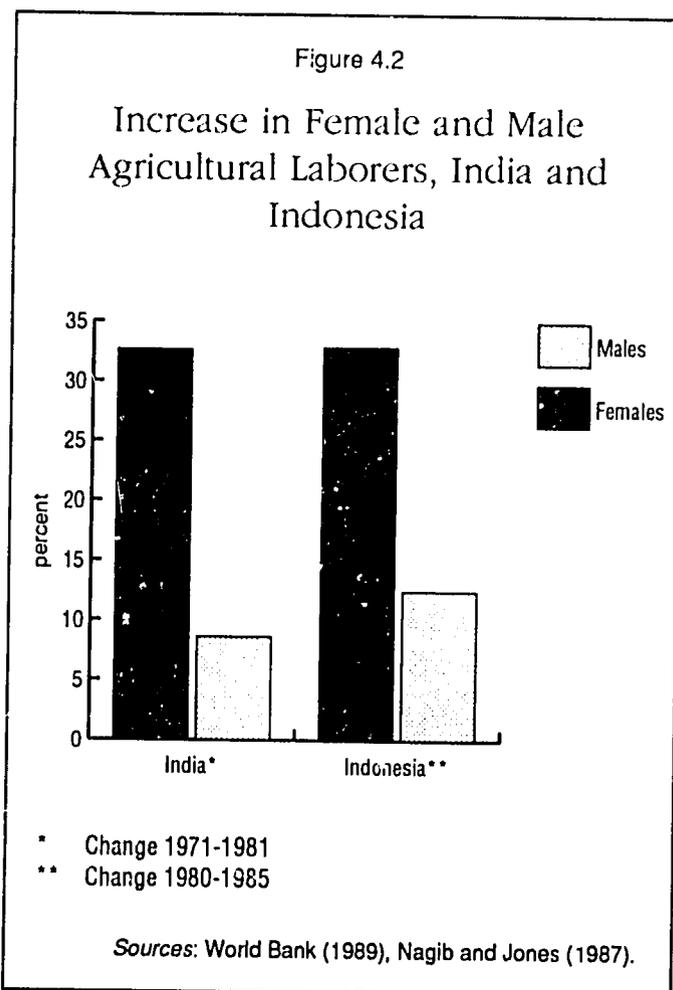
Household income

Women's contributions to household and national income are considerably underestimated because much of the contribution consists of unpaid labor in family production. The few reliable estimates available of women's earnings show, however, that they make substantial additions to total household income.

- In rural Bangladesh women's earnings account for about half of household cash income (Mahmud and Mahmud 1989).
- In Egypt, one study estimated that 40 percent of yearly cash income for an average size farm came from women, primarily earnings from poultry and dairy activities (Larson 1988).

In poor and landless households, women's earnings from agricultural wage labor are often crucial to family survival, and women represent a substantial portion of the farm wage labor force in many countries.

- In India, women working as agricultural wage laborers are often the main, or even the sole, income earners in landless or near landless households (Agarwal 1988).
- Surveys in Bangladesh demonstrate that one-half to two-thirds of women from landless rural households work as wage laborers. Other estimates indicate that women represent 21 to 54 percent of all wage laborers in rural areas (Mahmud and Mahmud 1989).



In some countries, women's participation in agricultural wage labor is increasing much more rapidly than that of men (figure 4.2).

- In India between 1971 and 1981, women's participation in farm wage labor increased 700 percent in the state of Punjab, 100 percent in Haryana, and 95 percent in Orissa compared with increases of 33 percent, 27 percent, and 6 percent, respectively, for men (World Bank 1989).

Another important source of income for rural women is employment in small-scale, rural agroindustries such as processing food for consumption by local communities or fruit and vegetable canning and fish and shrimp processing for local or export markets.

Improving Women's Productivity: Constraints and Opportunities

Women's critical and growing roles in agriculture suggest that the increases in farm output and productivity that are greatly needed in many countries of the region will depend in large part on integrating women into the development process. Research has now clearly established that projects that deliver resources to women according to their roles in the farming system are more likely to succeed than those that do not integrate women (United Nations 1989b). Support for women will be most effective if it is based on a realistic assessment of women's distinct roles and responsibilities and the constraints they face. This section discusses some of the constraints affecting women and opportunities for enhancing their productivity.

Access to and control over land

Throughout the developing world, few women own or have title to land, but in the ANE regions, especially in south and east Asia, landlessness is a severe and growing problem. Land ownership is highly skewed to begin with, and factors such as population growth, increasing urbanization, and soil erosion are rapidly diminishing the availability of arable land even further. As landlessness increases, so does poverty, and women are compelled to seek work as agricultural laborers. Figure 4.2 shows the increase in female agricultural laborers in India and Indonesia.

Although landlessness affects women, men, and entire households, especially among the poor, women are affected differently. In many places, women's right of access to land is not acknowledged. Even if it is legally recognized, in practice, women seldom own land.

- In Thailand, which has virtually no legal or social restrictions on women's ownership of land, women still represent just 12 percent of agricultural land owners (Tonguthai 1988).

Lack of access to land prevents women from earning a livelihood, since farming is virtually the only employment option available to poor rural women. In cases

where women have access to land but lack title to it, they are prevented from obtaining credit because land is often used for collateral.

Efforts to improve access to land among the poor and small farmers through agrarian reform and resettlement schemes tend not to benefit women. Reform measures often specifically designate as beneficiaries heads of households, who are assumed to be male.

- In Indonesia, Papua New Guinea, and Sri Lanka, land leases in settlement schemes are made out in the name of male heads of households, sometimes in violation of local traditions, which may be matrilineal (United Nations 1989b). Thus, women have no control over resources and income and lose the right to the land when their husbands die.

However, there are some hopeful signs that the issue is beginning to receive attention.

- In Thailand, for example, women's organizations are working to enable women to get access to land and resources and to protect women's rights to inheritance (United Nations 1989b).
- As a result of pressure from women's groups, India's Sixth Five-Year Plan recommended that the government provide joint land titles in all development activities involving the transfer of assets (United Nations 1989b).
- With loans from the Grameen Bank and help from nongovernmental organizations, Bangladeshi women have banded together to buy or lease small pieces of land jointly (United Nations 1989b).

Access to credit and productive resources

Like most small farmers, women experience great difficulty in obtaining access to institutional credit as lenders perceive them to be risky borrowers, and because of the higher administrative costs of making small loans. Women are at a particular disadvantage

because they do not generally have title to land, an asset commonly used as collateral (see chapter 3 for a more detailed discussion).

- Women's share of agricultural credit in India is around 10 percent or less (United Nations 1989b).

In some countries of the region, women do not have the right to act in their own legal capacity, which can be an additional constraint in obtaining credit. They depend on their husbands or other male relatives for approval to acquire or transfer property and apply for credit.

In most places, therefore, women rely heavily on informal sources of credit, such as relatives, friends and moneylenders. The advantages to women of these sources of credit are that they do not require collateral and provide flexible terms and conditions. The disadvantages, however, include the high rates of interest informal moneylenders charge (Lycette 1964).

Lack of access to credit prevents women from purchasing productive inputs, such as fertilizer and improved seeds, and assets, such as land and farm machinery, that could enhance their productivity and returns. It also prevents them from making larger and longer-term investments in more productive crops.

During the past 10 years, some countries of the region have made real gains in improving credit availability for women and small farmers. As noted in chapter 3, the success of the Grameen Bank of Bangladesh in making loans to poor rural women is well known. In 1983, women comprised one-third of the bank's borrowers. Other success stories in Indonesia and Thailand are described in boxes 3.3 and 3.4.

Differential access to technology

Development programs generally introduce new technologies and other innovations to men first. Frequently, the innovations have negative impacts on women, but development programs seldom anticipate or allow for such impacts.

- In Tunisia, agricultural mechanization, expanded credit, and technological information were given only to household heads. Women's lack of access to new technology and services increased their dependence on men (Larson 1988).
- In Kerala, India, the introduction of a fish auction displaced women from the small-scale fish trade because it fostered large, speculative, wholesale purchases of fish by male traders. The women traders lacked the capital to remain competitive in the new environment (Ahmed 1987).

Research and technological innovations are, moreover, often biased towards men.

- In Tunisia, for example, the government supported mechanization of ploughing, a traditionally male task. By contrast, the government did not provide support for weeding a woman's task — even though it is much more time consuming and harder work and women face more time constraints (Larson 1988).

Access to extension services and information

Extension services commonly ignore women producers and direct information to men. Women are underrepresented, and sometimes not represented at all, among extension staff and trainers, which is especially disadvantageous in societies where women are traditionally secluded. Training and extension programs targeted to women often focus on home economics and nutrition rather than on agricultural technologies or other off-farm activities that would enable women to improve their farm productivity and off-farm employment and wage earning potential.

- Even though animal husbandry is the responsibility of women in India, a dairy development scheme extended credit to men and gave them advice on veterinary practices (World Bank 1989).

Women are frequently unable to take advantage of training programs because their duration, timing, and location do not take account of their time constraints, or they conflict with women's multiple responsibilities instead of accommodating them.

Some countries in the ANE regions have, however, made efforts to alleviate these constraints.

- The National Agricultural Extension System in India has adopted a plan to train women in agriculture and is implementing it in 15 of 22 states (United Nations 1989b).
- About 50 percent of the extension staff in Indonesia and the Philippines are women, and about 25 percent in Thailand (United Nations 1989b).

Education and training

Continuing low levels of literacy and education pose significant constraints to women farmers' willingness and ability to adopt new and more productive farm techniques. Despite the considerable progress made throughout the region in improving women's education during the past 30 years (see chapter 6), significant deficiencies persist, and levels of female literacy and education are often significantly lower in rural than in urban areas.

- Just 5 percent of rural Pakistani women were literate in the early 1980s (Khan et al. 1984).
- In Bangladesh, 88 percent of rural women are illiterate compared with 67 percent in urban areas (United Nations 1989a).

Studies show that improvements in agriculture were strongly linked to education, and that educated farmers are more likely to adopt modern agricultural practices (see chapter 6). Low education levels among women, therefore, impede improvements in output and productivity.

Girls and women also tend to lack specific education and training in agriculture. They are not usually

enrolled in agricultural courses and schools, most likely because agriculture is not traditionally considered an appropriate field for girls.

- Even though subsistence agriculture is primarily women's work in Fiji, agricultural schools have traditionally provided training only to boys and men to become farmers, extension agents, and farm managers. Only in the 1980s did some countries in the South Pacific start to train women as agriculturalists (Hetler and Khoo 1987).

As a result, few girls have the qualifications to enter agricultural colleges or research institutions. Women are, therefore, underrepresented, and sometimes not represented at all, among teachers, trainers, and extension staff, and this is especially disadvantageous in societies where women are traditionally secluded and need segregated facilities. It is also a constraint in attempting to increase the number of women staff and professionals in agricultural research institutions and colleges.

Box 4.1

Tapping Women Professionals for Agriculture: The Jordan Valley Agricultural Development Project

A.I.D.'s Jordan Valley Agricultural Development Project has had notable success in recruiting women for professional positions at the National Center for Research and Technology Transfer. The interim evaluation noted that 17 percent of the total professional staff were women: a significant proportion for a national agricultural research institution. The achievement was mainly due to careful adherence to recommendations made in the design stage of the project that women should be targeted to become involved at the research level.

Source: USAID (1989b)

Despite these constraints, it is possible to tap into the available pool of educated women and encourage them to become agriculturalists (box 4.1).

Organizational membership

Women farmers are often unable to participate in agricultural development programs because they lack access to membership in cooperatives and other farmers' organizations that influence farmers' priorities for production, processing, marketing, and rural infrastructure operation and maintenance. Women are not usually barred from membership, but may be excluded because membership is based on land ownership or reserved for the household head, who is generally assumed to be a man.

- Although there is no legal obstacle to women's membership, very few of more than 4,500 agricultural cooperatives in Egypt have women members. Custom and tradition have not encouraged them to join. A few women landowners and tenants and some widows are members in their own right (Lamming 1983).

User associations also tend to exclude women, whether legally or implicitly, because they restrict membership to heads of households.

- In the Philippines, for example, under the rules of the Securities and Exchange Commission, the agency that registers associations, women were officially excluded from membership in irrigator associations unless they were heads of households despite their use of irrigation water (Illo et al. 1988).

When membership is open to women, they are often not permitted to hold leadership and policymaking roles. However, practical experience frequently demonstrates the need to involve women, as shown by the example in box 4.2.

Women's membership in cooperatives has risen recently, but it remains well below that of men. Some countries have made special efforts to improve women's membership in cooperatives and other farm organizations.

- In Sri Lanka, the National Cooperative Council has created women's advisory committees to help promote women's participation (United Nations 1989b).
- In Bangladesh, government support for the creation of women's cooperatives has resulted in the establishment of more than 8,000 credit and marketing cooperatives (United Nations 1989b).

Box 4.2

The Philippines Participatory Irrigation Program

An important feature of the Philippines National Irrigation Association's communal irrigation program was to involve farmers in the design, construction, operation, and maintenance of local irrigation systems. Farm-level irrigator associations were set up for this purpose, and despite women's heavy involvement in rice production, they were excluded from association membership. Membership was officially restricted to heads of households, assumed to be male.

It soon became apparent that women's involvement was both necessary and beneficial to the irrigation program. Women participated in the associations as members if they headed households, or as proxies at meetings that their husbands were unable to attend. Some associations appointed women to leadership positions as secretary or treasurer on the basis that women were better at recordkeeping and financial management. In tribal areas, women (members' wives) and men participated equally in construction and later in system maintenance work. Interestingly, government policy banned women from paid employment in construction.

Community attitudes and traditional beliefs, in some places, were favorable enough to overcome government policies restricting women's participation. However, considerably more could have been accomplished with less restrictive policies. Since women control household budgets, for example, their formal participation may have facilitated association and project fee collections.

Source: Illo et al. (1988).

Employment and wage differences

Women wage workers face additional constraints that other farm women may not. Unemployment and underemployment are high among farm women and higher than among men. Employment tends to be more seasonal for women than men and women's wages are generally lower.

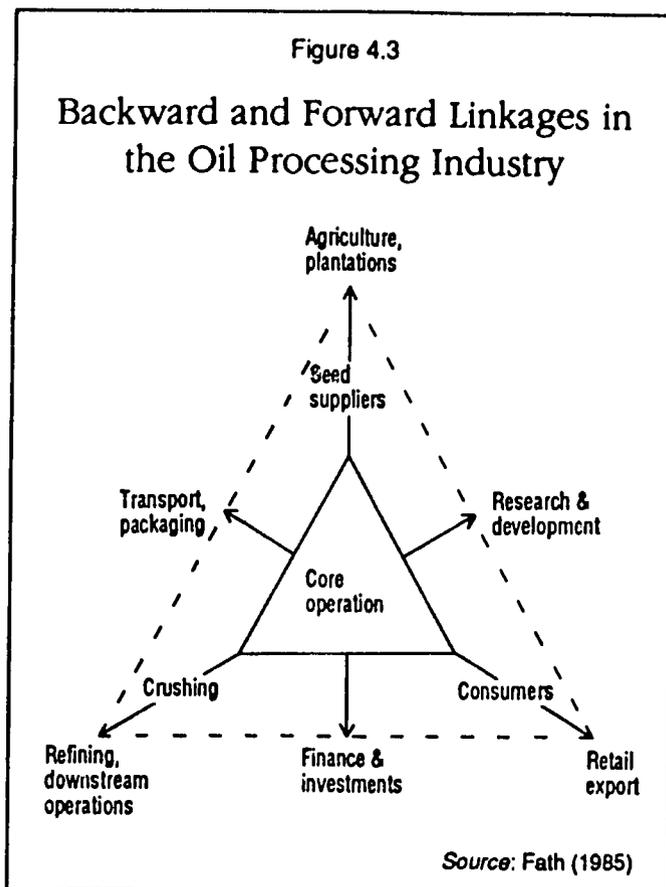
- In Sri Lanka, average daily wages for women farm workers in the unorganized sector are one-fourth to one-third less than men's wages for main crops (United Nations 1989b).
- Women's annual real earnings as agricultural laborers were half or less than half those of men throughout India, both because women's daily earnings were lower, and because they obtained work less often.

Technological innovations that displace women's labor often reduce women's employment opportunities. The effects are particularly serious because the displaced women are among the poorest and come from landless or near landless households and do not have the skills or training to obtain alternative employment, assuming it was available, which is seldom the case.

- Researchers estimate that the growth of mechanized rice milling in Bangladesh displaced 3.5 to 5.0 million days of female labor per year. The jobs created by the new technology are almost exclusively male (Ahmed 1987).
- Estimates of the displacement of female labor due to the mechanization of rice hulling in Asia as a whole are as high as 1.2 million jobs or 125 million days of labor (Ahmed 1987).

Opportunities in agroprocessing

The expansion of agroprocessing industries, if handled properly, offers considerable scope for increasing women's employment and incomes in the ANE regions. The Food and Agriculture Organization of the United Nations estimates that the demand for processed agricultural produce worldwide will double between 1980 and 2000, much of it in the developing countries,



where rising incomes and increasing urbanization will increase the demand for products such as sugar, vegetable oils, dairy products, and fruits and vegetables (Fath 1985). Efforts to meet this demand will require increasing farm output and expanding related industries and services, including milling, refining, storage, packaging, transport, and marketing. Figure 4.3 shows some of the backward and forward linkages generated by a single agroprocessing industry.

Opportunities for women vary considerably along the chain of activities involved in agroprocessing. Women are often preferred employees in food processing in subsectors such as fruit and vegetable canning, fish preservation, and confectionery, whereas men dominate in vegetable oil production and sugar refining (Horenstein 1986). Some observers argue that women are more commonly employed in industries that have lower pay rates, require less skill, and are seasonal. Moreover, they are not well represented in activities such as packaging, transport, and marketing. The extent to which women can benefit from the expansion of agroprocessing, therefore, depends not only on

women's own skills, training, and initiative, but on factors such as the industries' willingness to hire women, plant location, and the types of enterprises.

A.I.D. can play a significant role in expanding women's opportunities in agroprocessing, for example, by making them more employable through vocational/technical training; sensitizing industry managers to the importance of hiring women; conducting studies that provide industries and project personnel with data on women's economic needs and contributions and the types of crops, technologies, and locations that would benefit them; and identifying and providing financial and technical assistance to women's own agroprocessing enterprises.

Guidelines for Integrating Women: Policies

Small and relatively simple changes can be made in policy and project actions to address the constraints women producers face and enable them to benefit from development programs. A set of guidelines is developed here to facilitate this process. The guidelines focus on policy issues likely to arise within the context of the ANE Bureau's *Food Systems Growth Strategy for the 1990s*. Table 4.3 lists strategies for the 1990s by subregional categories: the low-income agricultural economies, the middle-income transitional economies, and the middle-income industrializing economies and identifies opportunities for integrating women. They can use the table as a quick reference to select the policy issues of interest for a particular program or project in the appropriate subregion. Readers can then refer to the discussion below to determine how current policies impact on women and how A.I.D. can help adapt them to integrate women better.

Measures for improving women's integration into the development process will require varying program emphases according to country and subregion, and may even vary within each country by women's economic and social status. In the low-income predominantly agricultural countries such as Bangladesh and Nepal, for instance, where food availability continues to be a problem, the emphasis should be on policies and mechanisms to increase women's farm production. In

the middle-income transitional economies, a more appropriate focus would be on measures to diversify farm and nonfarm production and to help women obtain the training and skills needed for diversification. Thus, regional development support will be a dynamic process that helps women overcome the immediate constraints to agricultural development and prepares them for the opportunities at the next stage.

Agricultural research institutions

Two types of research institution policies offer opportunities for integrating women: policies on research agendas and policies pertaining to staffing and institutional management.

a. Research agendas: So far, policies affecting national and international agricultural research agendas reflect little concern for gender differences in the adoption and impact of new technologies. Many of the international research institutions focus, for example, on the high-yielding seed varieties, whose success depends on high input use. Yet women often lack the resources to benefit from these packages. Such policies persist despite growing evidence that in many places women have not benefited from technological change. Certain technologies, such as mechanical rice milling, have actually had negative impacts on women's incomes and employment.

Solutions will require policy actions that influence the research agendas of these institutions (a) to determine the type of research and technologies needed to increase women's output and productivity, and (b) to undertake such research and development. The institutions may find, for example, that women need labor-saving technologies more than new seed varieties to enhance their farm productivity.

b. Personnel policies: As regards the staffing and management of research institutions, personnel policies that encourage hiring and promoting women and wage equality between the sexes will ensure women's participation in efforts to improve institutional management. Little information is currently available about the existence or absence of such policies, which makes recommending specific policy solutions difficult.

Table 4.2

Policy and Program Options for Integrating Women in the ANE Food Systems Growth Strategies

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Low-income Agricultural Countries			
Agricultural technology development and Management	Maintain cereals output	Research on production technologies	<p>Research agenda policies: Develop adapted technologies to raise women's productivity through proper choice of crops and labor-saving technologies.</p> <p>Agricultural education and extension policies: Develop programs appropriate for women's farm work; target programs to women; adjust training schedules to meet women's needs.</p>
Natural resource management	Sustain agricultural production	<p>Data on NR use</p> <p>Environmental benefit/cost</p> <p>Raise public and policy awareness of NR issues</p>	<p>Research agenda policies: Obtain gender disaggregated data use, management, and abuse of environment and develop appropriately targeted programs.</p> <p>Analysis should include benefits/costs to women. See chapter 5.</p> <p>NR education and extension policies: Develop programs appropriate for women's roles in environment; appropriate targeting and scheduling to suit women.</p>
Trade and market development	Privatize input and output markets	Encourage private sector involvement — e.g., in storage and processing facilities.	<p>Investment support policies: Target women to get participation in investment programs.</p> <p>Credit and technical support policies: See chapter 3 for ways to improve women's access to credit.</p>
Agricultural planning and analysis	Improve public planning and analytic capabilities	Research farm-level decisions	Gender disaggregated data: Obtain data on decision-making.

Table 4.2

Policy and Program Options for Integrating Women in the
ANE Food Systems Growth Strategies (cont.)

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Low-Income Agricultural Countries (cont.)			
Agribusiness development	Promote agribusiness investment	Privatize input delivery	Credit policies: Women may require improved access to credit to purchase nonsubsidized inputs. See chapter 3 for types of actions needed.
		Market analysis	Investment support policies: Focus on smaller enterprises may be more favorable for women investors. See chapter 3.
		Expand high value export processing	Credit and technical support policies: See chapter 3 for ways to improve women's access to credit and technical support. Employment and wage policies: Women workers often predominate in agroprocessing. Support policies that encourage employers to hire women, improve their skills and provide good wages and working conditions. See chapter 3.
Infrastructure management	Improve performance	Decentralize irrigation system operations and maintenance.	Local management organization policies: Membership and leadership policies should be open to women.
		Improve access to irrigation and transport systems.	Gender-disaggregated data Obtain data on system use and constraints because access varies by gender.
Sustained institutional and human capital development	Strengthen human and institutional base	Educate and train scientists and administrators	Educational and training recruitment policies: Should be targeted to women and men.
		Basic skills training	The strategy is gender-sensitive because it explicitly focuses on rural women.
		Build analytic capacity	The strategy is gender-sensitive because it explicitly cites the need to disaggregate gender impacts of national and sectoral policies.

Table 4.2

**Policy and Program Options for Integrating Women in the
ANE Food Systems Growth Strategies (cont.)**

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Middle Income Transitional Countries			
Agricultural technology development and management	Build research institution capability	Research management	Management policies: Should be reviewed and changed if necessary to ensure women's improved access to employment, training and promotion.
	Develop processing and marketing	Investment and market analysis	Gender disaggregated analysis: Should be done to determine potential investment opportunities for women.
Agricultural planning and analysis	Improve government adjustment and response capabilities	Economic analysis for public investment decisions	Gender-disaggregated analysis: Investment decisions and macroeconomic policies have differential impacts depending on respective male/female roles, control over resources, laws and customs.
Natural resource management	Sustain productivity	Forest management and agroforestry.	Forest leasing policies: Should consider effects on women as they are primary users and managers of forest resources.
		Irrigation associations	Irrigation association policies: Membership and leadership policies should be open to women because they use and manage irrigation water.
		Financing of irrigation	Finance policies: Cost recovery mechanisms should be devised to take account of differential ability to pay among poor and women. Feasibility depends on this.
		Policy analysis	Gender-disaggregated analysis: Will be necessary to determine gender differences in impacts of potential policies.

Table 4.2

Policy and Program Options for Integrating Women in the
ANE Food Systems Growth Strategies (cont.)

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Middle Income Transitional Countries (cont.)			
Agribusiness development	Promote agribusiness investment	Support for informal sector enterprises	<p>Investment support policies: Should benefit women entrepreneurs who tend to be concentrated in informal sector.</p> <p>Credit and technical support policies: See chapter 3 for ways to improve women's access and enable them to expand and consolidate enterprises.</p>
		Free trade zones	<p>Employment and wage policies: Women workers often predominate in free trade zones; investment incentives often relax wage and employment standards — may be disadvantageous to women. AID should support policies that encourage employers to hire women, help improve women's skills and training, and ensure good wages and working conditions. See chapter 3.</p> <p>Investment support policies: Focus on smaller enterprises may be more favorable for women.</p>
Trade and market development	Improve domestic and export marketing systems	Policy dialogue to promote private sector	Dialogue: Should include ways to provide equal access to women in private sector development.
Infrastructure management	Improve performance	New tax and rate structures	Gender-disaggregated impact analysis: Success of tax and rate policies will depend on prior knowledge of differential capacity to pay.

Table 4.2

Policy and Program Options for Integrating Women in the ANE Food Systems Growth Strategies (cont.)

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Middle Income Transitional Countries (cont.)			
Sustained institutional and human capital development	Strengthen human and institutional base	Capacity-building for policy analysis, research and management of adjustment	Gender-disaggregated impact analysis: Adjustment has differential impacts depending on respective male/female roles, control over resources, laws and customs.
		Education and training in new technical and management fields	Education and training recruitment policies: Should be targeted to women and men.
Middle Income Industrializing Countries			
Agricultural technology development and management	Build research institution capability	Technology exchange/networking and scientific collaboration	NA
	Develop processing and marketing	Education and training	Educational and training recruitment policies: Should be targeted to women and men.
		Analysis to support commercial investment in technology generation and diffusion	Gender-disaggregated analysis: Will show that commercial interests may not always coincide with the public interest in developing technologies that minimize costs to women and maximize benefits. Results of analysis may require modifications in policy support.
		Brokerage for joint venture promotion	Diffusion policies: Should take measures to avoid neglecting women as happened with public dissemination. Investment policies: Focus on smaller enterprises may be more favorable to women.
Agricultural planning and analysis	Improve public and private analytic capabilities	Train key analysts	Educational and recruitment policies: Should be targeted to women and men.

Table 4.2

Policy and Program Options for Integrating Women in the ANE Food Systems Growth Strategies (cont.)

ANE Strategy	Purpose	Development Mechanisms	Policies for Integrating Women
Middle Income Industrializing Countries (cont.)			
Natural resource management	Control point source pollution	Public investment in parks and reserves	Location choices: Should take account of women's needs to access forest and other common resources.
	Set aside conservation areas	Support domestic conservation groups	Group policies: Should be open to women's membership and leadership.
Agribusiness development	Promote agribusiness investment	Analytic capacity-building to promote export sales of processed products	Product identification analysis: Could be used to identify products commonly produced by women.
		Brokerage for joint ventures in processing	Women's investment opportunities: Focus on smaller enterprises may be more favorable to women.
Trade and market development	Improve domestic and export marketing systems	Policy dialogue to promote private sector	Dialogue: Should include discussion of ways to provide equal access to women in private sector development.
Infrastructure management	Improve performance	Train managers and researchers	Educational and recruitment policies: Should be targeted to women and men.
Sustained institutional and human capital development	Strengthen human and institutional base	Technical and managerial exchange	Recruitment policies: Should be targeted to women and men.

NA = Not applicable
NR = Natural resources

Agricultural education and training

Current policies in most countries, whether by design or default, restrict women's access to agricultural education, research, extension, and training. Policies affecting women's participation in education and training programs will undoubtedly vary with the type of training (basic skills training or higher education) and the degree of specialization. Women with higher education may be sufficiently self-motivated and independent and require no particular policy support to pursue advanced training. However, targeting policies may be required to elicit women's participation in basic skills training, especially if cultural factors do not encourage women to acquire education and training.

Solutions may require policymakers to set target quotas for men and women recruits. If they do not meet these targets, they will have to determine why and develop alternative solutions. In some places, for example, women's participation may require policy decisions to provide sex-segregated training and housing facilities.

In higher education, recruitment difficulties may stem from the shortage of female candidates trained in the agricultural sciences or in other specialized and technical fields. Most likely, this will be due to the failure of past educational policies to promote higher education for women and to improve their access to scientific and technical education. These problems will not be amenable to short-term policy solutions. More fundamental educational policy reform may be necessary in some cases. Chapter 6 addresses educational issues in greater detail.

Agricultural education and extension

Agricultural extension programs tend to ignore women. When they do reach women, they tend to provide home economics and nutrition information and training rather than training in improved production techniques and processing methods and market information that are more appropriate for women farmers. Moreover, the numbers of women agriculturalists, researchers, and extension personnel are limited, and little attention is paid to women's work constraints in scheduling training sessions.

Solutions will require policy changes that recognize the importance of women's productive roles, provide agricultural education for women as farmers and agricultural researchers, provide training for extension personnel in women's roles and activities and gender-sensitive approaches to information dissemination. In addition, centers providing education and training may have to make special arrangements to ensure women's participation in training programs to upgrade their education and skills and prepare them for professional positions in agriculture.

Natural resource education

Very little has been done regionally on a formal or integrated basis to disseminate information on the proper use and management of natural resources. However, there is a danger that when such information is disseminated the policy failures that resulted in the neglect of women in agricultural education and extension programs may be repeated.

Solutions require (a) gathering information on gender differences in roles and constraints in managing and using the environment, (b) using that information to develop education and extension materials, and (c) developing appropriate extension mechanisms, agencies, and training procedures and schedules to ensure women's access to the information. Chapter 5 provides additional information on these issues.

Forest leasing

Policy choices with respect to lease options will affect women as lessors and users of forest resources. Women will benefit only if policymakers recognize them as potential claimants to options. Lease options given to large-scale commercial enterprises may prevent women from exercising traditional use rights to forest lands. Unless alternatives are offered, the inability to use local forests may prove burdensome for women and poor households that rely on forest resources for fuelwood, food, and fodder.

Optimal solutions would favor local communities, guarantee women's participation in lease options, and incorporate sustainable methods for the use of forest

resources. Chapter 5 takes up these issues in more detail.

Agribusiness investment support: Entrepreneurship and production

Current policies to support agribusiness investment, even though they frequently generate considerable employment for women, often do not reach women entrepreneurs because they focus on large-scale enterprises.

Policymakers and others tend to overlook women's entrepreneurial activities because they are concentrated in the informal sector, tend to be small or microenterprises, yield low net returns, and lack stability. Research in many developing countries has shown that women's inability to expand and stabilize their enterprises is more often due to the constraints women face, for example, in raising capital, than to a lack of entrepreneurial or managerial abilities. Investigators have shown that small amounts of credit and technical assistance to women's enterprises yield good results.

Solutions that attempt to enhance women's participation as entrepreneurs in agribusiness enterprises will require policies that initially target the informal sector and focus on small and microenterprises. Policy changes may also be needed to improve women's access to credit and to target women's enterprises for technical assistance such as financial management, bookkeeping, and so on. See Chapter 3 for additional details.

Another way in which agribusiness investment policies can enhance women's employment and incomes is by their effect on small farmers and wage laborers in farm and nonfarm activities. The choice of development model, whether plantations, satellite, or small-scale contract farming, will determine whether women benefit and in what way. If women are employed on plantations, they will primarily be wage workers in crop production and processing. If agribusiness is based on satellite or contract farming, women small farmers can benefit if the crop selected for development is one with which women traditionally work. If new crops, such as nontraditional vegetables, are being introduced, women farmers will benefit to the extent that they are offered the same technical information and support services.

Agribusiness wage and employment policies

Many agribusinesses, especially agroprocessing enterprises, in the developing countries prefer to hire women. Thus, they represent an important source of nonfarm employment and income for women. However, there are some disadvantages for women employed in many agribusiness industries. Women tend to predominate in industries that require shorter training time, pay lower wages, and offer seasonal employment. Women's wages also tend to be low, for example, in export-oriented agribusinesses that are set up with the help of government concessions directed at attracting foreign investors. The concessions often exempt enterprises from local laws governing wages, working conditions (such as occupational health and safety regulations), and job security. Although very little research evidence is available on the impact of such policies on women's incentives and productivity, it is likely to be considerable.

Solutions will require monitoring wages and working conditions and, if necessary, policy interventions that ensure at least minimal levels of quality in women's work life through the provision of benefits such as childcare, training, and savings facilities. Governments may choose not to exempt industries from minimum wage laws if they anticipate a negative impact on women. Alternatively, policies that support trade unions will enhance women's bargaining power.

Agricultural infrastructure finance and management

Women and men use infrastructure such as irrigation and drinking water facilities and roads. Policies designed to increase user participation in infrastructure management should, therefore, aim to involve both men and women in user organizations.

Solutions may require changes in laws and/or organizational rules to permit women to become members in their own right. In some places, an effective initial approach may be to set up women's associations or cooperatives as a transitional mechanism to enable women to acquire the skills and confidence necessary for full participation in gender-integrated associations (box 4.3).

The institution of user fees is often an important element of user-managed infrastructure. Success in raising fees depends on users' ability to pay and their sense of participation in fee-setting policies. Women may be at a disadvantage in both situations.

Solutions include policy innovations that allow for payments in kind, graduated payments, or other ways to make and time payments so they are more flexible and affordable.

Box 4.3

Operation Flood, India

Although Indian women are heavily involved in household dairy production, until quite recently they did not benefit from the tremendous expansion in commercial dairying that practically doubled Indian milk production between 1951 and 1981. This expansion came about as a result of the National Dairy Development Board's program, Operation Flood, that set up a system of producer cooperatives that linked village producers with urban consumers, and provided technical assistance and quality control to milk producers.

Theoretically, women were to have equal access to cooperative membership, services, and benefits, and 30 percent of credit was earmarked for women. In practice, few women belonged to the cooperatives and only 14 percent made use of the available credit. Men ended up controlling the cash income from milk sales even though women did much of the work.

Since 1979, a number of nongovernmental organizations have been involved in changing the situation for women, employing a variety of strategies: organizing women-only cooperatives, setting up "precooperative" solidarity groups, training women in cooperative rules and management, and encouraging women to join mixed-gender cooperatives. Women have also benefited from services such as training in livestock care and paraveterinary techniques.

Source: World Bank (1989).

Gender-disaggregated data collection and analysis

Although data collection is not strictly speaking a policy issue, the availability of information on women's roles and participation and policy impacts on women are vital to guide policy decisions and dialogue and project planning. Gender-disaggregated analysis is necessary because of growing evidence that macroeconomic, investment and other policy decisions tend not to be gender neutral in their impacts.

- Studies have shown, for example, that the policy responsiveness of women farmers differs from that of men. Women's capacity to respond to production incentives is limited primarily because they own fewer productive resources such as land, farm implements, and cash.

Given AID's strategic focuses, gender-disaggregated data needs will include:

- women's and men's participation in agriculture, agribusiness enterprises, farmer and irrigators associations, cooperatives, and so on;
- gender-specific roles in using and managing natural resources and rural infrastructure;
- baseline data on women's and men's incomes, employment, education, and so on;
- gender distribution of responsibilities for farm decisionmaking.

Guidelines for Integrating Women: Project Implementation

Women will be better integrated into agricultural projects and will be more likely to benefit from them if they:

- Improve women's access to productive resources and services, especially land, water and other inputs;

- increase women's incomes;
- expand women's farm and nonfarm employment opportunities;
- reduce women's workloads while increasing their productivity;
- increase women's levels of health, education, and skills.

Small changes in project design and implementation can greatly increase women's participation and their potential to benefit from agricultural and agribusiness projects. Examples of such changes follow.

Targeting

- Since women are primarily small farmers, and among them, the least capitalized, projects that target smallholders are more likely to reach women.
- Targeting the household as the unit of production rather than the male as the assumed head of household is more likely to ensure participation by women and other household members.
- Targeting for technical assistance the crops women grow or the activities performed mainly or solely by women (weeding, harvesting, postharvest processing) are effective strategies.
- Targeting loans and technical assistance to smaller agroenterprises and those in the informal sector is more likely to benefit women entrepreneurs.

Box 4.1 illustrates the success of targeting policies to women, while box 4.4 shows how the A.I.D. mission in Papua New Guinea successfully incorporated targeting for women into the design of a fisheries project.

Box 4.4

Pacific Islands Marine Resources Project

Historically, fishing has not been important to the people of Papua New Guinea (PNG) because they are predominantly highlanders. Potential for developing the industry is good, however, as fish supplies are plentiful (though underutilized), and demand is high. When A.I.D.'s Regional Development Office took the opportunity to develop a small-scale coastal fisheries project in PNG, it made sure to include women.

- The project paper clearly identified both women and men as participants in and beneficiaries of the project. It incorporated both sexes into the program's goal, its logical framework, and the monitoring and evaluation process.
- The project paper explicitly required implementors to obtain gender disaggregated participation and income data.
- As women play a major role in the fish trade, they were especially targeted for the market development phase of the project.

The likelihood that women will be included in the project implementation as planned is enhanced by the supportiveness of the PNG government, which delegated an officer to be in charge of the women-in-development work in the Fisheries Department and head the A.I.D. project.

Source: USAID (1989c)

Farm and nonfarm training and extension

- Training programs that take place close to women's homes on a non-residential basis will be more effective in drawing women.

- Scheduling training around farm slack periods and women's household responsibilities will facilitate women's involvement.
- Employing more women extension agents, if necessary, or making arrangements to meet or train women farmers with male agents when other family members can be present will also enhance women's access to training.

Promotion mechanisms

Men tend to dominate standard project promotion mechanisms such as cooperatives and other farmers' groups and associations. Women's participation is

often formally or informally restricted. Efforts to identify women's groups and meeting places, such as the village well in parts of south Asia, are likely to be more effective in reaching women. Simultaneously, project promoters can try to address issues related to women's participation in male-dominated groups.

Agricultural credit

The introduction of innovative collateral options, such as crop liens and group guarantees, increase women's ability to borrow since they seldom have title to land, the traditionally accepted and most common form of collateral (see chapter 3).

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5. The Environment and Natural Resources

Women in the ANE regions, as in other parts of the developing world, are deeply involved in using and maintaining the environment. They depend critically on the land and natural resources to meet their economic needs and fulfill their household responsibilities through activities such as farming, collecting water and firewood, and maintaining the cleanliness of their homes and surroundings. Under pressure of shrinking resources women may contribute to environmental abuse, for example, by cultivating marginal lands because their access to more fertile land is restricted. There is growing recognition by researchers and policy makers, however, that women also make important contributions to preserving and improving the environment and that their involvement is crucial to ensure sustainable development.

The Importance of Natural Resources to Women

For poor women in the developing countries, natural resources are the basis for economic and household survival. The vast majority of women in the ANE regions depend on land and water resources for agriculture to grow food and other products for household use and sale for income. They depend on forests for fuelwood for cooking and sale and for a variety of raw materials to use directly or process for household consumption or sale.

Economic importance

National incomes and foreign exchange earnings of countries in the ANE regions have increased significantly as a result of women's economic activities that depend directly on the environment and natural resources. For example, women farmers grow crops for sale in domestic and export markets. Another example is the growing trade in fuelwood that is an increasingly important source of income for women (Food and Agriculture Organization 1989).

- A survey in Gujarat, India, found that 70 percent of women collected fuelwood for sale about 25 days in the year, and that they used most of the income earned to buy food (Food and Agriculture Organization 1989).

Women are also the main producers of forest based wood and nonwood products that are important sources of income and employment in many countries of the region.

- In Malaysia, 60 to 70 percent of production line workers in private veneer and plywood mills are women (Dankelman et al 1989).
- In Thailand, 20 percent of workers in the forestry industry are women (Dankelman et al 1989).
- In India, 70 percent of the over two million full-time equivalent jobs in forestry, the majority of which are held by women, are in production of nonwood products, such as harvesting and drying tendu leaves for Indian cigarettes, tannin, gums, and tasar silk (Food and Agriculture Organization n.d.).

Table 5.1

Characteristics of Forest Based Small Scale-Industries, Egypt and Bangladesh (percent)

Characteristic	Egypt	Bangladesh
One-person operations	69	36
Home production	76	NA
Rural location of enterprises	80	97
Rural employment	65	NA
Women's ownership	65	(3)
Women's labor	31	21
NA = not available		

Source: Food Agriculture Organization (1989).

Table 5.1 shows the characteristics of forest based, small-scale industries for two countries in the ANE regions. As the table shows, these industries are not only important in providing employment for women, but in Egypt, women own the majority of them.

The income derived from the sale of forest products is often of particular importance to women because of their limited access to land and other productive resources. The employment and income generated by the sale of forest products is especially important for landless women who depend on access to common property resources to obtain tradable goods.

- The only source of income for two-thirds of 100 women surveyed in Manipur, India, was from collected minor forest products (Food and Agriculture Organization/Swedish International Development Authority n.d)

Given the constraints on women's time, gathering forest products is a convenient way for women to earn income because they can combine it with other routine activities such as fuelwood and water collection.

A considerable portion of women's noncommercial but economically valuable activities, such as collecting fruits and berries for household consumption or cultivating household gardens, also derive directly from the environment and natural resources. Home gardens, generally tended by women, are an important source of fruit, nuts, fodder, oil, fuelwood, building materials, and thatch for household use and supplementary income.

- In Indonesia, more than a million hectares of land are used for tree gardens, which occupy 20 percent of the arable land in Java (Food and Agriculture Organization n.d.).

Household importance

Women rely on natural resources and interact with the environment to meet a multitude of household obligations for which they bear primary responsibility in the ANE regions as elsewhere in the world. These obliga-

tions include activities such as collecting fuelwood, fodder, and water for the household; maintaining household cleanliness; and disposing of waste.

- In Asia and the Pacific, Fortmann and Rocheleau (1989) estimate that women account for two-thirds of the time spent in fuelwood collection.
- In rural Bangladesh, both men and women are responsible for collecting fuel and fodder. They spend an average of 30 hours per week in these activities (Food Agriculture Organization 1989).
- In Gujarat, India, women and children in typical rural households spend the equivalent of 200-300 days per year gathering fuelwood. Women spend approximately two hours per day carrying water for cooking, drinking, bathing, and washing clothes (Magrabi and Verma 1987).

Maintaining and repairing the environment

Through their economic and household activities, women can have significant impacts on environmental quality and sustainable resource use. For example, in traditional agricultural systems women are responsible for collecting animal and crop residues, maintaining compost heaps, and applying organic fertilizers in the fields. Women are also becoming increasingly responsible for applying inorganic fertilizers and pesticides and making decisions about their use.

- In Gujarat, India, women are involved in plant protection, including using insecticides and pesticides and physically driving away insects and birds. They are also involved in selecting and using commercial fertilizers and are responsible for their safe storage and mixing (Magrabi and Verma 1987).

Women's participation in decisions such as the types and amounts of fertilizers and pesticides to use means that they play a role in determining environmental impact.

Women can be instrumental in repairing environmental damage and in using the environment and resources in a sustainable manner. They have a significant stake in sustainable use of natural resources and the environment because they are so dependent on them for both their economic and household needs. Moreover, women have considerable experience in managing the environment because they interact so closely with it on a daily basis during their household and economic activities.

Women also have considerable and sometimes unique knowledge of forestry, forest products, plant and tree species, and methods of conserving soil and forest resources (box 5.1).

Box 5.1

What Women Know About Forestry and Forest Products

- The extent of scarcity for products such as fodder, fuel, medicinal plants, resins and dyes, fruits and berries, nuts and mushrooms, and so on
- The distance a tree plantation site can be from the village and still allow women to meet work responsibilities at home and on the plantation
- The type of planning required to integrate harvesting and processing of minor forest products with other work responsibilities and their time constraints
- The burning properties of various wood species
- The value of planting shade trees near the house or at selected locations in the fields to improve the quality of the living and working space and increase productivity.

Source: Molnar and Schreiber (1989).

- In Kalimantan, Indonesia, the local Dayak people are the only source of specialized knowledge about edible forest plants (Colfer 1981).
- In traditional farming systems in India, women play key roles in intercropping maize with nitrogen-fixing beans and millet with nitrogen-fixing pulses; practices that enhance soil fertility and increase yields. Women are also instrumental in recycling crop residues and dung, which helps maintain soil fertility and prevents soil erosion (Shiva 1988).

In many parts of the ANE regions, however, extreme pressures have created environmental stresses and imbalances that have undermined women's ability to manage resources sustainably.

The Impact of Environmental Stress on Women

Environmental stress in the ANE regions has been mounting during the past two decades due to numerous factors, including rapid population growth, commercialization, and economic development that raise the demand for energy, land, and other resources and increase water, land, and air pollution. The ANE regions contain, for example, some of the most fuelwood deficient areas of the world: the Indian subcontinent, the Philippines, and parts of Indonesia (International Labour Organisation 1987) (table 5.2).

The nature and severity of environmental and resource problems vary greatly throughout the ANE regions because they are so diverse ecologically and countries are at such different stages of development. In countries such as Nepal and Bangladesh, for example, deforestation, soil erosion, siltation, and floods are major problems, while in the Near East lack of water and increasing desertification are more important. In rapidly growing urban areas, throughout the regions, land and air pollution, overcrowding, drinking water contamination, and poor sanitation are growing problems.

Women are deeply affected by mounting environmental stress and the depletion of natural resources as these

Table 5.2

People Affected by Fuelwood Deficits, 1980 and 2000

(millions)

Year	Asia & Pacific	Near East & North Africa
1980		
Acute scarcity	31	NA
Deficit	832	104
Potential deficit	161	NA
2000		
Acute scarcity or deficit	1,671	268

NA = Not available

Source: Agarwal (1986).

developments increase their workloads, undermine their productivity, and threaten their economic survival. They also affect the health and well-being of women and their families, and hence, the productivity of current and future generations. Finally, diminishing resources and worsening ecological conditions make it more difficult for women to manage ecological systems and use them sustainably. Social and institutional factors, such as lack of land ownership and access to education, compound the problems.

Economic effects

Growing environmental stress, including land conversion, loss of soil fertility, and deforestation, undermine women's economic productivity, limit their opportunities for income generation, and constrain their ability to contribute to economic growth. The ensuing reductions in farm output and forest resources have both a direct impact on women's incomes and an indirect effect through

increases in the time required to accomplish fundamental tasks such as fuelwood and fodder collection.

Women's farm production, for example, suffers as landlessness grows due to land conversion to alternative uses such as roads, commercial agriculture, and industrial development. As it is, landlessness is widespread throughout much of the regions and women are the primary losers. Landless families are the poorest, and among them, women are the worst off. Agricultural wage labor is often the only employment option open to landless women, but as noted in chapter 4, such work does not pay well and is uncertain because of its seasonal nature.

Farm output may also decline due to deforestation. This may occur because the loss of forest cover leads to soil erosion and loss of soil fertility. Another way that deforestation affects agricultural output is through fuelwood shortages that compel women to use dung for fuel rather than fertilizer, thereby reducing soil fertility. The resulting output losses can be quite substantial, and although estimates are not available specifically for the ANE regions, estimates for the developing countries as a whole are indicative.

- Investigators estimate that every ton of cattle dung burnt and unavailable for use as manure implies a loss of 50 kg of foodgrains. Based on the estimate of 400 million tons net weight of cattle dung burnt every year in the developing countries, this amounts to a total loss of 20 million tons of foodgrains annually (Agarwal 1986).

Deforestation, and privatization of forest lands undermine women's ability to generate income by reducing or preventing access to the raw materials that enable women to earn income. Income losses can be significant, especially for the poor. Reduced access to forests and commons that provide fodder for livestock can also affect women's incomes because livestock are often their responsibility and an important source of income. Moreover, if women have to travel longer distances to graze their animals, their productivity in other activities may decline.

Table 5.3

How Workloads Increase When Fuel is Scarce

Symptom of Problem	People Affected
Use of bushes, twigs, and roots as fuel	Women, children (gathering, preparing)
Use of residue fuels for cooking	Women, children (gathering, preparing)
Walking long distances to collect fuel	Women
Cutting living trees	Women, men
Use of carts/animals to collect fuel	Men
Purchasing fuel	Women or men (depending on who provides cash)

Source: International Labour Organization (1987).

Women's economic productivity may also decline because deforestation increases the work involved in collecting fuelwood, a task usually performed by women (table 5.3). As forests diminish, rural women have to go further afield and spend more time obtaining fuelwood and fodder. The opportunity cost is high. As it is, women work long hours in economic activities, childcare, cooking, and other household work (table 5.4). Additional hours spent in fuelwood collection means less time available for other necessary and productive work.

The opportunity cost of deforestation may also be high for children. Increases in women's workloads often mean that children's workloads, especially girls', also increase. The more time girls spend helping their mothers collect and transport fuel or taking on other

household responsibilities to compensate for increases in their mothers' workloads, the less time is available for them to attend school. This slowing of human capital formation could undermine economic growth in the long term.

Health effects

Environmental degradation, pollution, and resource depletion, can undermine women's ability to maintain their own health and that of their families. Rapid deforestation, for example, can restrict women's ability to provide supplementary forest foods, thereby seriously compromising the health and nutrition of household members.

- In Kalimantan, Indonesia, children in migrant households in the lowlands, whose diets consisted primarily of rice unsupplemented with gathered forest foods, had higher rates of malnutrition and death than children in the highlands, who had better access to a more diversified diet that included forest products (Colfer 1981).
- In parts of Fiji, women no longer have access to seasonal fruit trees such as guava, an important source of vitamin C, because of deforestation due to land clearing for cash crop production. Pesticide and herbicide run-off has destroyed aquatic life in swampy areas, reducing the availability of foods such as prawns and eels that women use to supplement their families' diets (Naikatini 1988).

The heavy reliance on biomass fuels among poor women in the ANE regions has been linked to serious eye and respiratory problems.

- A study in India estimated that during cooking with wood fuels women were inhaling as much benzopyrene, a carcinogenic pollutant, as if they smoked 20 packs of cigarettes a day. In areas of fuelwood scarcity, moreover, women resort to alternative residues that can be even more harmful (International Labour Organisation 1987).

Another way in which deforestation affects the health of women and children is the longer distances they must travel to obtain fuelwood.

- A survey of 14 villages in Himachal Pradesh, India, found that 70 percent of women travelled more than 6 km a day to collect fuelwood (Food and Agriculture Organization n.d.).

This is a severe drain on energy, and particularly serious because women generally tend to eat the last, the least, and take in fewer calories than they use (International Labour Organisation 1987). The longer hours involved in gathering scarce fuelwood may also affect the health of all household members as women adapt by preparing fewer meals and quicker cooking foods that are less nutritious. Women may, for example, switch away from grains and beans that require lengthy cooking to be edible. There is evidence that women have adopted such adaptive strategies in Nepal, but the health effects on families have not yet been studied (International Labour Organisation 1987).

In rapidly growing urban areas, women's ability to maintain the cleanliness of their surroundings and the

health of family members is affected by factors such as limited access to potable water and sanitation, and air and water pollution. In 1983, for example, just 67 percent of urban households in the Asia and Pacific region had access to water supplies and only 48 percent to sanitation (Population Reference Bureau 1987). These problems are likely to grow with the concentration of urban populations that is projected for the ANE regions. The Asian Development Bank, for example, projects a five- to ten-fold increase in regional air and water pollution during the next 15 years (A.I.D. 1990). Growing problems with water pollution and inadequate waste and sewage removal are likely to further undermine women's ability to maintain their families' health, for which they are primarily responsible. Chapter 7 discusses other environmental and occupational factors that affect women's health.

Constraints on Maintaining the Environment

Environmental stress, in and of itself, can be an important factor that undermines women's ability to use and manage resources wisely. Land conversions, for example, may push women on to more marginal lands that become even more degraded because women have

Table 5.4

The Rural Energy Crisis and Women's Time (hours)

Country	Agricultural Work	Nonagricultural Work	Fuel Collection and Cooking	Other*	Total Hours Worked
Indonesia					
Irrigated village	2.9	0.2	1.5	6.9	11.5
Upland village	3.1	0.5	2.4	6.0	12.0
India					
Average of five villages	3.9	4.0	4.8	0.9	13.6

* Cleaning; childcare; social, community, and religious activities.

Source: International Labour Organisation (1987).

no alternative but to farm them to meet subsistence foods needs. Other social and institutional factors, such as lack of access to land or information, may also undermine women's ability to maintain environmental quality and sustainable use of natural resources.

Lack of access to land can prevent rural women from changing current practices that harm the environment and adopting others that are beneficial. For example, persuading women to grow trees and participate in social forestry projects is difficult if they do not have land on which to grow trees or if they are not guaranteed ownership of the fruits and timber.

- In a survey in India, 80 percent of women interviewed claimed that they could not plant trees because they had no land; however, only 16 percent of the sample women actually belonged to landless families (Skutsch 1989).

Recent reforms may have worsened the situation for women by undermining their rights under customary laws and practices and setting up ambiguities, dependencies, and insecurities that did not exist earlier. For example, replacing customary rights to land with exclusive male ownership may require women to seek men's permission for their farming or gathering activities that were formerly recognized and provided for traditionally. As a result, women's responsibilities are out of balance with their legal status and formal rights to land and trees and their products.

- Even in places such as India and Pakistan, where the reform process acknowledges the right to common lands, women's access to land is inadequately protected by the legal and administrative systems (Rocheleau 1989).

In urban areas, lack of access to land is a critical factor impeding women's ability to find adequate shelter for their families. As it is, poor urban dwellers are crowded into slums and shanty towns where housing is totally inadequate. In some cases, recent migrants to the cities live on the streets. With the population of Asian cities expected to double by 2025, the situation will undoubt-

Box 5.2

The Need to Involve Women: Community Forestry in Nepal

As women are not traditionally active in public affairs in Nepal, a community forestry project undertaken in 1980 made no special efforts to include women in the initial stages. It soon became apparent, however, that unless women were included the success of the entire project would be jeopardized.

Forest replanting, for example, required women's involvement and commitment or it would not work. Closing a forest area to use while seedlings became established meant that women, who were primarily responsible for grazing livestock, had to adapt feeding practices from grazing to stall feeding; a switch that required them to spend additional time cutting grass. If they were not willing to cooperate, replanting could not succeed.

Source: Molnar (1989).

edly worsen unless policymakers pay greater attention to finding ways to address urban land use and housing issues.

As with other types of development policies and projects, environmental policymakers and project implementers tend to ignore the role of women. They often mistakenly assume that policies will not have dissimilar impacts on women and men. Moreover, they assume that by reaching male heads of households women will receive information, that women and men play similar roles in environmental and resource management, or that only men have an impact on the environment (Skutsch 1989). Failure to identify and acknowledge the role of women in environmental processes can result in inappropriate development interventions and jeopardize project success (box 5.2).

- One of the reasons for the failure of a government-sponsored home gardening project in Kalimantan, Indonesia, was that seeds, tools, fertilizers, and extension services were given to men instead of women, even though gardening is a female activity (Colfer 1981).

Lack of education and training often prevent women from contributing effectively to sound environmental management and from participating fully in environmental projects. Women's access to training tends to be limited because forest extension services and programs may ignore them or because there are insufficient female staff to train them; an important constraint in countries where women are secluded.

- In India, for example, the vast Indian Forest Department appointed its first three female professional staff members as recently as 1979 (Skutsch 1989).

Policy Options

A.I.D.'s environmental strategy for the ANE regions in the 1990s focuses on improving policies, enhancing local capacity for environmental decision making, strengthening the role of the private sector in environmental management, and supporting public education and popular participation in environmental issues and management. Each of these program areas offers considerable scope for integrating women's needs and concerns and building upon their knowledge of and skills in environmental management (table 5.5.).

Improve environmental policies

A.I.D. intends to support improvements in environmental policies in the ANE regions by evaluating the environmental impacts of economic and other policies and exploring economic, institutional, and political alternatives to ensure environmental protection and sustainable growth. The agency expects to support policy-oriented studies that evaluate (a) the costs of environmental damage, inefficiencies, and externalities, and (b) the political and institutional factors that either prevent or facilitate environmental policy changes. Specific studies might focus on issues such as the

environmental costs of subsidies provided for large-scale irrigation and the economic and environmental costs of the resulting inefficiencies in water use. Other research issues might include the impact of unregulated deforestation or the downstream implications of industrial pollution of rivers and streams.

For the economic studies to reflect fully the costs of inefficiencies and externalities, they would have to incorporate the costs to women where these differ from costs to the general population or where they are additional to other costs. Deforestation, for example, imposes both direct and opportunity costs on women. Direct costs result when fuelwood is unavailable for collection and must be purchased, and indirect costs occur when women have to go further to obtain it. In the latter case, the time involved in searching for fuelwood and the energy consumed in carrying it results in productivity losses in farm and other income-generating activities. Additional productivity losses may arise in farm output and income if women substitute dung for fuelwood instead of using it for fertilizer. Researchers should recognize these types of costs that are generally incurred by women and incorporate them into the general analysis.

Studies on the political and institutional factors affecting environmental policy change would similarly be incomplete if they did not incorporate the role of women. There are lessons to be learned, for example, from the strategies employed by grass-roots organizations such as the Chipko movement in India: to prevent commercial tree felling in a neighboring forest, women literally "hugged" (chipko) the trees. The women's action attracted state government attention and an investigation that resulted in a ten-year ban on tree felling in the area. Since then, the women have persevered in their efforts to preserve the environment (box 5.3). Wherever women play a role in influencing policymaking on the environment, investigators should try to document and learn from the experience. In cases where women do not play an active political role even though their interests are deeply affected by environmental policy decisions, investigators may have to determine the social and institutional factors that prevent them from doing so and devise solutions.

Table 5.5

Policy and Program Options for Integrating Women in Environment and Natural Resource Strategies

ANE Program Area	Purpose	Support Mechanisms	Policies for Integrating Women
<p>Improve environmental policies</p>	<p>Establish and improve ENR markets</p>	<p>Studies of costs of subsidies, inefficiencies and externalities on the environment</p> <p>Studies on political and institutional factors that prevent/facilitate environment policy change</p>	<p>Such studies should fully reflect costs for women, e.g., productivity losses, health impacts, etc.</p> <p>Document strategies employed by women's groups and other grassroots organizations in promoting environment policy changes.</p>
<p>Enhance recipient country capacity for environmental decision making</p>	<p>Ensure potential ENR consequences and mitigating solutions are incorporated early in local decision-making processes</p>	<p>Build local capacity to analyze of ENR problems, determine returns to investment in management and set priorities for sustainable development</p> <p>Training in concepts of managing ecological systems as interdependent whole</p> <p>ENR economist training for public and private sector analysts.</p>	<p>As part of this capacity-building process ensure that:</p> <ul style="list-style-type: none"> • consequences of ENR problems on women are fully captured • returns analysis fully incorporates benefits and costs for all relevant groups, including women • women's knowledge of sustainable practices is tapped to inform decision-making • women are involved in decision-making and priority-setting processes. <p>Tap into local women's knowledge of sustainable practices and build on this information.</p> <p>Ensure women are given access to new information, management practices, and technologies that promote sustainable development.</p> <p>Ensure women have equal access to ENR economist training opportunities.</p>

Table 5.5

Policy and Program Options for Integrating Women in Environment and Natural Resource Strategies (cont.)

ANE Program Area	Purpose	Support Mechanisms	Policies for Integrating Women
Define appropriate public and private sector roles and strengthen the role of the private sector in environmental management	Rely on markets rather than bureaucracies to relieve resource constraints to growth, deliver services and control and prevent environmental damage	Build information base on ENR trends and impacts	Ensure information captures gender-disaggregated impacts and implications for women's productive and household roles and documents women's knowledge of ENR resources and sustainable practices
		Support policies that encourage private sector role in provision of services (energy, waste management) and provide incentives for sustainable use	Evaluate differences in consumer direct costs between public and private provision of services and make provisions to ensure services are affordable for low-income women
		Transfer technology and build management skills for more efficient energy use, pollution control, etc.	Explore potential for community organization among women to provide own services or to link up with the private sector to provide services jointly that are both cost effective and efficient. Invest in and develop appropriate and affordable technologies for women's use, e.g. (Energy-efficient, non-polluting, and affordable stoves). Cooperate with women to determine local ENR management practices and if necessary, how to adapt modern management skills, to improve local practices.
Support private sector, NGO, and popular participation and public education in ENR decision-making and management	Increase popular participation in ENR management and decision-making	NGO cooperation	Ensure cooperation with women-centered organizations and or ensure women are represented in cooperating NGOs as members and decision-makers
		Public education and civic participation	Public education campaigns should ensure that: <ul style="list-style-type: none"> the information is readily accessible to women and men and the content of public education campaigns fully reflects women's roles.

ENR = Environment and natural resources.

Box 5.3

Chipko: A Grass-Roots Success

The Chipko movement, which started as a protest to save trees in the hill districts of northern India, has been transformed into a popular movement for afforestation and rural community development involving more than 5,000 villages. Women have been instrumental in organizing themselves into groups to build protective walls around their fields, grow grass, and plant trees. Their efforts have led to rapid and substantial increases of biomass and brought economic benefits to the communities. The key to women's success is the sense of strength they derive from organizational unity. A measure of their confidence is that they have now embarked on other community development activities such as obtaining better access to clean drinking water.

Source: International Labour Organisation (1987).

Second, the training in holistic ecosystem management should be informed by research into local women's knowledge of sustainable practices and should build upon it. Where women are unable to continue sustainable practices, investigators should try to identify the reasons and develop solutions through the use of appropriately adapted technologies and management practices. The women who will be the ultimate users of these methods should themselves have a voice in developing them.

Third, women should have equal access to training, the process of setting priorities for sustainable development, and decisionmaking. Box 5.4 describes USAID/Pakistan's success in advancing women's training and employment in the previously male-dominated forestry profession. Being alert to such opportunities is one way of enhancing women's capacity to participate in environmental policy and decisionmaking.

Enhance local capacity

The second element of A.I.D.'s strategy is to build recipient country capacity to improve environmental policies and decisionmaking. It expects to do so by (a) training people in research and analysis of environmental problems and their causes and consequences, techniques to evaluate the benefits and costs of alternative environmental policies, and in methods of setting priorities for sustainable development; (b) providing training in holistic concepts of ecosystem management; and (c) training economists.

This capacity building process offers a unique opportunity to integrate women at various levels. First, the research training should demonstrate the importance of integrating the differential impacts of environmental problems on women and evaluating the extent to which women are responsible for contributing to environmental degradation and better management. Similarly, training in benefit-cost analysis should offer techniques to incorporate as fully as possible the differential economic and social costs of alternative policies on women.

Box 5.4

Pakistan: Taking Advantage of an Unexpected Opportunity

Several years ago the Pakistan Forestry Institute, which had traditionally barred admission to women, inadvertently admitted a female Ethiopian student, having mistaken her name for that of a male. USAID maximized the opportunity that her admission provided and obtained the Institute's agreement to admit women. USAID in turn provided funding for scholarships and dormitory facilities for women. Four women graduated from the Institute in 1989 and two more in 1990. The Institute's goal is now to have women constitute 20% of its graduating classes. USAID has gone on to encourage the District Forestry Services to hire women foresters. The wording of their job announcements has changed, formerly reading "any interested men should apply ..." and now stating that "any interested men or women should apply". The word is spreading ...

Source: USAID/Pakistan

Enhance the role of the private sector

The third element of the strategy is to enhance the role of the private sector (a) in providing services, and (b) in transferring environmentally sound technology and management skills. An important argument for shifting services such as waste management, water supply, and electricity to private companies is to enhance efficiency. Private services are more cost effective because instead of the state subsidized rates that are now the rule in many countries, consumers pay the full cost of services. More cost-effective services will be particularly important in the future in the ANE regions as demand is expected to rise significantly with rapid urbanization.

Women will be directly affected by the privatization of urban services because they are primarily responsible for household services such as water provision and waste removal. Policy changes that result in higher rates for urban services could potentially reduce access for women and the poor. Further reduction in the use of urban services could have serious environmental impacts and threaten the health of many poor people. Thus, policies to promote service conversions to the private sector must take account of the potential impact of higher rates on women and the poor and make appropriate adjustments.

Box 5.5

Boosting Women's Energy in Nepal

In remote mountain areas of Nepal where it is not feasible to extend the national electricity grid, the installation of locally-made water turbine mills to generate mechanical and electrical power has yielded substantial benefits for women. Households use the mechanical power to grind corn, hull rice, and press oil seeds, thereby saving an average of 3,000 hours per household per year compared with traditional processing methods. This is mostly the unpaid time of women, who can now devote more time to livestock care and childcare and can get more sleep.

Source: International Labour Organisation (1987).

Studies are needed to evaluate the demand-reducing impact of higher rates and to explore alternative financing mechanisms. Sliding rates, for example, may be effective in covering service costs and limiting demand reduction. Studies are also needed to explore alternative mechanisms for reducing costs and maintaining affordability for the poor. One way to reduce costs in low-income neighborhoods might be to organize women to provide these services for themselves through collective action or to cooperate with the private sector service provider in sharing the work in their own neighborhood in order to reduce costs and lower rates.

Technology transfer through the private sector, if appropriately designed and adapted, can be an important avenue for more efficient resource use, yield significant environmental benefits, and enhance women's productivity and ability to use resources more sustainably. There is considerable potential, for example, in promoting energy efficiency and reducing pollution in the developing countries by designing technologies such as improved cook stoves, whose primary users are women. More energy efficient, nonpolluting, and affordable cook stoves would have a major impact in reducing total energy consumption and pollution levels because a significant proportion of the energy used in the developing countries is for household cooking and heating. Additional benefits would accrue to women in time savings and health improvements (box 5.5).

Improve public education and popular participation

Public education and popular participation, the fourth element of A.I.D.'s strategy, offers considerable scope for involving women. The importance of public awareness of and involvement in environmental issues, both to take direct actions to maintain the environment and to influence policymakers, has been amply demonstrated in the developed countries. It is just as important in the developing countries and women are key to the success of this strategy.

The potential for women to participate in direct action to use the environment sustainably and in public action

Box 5.6

Land Reclamation Through Entrepreneurship and Collective Management

A small village in the Bankura District of West Bengal, India, is the site of a unique experiment in land reclamation that has had a widespread impact in regenerating wastelands and generating employment and income for women. The impetus came from the women themselves who donated land to a women's society and started planting silk trees. The idea caught on in neighboring villages and other women's societies were formed.

Within a few years they had succeeded in reclaiming 100 hectares of land previously laid waste through systematic deforestation. Local women who previously had migrated several times a year for employment had steady work in their home villages. Landless women had access to land and work through membership in the societies that collectively owned the donated land.

Part of the women's success was due to technical and financial support from the state government and nongovernmental agencies such as the Centre for Women's Development Studies. But much of it was due to the women's own initiative, entrepreneurship, and ability to organize and manage their enterprises collectively.

Source: International Labour Organisation (1989).

to influence policymakers is high because they are most likely to suffer from the consequences of environmental problems. Through their private influence over men and children, women can also be instrumental in promoting sustainable practices among them. It is,

therefore, important to ensure that public education campaigns reach women as well as men, even if it means making special efforts to involve women because of their differing time constraints and responsibilities, or for social reasons, such as seclusion, that may make them less readily accessible.

It is also important to ensure that the content of the education campaigns reflects women's contributions, concerns, and constraints and demonstrates realistic methods to improve their practices. In some places, involving women as educators in community education programs may be necessary and effective.

Eliciting women's participation is crucial to the success of a strategy to promote civic action. Apart from the highly successful Chipko movement, there are other examples throughout the region of women's success in organizing for community action (box 5.6). Such organizations should be sought out and strengthened. Women's resources can also be tapped in other nongovernmental organizations in which they are represented and play leadership roles. Where women do not participate in civic groups, A.I.D. should encourage greater participation by women as part of the process of supporting environmental nongovernmental organizations. In some places, this may require getting men's approval. Organizers of community forest protection committees in Nepali villages discovered, for example, that women were unresponsive to the idea of joining committees unless the men and male community leaders had sanctioned the idea (Prasai et al. 1987). Finally, women's groups and other nongovernmental organizations can also play an important role in communicating women's needs and priorities to policymakers.

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6. Education

Research in the 1960s established that education contributes directly to the growth of national incomes by improving the productive capacities of the labor force (Denison 1962; Schultz 1961). For example, researchers have shown that improvements in literacy levels correlate with the adoption of improved agricultural practices that contribute to output growth. As women constitute a significant proportion of the economically active population in the region, economic growth and development will depend critically on improvements in female education. Increasing girls' education is basic, therefore, to implementing A.I.D.'s regional strategy of promoting economic growth. It is also fundamental to furthering civic participation and supporting democratic institutions.

The Importance of Female Education

In the 1980s, women represented over one-third of the economically active population in Asia and just over 12 percent in the Middle Eastern countries, and their economic participation is growing rapidly in many countries (see chapter 2).¹ More important, women were the sole breadwinners in as many as one fourth of households in some parts of the regions. These households were among the poorest. Even in families where women are not the sole breadwinners, they make critical contributions to family support.

Access to employment

Education is vitally important to women in their economic roles as it improves their access to employment opportunities, raises their earning capacity, and enables them to contribute more to the economic

¹ These statistics represent averages for Egypt, Jordan, Oman, Morocco, Tunisia, and Yemen in the Middle East and Bangladesh, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, and Thailand for Asia.

development of their countries and to the stability of their families.

- In a study that analyzed data from 70 developing countries, researchers estimated that increasing the female secondary school enrollment rate from 4 to 16 percent would likely increase labor force participation more than 12 percent after 20 years (Spratt, Crouch, and Cebeddu 1990).
- Evidence from the Philippines shows that education has a much greater effect on women's initial occupational placement than on men's (Lycette 1986).

Conversely, investigators have shown that educational deficiencies sharply limit women's capacity to enter the workforce.

- Illiterate women are at a disadvantage in acquiring the job and skills training that is so critical to obtaining access to employment in a rapidly modernizing economy such as that of Thailand. Literacy is a prerequisite even for a job application (Tonguthai 1988).

Not only does education expand women's employment opportunities, but evidence shows that women's earning capacity also increases with higher levels of education.

- A study in Morocco found that a single additional year of schooling resulted in a 15.8 percent increase in earnings for women (Lycette 1986).
- An increase of one year of schooling among Thai women was associated with an average increase in hourly wages of 26 percent (Schultz 1988).

Higher productivity

Improvements in education are also important for women employed in sectors such as agriculture. In most countries in the ANE regions, agriculture employs

the majority of female workers. Women constitute 45 percent of the agricultural labor force in south and southeast Asia and 31 percent in the Middle East (Lycette 1986). They provide much of the agricultural labor essential for both food and cash crop production, and their role is increasing in countries such as Yemen, Tunisia, and India due to male out-migration from rural areas (see chapter 2).

As mentioned above, education is strongly linked to the adoption of modern agricultural practices. Binswanger (1989), for example, cites evidence that literacy and numeracy are associated with greater demand for fertilizer and increased investment in draft power, both factors that contribute to greater productivity. Thus, in countries where women's participation in agriculture is high and increasing, future increases in agricultural productivity will depend on improvements in women's education, especially at the primary level.

Better health and nutrition

Another benefit of women's education is an improvement in both their health and that of their families. For example, women's education has been linked to increased life expectancy for women, reduced child mortality, and improved family nutrition. A statistical analysis of the link between education and longevity showed that holding constant other effects such as per capita income, female life expectancy increased more than one year for every 10 percent increment in the female primary school enrollment rate (Spratt, Crouch, and Cebeddu 1990).

Research on the rate of use of prenatal care services, an indicator of mothers' and infants' health, shows a clear association between education and the use of professional prenatal care services.

- Evidence from the Philippines shows that the use of formal maternal health care is positively associated with education. Timeliness and frequency of usage increased with educational level (Wong, et al 1987).

Table 6.1

Average Age at Marriage and Contraceptive Use by Years of Education, Asia and Oceania

Schooling (years)	Age at Marriage (years)	Current Contraceptive Use (percent)*
0	20.2	16
1-3	19.5	26
4-6	20.6	28
7 or more	23.8	39

* Married women aged 15-49.

Source: Schultz (1989).

Lower fertility

Women's education is also associated with higher contraceptive use, and hence lower fertility; an important consideration in many countries of the region where population growth rates are still high (table 6.1).

- A family planning study in India showed that the total fertility rate of literate women is lower than that of illiterate women by 25 percent in rural areas and 35 percent in urban areas. Reduced fertility rates are particularly marked for persons with at least ten years of schooling (Vaidyanathan 1989).
- A study in Thailand concluded that women with one additional year of schooling than the average had a 6.4 percent lower fertility rate (Blumberg 1989).

Table 6.2

Private Rates of Return to Education by Sex and School Level, Selected Locations
(percent)

Country	Primary		Secondary		Tertiary	
	Male	Female	Male	Female	Male	Female
India (1977)	8.9	11.8	8.7	11.9	6.2	8.9
Indonesia (1986)	7.6	9.1	8.2	11.3	9.2	12.4
Thailand (1986)	17.0	13.0	6.8	25.0	7.8	18.0

Source: Schultz (1989).

In contrast, low literacy and educational levels are often correlated with low contraceptive use, early marriage, and high fertility. A notable exception is Jordan, where both literacy among women and fertility are very high.

Higher rates of return on investment

Private rates of return to girls' education are high and indicate that education for girls is a good investment (table 6.2).² Schultz (1989) has shown that in low-income countries, rates of return to investment in girls' education are higher than for boys: private rates of return to education are approximately 11 percent for men, and 15 percent for women.

- In Sri Lanka, one study estimated that the private rate of return to completing the final secondary school examination is three times as high for women as for men in urban areas and twice as high in rural areas (Schultz 1989).

- In Andhra Pradesh, India, both private and social returns to education at every level are greater for women than men (Schultz 1989).

Social rates of return measure an individual's increased contributions to society as, for example, in additional taxes against the cost of a society's investment in a sector such as education. There is growing evidence that girls' education yields higher social rates of return than boys'. One reason for this is that the cost of female education tends to be lower than that of males. In higher education, for example, women tend to concentrate in academic programs that are less technical and require less laboratory-oriented training, and are therefore less expensive. Another factor that contributes to relatively higher rates of return for females is that women's participation in taxable wage employment increases with education and governments are able to recoup some of their expenditures on female education. Since men tend to work fewer taxable hours as their education increases, the return on investments in male education tends to be lower (Schultz 1989).

² A private rate of return measures an individual's increased returns from future earnings against the personal cost of obtaining an education.

Table 6.3

Female Primary Enrollment as a Percentage of Total Enrollment, Selected Countries

Country	1970s	1980s*
Bangladesh	32.0	40.0
Egypt	37.8	42.2
Fiji	49.8	56.3
India	37.3	39.2
Indonesia	45.6	48.2
Jordan	44.0	48.7
Morocco	33.9	37.9
Nepal	14.9	29.2
North Yemen	19.8	26.3
Pakistan	26.6	32.6
Philippines	NA**	48.9
Sri Lanka	47.1	48.2
Thailand	46.8	48.2
Tunisia	39.0	44.1

* Dates vary according to availability of data.

** NA = Not available.

Source: United Nations (1989).

The Status of Female Education

During the last 30 years, rates of female education have improved throughout the ANE regions. Between 1950 and 1985, girls' enrollment in schools and universities quadrupled from 95 million to approximately 390 million (Blumberg 1989). The most notable achievement was the increase in girls' enrollment in primary schools. Female literacy and girls' enrollment in secondary schools and universities also improved in some places.

Significant deficiencies remain, however, and noticeable gaps persist between male and female enrollment and attainment rates at all levels. They are more evident in rural than in urban areas, but overall are important enough that the level of female education in many parts of the region prevents girls and women from improving their own economic and social status and contributing optimally to national economic growth and development.

Formal education: access

Throughout the ANE regions, enrollment in schools and universities, an indicator of access to education, has increased substantially during the last two decades. Girls generally started with considerably lower enrollment rates, but have made impressive gains. Yet important gaps remain between the sexes in enrollment at all levels, demonstrating the continuing difficulties females face in access to formal education.

Table 6.4

Comparative Primary School Enrollment Rates in the 1980s, Selected Countries* (percent)

Country	Total (mean)	Male	Female	Male-Female Difference
Afghanistan	18	24	11	13
Bangladesh	60	70	50	20
Egypt	85	94	72	22
Pakistan	47	61	32	29
Morocco	81	98	63	35
Nepal	77	104	47	57
South Yemen	66	96	35	61
North Yemen	67	112	22	90

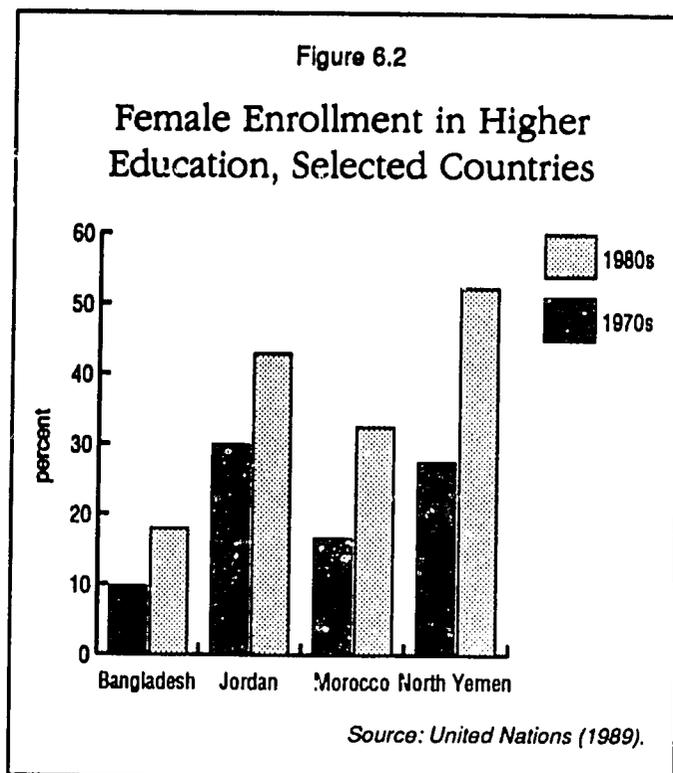
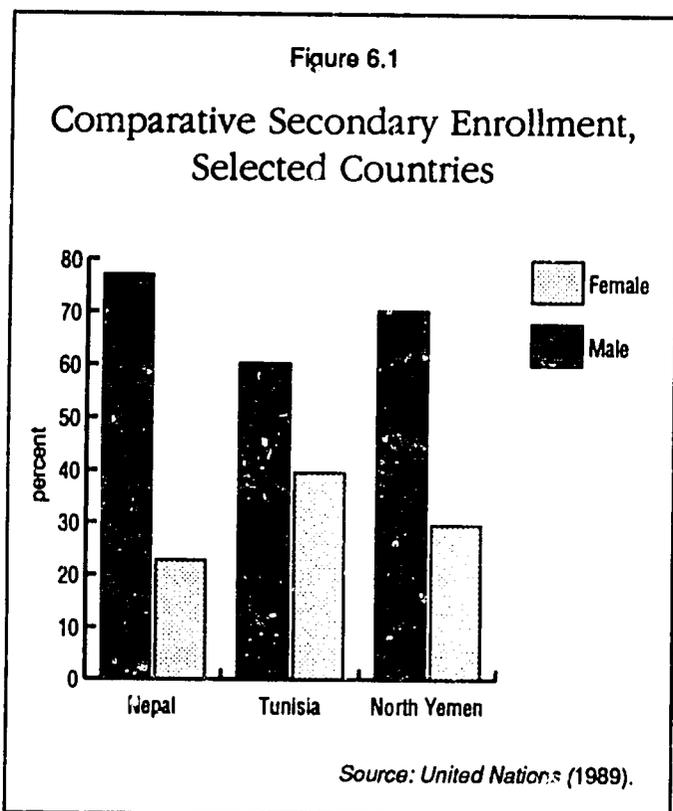
* Years vary.

Source: Lockheed and Verspoor (1989).

a. Primary enrollment: The most significant strides in improving girls' access to education have been made at the primary level. Girls represent almost half the students enrolled in primary schools in Indonesia, the Philippines, Sri Lanka, Thailand, and Morocco, while in Fiji they constitute the majority (table 6.3).

Despite this progress, however, throughout Asia just 59 percent of girls are in primary school compared with 77 percent of boys. As table 6.4 shows, the most significant gaps are in Morocco, Nepal, Pakistan and North Yemen and South Yemen. In some countries, the discrepancy between girls' and boys' access to basic education has not shown any tendency to narrow.

- In Afghanistan and Pakistan, the gap between male and female enrollment has widened since 1970 (Lockheed and Verspoor 1989).
- In India, girls' enrollment in primary schools has declined since 1965 (Coll 1990).



b. Secondary enrollment: Data on access to secondary schools in the region are more difficult to obtain, but the available evidence shows high rates of female enrollment in secondary schools in some of the same countries where girls' primary school enrollment rates are also high, namely, Fiji, Jordan, and the Philippines. Once again, there are conspicuous differences between girls and boys in some countries.

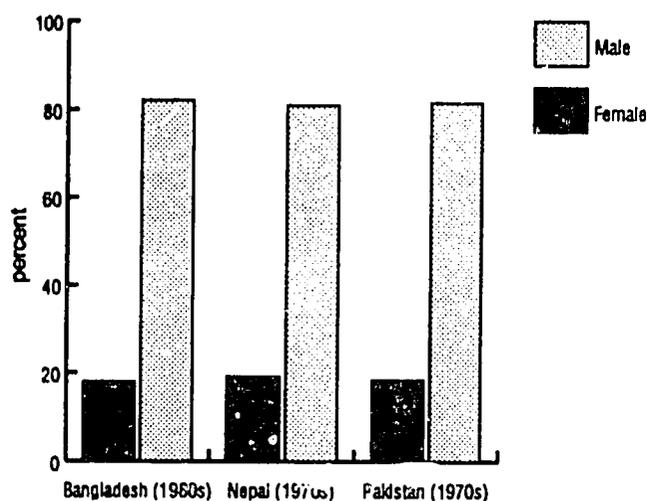
- In North Yemen and Tunisia, girls' enrollment in secondary schools is less than half that of boys (figure 6.1).

Of greater concern is that girls' enrollment in secondary schools has actually declined in some places, as for example, in India (Coll 1990).

c. Enrollment in higher education: Signs of progress are evident in higher education as girls' enrollment at the university level has risen rapidly in some countries (figure 6.2). In the Middle Eastern countries, for example, girls' enrollment rates in higher education have recently increased almost twice as fast as those for boys.

Figure 6.3

Comparative Enrollment in Higher Education, Selected Countries



Source: United Nations (1989).

- In North Yemen, not only has female enrollment increased dramatically, but it is higher than that of males.
- In Jordan, there is approximate parity between males and females in higher education. Moreover, female enrollment in higher education compares favorably with the developed countries. The number of females per 100,000 students in higher education in Jordan is approximately equal to the ratio in the United Kingdom (El-Sanabary 1989).
- In Bangladesh, although the level of female enrollment in postsecondary education continues to be low, it has almost doubled since the 1970s. It has also doubled in Morocco (figure 6.2).

The gains in a few countries should not, however, obscure the gaps between female and male enrollments,

which are more noticeable at the tertiary level than at any other (figure 6.3). Males outnumber females by more than two to one at the tertiary level in Bangladesh, Indonesia, Morocco, and Tunisia. Moreover, some countries show a disturbing trend toward declining enrollments. From the 1970s to the 1980s, female enrollment in higher education dropped from 43 percent to 29 percent in Sri Lanka, while the Philippines experienced a smaller drop. Apparently gains in tertiary education for girls are not assured even in some of the more advanced countries.

The great variation in female access to formal education between countries suggests the need for different responses in specific countries. Thus, in countries such as North Yemen and Nepal, where girls represent a very small proportion of children attending primary school, attention to basic education may be critical. In these countries, as well as in those where girls' access is better, further improvements in girls' education will require policy support for retention and completion. In countries such as Egypt and Tunisia, where females already have relatively better access to higher education, further improvements will also depend on progress at the lower levels. Finally, in countries like Jordan, the Philippines, and Thailand, where girls' access to all levels of education appears to be fairly well ensured, the policy focus should be on the content and quality of girls' education.

Formal education: retention

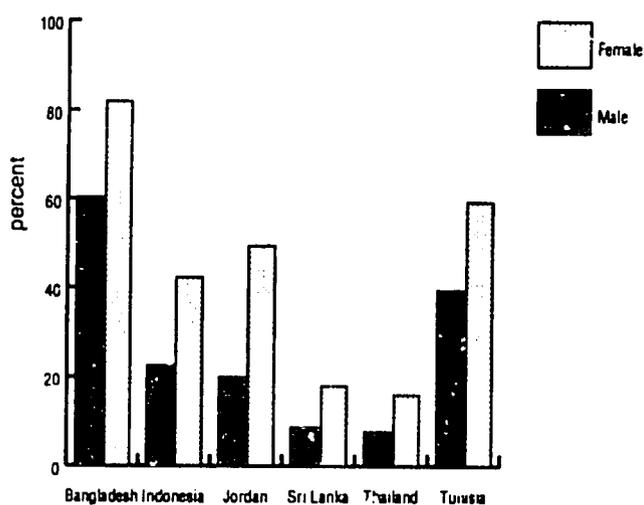
Access to formal education is, however, only part of the problem. Even where girls have access to schooling, they often have high dropout and repetition rates. Unfortunately, consistent quantitative data on dropout and repetition rates are difficult to obtain, complicating the task of systematically analyzing the problem for these regions, but it is well known from case studies, for example, that the conflicting work and cultural demands on girls' time prevents them from applying themselves consistently to school work and completing their education. In India, for example, girls are often withdrawn from school because of early marriage (Lycette 1986). In addition, the generally poorer quality of girls' education also tends to contribute to higher dropout and repetition rates.

Formal education: quality

The quality of education is measured by factors such as quality of instruction (itself measured by such instruments as achievement tests), class size, teacher-pupil ratios, teacher training and experience, and condition of physical facilities. Once again, reliable quantitative data on these variables are generally not available for the developing countries. The few quantitative and qualitative data that are available show that by and large, there are significant deficiencies in the quality of education. Moreover, these inadequacies affect girls more than boys, especially in sex-segregated systems, as girls may have fewer and less adequate school facilities, fewer supplies, and less competent teachers.

Figure 6.4

Illiteracy of Males and Females, Age Ten and Over, Selected Countries, 1980s*



* Dates vary

Source: UNESCO (1988).

Formal education: relevance

In many developing countries, including those in the ANE regions, curricula tend to be highly academic and lacking in relevance for the students' day-to-day life and future employment. This is particularly a problem for girls, who require a wide range of skills to fulfill their domestic and work responsibilities.

There is a tendency for schools to channel girls into studying traditionally "female" subjects such as the social sciences and humanities that narrow their future job options. Due to social and cultural factors, girls themselves often tend to select traditional nontechnical, nonscientific fields that lead to traditional types of employment. El-Sanabary (1989) found, for example, that most women at the postsecondary level in the Middle East pursued traditional studies in humanities, social sciences, and education. In the few cases where schools do offer vocational training, girls tend to be trained in nontechnical, traditional skills. In Egypt, Turkey and Jordan girls predominate in vocational programs such as domestic science and commercial education (El-Sanabary 1989).

This is particularly unfortunate at a time when employment in nontraditional occupations such as computer and laboratory sciences is expanding. These types of occupations, because they minimize personal contact, could have particular importance for women in the Middle East where women's employment is constrained because of seclusion. More generally, the failure to educate girls for a potentially wide range of occupations represents a major underutilization of human capital.

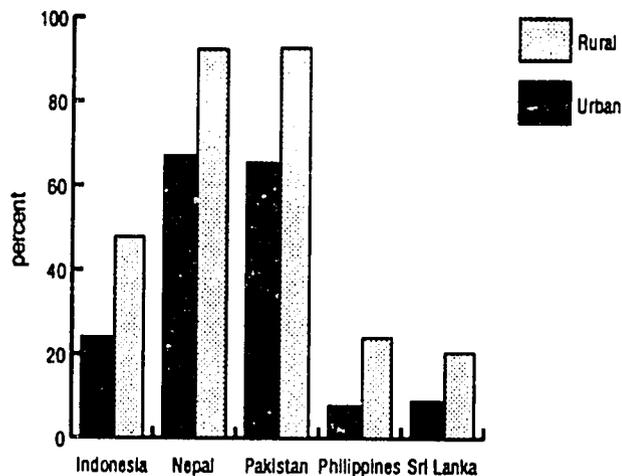
Nonformal education and literacy

Nonformal education, encompassing a wide variety of both academic and nonacademic training, represents an important alternative for illiterate people or those who have no access to the formal educational system. Such alternatives can be especially important for women who are more likely than men to lack access to skills training and formal education programs.

In the ANE regions, one of the most important contributions of nonformal education has been the spread of literacy. During the past 20 years, illiteracy among

Figure 6.5

Illiteracy of Females Age Ten and Over in Rural and Urban Areas, Selected Countries, 1980s*



* Dates vary

Source: UNESCO (1988).

adults and children has declined significantly. Some countries have also made considerable progress in improving literacy among females. In Sri Lanka, for example, 91.1 percent of urban girls and 79.5 percent of rural girls were literate in 1981. In the five to nine age group, there was virtually no difference between the sexes in literacy (Khan 1989).

Despite considerable progress, however, illiteracy continues to be a serious problem in some countries. Rates vary greatly, ranging from 79 percent of the adult population in Morocco to 12 percent in Thailand. In about half the countries of the regions, more than 50 percent of the adult population is illiterate. In all the countries, more women than men are illiterate (figure 6.4). Even in countries such as Fiji, the Philippines, Sri Lanka and Thailand, where total illiteracy is low, rates for women tend to be higher than for men; in many cases almost twice as high.

- In Tunisia, which has one of the most successful female literacy programs, illiteracy among women continues to be much higher (59.4 percent) than among men (39.5 percent) (UNESCO 1988).

Moreover, illiteracy, is higher in rural than in urban areas (figure 6.5) and among particular groups within some countries.

- Data from India indicate that while the literacy rate for women as a whole was 25 percent in 1981, there were lower rates among rural scheduled castes (8 percent) and rural scheduled tribes (7 percent) (Stromquist 1990).
- In North Yemen, in 1973, virtually all nomad women were illiterate (UNESCO, 1988).

Persistent illiteracy and low education levels among women pose severe constraints to their economic advancement. They slow women's access to the formal workforce in rapidly modernizing economies such as that of Thailand, and impede their productivity in the low-income countries in both paid and unpaid work.

Constraints

The educational advancement of girls and women is limited by numerous factors, including lack of financial and human resources, social and cultural impediments, and segregation of girls in separate facilities. Some of these factors and their impacts are discussed below.

Inadequate and misplaced public investments

Public support for education is generally inadequate in the regions. In the developing countries as a whole, expenditures on education averaged 15 percent of total budgetary outlays. Educational expenditures in Bangladesh during 1981-87 averaged about 9.3 percent (Choudhury 1989). Many countries in the ANE regions spend considerably less than that. India and Pakistan, for example, spent 3.2 percent and 2.0 percent, respectively, of their budgets on education in 1979 (Ghee 1986).

Within these limited budgets, support for girls' education is even more restricted. In sex-segregated systems, which are common in both Islamic and some nonIslamic countries in the region, girls' schools experience greater financial difficulties. Fewer schools are available to girls; girls have to travel further than boys; and girls' schools more frequently experience shortages of teachers, supplies, and textbooks, and have inadequate physical facilities.

In many countries of the regions, governments favor higher education and tend to subsidize it proportionately more than other levels of education. By drawing funds away from basic education, subsidies to higher education limit opportunities for girls, whose greatest need is to obtain a primary education.

Opportunity cost of female labor

The higher relative indirect and direct cost of education for girls and their families lowers demand for female education and limits enrollment levels. The indirect cost of school attendance is the foregone labor children contribute to low-income households in the developing countries. Although both boys and girls contribute to household support, girls contribute more. Like adult women, girls engage in economic activities. They also perform household work such as caring for siblings, obtaining fuel and water, cooking, and cleaning that in some cases can take a considerable portion of the traditional school day.

- In Nepal, girls' labor in the household exceeded that of boys by 50 percent (Jamison and Lockheed 1987).
- In some communities in India, girls' and women's work are interchangeable (Khan 1989).
- Studies in rural Yemen, Bangladesh, Nepal, and Indonesia found that because girls were required to perform more household labor than boys, they could not attend school unless other people took over some of their responsibilities (Lycette 1986).

The opportunity cost of girls' foregone labor is thus greater than that of boys. Not only does this affect girls' enrollment but even when girls are enrolled, their achievement levels are lower because their time is more constrained. They may attend school less regularly than boys, spend less time doing homework, drop out more frequently than boys, and experience higher repetition rates (Sattar 1984).

Direct costs, such as the cost of supplies, clothing, and school fees, can also limit enrollment. Again, some evidence indicates that girls are more severely constrained than boys. Out-of-pocket costs may be higher for girls than boys because, for example, they may have to travel longer distances to attend sex-segregated schools, and where no public schools are available within a reasonable commuting distance, girls may have to attend more costly private schools if they are to receive any formal education at all (Lycette 1986).

Distance

Researchers have shown that distance from school is a more significant constraint for girls than boys.

- In Egypt, for example, 94 percent of boys and 72 percent of girls were enrolled when a school was located within one kilometer of their homes. When schools were two kilometers away, enrollment among boys dropped marginally to 90 percent, but much more dramatically for girls to 64 percent (Lockheed and Verspoor 1989).
- Studies in Bangladesh report that 71 percent of rural schools and 53 percent of urban schools had no latrines, and that parents were reluctant to send their daughters to such schools. Attendance of both boys and girls fell, but the decline was much greater among girls (Khan 1989).

Cultural factors

Girls' access to schooling may be limited by cultural factors in some countries. In societies that practice female seclusion, girls may only attend school if they can be physically separated from boys.

- In Pakistan, parents were reluctant to let their daughters attend schools that lacked boundary walls (Khan 1989).

Often this means that girls' access to education depends on the availability of separate schools, which may entail additional costs, as discussed above. In many cases, fewer schools are available for girls, and evidence shows that girls' schools have fewer teachers and supplies than boys' schools. These factors not only limit girls' access, but if they are enrolled, the quality of the education they receive may be lower than that of boys.

- In Pakistan, a study found that girls schools constitute only 29 percent of the primary schools, 26 percent of the middle-level schools, and 34 percent of high schools (Lycette 1986).

Early marriage, a widespread practice in the region, is another cultural dimension of the constraints upon girls' education. It can affect attendance, retention, and completion, even overriding the effects of innovative efforts to encourage school enrollment and to accommodate girls' work schedules.

- An experiment was conducted in India in which classes for girls were scheduled between 7 and 9 o'clock in the evening to allow them to complete their household tasks. Although the girls showed noticeable improvements in reading, mathematics, and writing, the program could not prevent girls from dropping out because of marriage and betrothal (Khan 1989).

Insufficient female teachers

An insufficient number of teachers, especially female teachers, can reduce the demand for girls' education. Many parents are more inclined to send their daughters to school if they have women teachers. Raising the number of qualified female teachers is a priority in some education programs.

- A study in Yemen found that girls' enrollment dropped to almost zero after grade three because female teachers were not available. Introduction of a female teacher in one of the schools caused female students that had dropped out two years earlier to return (Anderson et al. 1988).

- Anderson et al. (1988) linked female enrollment in rural Indonesia to the shortage of female teachers. Only one-third of the girls who attended rural primary schools completed primary education, whereas more than one-half of urban girls did.

Parental educational levels

Studies have linked girls' educational enrollment and attainment to parental educational levels. As parental educational levels are low in many countries this tends to lower the demand for girls' education. By contrast, improved educational levels among parents tend to have a positive impact on girls' education.

- A study in Pakistan showed a positive relationship between father's educational level and girls' enrollment rates. Fathers' educational level influenced both male and female enrollment, but in lower class families, fathers' education had a stronger influence on daughters' than on sons' attainment (Khan 1989).

Some evidence suggests that mothers' educational level is more strongly linked to girls' academic progress. Clearly raising overall parental education levels would strongly influence both girls' and boys' education.

Insufficient access to nonformal education

Many of the factors that prevent girls from gaining access to education are equally, and perhaps more, applicable to women's inability to take advantage of opportunities in nonformal education. Lack of female teachers, high opportunity costs, distance and lack of

transportation, and lack of segregated and secure facilities are constraints to the implementation of recent nonformal education schemes targeted at women. For example, key elements of an Indian government program adopted in the late 1980s to develop nonformal education centers for girls included providing sex-segregated facilities, recruiting female teachers, and establishing hostels for rural students to circumvent transportation difficulties (UNESCO 1984).

Opportunities for Advancing Female Education

Despite the constraints, the evidence is growing that the demand for female education is rising and that governments are responding in innovative ways to meet the challenge. Parental demand for girls' education is rising in some countries.

- More than 94 percent of a sample of parents in Cairo indicated that they intended to educate their daughters. Of these, 84 percent said that they wanted them to have a university education (El-Sanabary 1989).

Moreover, people at varying socioeconomic levels appear to favor education for girls.

- In the survey cited above, 82 percent of the parents of limited means considered the cost of private tutors burdensome, but were willing to make sacrifices to provide private tutors for their daughters (El-Sanabary 1989).

The growing expectations provide an unprecedented opportunity to further girls' education in countries where, so far, female education has not been a high priority.

The growing trend toward urbanization is favorable for improving girls' access to education. Urban residence is associated with higher enrollment and achievement levels for both boys and girls, but for girls, urban residence seems to be especially linked with improved educational opportunities, for example, because obtaining supervised transportation to and from school is easier.

The advantage of urbanization from the supply side is that the unit cost of providing educational facilities is

relatively lower in urban areas, where populations are more concentrated. Thus, more and better educational alternatives can be provided, including separate-sex schools.

The policy climate in many countries is becoming more favorable toward girls' education. Meanwhile, research and experience have produced some valuable lessons that will help policymakers and planners sort out priorities for girls' education. It is now acknowledged, for example, that underinvestment in education is often compounded by misallocation of educational resources in developing countries. Thus, for example, university-level education is more heavily subsidized than primary and secondary education. This is particularly harmful to girls, who often do not attend school past the primary grades. There is some evidence that governments are now acting to reshape priorities in favor of primary and secondary education and to improve educational opportunities for girls.

- Pakistan's sixth five-year plan specified that by 1987-88, all five-year-old girls were to be in school. The plan also provided for a mass literacy campaign aimed at rural women. In addition, the prime minister's five-point program for economic and social development for 1986-90 set a target to increase primary school enrollment among girls by 1.3 million and provided for upgrading girls primary schools to the middle level. Even if these objectives are not reached, they demonstrate the increasing concern at the highest governmental levels for girls' education.

Policy and Program Considerations for Increasing the Level and Quality of Girls' Education

A.I.D. can help promote female education in the region by facilitating changes in educational policies. The areas that may need to be addressed include increased financial support, improvements in the linkages between education and employment, access, and management (table 6.5). The mix of policies required will depend on the specific country because conditions vary greatly.

Table 6.5

Policy and Program Options for Integrating Women into Educational Reform Strategies

Program Area and Mechanisms	Gender Constraints Addressed	Potential Benefit/Cost of Policy	Options for Integrating Women
Financial Support and Sustainability			
Greater support for girls' education in sex-segregated school systems	Lack of adequate financial support for girls' schools in sex-segregated systems	Stronger finances more likely to improve access, efficiency and quality of girls education	Target proportion of funds for girls' education in sex-segregated systems.
Cost-savings measures, e.g. higher utilization of facilities through evening classes, flexible calendar	Scheduling conflicts for girls with household work responsibilities	Reduces opportunity cost for girls' attendance	Allow girls who have day-time responsibilities to have the option to attend evening classes.
Cost recovery policies, e.g., school fees	Inferior education for girls in sex-segregated systems	Can improve educational quality May limit access for low income girls	Set "progressive" fees in relation to income and level of education. Lower fees at basic level more likely to result in retention of low-income girls and maintain quality. Targeted and merit-based financial aid to low-income girls can maintain their access and keep costs contained.
Local taxes and voluntary community fund-raising drives	Lack of community support for girls' education	Generate community support and establish stake in girls' and boys' education May reinforce girls' lack of access in low-income non-taxed families who already give less support to girls education	Establish nominal tax or in-kind contributions for low-income families and encourage participation in volunteer activities to ensure they "buy in" to community support idea. Establish local support groups to raise funds for schools.
Subsidy reduction on higher education and reallocation to primary education	Lack of adequate financial support for girls' education	More funds available for primary education where more girls enrolled and scope exists for further improvements	Give higher priority funding for primary and secondary education for girls.
Education, Training, and Employment Linkages			
Develop employer- job training-school linkages	Failure to offer girls traditional and nontraditional job-related skills training and employment information and options	Improve girls' knowledge of options and employment skills	Target information and training in appropriate skills to girls.

Table 6.5

Policy and Program Options for Integrating Women into Educational Reform Strategies (cont.)

Program Area and Mechanisms	Gender Constraints Addressed	Potential Benefit/Cost of Policy	Options for Integrating Women
Education, Training and Employment Linkages (cont.)			
Provide basic skills and traditional and non-traditional job training skills for girls	High illiteracy and low job-related skills among girls	Improve girls' job options and employment skills Enhance productivity	Target training to girls.
Strengthen job related school guidance programs	Girls and women less well-represented, especially in non-traditional formal sector jobs	Increase female participation in waged, salaried jobs	Hold dialogue with potential employers : (a) to raise employer awareness of girls as potential workers; and (b) to obtain information from employers about needed job-related skills and available opportunities for girls.
Modify curriculums to be more responsive to practical needs	Low parental and community perception of value of girls' education	Higher parental motivation to educate girls	Adapt curriculum to practical employment and household work needs of girls.
Access			
Modify physical facilities or provide suitable alternatives e.g., build privacy fence around school	Parental concerns over girls' safety and morality	Increase parental incentive to send girls to school	Support construction, building improvement, or use of alternative sites (e.g., mosques).
Increase scheduling flexibility	A cultural preference for sex-segregated schools limits girls' access because boys get preference to use limited available space Girls' Domestic responsibilities limit attendance and completion	Increase girls' attendance and retention	Support multiple grade classrooms, evening, weekend classes for girls, alternate calendar. Support alternative delivery systems (e.g., radio, programmed instruction).
Increase number of qualified female teachers	Parental preference for female teachers for daughters	Increase incentive for girls' enrollment	Provide cash and other incentives for female teachers, especially in rural areas. Provide scholarships to attract women to teacher training.
Provide direct support to girls from low-income households	Lack of incentive due to high out-of-pocket costs of schooling	Relieve financial burden for deserving low-income girls	Scholarship program and other direct assistance — food, clothing, etc.

Table 6.5

**Policy and Program Options for Integrating Women
into Educational Reform Strategies (cont.)**

Program Area and Mechanisms	Gender Constraints Addressed	Potential Benefit/Cost of Policy	Options for Integrating Women
Access (cont.)			
Social marketing	Lack of parental and community support for girls' schooling	Increase public awareness and community support for girls' education	Conduct community-level campaigns, seminars.
Adult education	Low parental education level strongly linked to low demand for childrens' education, especially girls	Increase adult motivation for childrens' education Increase adult education levels	Programs for adult literacy and basic skills.
Decentralization and Management			
Develop local capacity to set up information system	Limited data on girls' education	Facilitates tracking of enrollment and attainment and improves decision-making capabilities of school administrators and policy makers Facilitates assessment of success/shortcoming of measures to improve girls' access and retention.	Set up gender disaggregated data bases and information systems.
Incorporate women into educational leadership	Lack of female representation in professional leadership positions	Establish role models for girls and representation of female "voice" in administration	Policy support for hiring and promoting women administrators.
Develop community participation and local investment in schools	Lack of community support for girls' education	Generates community support and establishes stake in girls' education	Improve parent-teacher relationships, e.g. through establishing formal associations or informal networks. Involve community in school-related voluntary efforts.

Financial support and sustainability

The most obvious way to improve girls' education in countries where facilities and equipment are limited, is to increase investments either from public or private sources. But in most countries of the ANE regions, it is unlikely that financial support for education will increase. Therefore, it will be necessary to develop other ways to improve funding.

a. Reallocation and targeting: Even in countries where real allocations for education can be increased there is no guarantee that funds for girls' schools will increase. It may be necessary, in these cases, to target expenditures specifically to girls in order to improve girls' access and the quality of the education they receive. The expenditure would be worthwhile because, as mentioned above, the return on investments in girls' education are especially high.

Policymakers can also increase funding for girls' education by reallocating funds to more efficient uses. Policies that reduce subsidies to higher education, for example, can free up resources for investment in primary and secondary education. An emphasis on primary education at this stage would more likely improve girls' access rather than that of boys because boys' enrollment is already high in most countries.

b. Cost recovery: Policies such as the institution of school fees rather than free public education, can also contribute to financial strengthening and make additional resources available to improve educational quality. There is evidence that in the absence of cost recovery programs, as costs escalate, educational quality declines and parents are more reluctant to send girls than boys to school as they see fewer advantages to their education.

School fees may, however, discourage attendance, especially among low-income students. The effects may be more severe for girls because if parents have to choose, they are more likely to finance the education of boys than girls.

Several options are available to make cost recovery policies more effective, and yet not discourage girls' attendance. One option is to charge school fees at the

Box 6.1

Scholarship Success in Bangladesh

The high direct costs of education pose a serious constraint to girls' education in Bangladesh. As a result, girls' enrollment and retention rates in secondary schools are consistently low. In 1982, A.I.D. undertook a pilot project to address the problem, providing over 6,000 scholarships to girls in secondary schools. The scholarships paid about half the girls' educational expenses. Within three years, girls' enrollment increased by almost 60 percent, and in five years, the dropout rate fell from 15 percent to just 3.5 percent. The project demonstrates the effectiveness of direct subsidies in improving girls' access to secondary schools in the ANE regions. Once a constraint such as the high direct cost of education is identified and confronted directly, improvements in girls' education can occur quickly.

Source: Blumberg (1989).

secondary and tertiary levels, where costs are higher, but fewer girls attend. Another is to give financial assistance to low-income girls who are unable to meet the costs of education (box 6.1). Scholarships can also be aimed at reducing direct costs for books, supplies, uniforms, and other required items.

c. Cost savings: Measures to use resources more efficiently can both strengthen overall financial status and, if used creatively, can yield dividends in terms of improving girls' education. For example, school buildings can be used more efficiently by extending the conventional schedule to offer classes in the evenings, weekends, summer, and throughout the year.

Education, training, and employment linkages

As girls' increased participation in wage paying and salaried positions depends to a large extent on the appropriateness and quality of the education and skills training they receive, it is important to develop policies that will enhance their employability. One way to do this is through closer cooperation between schools and prospective employers. Employers can provide up-to-date information about needed skills, and often about labor market trends, that could be helpful to both job

and career counseling functions of the school and to curriculum development. In return, schools can provide employers with information about the upcoming pools of talent. Thus, establishing active connections between employers and schools serves the needs of both female students and employers.

Another way to make girls' education more relevant for future employment is to inform girls and their families about economic opportunities and the types of training necessary to make them more employable. Vocational and job-related guidance programs in the schools could greatly enhance their understanding of the skills they need and how to obtain them. In addition, targeting girls for improved training in traditional and nontraditional job skills would enhance their employability and would also improve the labor force's productivity.

A third way to improve girls' preparation for employment is to modify curriculums. For example, curriculums that provide technical skills such as accounting, machinery operation, food preservation, and the use and maintenance of smokeless stoves are likely to enhance support for girls' education at home and in the community. For other girls, it may be necessary to provide better access to science curricula, computer training, and management skills. Such measures would provide girls with strong incentives to succeed academically.

Access

In order to improve girls' demand for education and access to it, it will be necessary to adopt policies that expand physical facilities, and improve transportation. Girls' access to schools will also improve if schedules are made more flexible, and more female teachers are trained and hired.

a. Physical facilities: Since the shortage of schools is a major factor limiting girls' access to education in sex-segregated systems, the provision of additional schools will help alleviate this constraint (box 6.2).

Low-cost alternatives to expanding the availability of physical facilities include using other buildings in the community for schools, providing staggered schedules

for boys and girls in existing schools, and using multi-grade classes. Researchers have also shown that other low-cost options that require small changes in existing facilities, such as adding latrines and constructing privacy walls, encourage girls' enrollment.

b. Transportation: In places where transportation is a serious constraint, innovative ways of delivering educational services may substantially improve girls' access. One alternative is to provide mobile educational units that send teachers and instructional materials to students rather than have students travel long distances to schools.

c. Flexible schedules: Policies that encourage innovative approaches to scheduling may be effective in increasing girls' attendance and achievement in school. As mentioned above, girls' work responsibilities often conflict with school attendance and homework. Options to reduce these conflicts may include maintaining a school calendar that is compatible with seasonal and

Box 6.2

Building Demand for Girls' Education

Very often, government policies promising universal education remain unfulfilled because of parental opposition to sending girls to distant schools. The problem commonly arises in rural areas and in societies where women are secluded. In such cases, an effective way to raise the demand for girls' education may be to build more schools. This was demonstrated by the success of a recent A.I.D. project to support building of primary schools in rural Egypt.

Two years after the new schools opened, virtually all appropriate-age boys were enrolled and girls' enrollment increased by 25 percent. Absenteeism declined significantly. Persistence rates among boys increased 6 percent the first year and an additional 6 percent the second year, while for girls they increased 12 and 17 percent, respectively.

Source: Creative Associates (1986).

daily work cycles. Girls who work in harvesting, for example, may be more likely to attend school if classes are offered in nonharvest seasons. Similarly, girls who do domestic work during the day may find attending evening classes more feasible. Alternatively, providing childcare facilities and allowing girls to bring younger siblings to school may be effective.

d. More female teachers: In places where girls are secluded it may be necessary to increase the availability of female teachers. This in turn, requires improved strategies for recruitment, training, and placement. Innovative recruitment strategies may be necessary because women with university training are often unwilling to teach in remote areas, which is where they are needed the most. Recruitment programs may be effective if they offer incentives such as higher salaries or positions in desired locations after minimal service. The Voluntary National Service Program in Yemen is an example of a successful effort to increase the availability of female teachers. The program requires all women completing secondary school to serve one year as teachers in primary schools, and all those who graduate from university to serve in secondary schools (Anderson et al 1988).

Innovative teacher training strategies could include combining radio instruction and correspondence courses, permitting practice teaching while taking coursework, and employing newly trained teachers under the supervision of highly trained and experienced master teachers.

e. Scholarships for girls: Since the high direct cost of education is one of the most significant constraints to girls' educational access and retention, subsidizing these costs, even partially, through scholarships can have a positive impact on girls' enrollment and retention rates. As noted above, scholarships may be even more necessary if cost recovery policies that raise fees are instituted.

Decentralization and management

Improving the quality of education is closely tied to improved management and increased public support for schooling. Management that is decentralized and tied to

local decisionmaking can enhance girls' educational opportunities. For girls especially, improved management implies improved data and record keeping.

a. Information system: A sound information base is a prerequisite for any good management system. Although considerable progress has been made in recent years, especially in compiling data on enrollment at the primary level, obtaining gender disaggregated information on retention rates and achievement levels is still very difficult. Policies that support the establishment of orderly and gender disaggregated record keeping at individual schools would facilitate management at the local level by providing input for current decisionmaking, and over time providing planning information on improvements in girls' and boys' access and retention. These data would also be useful for assessing and evaluating the educational system as a whole.

b. Community support: As lack of family and community support is often a serious impediment to girls' education, policies that encourage community support will be needed to induce families to educate girls. Strategic, well-designed and targeted social marketing techniques can be effective in emphasizing the importance of girls' education and persuading local leaders and families to invest in it. Professionally produced films and radio presentations, as well as locally-presented plays and expressions of support by respected leaders, can lead to shifts in opinion that raise the demand for girls' education and to improve girls' enrollment and retention rates. Social marketing can be supplemented with efforts to involve communities directly in supporting local schools by, for example participating in parent-teacher associations and fundraising efforts for special school projects.

The strong relationship between girls' education and that of their parents suggests the need in some countries for educational policies that target adults. This is especially important where adults have low functional literacy and numeracy skills. Policies that provide adults with accessible, conveniently scheduled, regular classes will be needed to increase their own economic options and skills, but also to increase their support for their children's education.

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7.

Health, Population, and Nutrition

Improvements in productivity and effective economic development require healthy, well-nourished populations. Research during the last two decades has provided substantial empirical evidence to show that women are key contributors to national economic development in their roles as economic producers, nurturers, caretakers, and providers for their families (Blumberg 1989). Maintaining women's health and nutrition is, therefore, critical for ensuring current growth by enhancing women's own productivity. It is also important for future growth and development because the health and nutrition of children are, biologically and socially, closely linked to those of their mothers.

Health status indicators from the ANE regions for the last three decades indicate that women's health has improved significantly in certain countries such as Indonesia, Sri Lanka, and Thailand. Despite such improvements, a large proportion of women in these and other countries in the region remain malnourished and suffer frequently from infectious diseases and a wide range of reproductive and work-related health disorders. Typically, they also bear many children, often at too young an age, without adequate spacing between reproductive cycles, and without adequate and accessible health care. Many women die as a result of these factors and many more suffer a severely impaired quality of life. A.I.D.'s agenda for sustainable growth in the region should, therefore, give priority to improving women's health status.

The Need for a Focus on Women's Health

Because women's health needs have often been neglected by health programs in the past, social justice and gender equity are often cited as primary reasons to focus on women's health. In addition to these reasons, the measurable economic benefits that derive from

improving women's health provide a strong and pragmatic argument within the context of economic development. The linkages between women's health and their reproductive and productive roles within the household have a direct impact on household, community, and ultimately national well-being, and are important economic reasons to justify a focus on women's health needs.

Women's health and economic production

Women are key economic contributors, and in many instances, the only economic providers for their families. When women's health is poor due to nutritional deficiencies or disease, women's productivity is lower and their physical capacity to generate income and provide economic sustenance for their families is undermined. Healthy women are more productive.

- A study of female tea workers in Sri Lanka and Indonesia found that anemic women who received supplementary iron were significantly more productive than a comparison group of unsupplemented women (Leslie forthcoming).

Ensuring women's ability to provide economically for their families is particularly important because research evidence indicates that women are more likely than men to use personal income for family welfare, especially for food and health care for their children (Dwyer and Bruce 1988).

Women's health and home production

Typically, women are responsible for home production activities that are vital to the household economy and family health. The time and energy required to produce food and prepare family meals, carry and store water, and collect firewood is extensive. Chronic ill-health and malnutrition compromise women's ability to undertake these strenuous tasks, and thereby threaten the entire household's well-being. More important, the continuous exhaustion that results from such heavy physical work is detrimental to women's health, contributing to overall weakness and susceptibility to disease.

- Researchers estimate that women worldwide spend between 10 and 16 hours a day doing housework, collecting firewood and water, caring for children, preparing food, and raising 60 to 80 percent of their family's food (International Center for Research on Women 1989; Mueller 1984).
- Medical reports from India indicate that physically demanding household work is associated with miscarriage and stillbirth (National Commission on Self-Employed Women 1988).

Women's home responsibilities also include providing health care for their families. Nursing, preparing special foods for those who are sick, and taking family members to health clinics for treatment are activities that women usually undertake. Thus, looking after women's health needs and providing them with access to appropriate resources are critical for ensuring family health.

Women's health and child survival

Women's health is directly linked to child survival through the biological link between mothers and their unborn children, and because mothers are the principal nurturers and caretakers of children.

- Nutritional stunting among women, primarily associated with protein-energy malnutrition in childhood, increases women's risk of obstructed labor due to cephalopelvic disproportion and is significantly correlated with higher rates of miscarriage, stillbirth, low birthweight infants, and infant mortality (Leslie forthcoming).
- A study in Bangladesh showed that when a mother dies in childbirth, the infant she leaves behind has a 95 percent chance of dying within the first year (Chen et al. 1974).

Status of Women's Health in the ANE Regions

The status of women's health in any region or country can be determined by examining the levels of fertility and mortality and patterns of morbidity and nutritional deficiency among women.

Fertility

Women's health status is directly affected by high fertility because frequent pregnancies (more than four), particularly at a very young or old age (below 20 or above 35), with short intervals between reproductive cycles (less than two years apart) are major risk factors for maternal mortality and morbidity (Favin, Bradford, and Cebuia

Table 7.1
Decline in Total Fertility Rate,
1965 to 1987
(total fertility rate)

Country	1965	1987	Percentage of Decrease
Thailand	6.3	2.8	56
Sri Lanka	4.9	2.7	45
Philippines	6.8	3.9	43
Tunisia	7.0	4.1	41
Indonesia	5.5	3.5	37
Morocco	7.1	4.8	32
India	6.2	4.3	31
Egypt	6.8	4.8	29
Bangladesh	6.8	5.5	21
Jordan	8.0	6.5	19
Pakistan	7.0	6.5	4
South Yemen	7.0	6.7	4
Nepal	6.0	5.9	2

Source: World Bank (1989c).

1984). The two most commonly used fertility measures are total fertility rate and the crude birth rate.¹

Data show that during the last two decades, the total fertility rate has steadily declined in most countries of the ANE regions (table 7.1). However, total fertility rates for individual countries vary greatly.

- The total fertility rate for Yemen and Pakistan, for example, is 6.7, while for Thailand and Sri Lanka it is close to 2.8 (World Bank 1989a). Similarly, there is a wide disparity in crude birth rates between countries, ranging from 47 in Pakistan to 23 in Sri Lanka (World Bank 1989c).
- Data indicate that the majority of women in the region give birth to six or more children by the time they reach their thirties (United Nations 1987).
- In some countries, such as Indonesia, Thailand, and Tunisia, successful family planning programs have contributed to dramatic decreases in fertility and birth rates in the last two decades (tables 7.1 and 7.2, box 7.1).

Typically, total fertility rates are negatively correlated with contraceptive use. There is a great disparity between countries in the region in the prevalence of contraceptive use among married women of childbearing age.

- In some countries, such as Indonesia, Sri Lanka, and Thailand, contraceptive prevalence among married women is as high as 50 percent or more. In sharp contrast, in countries such as Nepal and Pakistan, contraceptive prevalence is 15 percent or lower (World Bank 1989c).

¹ The total fertility rate is the total number of children a woman would bear by the end of her reproductive years if the prevailing fertility rates were to apply to her from age 15 to 49. The crude birth rate reflects the number of births per 1,000 population.

Ironically, in the very countries in which contraceptive prevalence is low, many women do not want any more children, but for various reasons (including nonavailability of contraceptives, religious taboos, and fear of side effects) they do not use contraceptives.

- Researchers estimate that if all the women who wanted no more children were actually able to stop childbearing, the number of births in Asia would be reduced by 33 percent and the number of maternal deaths would fall by an equivalent amount, if not more (Royston and Armstrong 1989).

Table 7.2
Decline in Crude Birth Rate,
1965 to 1987
(per 1,000 population)

Country	1965	1987	Percentage of Decrease
Thailand	41	25	39
Indonesia	43	29	33
Tunisia	44	30	32
Sri Lanka	33	23	30
India	45	32	29
Morocco	49	35	29
Philippines	42	30	29
Jordan	53	43	19
Egypt	44	36	18
Bangladesh	47	41	13
Nepal	46	41	11
Yemen	50	48	4
Pakistan	48	47	2

Source: World Bank (1989c).

Box 7.1

A Family Planning Revolution in Thailand

Family planning practices in Thailand have undergone dramatic changes in the past two decades. Contraceptive prevalence has increased from 15 percent in 1970 to 65 percent in 1985, and the fertility rate has declined from 6.3 in 1965 to 2.8 in 1987.

Thailand's success resulted from the effective use of available resources; a sincere commitment to population control by the government, private individuals, and agencies; and the adoption of innovative approaches that have now become well known throughout the world.

Features that contributed to Thailand's family planning success were:

- expanding the number of pill-dispensing sites from less than 350 to more than 3,500 through the use of trained auxiliary midwives;
- introducing new contraceptive methods such as injectable contraceptives and minilaparotomy, a simplified sterilization technique whose performance requires little equipment and training;
- harnessing the vision, energy, and dedication of leaders like Dr. Mechai Viravaidya, head of the nongovernmental Population and Community Development Association, who is widely credited with being the driving force behind the success of family planning in Thailand and whose name has become slang in Thai for condom.

Sources: Jensen (1990);
Rosenfield et al. (1982).

- The Pakistan Contraceptive Prevalence Survey (1984-85) indicated that 43 percent of married women wanted no more children, but that only 14 percent of them were using effective contraception (World Bank 1989b).

In several countries in the region, contraceptive use has increased dramatically during the last decade.

- Contraceptive prevalence in Morocco and Indonesia, for example, has increased more than 30-fold during the last ten years (figure 7.1).

Although these increases may appear startling, they are plausible given the recent impetus provided to family planning programs in these countries through strong political commitment, financial support, and innovative programs (Clarke 1985; Overholt et al. 1985). Such dramatic improvements in contraceptive prevalence are testimony to the effectiveness of well-designed, national family planning programs.

Differential mortality

Since 1960, mortality rates for the region have declined steadily (figure 7.2). Infant mortality has also decreased significantly in the last two decades; an indicator of improvement in women's health, because healthy babies invariably signify healthy mothers (figure 7.3).

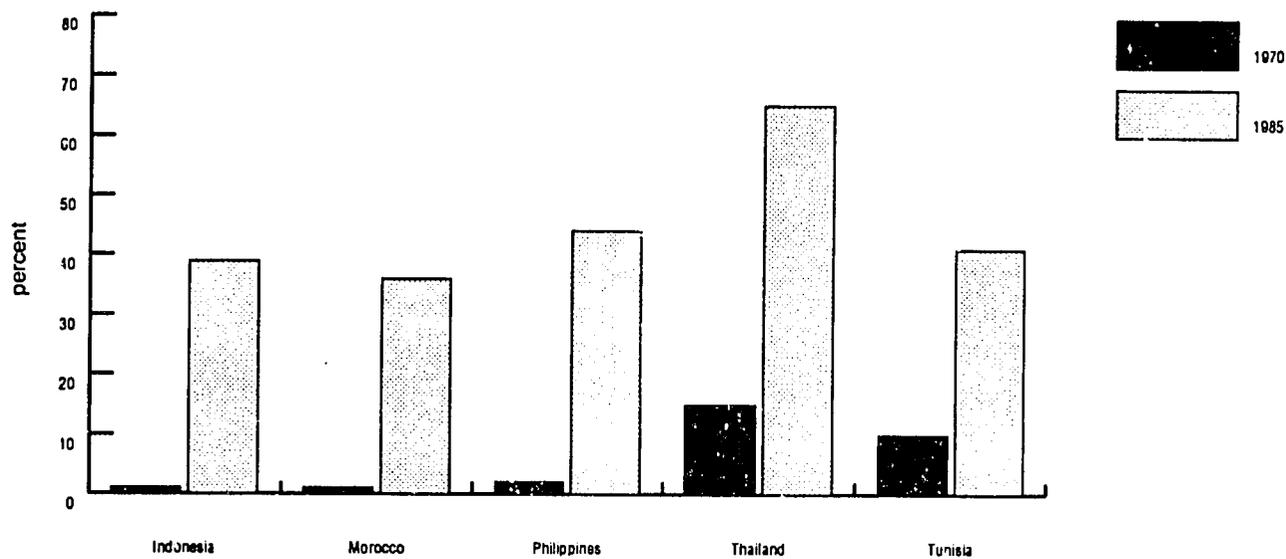
Despite such notable improvement, sex ratios, indicators of gender differences in mortality, favor males over females in many countries (table 7.3).

- With 91 females to every 100 males, Pakistan has one of the lowest sex ratios in the world (World Bank 1989b).
- A study in rural Bangladesh found sex ratio differentials favoring males at all ages except birth to one month (when the biological advantage of females is known to be particularly strong). Girls' probability of dying was 46 percent higher than boys' at ages 1 to 4, and 37 percent higher for ages 5 to 14 (D'Souza and Chen 1980).

These data are of particular concern because the evidence generally shows that females are genetically stronger than males, and therefore national sex ratios should favor females over males. This suggests that in countries that have a sex ratio that is biased in favor of males, factors other than biological vulnerability are

Figure 7.1

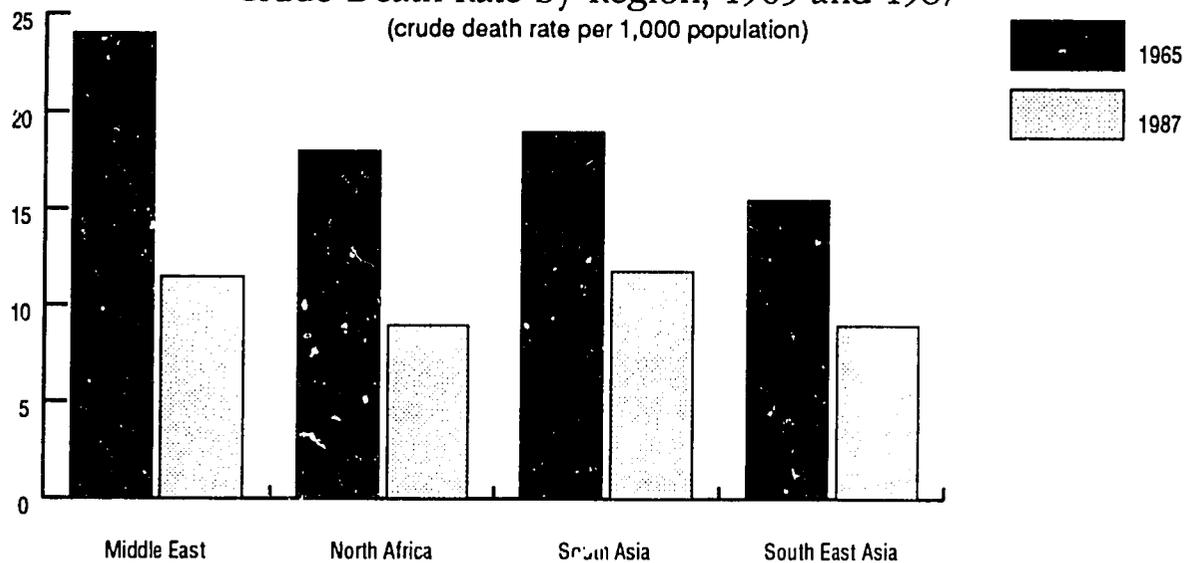
Increases in Contraceptive Prevalence, 1970 to 1985



Sources: World Bank (1989a,c); Overholt et al. (1985).

Figure 7.2

Crude Death Rate by Region, 1965 and 1987 (crude death rate per 1,000 population)



Source: World Bank (1989c).

Table 7.3

Sex Ratios, Selected Countries
(females per 100 males)

Country	Sex Ratio
South Yemen	111
North Yemen	103
Indonesia	101
Morocco	100
Philippines	99
Thailand	99
Sri Lanka	98
Tunisia	98
Egypt	97
Nepal	95
Bangladesh	94
Jordan	94
Turkey	94
India	93
Pakistan	91

Source: World Bank (1989c).

operating against females that need to be better understood. Investigators have repeatedly suggested that social and cultural practices that discriminate against girls (such as the "son preference" that is prevalent in south Asia) are the root cause for gender differentials in mortality that favor males (Miller 1981).

Maternal mortality rates, which measure a woman's chances of dying from a given pregnancy, are further evidence of women's poor health status. Maternal mortality in a developed country is at least 100-fold smaller than the same risk in a developing country. Thus, of the half million maternal deaths that take place in the world each year, 99 percent take place in developing countries, of which over 65 percent take place in the ANE regions (Royston and Armstrong 1989).

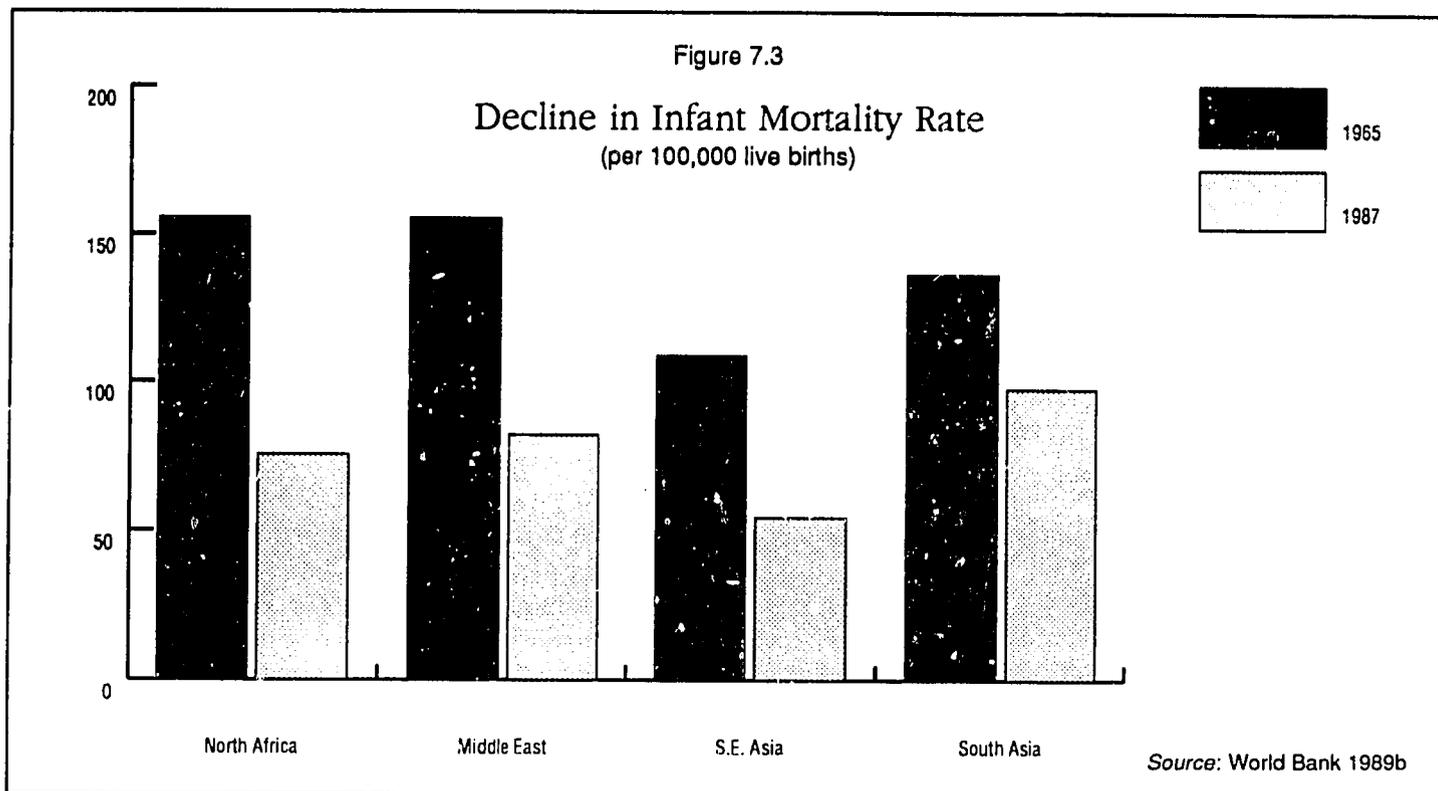
- The maternal mortality rate for Asia (excluding Japan, Hong Kong, China, North Korea, and South Korea) is 470 per 100,000 live births, second only to the maternal mortality rate for Africa. A woman's lifetime risk of dying from pregnancy-related causes is about 1 in 18 (Royston and Armstrong 1989).
- In India approximately 100,000 women die each year from pregnancy-related causes (Family Care International 1990). More maternal deaths occur in India in one day than in all the developed countries in one month (Royston and Armstrong 1989).

Table 7.4

Maternal Mortality Rates, Selected Countries, 1980s
(per 100,000 live births)

Country	Maternal Mortality
Developed countries	30
Developing countries	450
Philippines	80
Sri Lanka	90
Thailand	270
Morocco	327
Egypt	500
India	500
Bangladesh	600
Pakistan	600
Indonesia	800
Nepal	850

Source: World Bank (1989c);
World Health Organization (1986).



- In Yemen the government estimates the maternal mortality rate to be 1,000 per 100,000 live births, one of the highest in the world (USAID/Yemen 1990).

There are, however, a few exceptions to this pattern of high maternal mortality in the region.

- The maternal mortality rates for Sri Lanka and the Philippines are below 100, much lower than those of their neighbors (table 7.4). While many factors account for such a low rate, the most important is that in these countries maternal health care, including family planning, is recognized as an essential and integral part of primary health care programs.

The particular nature of the demographic transition taking place in the ANE regions underscores the need for successful interventions to reduce maternal mortality. A close examination of the demographic trends reveals that birth rates have declined more slowly than mortality rates in the region (Asia Near East Bureau/USAID 1990). This suggests first, that the population

will continue to grow well into the 21st century, and second, that the number of women of reproductive age in the region will increase by nearly 45 percent from 1985 to 2000. Thus, the coverage of maternal health programs will have to increase proportionately. More important, to maintain the current birth rate, family planning programs will need to increase the number of contraceptive acceptors by 45 percent, or else fertility will pose a greater risk to women's lives in the future than it does today.

Differential morbidity

Morbidity patterns among women in the region are dominated by complications associated with pregnancy and childbirth (such as hypertensive disorders and obstetric fistulae), reproductive problems (such as sexually transmitted diseases and infertility), infectious diseases (such as malaria and hepatitis), and occupational health problems (such as respiratory complications and cancer from exposure to toxic fumes or pesticides). While specific prevalence rates on each of these are not available, the scale of suffering because of these problems is far greater than is generally known

(International Center for Research on Women 1989; Stinson 1986; Favin, Bradford, and Cebula 1984).

- In 1980 a study in one small Indian village found that for every maternal death, 16 women suffered from illness during pregnancy or childbirth or within six weeks of delivery (Datta et al. 1980).
- The prevalence of obstetric fistulae (openings between the vagina and the rectum or urethra that allow urine or faeces to leak through the vagina) is high in Nepal, Bangladesh, and northern Pakistan, where maternity services are few and communications are poor (World Health Organization 1989).
- Women suffer more long-term consequences from sexually transmitted diseases than men, and for gonorrhea in particular, women's risk of contracting the disease from a single coital act with an infectious partner is twice as high as for men (International Center for Research on Women 1989).
- While the prevalence of hepatitis and malaria is no higher among women than men, pregnant women are more likely to die due to liver failure or severe anemia if they contract these diseases (Population Information Program 1988).

A significant demographic shift in the last two decades that has had a direct impact on morbidity patterns among both men and women is the rapid increase in urban populations due to migration from rural areas (figure 7.4). This trend is likely to continue at an accelerated pace during the next decade.

- In North Africa and the Near East by the year 2000, over half of the population will live in urban areas (Harpham, Lusty, and Vaughan 1988).

Thus, while the need to provide services for the rural poor will continue, demand for services for the urban poor, who will retain many of the health behaviors of

the villages from which they came will increase. Overcrowding and the resulting problems of poor housing and sanitation, air and water pollution, and lowered standards of hygiene will increase the incidence of infectious diseases such as malaria and tuberculosis. Diarrheal diseases and malnutrition will also be significant problems of the future (Harpham, Lusty, and Vaughan 1988).

Data suggest that migration also results in increases in the number of woman-headed households in the region, forcing more and more women to be the sole economic providers for their families. This increases the relative importance of the occupational health hazards women face in different sectors of the economy.

In addition, urban migration trends increase the prevalence of sexually transmitted diseases, including AIDS. Women's risk of exposure to HIV infection is high both within and outside marriage because of their lack of power in sexual negotiation to ensure the use of common preventive interventions, such as condoms. Transmission of HIV infection from mothers to children during pregnancy and childbirth further underlines the seriousness of the potential threat AIDS poses to women and children.

Nutritional deficiencies

Women's nutritional status, a critical determinant of the quality of life, productivity, and the health of children, is generally poor.

- Women's average weight-for-height was well below the 50th percentile for subpopulations in East Java, India, and the Philippines (McGuire and Popkin 1989).
- A study of the nutrition and health status of Indian Tamil female tea plantation workers in Sri Lanka found that pregnant women actually consumed less food than any other subgroup of women (Samarasinghe, Kiribamune, and Jayatilaka 1990).

Data from some countries in the ANE regions suggest that the prevalence of three major nutritional deficiencies

cies — iron deficiency anemia, protein-energy deficiency and iodine deficiency — is higher among women than among men (Leslie forthcoming; McGuire and Popkin 1989).

- In some poor communities in India, 80 to 90 percent of pregnant women may be anemic, while nationally more than 50 percent of women may be affected (Chatterjee and Lambert 1989).

Governments have undertaken programs to address the problem of under nutrition through a wide range of interventions (such as nutrition education, supplementation, food fortification, and food subsidies), but even those that specifically target women are designed primarily to benefit infants and children. Assessments of such programs are usually in terms of impact on pregnancy outcome and breastfeeding. Moreover, supplements are generally targeted to women during pregnancy and sometimes during lactation, while in reality women's nutritional needs are life-long and may be better met if interventions were targeted prior to pregnancy or between reproductive cycles (Kramer, Schlossman, and Rao Gupta 1990; Merchant et. al 1990).

Thus, although the health status of women in the ANE regions has improved during the last two decades, the rate of change has been slow and much more needs to be done.

Improving Women's Health: Constraints and Possibilities

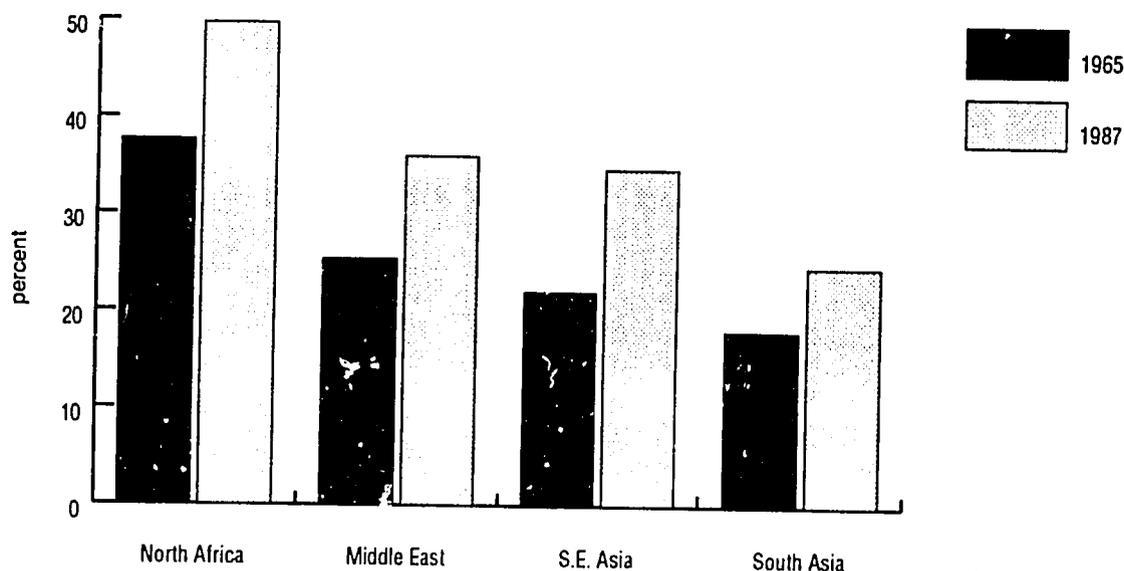
This section considers some of the gender-specific social, economic, and cultural constraints to and the possibilities for improving women's health.

Women's social status

In most countries in the ANE regions women are accorded a lower status than men, and investigators now widely accept that "the most powerful variable in explaining cross-national sex mortality differentials ... is the status of women" (Nathanson 1984). In south Asia and most of the Islamic countries in the Near East, for example, son preference explains much of the gender difference in the intrahousehold distribution of food and in the timing and frequency of use of health services.

Figure 7.4

Increase in Urban Population



Source: World Bank (1989b)

- A study conducted in Punjab, India, found that boys are breastfed longer and given more food after weaning than girls (Elliott and Sorsby 1979).
- A study in Pakistan showed that 60 percent of grandmothers left in charge of grandchildren fed only the boys and not the girls (Lovel, Sabir, and Cleland 1984).
- In Matlab, Bangladesh, diarrhea treatment rates for boys up to the age of 14 were 66 percent higher than for girls (Sabir and Ebrahim 1984).

Women's only avenue to social status and prestige in such societies is through motherhood. Thus, they typically marry as teenagers and bear too many children too close together, factors that substantially increase the risk of maternal morbidity and even death. For example, in Bangladesh, a country with one of the highest fertility rates in the region, 72 percent of women aged 15 to 19 are married (Royston and Armstrong 1989).

Because of the close link between women's status and their health, community development programs that have succeeded in improving women's social status have observed parallel improvements in women's health status. Income generating projects, for example, may improve women's health through helping women achieve increased economic power, greater self-confidence, and a more positive self-image.

- The Grameen Bank Project in Bangladesh is reported to have had revolutionary effects on women's social status and has also resulted in notable health improvements, such as increases in family planning acceptance.

Education

The lack of commitment to educating girls has a negative effect on female health. Low literacy levels are often correlated with high fertility, low contraceptive use, early marriage, and less use of health services.

- In Asia, women with seven or more years of schooling average 1.9 fewer children than those with four to six years of schooling (United Nations 1987).
- Census data from Bangladesh show that in 1974 among females aged 15 to 19, 81 percent of those with no schooling and 70.5 percent of those with some primary education had already married, but only 36.5 percent of those with some secondary education had married (Blumberg 1989).
- Researchers in the Philippines found that education level has a significant positive correlation to use of prenatal services (Villaroman-Bautista, Roldan, and Basco 1990).

Note, however, that educational attainment is not by itself a sufficient condition to ensure the improvement of women's health status, particularly when their social status is low.

- In Jordan, for example, although more than 45 percent of females are educated up to the secondary level, the sex ratio for the country (94 females per 100 males) continues to favor males over females, and at 6.5, the total fertility rate for the country remains one of the highest in the region (World Bank 1989c).

Women's work

Data from the developing world indicate that with their dual home and market responsibilities, women work longer hours than men, and that the poorer a family the more hours women work (International Center for Research on Women 1989). Continuous physical exhaustion from such an overload contributes to women's overall weakness and susceptibility to disease and can have significant long-term impacts on women's health.

The nature of women's household activities increases exposure to certain types of illnesses and medical conditions.

- Collecting water, washing clothes, and bathing in polluted rivers and streams makes women more prone to water-borne diseases such as schistosomiasis, onchocerciasis, and malaria (International Center for Research on Women 1989).
- Within the home, women's use of open stoves or cooking fires often results in a significantly higher incidence of burns among women than among men (International Center for Research on Women 1989; Gupta and Srivastava 1988). Moreover, the common use of biomass fuel for cooking poses a risk of cancer (Smith, Aggarwal, and Dave 1983).

Much of poor women's work in agriculture and the formal and informal sectors exposes them to dangerous chemicals, requires long hours of labor in uncomfortable positions, and is often undertaken in poorly lit and ventilated work environments.

- An analysis in Maharashtra, India, revealed a strong clustering of neonatal mortality during July and August, the months when paddy is transplanted. A possible explanation was that squatting, necessary for transplanting, for over 12 hours a day put heavy pressure on the uterus and resulted in premature births (Batiwala 1983).

Although this is a much neglected area of women's health, governments and private agencies have made some efforts to protect women from work-related health hazards. An example is development of the smokeless chulla or stove, a collaborative effort by the Indian government's forestry department and the Self-Employed Women's Association, a women's union, to protect women from exposure to the carbon monoxide pollution caused by wood smoke (Self-Employed Women's Association 1988). In some cases, countries have passed protective legislation, but this generally applies only to formal sector employment and frequently is not enforced. There are also isolated examples of efforts made by national governments to identify the extent of the problem in the informal sector and to determine the need for protective legislation.

- In 1988, the Government of India established the National Commission on Self-Employed Women to conduct a comprehensive examination of the status of self-employed women in the unorganized sector. This included studying the health status of these workers and identifying the health hazards associated with their work (National Commission on Self-Employed Women 1988).

Such initiatives deserve attention because they demonstrate the potential for action that can be taken to protect women's health in the work place and at home.

Use of health services

Although utilization statistics vary widely both across countries and within countries, data indicate that typically women underutilize formal health services (Leslie and Rao Gupta 1989).

- A study in India found that five times more men than women sought treatment at primary health care centers (ICRW 1989; Key 1987).
- According to recent WHO estimates, on an average, only 41 percent of all births in the ANE regions are attended by a trained person because of shortages of trained health personnel and an underutilization of existing facilities (Royston and Armstrong 1989).

Four key barriers to women's use of formal services are discussed below.

a. Accessibility: Physical distance, a primary component of accessibility, acts as a critical deterrent to the use of health services. Long distances coupled with difficult terrain, for example, are cited as key barriers to the use of health services in a remote mountainous area of Yemen.

Distance acts as a particularly formidable barrier for women in countries that have cultural restrictions on their mobility. The cultural custom of "purdah," for example, prevents many women in Pakistan from getting access to health facilities, particularly when the

health care providers are men (World Bank 1989b).

Use of certain forms of transportation, especially during critical times, such as after the onset of labor, may also be a significant deterrent to the use of health services. Travel on a bicycle, motorcycle, donkey, or horse, for example, are not likely to be permissible modes of transport at such times.

- Interviewing women in a rural area in Pakistan, Schmidt (1983) found that the lack of transportation to reach the closest hospital was the reason most often cited for women's dependence on the village *dai* or traditional midwife for delivery services.

In cases of obstetrical emergency, the lack of accessibility can often make the difference between life and death.

- Between 1975 and 1983, 8 percent of maternal deaths recorded in two rural areas of Turkey occurred on the way to the hospital (Dervisoglu 1985 cited in Thaddeus and Maine 1990).

b. Cost of care: The costs women incur in using health services include both monetary and opportunity costs. Studies of the impact of the monetary cost of a service on women's use of health services are inconclusive. A recent review concluded that compared to other factors, the financial cost of receiving care is not a major determinant of the decision to seek care. Services that are free are actually often underutilized because women perceive them to be of lower quality (Thaddeus and Maine 1990).

- Data from Tunisia and rural Bangladesh showing that people often associated higher costs with better quality care support the hypothesis that use of services increases with cost of care (Auerbach 1982; Claquin 1981).

However, other evidence suggests that fee increases may affect women's use negatively (Gertler 1990). Unofficial fees, a symptom of widespread corruption, also deter women's use of maternal care services.

- As a woman from Pakistan explained: "A *dai* is happy to accept 10 to 15 rupees, but in a hospital you have to give a 15-rupee tip to each and every staff member and the doctor's fee on top of that" (Schmidt 1983, p. 419).

Another important component of cost is the opportunity cost of the time expended in travelling to and waiting for health care services. The data indicate quite clearly that for most women such time costs are a heavy price to pay because it means a loss of time available for other more urgent and economically productive activities.

- An evaluation of the nutrition education component of Project Poshak, a maternal and child supplementary feeding program in India, found that the major reasons for nonparticipation by women in fortnightly sessions were conflicts with work and household chores (Gopaldas et al. 1975 cited in Hamilton, Popkin, and Spicer 1984).

c. Quality of care: Women's perception of the quality of health care seems to serve as a critical variable in making the decision to use health services (Thaddeus and Maine 1990; Leslie and Rao Gupta 1989). Judgment of the quality of care is generally shaped by the effectiveness of a particular kind of treatment and the availability of drugs and equipment.

- Shortages of blood, sutures, surgical gloves, and medicines were cited as commonplace in health clinics in India, hindered their everyday functioning, and had negative implications for use (Misra 1983).

Researchers have also found that the health personnel's attitude and efficiency determine women's perception of health care quality. This variable may be particularly important in childbirth services, because traditionally the person attending the birth plays a significant role in providing the mother with emotional and moral support (Leslie and Rao Gupta 1989).

- Women in a study in the Philippines generally perceived public and private doctors to be the most knowledgeable and skilled for prenatal care, but they saw midwives as the most competent for delivery care because their services were more personalized (Villaroman-Bautista, Roldan, and Basco 1990).

d. Culturally appropriate care: The culture of modern medical facilities is often quite different from the culture of the communities in which they operate. The extent to which the two cultures are congruent will determine the level of acceptability of the medical facility to the local population, and therefore the level of use (Leslie and Rao Gupta 1989, box 7.2).

Privacy, modesty, and seclusion are the essential ingredients of traditional childbirth and maternal care practices in most cultures in the region. Unfortunately, most formal maternal care services do not adhere to these basic tenets of traditional care.

- Auerbach (1982), in her study of childbirth in Ksar Hellal, Tunisia, found that women's dissatisfaction with maternity services was related to the lack of emotional support and privacy in the hospital setting compared to the home. Women were also uncomfortable about having to expose themselves in the hospital ward in front of strangers.

Improving Women's Health : Policy Guidelines

For several years now, a major focus of A.I.D.'s strategy in the ANE regions has been to improve the health and nutritional status of vulnerable populations. This strategy has been operationalized by supporting primary health care and family planning programs (Asia Near East/USAID 1990). A.I.D.'s goals for the year 2000 are to increase contraceptive prevalence and reduce infant and child mortality. A focus on women's health is essential to achieve these aims because of the close link between women's health and fertility and child health. Such a focus is not only important for the success of A.I.D.'s health and population strategy, but is critical for ensuring the economic and physical well-being of households and entire communities.

A number of policy actions will be required to improve women's health in the region, including placing greater emphasis on preventive care, strengthening maternal health programs, and supporting research to identify women's emerging health needs (table 7.5). The wide disparity between countries in the status of women's health suggests that each country will have to select for itself the most appropriate policies and determine the proper weight to be given to each. The policies chosen will depend largely on the country's economic status and women's health needs as determined by how far that country has progressed in the demographic transition from high fertility and mortality to low fertility and mortality. Bangladesh, for example, with limited

Box 7.2

Celebrating the 40th Day: The Sfax, Tunisia Postpartum Program

A postpartum program initiated in 1983 by the Maternal and Neonatal Hospital of Sfax demonstrates the creative use of a cultural and religious tradition to ensure the success of a family planning program. The innovative aspect of the program was to schedule the postpartum follow-up visit for the 40th day after delivery; a day traditionally celebrated in Tunisia as signifying the end of the mothers convalescence and isolation and the resumption of her normal activities.

The other innovative aspect of the program was to make it a consultation for both mother and child. Thus, services provided included a gynecological examination, information on breastfeeding, and family planning advice for the mother, and a physical examination and referral for immunization for the infant. By saving mothers' time, this program feature increased the likelihood that women would participate.

Four years later, the number of women who returned for the postpartum visit had increased by more than 20 percent, and of the women who returned, 55 percent accepted a family planning method during the postpartum visit.

Source: Coeytaux (1989).

economic resources and high mortality and fertility rates, might give priority to family planning and maternal mortality rather than to the health risks women face at work. By contrast, Sri Lanka, with relatively low fertility and maternal mortality rates, may shift its focus to women's work-related morbidity.

Strengthen the emphasis on prevention

While both preventive and curative care are essential in any health system, a focus on prevention can be more effective in bringing about rapid and substantial change in the health of populations whose most basic health needs are not being adequately met. Preventive health care is more cost effective in this context because it ensures the long-term health of populations with the use of relatively low-cost technologies, and reduces the need for higher cost emergency or surgical crisis intervention that can often only take place at hospitals.

To strengthen preventive health care for women, governments should recognize adolescence as an important point of intervention, and should place more emphasis on improving nutrition, and family planning services to meet women's needs more effectively.

a. Introduce preventive interventions during adolescence: To strengthen preventive care for women, governments should target nutrition and health services to adolescent girls prior to marriage and pregnancy. In the past, nutrition and health programs have focused on pregnancy as the point of intervention. Pregnancy, however, is not the most appropriate time to intervene to meet a woman's needs because of the competing nutritional demands of the growing fetus. Intervening at this point is akin to crisis management in response to the urgent growth needs of the fetus. Governments must move beyond crisis management to a preventive and ultimately proactive approach by providing nutritional and health inputs during adolescence, prior to the demands of pregnancy, childbirth, and motherhood.

The benefit of extending the scope of preventive health programs to target adolescent girls is further highlighted by the fact that poor nutrition and health during adolescence have a direct impact on adult nutritional and health status. For example, malnourishment in

adolescence can lead to nutritional stunting and cephalopelvic disproportion in adulthood, a major cause of obstructed labor, the most serious consequence of which is maternal death (Chatterjee and Lambert 1989). Furthermore, compelling evidence suggests that adolescence may represent a time of physiological opportunity, a time to catchup and maybe even reverse prior childhood malnutrition before the onset of the increased demands of pregnancy and lactation (Rohde 1987). In addition, investigators have suggested that adolescent girls are at a critical point in their lives for educational interventions that can increase their knowledge about family planning, their own nutrition and health care, and the nutrition and health care of their future children.

b. Improve nutrition programs: The preventive health benefits of improved nutrition are wellknown. Women, however, have only incidentally benefited from nutrition programs that are typically designed to benefit children. Thus, existing nutrition programs, need to be reoriented to serve women as direct beneficiaries; nutrition programs should target not just pregnant women and mothers, but all women. Research has shown that in addition to pregnancy, important points for intervention to improve women's nutritional status include adolescence (to ensure full growth and healthy development prior to the first pregnancy), lactation (to meet the increased energy demands on the mother), and between reproductive cycles (to help women recuperate). Nutrition programs for women should emphasize ameliorating iron deficiency anemia, protein-energy malnutrition, and goitre.

c. Continue to promote family planning: Governments should continue to promote family planning because it serves as an important preventive health measure for women. By reducing fertility and permitting child spacing, it reduces women's life-time risk of maternal mortality and allows women to recover physically between pregnancies.

For family planning to be effective as a preventive health measure for women, policy actions must strengthen the linkage between family planning and maternal care services by, for example, providing family planning advice and contraceptive counseling

Table 7.5

Policy and Program Options for Improving Women's Health

Policy	Policy Emphasis	Benefits	Types of Programmatic Interventions
Emphasize prevention	Adolescent girls Nutrition services	More efficient use of resources by: <ul style="list-style-type: none"> • Improving targeting so that women benefit • Intervening at more cost effective points in the woman's life cycle 	Improve women's access to and quality of preventive services throughout their reproductive lives. Expand scope of preventive programs to include adolescent girls. Design services specifically to meet women's needs.
	Family Planning	Reducing women's lifetime risk of maternal mortality	Integrate family planning services with maternal care services. Involve significant others in family planning education.
Strengthen maternal care	Access to services	Reduced maternal morbidity and mortality	Provide and/or strengthen community based care.
	Quality of services	Improved infant and child health	Strengthen communication and transportation to health facilities.
	Effectiveness of services		Improve facilities at both the primary level and in hospitals. Ensure that health personnel are trained and well-supervised.
Integrate services	Women as principal users of maternal care, child health, and family planning services	Reduced time constraints for women's use of services	Provide a comprehensive package of services that include maternal care, child health, and family planning.
Expand women's participation	Recruit and train women as health planners, managers, and service delivery agents	Expanded coverage	Involve local women's groups and women as community representatives in planning and implementation of health programs.
		Services that better meet the needs of women	
		Increased demand	Target management training to women.

Table 7.5

Policy and Program Options for Improving Women's Health (cont.)

Policy	Policy Emphasis	Benefits	Types of Programmatic Interventions
Support research on impact of changing demographic trends	Changes in women's social and economic status	Preventive action can be taken early	Focus on identifying new health priorities in women's health.
	Changes in morbidity and mortality patterns among women	Priorities can be established based on health needs	
	Interaction between the two	Fund social science and epidemiological research on women's morbidity and mortality patterns.	
Strengthen financial base	Evaluate impact of alternative financing mechanisms on women's access and use of services	Improve sustainability without compromising women's access	Set sliding scale user fees.
	Explore and institute financing options that do not compromise women's access		Institute fee exemptions for vulnerable populations.
			Subsidize preventive services from profits generated by curative services.

during postpartum visits. Increasing women's access to family planning services by using community-based education and distribution channels is another way to increase the effectiveness of family planning as a preventive health measure for women. Yet another way to improve its effectiveness is to educate men and other significant family members who hold positions of responsibility and power within the household on contraceptive options and the dangers of multiple pregnancies.

Strengthen maternal care services

Although maternal and child health programs have been in existence for many years, the maternal component has received very little policy and programmatic attention (Rosenfield and Maine 1985). Traditionally, the primary focus of maternal and child health programs has been on child health and family planning, and not on women as such. Experience has shown, however, that this is not sufficient to ensure maternal health. Strengthening maternal health care programs, therefore, requires a reorientation of maternal and child health services to meet women's health needs more effectively in preventive as well as in emergency and surgical care. The shockingly high rates of preventable maternal, neonatal, and infant deaths underline the urgent need for change.

A number of policy actions are required to implement these changes. These include, first, increasing women's accessibility to maternal care services through such measures as providing low-cost community-based care or improving communication and transportation between rural communities and district hospitals; second, improving the quality of care by upgrading the facilities and equipment both at district hospitals and rural health centers, and ensuring that health personnel are appropriately trained and supervised; and third, expanding the scope of maternal care services to target women of reproductive age prior to pregnancy to lay the foundation for good health and nutrition before the demands of pregnancy and childbirth.

Integrate services

The everyday activities of poor women, both within and outside the home, are very time consuming and take up a major portion of the day. Thus, as mentioned earlier, for most women the cost of waiting and traveling time incurred in using health services is a heavy price to pay because it reduces the time available to undertake more urgent and economically productive tasks.

Policy actions to make services less expensive in terms of the time costs to women must include integrated services so that the separate components of maternal health, child health, and family planning are provided as one comprehensive package of services. Such integration is logical because women are the principal users of all three services.

Some caution should be exercised, however, when integrating a new component into an existing program. For integration to succeed it is important to start with one component, establish the required infrastructure and add on other components only after the first has been fairly well established.

Expand women's participation

Typically, women are actively involved in health service delivery at the community level, but are less often recruited or trained for planning and management positions within health programs. Thus, for example, while training programs for traditional birth attendants or community health volunteers are traditionally designed for women, recruitment and training programs for senior health management positions are not designed to target women.

Policy actions should strongly support the recruitment and training of women as health planners and managers as well as for service delivery positions to promote women's involvement at every level, and to help ensure that health services meet women's needs and are sensitive

to the realities of their lives. Encouraging the participation of women and women's groups is an effective way to increase the acceptability of services and to expand coverage. Moreover, in the longterm, expanding women's participation in planning, managing, and delivering health programs helps women to become informed health consumers, thereby increasing the demand for services that specifically target women's needs. Such participation also increases the likelihood of improving women's social status and, therefore, in an indirect way improving women's health.

Support research to identify women's emerging health needs

Because of the complex epidemiological and demographic changes that are underway in the ANE regions, the need for research data on the implications of such changes for different segments of the population, especially women, are critical. As mentioned earlier, the two key characteristics of this transition are increasing migration from rural to urban areas and the slower decline in fertility rates than in mortality rates.

Policy actions that encourage and support research on the implications of these demographic trends for women should, in general, describe the changes in morbidity patterns that result from demographic shifts and identify appropriate prevention and intervention strategies. The research should focus on areas such as the predicted increase of infectious and sexually transmitted diseases, including AIDS, as well as on women's work-related health risks within the context of women's changing social and economic roles.

Strengthen health financing systems

To sustain health programs and to implement changes policies must pay some attention to financial systems. Current A.I.D. policies emphasize the need to strengthen the financial base of health and family planning programs through privatizing services, increasing the mobilization of private resources, and encouraging insurance and other forms of risk sharing and investment. Such policies can increase the financial sustainability of services and ensure greater coverage, equity, and cost efficiencies, and should therefore be supported. They can also be used to

Box 7.3

Egypt: Cost Recovery for Health

Under the USAID supported "Cost Recovery for Health" project in Egypt, a credit program has recently been established to provide loans to medical school graduates to set up private practice instead of seeking jobs in the Ministry of Health — where job security is guaranteed but doctors are underemployed. The program makes special efforts to encourage women to participate because women constitute 40 to 50 percent of Egypt's medical school graduates. The brochure advertising the credit program, for example, specifically mentions that both men and women are eligible to apply, in order to encourage women applicants. It is hoped that an increase in the number of practicing women doctors will ensure better health care for women.

Source: USAID/Egypt

strengthen and improve health care services for women as is being done in Egypt under the "Cost Recovery for Health" project (box 7.3).

Note, however, that to the extent that such policies encourage privatization of health care, user fees, or other direct monetary contributions for health services, women's access to such services is likely to be reduced. Services that are contingent on a fee are not likely to be accessible to women because of the limitations on women's earnings in both formal and informal employment, the relatively limited control they have over their incomes, and in some cases, their complete exclusion from the cash economy. Moreover, evidence suggests that under financial stress, families tend to give higher priority to the health needs of male family members than to female family members (Royston and Armstrong 1989), making it very likely that monetary contributions for health services will affect poor women adversely. Employment-based insurance schemes are also not likely to benefit poor women because the majority of such women work either as home-based workers, casual agricultural wage laborers, or daily wage workers in the informal sector, and such schemes are not available to them.

Innovative policy actions are therefore needed to ensure that privatization and other measures to strengthen financial sustainability do not deter women from using health services. Available policy options to reduce cost disincentives to women include sliding scales of fees based on individual ability to pay, fee exemptions for the poor, and cross-subsidization of preventive services through revenues generated from user fees in curative services.

Improving Women's Health: Program Actions

Additional programmatic actions may be required to ensure that the policy alternatives are effectively implemented.

Increased accessibility

Innovative ways to improve the accessibility of health care for women include:

- Providing low-cost maternity waiting homes close to the hospital: in places where women have to travel long distances and transportation is poor, women can be moved to waiting homes during the last few weeks of pregnancy so that they can be easily transferred to the hospital for delivery.
- Introducing community-outreach programs, including mobile clinics, that literally take the clinic to the community, or trained community health workers who provide primary health care within the community. Training traditional birth attendants to conduct safe deliveries and refer women at risk to the district or city medical center is another way to provide care within the community.

Improved quality and acceptability

There are several ways to increase the quality and cultural acceptability of health services, including:

Box 7.4

Model Mothers and Male Family Planners

Generating local community participation in the design and implementation of health programs has proved to be one of the most important ways to improve primary health care in many developing countries. Throughout the ANE regions are examples of innovative ways to involve the local community in health care.

- The use of local mothers' clubs has been very successful in promoting health and sanitation programs in the Philippines. The clubs identify households that need medical assistance, raise funds to repair or construct health centers, participate in immunizations and diarrheal disease control efforts, assist with environmental and sanitation efforts, and support nutrition and health education projects (World Health Organization 1982).
- Thailand's national maternal and child health program has successfully used "model mothers." Village development committees select model mothers to act as community role models for other mothers to emulate (Suvannus 1990).
- Innovative features that account for the success of Bangladesh's Matlab Project in health and family planning include
 - the use of young married women from influential families as community health workers who help gain the confidence and respect of women targeted by the program,
 - male supervisors who liaise with important male community leaders to influence husbands in family planning, thereby supporting and reinforcing the women's efforts (Koblinsky and Corbett 1987).

- Recruiting and training female health workers to increase women's use of family planning and health services in cultures where the custom of female seclusion is common.
- Involving local women's groups and nongovernmental organizations in working together with health workers to enable them to convey health information more effectively. Working through local groups increases the acceptability of the health messages and emphasizes the community's responsibility for individual women's health needs (box 7.3).
- Improving the conditions under which health personnel work in terms of adequate economic remuneration, consideration of the workers' needs, and a smooth flow of medical supplies can greatly help to ensure good quality services.

Reduced workload and time constraints

Reducing women's time constraints and workloads can

help to improve their health and their use of health services. In addition to integrating services, effective ways to do this include:

- ensuring that clinic hours do not coincide with the peak hours of activity for women in the community;
- increasing the number of hours that a health facility is open so that women can attend when it is most convenient for them;
- providing childcare facilities at health care clinics so that services are more convenient for mothers of young children;
- developing innovative technologies to reduce the drudgery of women's work and their time constraints: improved stoves, water pumps, and other simple household technologies for hulling rice or grating coconut save time and energy and directly improve women's health.

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