

Rural women and food security in Asia and the Pacific



Prospects and paradoxes



Rural women and food security in Asia and the Pacific:
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With contributions on the Pacific Islands from
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Foreword

Agriculture and food production offer stable livelihood options to rural communities throughout Asia and the Pacific region. Even as the effects of globalization spread in the region, farm production – most often at the smallholder level – continues to be a family enterprise. A fair share of farmers in the region engages in subsistence farming and poverty is a common occurrence among them. Farm enterprises are mostly managed by family members and family labour is a critical asset and often the only reliable investment. As rural women and men toil to preserve their heritage and broaden their economic choices, their endeavours are made more difficult by a lack of resources and market fluctuations.

Asian and Pacific farmers, both men and women, are guardians of biodiversity, household food security and providers of food to urban communities. In these small farm enterprises distinct gender roles and gender differentiated access to technology and resources are evident. This disparity is compounded by the neglect of investment in rural social infrastructures such as education, health care and communications. In such resource poor rural environments, the struggle by rural women for access to resources and services is inevitable.

In many Asian and Pacific countries, substantial gender equality gains have been made in urban areas in education, health and employment. Yet rural women lag behind. Moreover, rural women's work is multifaceted and demanding both as family workers and agricultural labourers. Social and economic indicators often do not do justice to their contributions. Development innovations such as microcredit and self-help groups promote rural women's economic development, but emerging evidence suggests that gender equality in rural communities is far from an everyday reality. Persisting social biases and traditional perceptions and assumptions regarding women's responsibilities and their capacities continue to hamper women's progress.

This publication presents an overview of both the substantial contribution made by rural women to the economies in the region and the persisting barriers to their advancement. The framework of analysis, data and information reviewed together illustrate the complexity of rural women's work in the region and offer a broad perspective on women's economic and social contribution as well as on the barriers they encounter in accessing resources.

The global development community is gathering momentum assessing progress made to date in achieving gender equality and the advancement of women as declared in the Millennium Development Goals and as reviewed in Beijing Plus 10. This publication aims to make rural women visible to policy-makers and to advocate their concerns to stakeholders. We hope that the analyses and approaches presented in the document will offer a persuasive argument for committing to strategies for the advancement of rural women, especially in Asia and the Pacific region.



He Changchui

Assistant Director-General and
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Abbreviations and acronyms

ADB	Asian Development Bank
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
Avian Influenza	An infectious disease of birds (“bird flu”)
CEDAW	Convention on Elimination of All Forms of Discrimination against Women
ESCAP	Economic and Social Commission for Asia and the Pacific
FAO	Food and Agriculture Organization
FFS	Farmer Field School
FLS	Farmer Life School
GDI	Gender Development Index
GDP	Gross Domestic Product
GEM	Gender Empowerment Measure
Ger	Mongolian traditional dwelling
HDI	Human Development Index
HDR	Human Development Report
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICTs	Information and Communication Technologies
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMP	Integrated Pest Management
LIFDCs	Low-Income Food Deficit Countries
MDG	Millennium Development Goal
NGO	Non-Government Organization
OXFAM	A development, advocacy and relief agency
Purdah	A screen or veil; seclusion of women from public observation
RGEM	Rural Gender Empowerment Measure
SAARC	South Asian Association for Regional Cooperation
SARS	Severe acute respiratory syndrome
SEWA	Self-Employed Women’s Association
UN	United Nations
UNDAW	United Nations – Division for the Advancement of Women
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children’s Fund
UNIFEM	United Nations Development Fund for Women
WFP	World Food Programme

Food security and rural women

In the twenty-first century the pursuit of food security remains a critical challenge for Asia and the Pacific region. In spite of considerable economic growth and improvements in human development across the region during recent decades, the lack of availability and stability of food supplies and access to them continue to be of key concern. Indeed, increased population pressures, environmental degradation and emerging regional trends beg the question: “Can the world produce enough food at reasonable prices, provide access to food by the poor and not destroy the environment in the process?” (Falcon, 1996). The challenge is particularly applicable to Asia and the Pacific region nations that still have 497 million of the world’s 777 million hungry people. “On an average, two out of every three malnourished children in the world live in South and Southeast Asian countries. To reach the World Food Summit goal, the number of hungry people in the world must be reduced by 20 million every year, and 14 million of them in Asia-Pacific countries” (FAO, not dated). Girl children and women in poor households are included in the hunger vulnerable group in the region. Most of the poor in the region live in rural areas depending on land based livelihoods, mainly agriculture (IFAD, 2001).

“Girl children and women in poor households are included in the hunger vulnerable group in the region.”

Nutritional deficiency among women and children in South Asia is seen as a major crisis in the making.

Sustainable food security is defined as “when all people at all times have physical, social and economic access to sufficient,

safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life without compromising the productive capacity of natural resources, integrity of biological systems, or environmental quality” (UNDP, not dated). The 1996 Rome Declaration on Food Security and the World Food Summit Plan of Action recognized that although the availability of food has increased substantially during past decades, serious constraints in access to food, coupled with the continuing inability of households to purchase food, the instability of supply and demand and natural and human-induced disasters, prevent many people from fulfilling their basic food needs (FAO, 1996). In this context, the 1996 World Food Summit reiterated the importance of poverty eradication through the full participation of women and men in order to achieve sustainable food security for all. Renewed commitments related to food security, poverty alleviation and empowerment of women in the declarations of the World Food Summit: Five Years Later (FAO, 2002) and the World Summit on Sustainable Development (United Nations, 2002) as well as in the United Nations Millennium Declaration validate the urgency for global action to surmount the persisting gender disparity. Furthermore, the United Nations Millennium Declaration resolves, “to promote gender equality and the empowerment of women as effective ways to combat poverty, hunger and disease and to stimulate development that is truly sustainable” (United Nations, 2000).

Rural women across Asia and the Pacific region play a critical role in supporting the three pillars of food security – food production, economic access to available food and nutritional security – for the members of their households, in normal times as well as during periods of stress. However, their roles generally are constrained and undervalued (Laier et al., 1966), and usually executed in the face of enormous social, cultural and economic constraints (Quisumbing *et al.*, 1995). At the local level, food security depends on the capacity of individuals and households to produce their own food or buy and use food of sufficient quantity and quality all through the life cycle and varying seasons. Understanding the relative status and different roles of women and men within the household is essential to comprehend the different strategies households pursue to access resources and promote food security. The majority of households and communities in Asia and the Pacific region manage their rural production systems based on socially accepted gender divisions of labour that affect food security achievements. In the Pacific Islands, the semi-subsistence and communal nature of local economies, in which women and girls play an integral role in family production and resource management systems, has traditionally provided the foundations for family food security, ensuring the production of food and essential items for family use. However, a lack of awareness and lack of appreciation of rural women’s productive roles in many developing countries in the region have historically undervalued their contribution. The result is enduring discrimination in women’s access to resources and opportunities, which is reflected in significant deficits in female educational and health indicators.

“Rural women across Asia and the Pacific region play a critical role in supporting the three pillars of food security – food production, economic access to available food, and nutritional security – for the members of their households, in normal times as well as during periods of stress. The majority of households and communities in Asia and the Pacific manage their rural production systems based on socially accepted gender divisions of labour that affect food security achievements.”

Until now, the development and academic communities have generally paid scant attention to the situation of rural women. Indeed, Sachs (1996) has noted, “feminist theorists, as well as rural social theorists, remain inattentive to rural women’s concerns. Their urban focused, theoretical work inadequately addresses the context of rural women’s lives.” Yet given the role of women in achieving food security for their families, meeting the world’s food needs in the year 2020 will depend even more than it does now on the capabilities and resources of women (Brown *et al.*, 1995). Sustainable food security can only be achieved with the full participation of women as equal partners and, as such, it is essential to fully understand women’s roles and responsibilities in the household, community and local economy, as well as the range of constraints and inequalities they face on a daily basis. However, the lack of current sex-disaggregated data that reflect urban-rural and gender-differentiated considerations is a critical impediment in this regard. In this context, it is essential that FAO examines the situation of rural women in Asia and the Pacific region, and

identifies and pursues opportunities to analyse and integrate gender dimensions and strategies to empower rural women in all aspects of agricultural and rural development.

Asia and the Pacific region: Dissimilarities and common dilemma

The countries that make up Asia and the Pacific region are characterized by considerable diversity in terms of geography, culture, religion and political systems, as well as economic performance and social development. For instance, the region includes two of the most populous countries in the world, as well as some of the world's smallest states. It contains the second largest economy on the globe, as well as some of the smallest, and whereas some countries are at the pinnacle of economic development, others are nomadic or agrarian (ADB, 2001). A few Asian countries have recorded unprecedented economic growth rates with an open market approach and achieved remarkable social development, while others are in the process of transforming from a centrally controlled economy to a market driven system. Nonetheless, the agriculture sector still makes a significant contribution to many economies in the Asian region.

The twenty-plus island countries in the South Pacific are characterized by significant differences in physical size, degree of isolation, resource endowment, stage of development and cultural background. In the Pacific region Kiribati, Samoa, the Solomon Islands, Tuvalu and Vanuatu are least developed countries. All face the physical disadvantages of remoteness, smallness and dispersion, and there are few opportunities for realising economies of scale. Agriculture has been the major source of livelihood security across the Pacific Islands, with semi-subsistence farming as the major form of production. Food security has emerged as a serious development concern where a focus on economic production, backed by spiralling levels of population growth and accelerated urban drift, has the capacity to disrupt the fine balance long maintained by family-based semi-subsistence systems.

Differences in religion, culture and traditions vary significantly among East Asia (East and Southeast), South Asia, Central Asia and the Pacific and Oceanic countries, influencing gender biases in both an affirmative and discriminatory manner. These differences are further accentuated by ethnic diversity and linguistic distinctions that contribute to a rising sense of cultural uniqueness, and that shape political realities and civil conflicts in new ways.

Unprecedented rates of economic and agricultural growth transformed Asia and the Pacific region during the past two decades, accompanied in many places by impressive social gains and improvements in living conditions. In addition to the overall favourable economic performance, lowered population pressures played an

“Within the region, in spite of impressive gains, extreme inequities persist in terms of economic prosperity among, as well as within countries. There are 21 low income food deficit countries among the FAO member countries in the region and these also are agriculture dependent economies.”

important part in the social transformation that took place (ADB, 2001). Yet despite the impressive gains, extreme inequities persist in terms of economic prosperity, livelihood opportunities and food security among, as well as within,

countries. Rural and urban disparity in economic achievement is a common development dilemma as is rural poverty and persisting food insecurity. Among regional FAO member countries, 21 are designated as low income food deficit countries and these also are agriculture dependent economies.

Asia and the Pacific region: Rural women's equality challenges

Achievements in gender equality differ considerably throughout Asia and the Pacific region, reflecting the overwhelming diversity in economic and human development indicators among and within countries. Within the region's complex resource environment, and amid the debate on trade versus self-sufficiency in food for sustainable food security, the gender equality scorecard is marked by disparity, as illustrated in the human and gender development index rankings in Table 1. Most countries in Asia that fall in the low and medium human development rankings also recorded lower achievements in the gender development index. Yet ranking gains for Asia are noted in the reporting periods of 2001 and 2004. HDI ranks of Asian countries such as Bangladesh, Bhutan, Lao PDR and Nepal have improved from low to medium. These countries also recorded improved rankings in GDI. Although, as is to be expected, countries at the high end of the development continuum (such as Australia, Japan, New Zealand and the Republic of Korea) score very well on these indicators, lately countries such as Australia, Japan, New Zealand, Thailand, Philippines and Sri Lanka have lost in relative terms with lower rankings in GDI compared to 2001. It should be noted that many countries in Asia that ranked medium in terms of HDI both in 2001 and 2004 recorded improvements in GDI ranking in that period. Hence, there seems to be gains in indicators such as life expectancy, adult literacy rate and enrolment ratio at various levels of education and a decent standard of living. In relative terms countries in South Asia (such as Bangladesh, India, Nepal, Pakistan and Nepal) that are predominantly represented among low income food deficit countries, are notable for their low performance in gender related development indicators.

The aggregated HDI and GDI indicators do not differentiate between urban and rural women. The progress achieved by a large number of urban women across Asia

Table 1. Relative status of human development and gender development in selected Asia and Pacific region countries¹

	Human Development Index ² 2001: Rank	Human Development Index 2004: Rank	Gender-related Development Index ³ 2001: Rank	Gender-related Development Index 2004: Rank
Asia				
Bangladesh	Low	Medium	121	110
Bhutan	Low	Medium	...	...
Cambodia	Medium	Medium	109	105
China	Medium	Medium	76	71
India	Medium	Medium	105	103
Indonesia	Medium	Medium	92	90
Japan	High	High	11	12
Kazakhstan	Medium	Medium	...	63
Kyrgyzstan		Medium	...	...
Korea, Republic of	High	High	29	29
Lao PDR	Low	Medium	119	109
Malaysia	Medium	Medium	55	52
Maldives	Medium	Medium	69	...
Mongolia	Medium	Medium	104	94
Myanmar	Medium	Medium	107	...
Nepal	Low	Medium	120	110
Pakistan	Low	Low	117	120
Philippines	Medium	Medium	62	66
Sri Lanka	Medium	Medium	70	73
Tajikistan	Medium	Medium	93	93
Turkmenistan		Medium		67
Thailand	Medium	Medium	58	61
Timor-Leste	...	Low	...	...
Uzbekistan	Medium	Medium	86	85
Viet Nam	Medium	Medium	89	87
Pacific Islands				
Australia	High	High	2	3
Fiji	Medium	Medium	63	69
New Zealand	High	High	17	18
Papua New Guinea	Medium	Medium	110	106
Samoa (Western)	Medium	Medium	...	...
Solomon Islands	...	Medium	...	...
Tonga	...	Medium	...	...
Vanuatu	Medium	Medium	...	...
Low Income Food Deficit Countries				

Notes:

¹ HDI and GDI data are not available for the Democratic People's Republic of Korea, the Cook Islands, Kiribati, the Marshall Islands, Nauru, Niue, Palau, the Solomon Islands, Tonga and Tuvalu for HDR 2001 and HDR 2004. HDI Data for Timor-Leste, the Solomon Islands and Tonga are available for HDR 2004 only.

² The Human Development Index (HDI) measures average achievements in three basic areas: a) a long and healthy life (measured by life expectancy); b) knowledge (measured by adult literacy rate and combined primary, secondary and tertiary gross enrolment ratio); and c) a decent standard of living (measured by GDP per capita (purchasing power parity in USD).

³ The Gender-related Development Index (GDI) adjusts the average achievements measured by the HDI to reflect inequalities between men and women in the same areas.

Source: UNDP Human Development Report, 2001, pp. 212-213, 241-242.

Source: UNDP Human Development Report, 2004, pp. 139-142; 217-220.

“Over the last decade some positive trends in HDI and GDI emerged in countries such as Bangladesh, Bhutan, Lao PDR and Nepal. In relative terms countries in South Asia (such as Bangladesh, India, Nepal, and Pakistan) that are also low-income food deficit countries, are notable for their low performance in gender-related development indicators.”

although women directly contribute to food production as cultivators, labourers and family workers in the agriculture sector. Rural women continue to struggle with dual responsibilities of economic production and domestic labour, and most are confronted by poverty, illiteracy, high health risks, inadequate access to productive resources, health and sanitation services and denial of market access in the profitable food sectors. Indeed, it has been observed that “[f]or many, being female and living in rural Asia is doubly discriminatory” (Bloom *et al.*, 2001).

In general, the situation of rural women across Asia and the Pacific region is shaped more by customary laws and social sanctions than by the universal norms of equality that are promoted in the global development agenda. The relative gender equality gains of women in East and Southeast Asia – particularly when compared to South Asia – can be attributed to social norms of equality fostered by the region’s political philosophy, ethnic culture and educational achievements. The visible presence of women in the public realm in East and Southeast Asia tends to mask hidden inequalities in their struggle to provide for their families. In Central Asia, reforms impose new demands on women’s roles in economic and social spheres.

The Human Development Index for women and men in the Pacific Islands is presented in Table 2. Although most Pacific Island countries (such as the Cook Islands, Fiji and Palau) have achieved significant progress in human development indicators in recent decades, others like Kiribati, Papua New Guinea, the Solomon Islands and Vanuatu lag behind considerably. In terms of gender equality, the differences between the situations of women and men in Pacific Island countries are generally less pronounced than in Asia. Although care should be taken in generalising about indices because of the complexity of gender relations in the Pacific, it is nonetheless noteworthy that women outscore men in the human development index (indicated by a score of more than 100 in the gender ratio column) in some Pacific Island countries.

disguises the low human development indicators and extreme gender inequality among rural women in many parts of the continent, especially in South Asia. The South Asian countries struggle under the burden of persisting ***rural gender inequality***

“In general, the situation of rural women across Asia and the Pacific region is shaped more by customary laws and social sanctions than by the norms of equality that are promoted in the global development agenda.”

The differences between the situations of women in Asia and the Pacific Islands may be related to the fact that rural and urban communities in the Pacific are more

Table 2. Human Development Index (HDI) in the Pacific Islands (1999)

	Male	Female	Gender ratio (Male = 100)
Tuvalu	0.565	0.602	107
Palau	0.839	0.882	106
Nauru	0.660	0.700	106
Tonga	0.628	0.664	106
Kiribati	0.493	0.517	105
Samoa	0.579	0.597	103
Cook Islands	0.817	0.835	102
Fiji	0.668	0.675	101
Niue	0.772	0.778	100
Federated States of Micronesia	0.572	0.564	99
Marshall Islands	0.546	0.541	99
Vanuatu	0.428	0.423	99
Solomon Islands	0.389	0.351	90
Papua New Guinea	0.336	0.297	88
Tokelau	n.a.	n.a.	n.a.

Source: UNDP, *Pacific Human Development Report, 1999*, p. 23.

Note: n.a. Not Available.

homogenous than in Asia. In general, women in urban and rural parts of the Pacific Islands have similar employment options and choices. In addition, where major urban areas are developing in some Pacific countries (such as Fiji, New Caledonia and Papua New Guinea), strong networks have also emerged linking people in the towns with those remaining in rural areas.

A macro analysis of women throughout Asia and the Pacific depicts diversity, characterized by disparity in women's economic achievements, political participation, educational advancement and social articulation. *This regional diversity and the prevailing urban-rural duality are a reflection of differences in national priorities for the advancement of rural women, as well as differing policy and resource commitments for interventions to support gender parity in development. It is crucial to acknowledge that although there is an implied recognition that rural gender inequality impedes economic and social progress in predominantly agriculture dependent countries, the commitment to action through a comprehensive policy framework that explicitly advances rural women's economic and social rights is rather weak.*

Overall, the central equality challenges confronting the advancement of rural women in the region are to:

- 1) achieve gender equality gains for women in agriculture and rural communities that are parallel to the gender gains made among urban populations;
- 2) create opportunities for rural women to be the principal agents in poverty eradication for food security in the context of the declining importance of agriculture within national economies;
- 3) achieve household food security with gender equality within the nexus of current intrahousehold economic and social realities;
- 4) prevent further marginalization of rural women in the context of the accelerated pace of global economic integration and the commercialisation of the agriculture sector; and
- 5) empower rural women with the capacity to function effectively in an increasingly complex world that is shaped by new technologies in the agriculture and information and communications sectors.

“Overall, the situation of women in Asia and the Pacific could be summed up as “duality”, characterized by the coexistence of gender equality gains and gender equality gaps, set in the context of the economic dualism of new prosperity and persistent abject poverty. The foremost obstacle to the advancement of rural women in the Asia and Pacific region remains the persisting traditional perceptions of women’s lower social status.”

Overall, the situation of women in Asia and the Pacific region can be summed up as **“duality”**, characterized by the coexistence of **urban gender equality gains** and **rural gender equality gaps**, set in the context of the economic dualism of

contemporary prosperity and persistent dismal poverty. **The foremost obstacle to the advancement of rural women in the Asia and Pacific region remains the persisting traditional perceptions of women’s lower social status.**

Macro scenario of regional women’s economic activity and education

Within developing countries in Asia and the Pacific region, women make up a substantial portion of the agricultural labour force, yet a systematic body of relevant macro data and national information on their roles and contributions is still lacking. The increased number of microlevel gender studies throughout the region is a positive development, balancing the limited availability of macrolevel data. A focus on farming systems has given rise to several studies of gender roles in specific agrozones or locations, whereas the remarkable growth in participatory rural appraisal has provided

qualitative data on the contribution of rural women to local production. However, these studies were produced independently of each other and by researchers with varying skills and expertise. Consequently, they differ in quality, reliability, accuracy and common variables of analyses; thus it is difficult to generalize and extrapolate local findings to national trends. In this context, this review aims to describe the status of rural women drawing upon the existing aggregate data on the participation of women in the labour force and in the agriculture sector, as well as drawing information from diverse sources and case studies, to illustrate rural women's contribution and resource situation in various types of productive work in the food and agriculture sectors. The macro level data presented in Table 3, Table 4 and Table 5 illustrate female participation in economic activity and agriculture and the educational attainment status in the countries in Asia and the Pacific region for which comparative data are available in Human Development Reports (2001 and 2004).

Regional rural women's participation in the agriculture sector

Women's participation in economic activity throughout Asia and the Pacific region, and the relative share of male and female labour force participation in agriculture, are presented in Table 3. The data indicate that in South Asian countries like Bangladesh, Bhutan, India, Nepal and Pakistan, a particularly high percentage – more than 60 percent and up to 98 percent – of women are employed in the agriculture sector. Indeed, more women than men are employed in agriculture in each of these countries. In East and Southeast Asian countries such as Cambodia, China, Lao PDR, Myanmar and Viet Nam women also make a substantial contribution to the agriculture sector. For instance, among the economically active population, women's participation in the agriculture sector in Cambodia is 78 percent, and 81 percent in Lao PDR. The data illustrate that in most Asian countries, a larger number of women than men are employed in agriculture as a percentage of the economically active population. Such a finding is even more significant given that the data for the economically active population in agriculture in Table 3 exclude rural women's unpaid work contributing to value addition in the farm and family milieu. As a result, ***it is reasonable to believe that a considerable proportion of women's contribution to agricultural labour throughout the region is invisible in macro statistics. If unpaid work were included, the figures for female employment in agriculture and rural production would be even higher.***

Although a higher percentage of Pacific Island women are employed in the service sector than in agriculture, Table 3 shows that a significant number of women throughout the Pacific are engaged in various agricultural activities, ranging from lows of 1 to 3 percent in the atoll countries of Kiribati, the Federated States of Micronesia and the Marshall Islands (where there is an acute shortage of arable land) to highs of 80 percent in Vanuatu and 84 percent in Papua New Guinea, where the share of women employed in agriculture exceeds that of men (UNDP, 1999). Although the

Table 3. Female economic activity pattern in selected Asia and Pacific region countries

	Human development status	Food security status	Female economic activity rate (age 15 and above)		Economically active in agriculture as a percent of total population	
	HDI 2004	Low income food-deficit country	Rate (%) 2002	As % of male rate 2002	Female 1990-99	Male 1990-99
Asia						
Bangladesh	138	yes	66.4	76	78	54
Bhutan	134	yes	57.1	65	98 ^a	92 ^a
Cambodia	130	yes	80.2	97	78 ^a	69 ^a
China	94	yes	72.5	86	76 ^a	69 ^a
India	127	yes	42.4	50	74 ^a	59 ^a
Indonesia	111	yes	56.0	68	42	41
Japan	9		51.1	68	6 ^u	5 ^u
Kazakhstan	78		61.2	82	...	...
Kyrgyzstan	110	yes	61.2	85	53	...
Korea, Republic of	28		54.1	71	...	...
Lao PDR	135	yes	74.5	85	81 ^a	76 ^a
Malaysia	59		48.9	62	15	21
Maldives	84	yes	65.4	80	28 ^a	35
Mongolia	117	yes	73.8	88	30 ^a	34 ^a
Myanmar	132		65.8	75	70 ^a	78 ^a
Nepal	140	yes	56.8	67	98 ^a	91 ^a
Pakistan	142	yes	36.8	44	66	41
Philippines	83	yes	49.9	61	27	47
Sri Lanka	96	yes	43.3	55	49	38
Tajikistan	116	yes	58.5	81	45 ^a	37 ^a
Kurkmenistan	86	yes	62.5	82	...	...
Thailand	76		73.0	85	50	52
Timor-Leste	158	yes	73.3	86	...	...
Uzbekistan	107	yes	62.8	85	35 ^a	34 ^a
Viet Nam	112		73.5	91	70	71
Pacific Islands						
Australia	3		56.4	78	4 ^u	6 ^u
Cook Islands			...	...	6	15
Fiji	81		38.7	48	28	47
Kiribati		yes	...	...	1	10
Marshall Islands			...	...	3	28
New Zealand	18		58.0	80	6 ^u	11 ^u
Papua New Guinea	133	yes	67.6	79	84	71
Samoa (Western)	75	yes	...	...	67	73
Solomon Islands	124	yes	80.9	92	85	87
Tuvalu		yes	...	...	34	45
Vanuatu	129	yes	...	...	80	69

Column 1. Human Development Indicator UNDP HRD Report 2004

Columns 4 and 5: calculated on the basis of data on the economically active population and total population from ILO 2002 Table Gender Inequality in Economic Activity.

Columns 6 and 7: ^u indicates use of UNDP data. ^a indicates use of ADB data. Refers to 1990 or the nearest reference year. Figures for Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu refer to economically active population as a percent of the total population over 15 years.

Source: Column 3: FAO LIFDC data; columns 4 and 5: UNDP Human Development Report (HDR) 2004, Table 27; columns 6 and 7: UNDP HDR 2001 Table 24 and Asian Development Bank, 2002. Key Indicators of Developing Asian and Pacific Countries. Table 5 and Table 7.

data in Table 3 display significant differences in the share of women employed in agriculture as a proportion of the economically active population in the Pacific, other studies demonstrate that women and girls play an integral role in family production and resource management systems throughout the Pacific. It is difficult to generalize about the contribution of these women to the agricultural workforce based on the use of different definitions and time periods in data collection and an overall scarcity of data. In some Pacific Island countries – such as Tonga where cultural mores dictate that agriculture is male work – gender roles discourage the formal participation of women in agricultural work.

Across Asia and the Pacific region even within the constraints of data deficiency, it is clear that with few exceptions women form a significant component of the labour force and make a substantial contribution to the agriculture sector. The predominance of women in the agriculture sector is referred to as the “feminization of agriculture/farming”. In general, findings and observations support the notion that the feminization of farming is occurring in many countries across the region. For the countries presented below (Table 4) for which the most current data are available, evidence supports the greater participation of women than men in agriculture. Indeed, there is a consistent trend that women’s participation in the agriculture sector is substantial and on the increase.

The report on Human Development in South Asia 2002 (Mahbub ul Hag Development Centre, 2003) states, “The majority of the 70 percent of South Asians who live in rural areas are women. They are responsible for producing food, yet they have the

Table 4. Female participation in the agriculture sector, feminization of agriculture

Country	Female employment in Agriculture 1995–2002	
	Total (%)	As percentage of male rate
Australia	3	56
Japan	5	113
New Zealand	6	50
Kyrgyzstan	53	103
Korea, Republic of	12	125
Malaysia	14	68
Thailand	48	95
Philippines	25	55
Maldives	5	31
Sri Lanka	49	129
Bangladesh	77	144
Pakistan	73	164

Source: Table 27 Gender equality in economic activity: Human Development Indicators – UNDP Human Development Report 2004.

least access to means of production, and receive the lowest wages, if at all.” In Cambodia, women heads of households are more likely to work in agriculture than male heads of households and yet women are likely to be landless or have significantly smaller plots of land (MWVA, 2004). In the Republic of Korea during the last 10 years the percentage of full time female farmers has increased compared to that of males. Although the comparative wages for women have increased on average 5 percent in the last five years, women’s wages in agriculture and fisheries decreased by 13 percent (Rural Living Science Institute, 2003). According to Song (1999), patterns of the gender division of labour reflect the feminization of agriculture throughout China, where about 80 percent of the rural labour force consists of women. The feminization of agriculture is most evident in the poorer and more marginal areas. Women comprise more than 85 percent of the agricultural labour force in the south western provinces of Guangxi, Yunnan and Guizhou. The percentage of women labourers in some remote mountainous areas is even higher, at about 90 percent.

In conclusion, data confirm that countries with low and medium achievements in human development and gender development indices also tend to be low income food deficit countries and to have a larger share of women in agriculture. Such associated factors raise the interesting question whether rural women’s lack of access to productive resources including technology, capital, agriculture support services and information has an adverse effect on agriculture productivity in low income food deficit countries. In other words, does the persisting indifference to rural women’s contribution to agriculture and the constraints on women’s access to productive resources impede achieving food security goals? It is imperative that gender defined constraints that affect agriculture productivity be systematically investigated in selected food deficit countries that record high risks of hunger in the region.

“The predominance of women in the agriculture sector is referred to as the “feminization of agriculture/farming”. Data confirm that countries with low and medium achievements in human development and gender development indices also tend to be low income food deficit countries, and have a larger share of women in agriculture. Persisting indifference to rural women’s contribution to agriculture and the constraints on women’s access to productive resources might impede achieving food security goals.”

Rural women’s educational status: Regional overview

Female adult literacy rates for countries in the region are presented in Table 5. The table shows female literacy rates as a percentage of male literacy achievement to highlight gender differences. With only a few exceptions women are disadvantaged. The aggregate data available for the two reporting periods of 1999 (HDR 2001) and 2002 (HDR 2004) illustrate incremental gains in female adult literacy rates. Yet

countries such as Bangladesh, India, Nepal and Pakistan still record lower rates of female adult literacy and thus larger differences between males and females in adult literacy gains. Given that the literacy data presented are not disaggregated by place of residency (urban versus rural), it is reasonable to assume that adult literacy among rural women is even lower. For instance, in Bangladesh, the adult literacy rate for

Table 5. Gender patterns in education in Asia and the Pacific region countries

	Low income food-deficit country	Female adult literacy rates (Age 15 and above) HDR 2001		Female adult literacy rates (Age 15 and above) HDR 2004	
		Rate (%) 1999	As % of male rate 1999	Rate (%) 2002	As % of male rate 2002
Asia					
Bangladesh	yes	29.3	57	31.4	62
Cambodia	yes	...	...	59.3	73
China	yes	75.5	83	86.5	91
India	yes	44.5	66	...	...
Indonesia	yes	81.3	89	83.4	90
Kazakhstan		...	...	99.2	100
Kyrgyzstan	yes		...	...	...
Korea, Republic of		96.2	97	...	...
Lao PDR	yes	31.7	50	55.5	72
Malaysia		82.8	91	85.4	93
Maldives	yes	96.2	100	97.2	100
Mongolia	yes	52.1	72	97.5	99
Myanmar		80.1	90	81.4	91
Nepal	yes	22.8	39	26.4	43
Pakistan	yes	30.0	51	28.5	53
Philippines	yes	94.9	100	92.7	100
Sri Lanka	yes	88.6	94	89.6	95
Tajikistan	yes	98.7	99	99.3	100
Turkmenistan	yes			98.3	99
Thailand		93.5	96	90.5	95
Uzbekistan	yes	84.0	90	98.9	99
Viet Nam		91.0	95	86.9	99
Pacific Islands					
Fiji		90.5	96	91.4	99
Papua New Guinea	yes	56.0	78	...	...
Samoa (Western)	yes	78.8	97	98.4	99

Source: Column 1: FAO LIFDC data; columns 2 and 3: UNDP Human Development Report (HDR) 2001, Table 23; UNDP Human Development Report (HDR) 2004, Table 26.

Note: Countries that do not have data presented in HDR 2001 and HDR 2004 are not included in the table.

rural women is only 36.2 percent, compared to 60.0 percent for urban women, and 56.1 percent for rural men compared to 75.4 percent for urban men (Pal, 2001). The data indicate gains in women's education in Asia and the Pacific region over the years. With the exception of only a few countries, women's adult literacy rates are relatively lower than those of men. Countries such as Bangladesh, India, Nepal, Pakistan, Cambodia and Lao PDR demonstrate the considerable inequality in adult literacy attainment between men and women. These countries also have economies highly dependent on agriculture.

Table 6. Gender ratio of adult literacy in the Pacific Islands

Country	Gender ratio of adult literacy (Male = 100)
Tuvalu	101
Palau	94
Nauru	100
Tonga	100
Kiribati	97
Samoa	100
Cook Islands	101
Fiji	97
Niue	100
Federated States of Micronesia	85
Marshall Islands	88
Vanuatu	82
Solomon Islands	52
Papua New Guinea	61
Tokelau	98

Source: UNDP Pacific Human Development Report, 1999, p. 23.

agriculture in Papua New Guinea and the Solomon Islands therefore warrants further exploration.

With the exception of developed countries and a few developing countries like the Maldives, Malaysia and some Pacific Island countries, this analysis shows that the vast majority of rural women in the region lag far behind men in improvements achieved in literacy. Specifically, countries like Bangladesh, India, Lao PDR, Nepal, Pakistan and Papua New Guinea reveal particularly low adult literacy rates for rural women. In the context of the feminization of farming, the overall lack of progress in improving female literacy has serious implications for the future of the agriculture sector's productivity and food security in many countries across the region that

The educational situation of women in countries in the Pacific region is substantiated by data on the gender ratio of adult literacy in Table 6. Data from Papua New Guinea and the Solomon Islands, where female adult literacy is particularly low, confirm that women there have had less access to education than men over a long period (UNDP, 1999). Low literacy adversely affects women's access to information and technology. Poor educational achievement limits their ability to participate in decision making processes at the family, community and national levels. The combined resource constraint in turn impairs their capacity to work for change. The relationship between low literacy rates and the high participation of women in

“With the exception of developed countries and a few countries such as Maldives, Malaysia and some Pacific Island countries, this analysis shows that the vast majority of rural women in the region lag far behind men in improvements achieved in literacy.

Prevailing shortfalls in rural female literacy achievement, coupled with trends towards the feminization of farming, underline the urgency for taking action to improve the skills and knowledge of rural women as a means to advance their technological and economic empowerment.

National actions to empower women with education will be investments in human capital for agriculture and rural development with consequent positive outcomes for household and national food security.”

depend largely on a female labour force with little or no formal education. Poorly educated rural women are more likely to encounter the adverse effects of structural changes in the economy, particularly in an agriculture sector oriented towards the competitive global market, but they are less likely to be able to respond positively.

Prevailing shortfalls in rural female literacy achievement, coupled with trends towards the feminization of farming, underline the urgency for taking action to improve the skills and knowledge of rural women as a means to advance their technological and economic empowerment. National actions to empower women with education will be investments in human capital for agriculture and rural development with consequent positive outcomes for household and national food security.

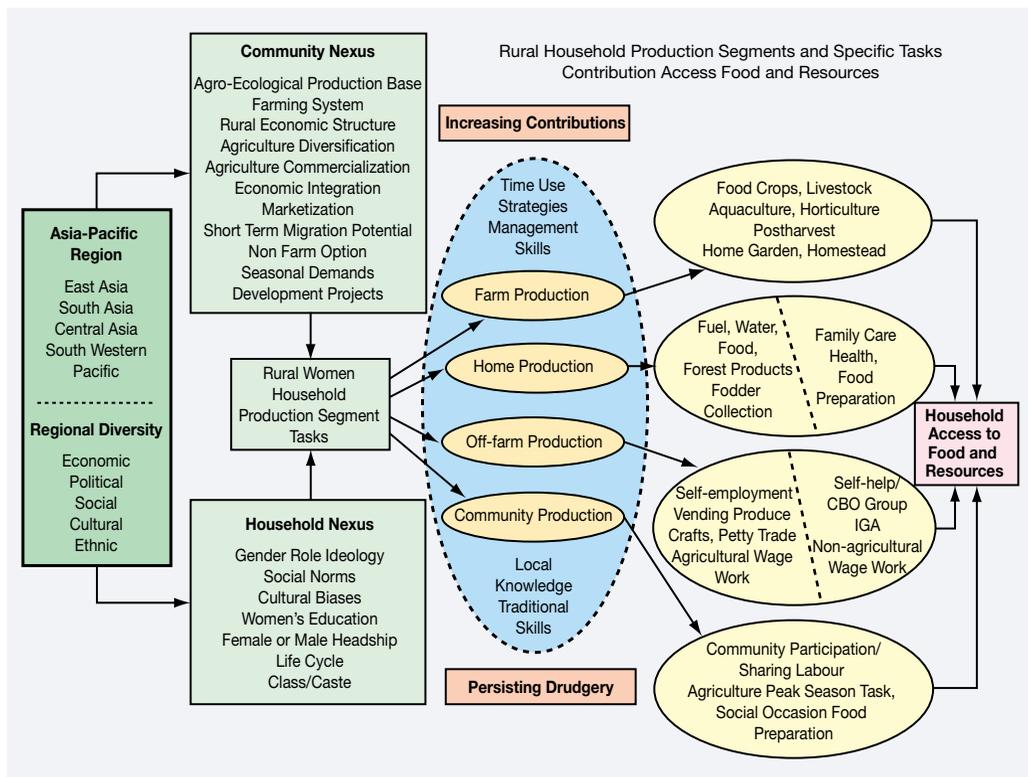
Rural women in household production: Increasing contributions and persisting drudgery

Rural women throughout Asia and the Pacific region make critical contributions to household production and consequently to household and national food security. Although the specific nature of their contribution varies among the various Asian and Pacific countries, clearly the majority of rural women take on an increasing share of household labour and their lives are characterized by mounting drudgery. Various studies produced in different countries in the region provide important findings on gender roles to guide policies and programme interventions that will improve the productivity of rural households. The lack of a systematic synthesis of the findings hinders efforts to build a realistic scenario of rural women’s roles in household food security. However, a general pattern of gender roles emerges from these studies indicating that both rural men and rural women in Asia and the Pacific contribute to farm and home production. Gender roles vary within and between countries determined by agro-ecological systems and crops grown, farming systems adopted, linkages with livestock and fish production and opportunities for off-farm occupations in the rural economy.

This analysis of rural women’s situation in household production synthesizes information from diverse sources into a framework portraying the diversity and complexity of rural women’s contributions. The framework presents linkages among gender specific contributions, drudgery and resource access constraints within the household and community setting. Rural women’s role in household production is considered in terms of farm production, home production, off-farm production and community production. The foundations of rural women’s contributions can be seen in terms of labour and managerial inputs, as well as local and traditional knowledge and expertise. Rural women’s gender roles, the community and household factors that affect women’s roles and responsibilities and that affect their access to food and resources are illustrated in Figure 1.

In the context of economic, political, sociocultural and ethnic diversity in Asia and the Pacific region, the factors shaping rural women’s work and their economic and social contributions can be grouped in two broad categories, namely those imbedded in the community and those embedded within the household. In the nexus of

Figure 1. Rural women in household production: Segments, tasks and access to food and resources



Source: Adapted from R. Balakrishnan. Widening Gaps in Technology Development and Technology Transfer in Support of Rural Women. In Human resources, agricultural and rural development. FAO, 2000.

a community, the economic production base determines rural women's work in the various segments of production. In most countries, rural women actively contribute to community production thus improving social linkages and kinship relationships and facilitating resource exchange in times of need.

In the household nexus, the traditional gender role ideology, founded on culture and religious tenets, determines rural women's participation in household production. Contributions made by women within the household increasingly are affected by changes external to the household. For instance, rural poverty has acted as a push factor whereas new economic opportunities outside the household have emerged as pull factors encouraging rural women to cross customary gender role boundaries and to participate in the economy outside the household, often in farm production and off-farm production. Yet although recent trends in agricultural diversification accompanied by commercialisation and marketisation have generated opportunities for off-farm paid work, rural women's poor educational attainment, inadequate training and social immobility often have prevented them from responding to these opportunities. Even though short-term internal migration induced by subsistence economies and seasonal dimensions of agriculture production sometimes bring new work patterns for rural women, certain gender roles in household production tend to remain inexorably fixed. Across the region, work inside the home space that involves family care giving is almost always seen as women's work. The women are primary care givers and domestic workers within the household space in every stage of the life cycle and this responsibility of care giving is expanded to serve the community's needs too.

Rural women's increasing economic contributions

In general, rural women's work patterns are marked by change and continuity as well as flexibility and rigidity (Gurung, 1999). Change and flexibility are characterized by women taking on new roles in farm production, off-farm production and community production to ensure the family's access to food and household resources. Continuity and rigidity relate to social norms that define gender roles and dictate that rural women and girls should assume home production responsibilities in rural households. The intrahousehold decisions on allocation of labour often are biased and relegate domestic tasks to women and girls. In the region, tradition driven socialization defines the tasks and taboos in the economic and social spheres among rural women. Increasingly, faced with economic pressures, gender roles may become flexible to enable women to engage in work traditionally regarded as belonging in the male domain. However, the rigid gender role definitions dictate that men should not perform household tasks. A pattern of gender roles marked by diversity in flexibility and change as well as convergence in rigidity and continuity is described with illustrations from various countries.



South Asia



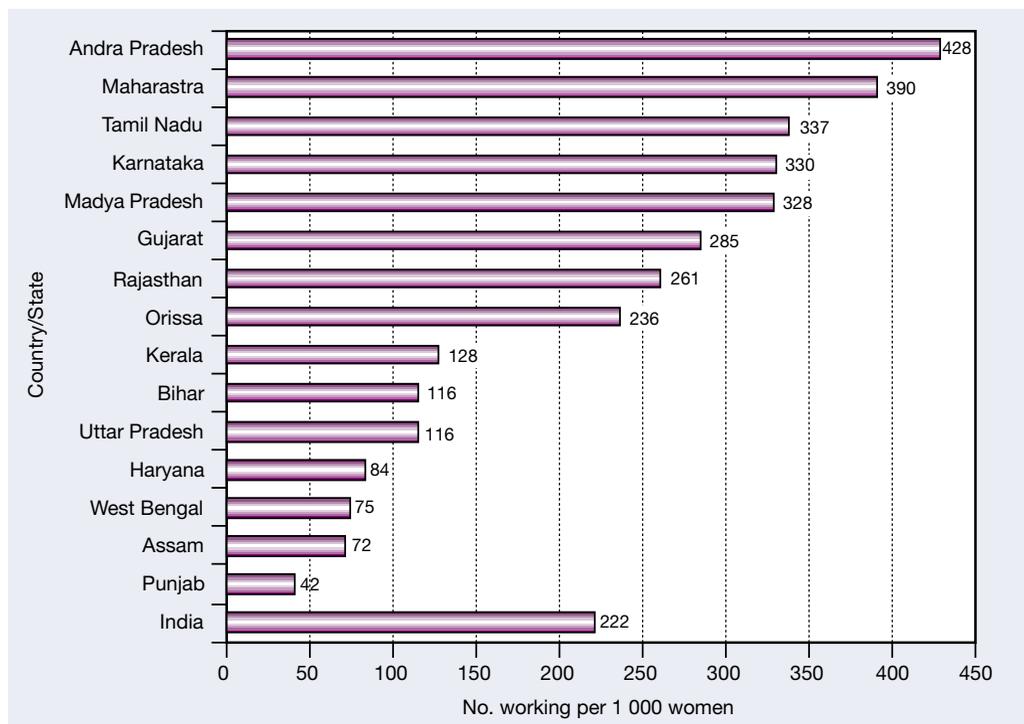
South Asian rural women

In **Bangladesh**, participation in economic activities varies considerably according to gender, the type of activity and the place of residence. Rural women traditionally have played an important role in a wide range of income-generating activities. These rural production activities include post-harvesting, cow fattening and milking, goat farming, backyard poultry rearing, pisciculture, agriculture, horticulture, food processing, cane and bamboo works, silk reeling, handloom weaving, garment making, fishnet making, coir production and handicrafts. A significant number of rural women, particularly from extremely poor landless households, also engage in paid labour in construction, earthwork and field-based agricultural work, activities that traditionally have fallen within the male domain. The tradition of female seclusion is overlooked to provide for the economic needs of the family. Unpaid family workers, among whom women are disproportionately represented, are a major source of labour in the agriculture sector in Bangladesh (Pal, 2001).

One study of intrahousehold organization of rice production (based on a relatively small sample) found that the extent to which male and female household members are involved in irrigated agriculture and irrigation management is related to the amount of land owned by the household and to religion. It suggests that female family labour plays a more important role in rice production than male family labour, and points to differences among households in different economic categories. For instance, a higher percentage of female labourers from middle class households are involved in rice production (mostly transplanting and crop processing tasks) compared to marginal farmer households. In the middle strata, women in Hindu male-headed households contribute 54 percent of all labour in rice production, compared to 31 percent in Muslim male-headed households. When a comparison is made of labour allocation based on tasks, a modified labour pattern emerges. Apart from the traditional crop processing tasks, female family labour also is used for making seedbeds, uprooting seedlings and transplanting, fertilising, weeding and harvesting, all traditional male activities. Women, almost equal to the contribution of male family labour, carry out some 40 to 50 percent of field irrigation and non-farm water management (Jordans and Zwarteveen, 1997).

In **Bhutan** agriculture is the primary economic activity in rural areas; other dominant activities are kitchen garden and livestock. Rural women engage in main economic activities and are main workers of supplementary activities with some differences among the locations. Certain regions have more women main agricultural workers than men with distinct divisions of labour on gender lines (RGB and UN agencies 2001).

In **India**, the national rural female work participation rate is 22 percent according to the National Sample Survey Organization (1996). However, as shown in Figure 2, this national average masks significant regional variations among states as a result

Figure 2. India: Participation of rural women in India in the labour force

Source: K. Menon-Sen and A.K. Shiva Kumar, *Women in India: How Free? How Equal?*

of diversity among population groups, agro-ecological systems and the social and economic organization of production. The level of mechanization in the agriculture sector also helps to explain the variations in women's participation in the rural labour force. For instance, in Punjab where the Green Revolution ushered in prosperity and where agriculture is highly mechanized the rural female work participation rate is the lowest. By comparison, Andhra Pradesh, which depends on women for labour-intensive crops like cotton and groundnut that are grown in dry conditions, shows the highest level of rural female work participation.

Social customs, traditions and cultural considerations as well as cropping patterns and cultivation practices affect the type of work performed by men and women in India. A study by IFAD in the tribal areas of Madhya Pradesh in 1997 recognized male-female sharing of domestic and productive work. It found that both women and men work in agriculture, collect and sell non-timber forest products during certain months of the year, and engage in wage labour. However, this equality in work activities was not reflected in decision-making concerning income allocation in which men played a dominant role (IFAD, 1997). Another study that covered three ecologically distinct and fragile regions in India concluded that while agriculture is a household enterprise, social norms demarcate the division of labour based on sex

and age. In general, land preparation and ploughing are seen as the responsibility of men, and activities like transplanting and weeding are regarded as women's jobs, whereas both men and women perform activities like harvesting and post-harvesting. However, in certain areas, at times of heavy demand for labour, women also undertake some of the heavier traditional male activities like land preparation. In the case of little millet cultivation in the Kolli Hills, women are responsible for most agronomic practices and post-harvest operations including seed storage, supply and exchange (Rengalakshmi *et al.*, 2002).

In the **Maldives**, changes in the fishery sector have reinforced the segregation of tasks between the sexes and exacerbated the inequalities between them. Traditionally, men were engaged in fishing and women in small-scale fish processing. The resulting product, known as "Maldives fish", was recognized as a delicacy in countries like Sri Lanka and exported widely. At the time when "Maldives fish" formed the country's main merchandise export, the participation of women in the labour force was greater than 50 percent. This was one of the highest rates in the developing world at the time. Since then, modernization of the fishing industry has enhanced opportunities for fishermen, enabling them to increase their catch and sell it directly to collection vessels, which subsequently export it in frozen form or give it to canning factories for processing. Consequently, opportunities for women to engage in fish processing were seriously curtailed, causing the female labour force participation rate to drop to 21 percent in 1985, and 19 percent in 1996 (Dayal, 2001). At the same time, women became more heavily involved in subsistence agriculture, practiced as home gardens in small plots, and seed selection (Kanvinde, 1999).

A substantial proportion of **Nepalese women** (40 percent) are economically active. Most of these women are employed in the agriculture sector, the majority working as unpaid family labourers in subsistence agriculture characterized by low technology and primitive farming practices. Indeed, with as men increasingly move out of farming, agriculture is becoming increasingly feminized (Acharya, Acharya, and Sharma, 1999). In addition to a culturally based division of labour, women's work load has increased because of: i) geographic and infrastructure factors; ii) out-migration and iii) new activities promoted under development projects (IFAD, 1997). Important changes in the traditional agropastoral economy and increases in non-agricultural activity have created formal and non-formal employment opportunities in the export-led industrial market which relies heavily on low wage female labour. This new phenomenon has arisen in response to a mix of basic survival needs and new desires generated by increased exposure to the world beyond the village. A nationwide study has identified three resource development strategies – the family farm economy, the local market economy and short term migration – adopted by rural

"In Nepal, in addition to a culturally based division of labour, women's work load has increased because of i) geographic and infrastructure factors; ii) out-migration and iii) new activities promoted under development projects."

families. About 67 percent of women participate in the family farm economy and 59 percent in the local market economy, whereas 75 percent engage in short term migration. It should be further noted that the strategy adopted by women varies according to busy and slack agriculture periods (Shtrii Shakti, 1995).

In **Pakistan**, women are key players in the agriculture sector which employs almost 12 million women in the production of crops, vegetables and livestock. The cotton crop, accounting for half of national export earnings, depends heavily on female labour. Women have the exclusive responsibility for cotton picking, exposing themselves in the process to health hazards emanating from the intensive use of pesticides (Bari, 2000). One study on gender in Pakistan found overwhelming evidence of a division of labour based on gender and family status in which men are responsible for “market” work (such as farming, herding and other income generating activities) and women are responsible for “home production” activities (Fafchamps and Quisumbing, 1999).

“South Asian rural women contribute to agriculture and rural production as unpaid family labour in the farm and in the home as well as increasingly as agriculture wage labourers and producers of crafts and processed products. By comparison, in many parts of South Asia (notably Bangladesh and India), purdah and other cultural norms traditionally have restricted women’s movement and limited their participation in fish harvesting.”

Since the days when women from southern India were recruited to fulfil the labour demands of colonial plantations in **Sri Lanka** and thus become the first wage earners in the country, women have played an important role in the agriculture sector. In 1997, about 42 percent of the female labour force in Sri Lanka was engaged in agricultural activities. Gender roles in *Chena* (slash and burn cultivation), rice paddies and home gardens vary according to the cultivation practiced in these systems of production. Whereas men participate extensively in land preparation, sowing, the application of chemical fertilisers and pesticides and marketing, women take on activities related to transplanting, post-harvesting and household level processing of home garden produce (M.S. Swaminathan Research Foundation, 1999). Yet despite the contribution of women to the sector, their role has tended to be seen as secondary to that of men. Consequently, women farmers in Sri Lanka are normally seen as “farmers’ wives” rather than as economic producers

“Women farmers in Sri Lanka are normally seen as “farmers’ wives” rather than economic producers in their own right.”

in their own right. The failure to develop local industries in the rural sector has further limited women’s access to off-farm employment opportunities (Jayaweera, 1999).



Southeast Asia



Southeast Asian rural women

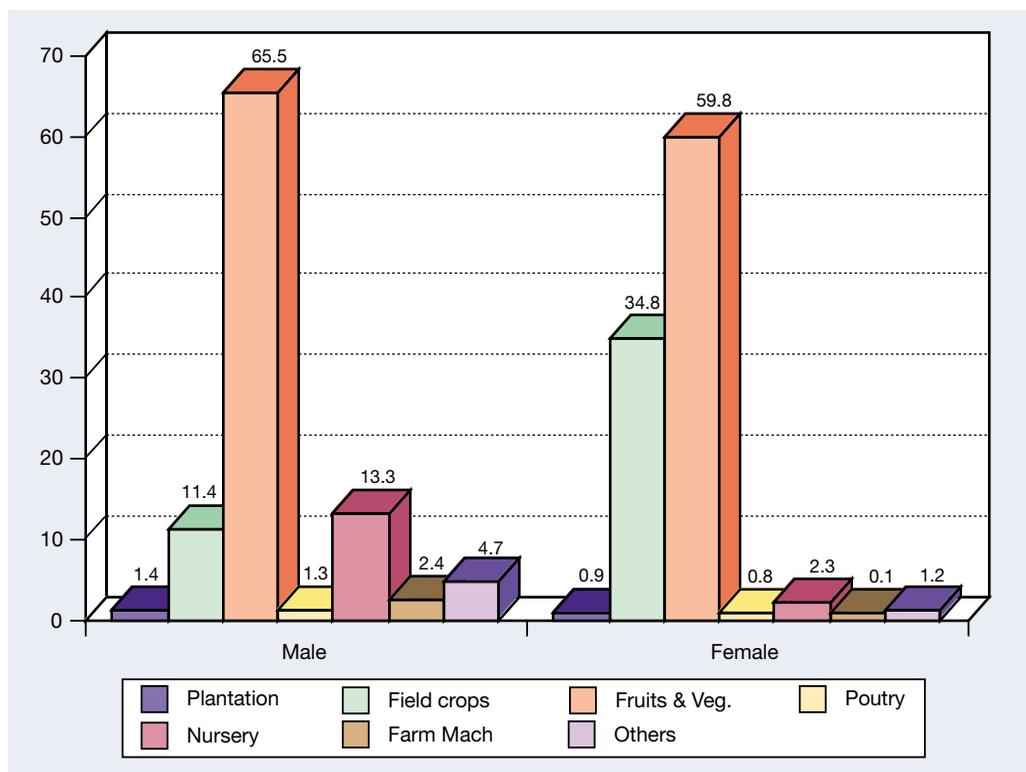
According to the **Cambodia** Human Development Report, 55 percent of the labour force in the agriculture, forestry and fishery sectors is made up of women (Royal Government of Cambodia, 2000). Another report finds that nearly 80 percent of workers in the agriculture labour force are engaged primarily in subsistence agriculture; women comprise 56 percent of the primary workforce in subsistence agriculture and 54 percent of the workforce in market oriented agriculture. Most of these women are unpaid family workers (MWVA, 2004). The organization of labour appears to be centred on household availability of labour, exchange labour and hired labour. As such, men and women share many farm activities (such as carrying water and fuel wood and tending livestock) within the wide variety of tasks carried out by household members (JICA, 1999).

In **Indonesia**, women represent the mainstay of rural households, providing family as well as farm labour. Agriculture accounts for the highest share of rural employment, with some 63 women working in agriculture per 100 men. Since most rural households control small amounts of land or have no land at all, rural women often seek to supplement household income and food security through off-farm employment in small and medium enterprises, some of which have links to agricultural production (Mugniesyah, 2002). In Bali, women are active in fish marketing, but in South Sulawesi men completely control marketing (Felsing et al., 2000).

In **Lao PDR**, studies have recorded that women and girls perform 50 to 70 percent of agriculture and productive tasks in addition to household activities. Women farmers produce mostly for household consumption, and rural women obtain as much as 30 percent of the family diet and household needs from foraging (UNICEF, 1996). Gender roles and the involvement of women in household decision-making processes related to agriculture and aquaculture vary by region and ethnic group (Murray and Kesone, 1998).

Malaysia, one of the East Asian success stories, experienced a fundamental shift in employment patterns over the last 15 years. Though previously major sources of Malaysian women's employment was agriculture, forestry, livestock and fishing, these sectors in 1995 employed just 15.9 percent of female workers and 20.3 percent of male workers. Malaysian women have taken advantage of the economic transformation to move into relatively better paid opportunities in other sectors. At present, the manufacturing sector is the single largest employer of women, followed by community work, the public sector, social services, trade and agriculture (Ahmad, 1998). Agriculture sector data from various studies show different participation levels of women according to different crops (Figure 3). Women are most extensively involved in field crops (working on estates and smallholdings) such as rubber, cocoa, coconut, coffee, tea and other diversified short term cash crops cultivation and mixed farming. Very few are directly involved in oil palms, except to work as labourers for

Figure 3. Malaysia: Percentage distribution of employed persons in selected agriculture occupations by sex, 1995



Source: J. Mazud, and L. Paim. *Women in Agriculture and Rural Economy: Malaysia*.

weeding (Masud and Paim, 2004). In irrigated rice cultivation areas, mechanization has displaced female labour to a large extent. A study conducted by Kumi *et al.*, (1996) shows that despite mechanization, male farmers still depend on family labour for certain farm activities. Women's participation in rice production areas has declined. In other sub sectors of agriculture, however, (apart from oil palm and irrigated, mechanized rice production), the percentage and extent of women's involvement is still high.

Findings from a study completed by FAO (Khin Pwint Oo, 2003) in **Myanmar**, record rural women's key contributions to household food security marked by diversity in work patterns in agriculture and food production, but there is evidence of gender role flexibility as occasion demands. Traditionally, men's agriculture activities include land preparation, ploughing and levelling fields, whereas sowing, transplanting, weeding and reaping are women's work. Post-harvest activities of threshing, winnowing, seed management and transporting grains from field to home is the work of both men and women. Women from poorer households are more involved in agriculture fieldwork than those from less poor families. Poorer women are also

heavily involved as family farm workers and agricultural labourers to contribute to family income and food security. Women also participate in the cultivation of secondary crops and work as waged agricultural labourers in cash crop production. Home garden cultivation is the responsibility of women.

The majority of working women in the **Philippines** – more than 50 percent in 1997 – continues to work in the agricultural sector. Women also dominate the rural informal employment market (APEC North-South Institute, 1999). Data from five rice-growing villages indicate that women tend to work as much as men in both farm and non-farm activities (Estudillo *et al.*, 2001). It is now documented and recognized that the contributions of female family members are higher in rainfed and upland rice farming environments whereas the contributions of hired female labourers are higher in irrigated rice environments (Paris, 2000). The contribution of women to livelihood appears to be evident in the sweet potato-based livelihood systems of the Philippines. They have been known to contribute a more significant part of the labour force in sweet potato production than in any other crop. They also are active traders of sweet potato in local markets (Sister, 2002).

In **Thailand**, women play a major role in rural production systems and income generation; in 1995 about 40 percent of women worked in agriculture. All members of smallholder households, regardless of age and sex, participate in agricultural production. Yet the participation of rural women in the labour force is highest – approximately 80 percent – among older age groups (30–34, 35–39, and 40–49 years) (Thonguthai *et al.*, 1998). As opportunities for wage and self-employment outside rural households have increased along with economic transformation, the participation of rural women in the economy has begun to resemble that of urban women. A study in one neighbourhood of Bangkok confirmed the importance of women in marketing agriculture produce. A survey of ten agricultural produce markets indicated that about 80 percent of fruit and vegetables stalls were owned by women (Korsieporn, 2000).

In a study of gender roles and technology needs in six villages of Thailand it was found that rural women in all of the villages played a major role in all aspects of paddy production, including seed preparation, transplanting, weeding, fertilizer application, harvesting and seed preparation (Balakrishnan *et al.*, 2003). Given the lack of appropriate technologies for most paddy farming activities, women perform labour-intensive tasks with the use of simple and traditional technologies. By comparison, men are responsible for those aspects of paddy production that are

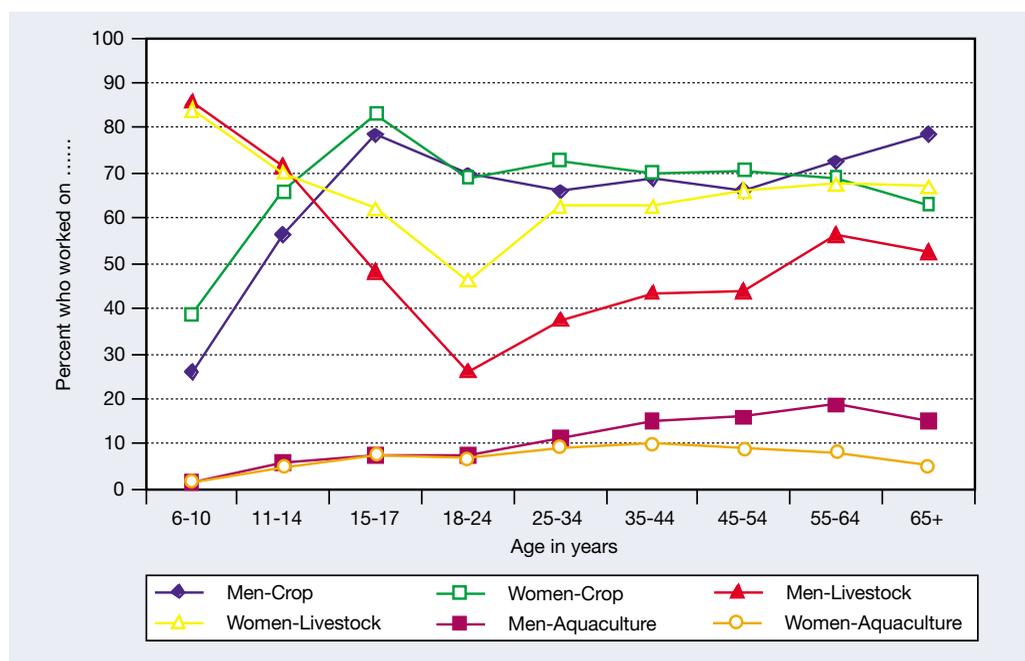
“In Southeast Asia countries like Malaysia, Thailand and Viet Nam, women normally play an important role in processing and marketing fish.”

mechanized such as use of the tractor for ploughing. Similarly, in orchard (such as guava and mango) and cash crop production (such as peanuts and mung beans), women engage in labour-intensive, simple and low prestige tasks, whereas men are responsible

for mechanized tasks. For instance, in cassava production women are responsible for weeding, hoeing and digging at harvest time.

In **Viet Nam**, data from the recent Viet Nam Living Standards Survey have demonstrated the extensive participation of women in the agriculture sector. As illustrated in Figure 4, the data show that the contribution of rural women exceeds that of rural men in livestock production, and equals that of men in crop production. The survey data further revealed that in the five-year period between 1992/93 and 1997/98, wage employment increased from 26 percent to 32 percent among male and female adults in the 18 to 64 year age group. Moreover, in the case of women, most of this increase occurred in rural areas; there was no change in urban areas. Another recent study corroborates these findings regarding women's contributions to rural production systems and reiterates the major role of women in livestock rearing. It found that women's labour accounts for an average of 69 percent of a household's total labour (Desai, 2001).

Figure 4. Participation of the labour force in crop production, livestock maintenance and aquaculture in Viet Nam



Source: J. Desai, *Viet Nam through the lens of gender: Five years later. Preliminary results of second Viet Nam living standards survey.*



East Asia



East Asian rural women

In **China**, large variations in agro-ecological characteristics, crops grown and livelihood options result in wide differences in the situation of rural women. The pace of economic growth and the move towards a market-based economy has quickened during recent years, bringing a number of changes that have had both positive and negative influences on the lives of rural women throughout the country. Although some rural women have benefited from emerging economic opportunities in the expanding economy, others have encountered threats to their rural livelihoods and a greater struggle in their daily lives.

An IFAD study found that rural women in China spend more time in their reproductive role (56.7 percent) than in their productive role (43.3 percent). It is important to note, though, that there were considerable variations in time allocations among the provinces studied, and that time use patterns varied significantly by age and education. For instance, women over the age of 50 spend most of their day on housework, as physical labour in the fields is considered too taxing. Middle-aged women play a key role in the home and share crop and livestock activities with men. As in many places, younger women often prefer alternatives to farming whenever possible. The study also recognized seasonal differences in time use patterns in rural areas. For example, women might work from 8 to 10 hours in the fields during the busiest agricultural season, and they engage in green house production and other income generating activities during less busy periods (IFAD, 1995).

A case study in the mountainous Yunnan Province found that women perform 80 percent of agricultural work and engage in all activities (including cultivation, crop management, harvesting and marketing) with the exception of ploughing. The involvement of women in agriculture appeared to be determined by their social position in the family. Younger women and middle-aged women are responsible for most agriculture and forestry activities (such as collecting fuel wood, non-timber products and pine leaves for barn yard manure) during the slacker farming season from November to January. Women older than 60 years do not perform any agricultural activities, while girl children help with household chores and look after their younger sisters or brothers. The efforts of boy children are relatively less structured (Jieru, 1999).

A study from a different province in China found that women are not uniformly

“In China, large variations in agro-ecological characteristics, crops grown and livelihood options result in wide differences in the situation of rural women. The pace of economic growth and the move towards a market-based economy has quickened during recent years, bringing with it a number of changes that have had both positive and negative influences on the lives of rural women. Although a segment of rural women has benefited from emerging economic opportunities in the expanding economy, others have encountered threats to their rural livelihoods and a greater struggle in their daily lives.”

excluded from off-farm employment opportunities and that economic development does not uniformly increase gender inequalities within Chinese households. It observed that although men are more likely than women to obtain off-farm employment, women's opportunities for off-farm work improve significantly when the coexistence of local and regional marketisation creates a shortage of male workers and compels employers to hire women. It further noted that the relative size of contributions to household income for male and female non-farm workers narrows incrementally with increased marketisation. At the same time, women who are left to perform agricultural work are more likely to become heads of household, a position that brings greater household decision-making power to female family members (Matthews and Nee, 2000).

Nomadic households in **Mongolia** play a part in the productive and reproductive economies; rights and responsibilities within households are differentiated by gender. Although traditional nomadic herding maintained clear distinctions between men's and women's work marked by a mix of cooperation and specialization, the emergence of privatization has blurred some of the role distinctions with more women and boys taking on work that traditionally was perceived to be in the male domain. Privatization also provided opportunities to increase herd size and expand milk processing, traditionally the work of women in the *ger*, which in turn has resulted in more work for women. Although the volume of paid and unpaid productive work that is regarded as women's responsibility has increased, some traditional work divisions are strictly maintained. As a result of this flexibility in some work activities (where women and boys take on men's work) and continuing rigidity in others (where women's tasks remain theirs alone despite an increase in workload), the overall work load has intensified for women (UNIFEM, 2001).



Central Asia



Central Asian rural women

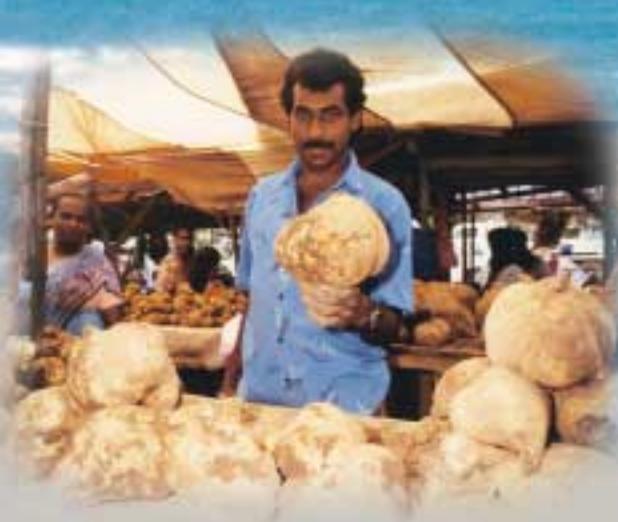
In 1998, **Kazakhstan's** rural areas incomes predominantly depends on the agricultural sector which employs approximately half of the female rural labour force (ESCAP, 1999). In 1998, women accounted for about 3 513 million of the agricultural population (total of 7 107 million) which accounted for 46.2 percent of the entire female population. The wages for agricultural workers is the lowest among all sectors of employment. Economic difficulties complicate the lives of rural women (Zholaman, 1999).

Economic reforms in **Kyrgyzstan** affect the economic conditions of rural women. In 1997, female employment in the agriculture sector was 37.5 percent which had decreased slightly since 1991. Home farming helps to ease economic hardship. The self-employment trend shows that women work in home farms, take the produce to market and sell their home garden produce. Most women also take up dairy and animal farming (Kumskova, 1999).

In **Tajikistan**, provisional official statistics show that women's relative share of agriculture, forestry and fishing increased from 18.8 percent in 1991 to 29.3 percent in 1998, and that women earned an average monthly wage of just \$6 in 1998. The agriculture sector employs 54.1 percent women and 46.2 percent men. Women make up about 8.5 percent of collective farmers. Employment status compared by type of enterprise and ownership shows that under the collective farmer category 29.9 percent men and 40.6 percent women are represented; under the private farm category, 2.2 percent men and 2.4 percent women are included. Women's low wages are a function of women's occupational segregation into low paid occupations such as education and health and low skilled occupations such as agriculture (ADB, 2000).

Women in the rural areas of **Turkmenistan** make up 22.2 percent of the employed labour force. The main areas of employment for rural women are farmer associations, farms and the informal sector. Women account for 64 percent of home farm workers and almost 71 percent of household workers. Hence, widespread home farming and lease of agricultural land result in the use of women and children as unpaid labour (ESCAP, 1999).

In the Republic of **Uzbekistan**, in 1998, most of the employment was still found in the rural areas with 39 percent employed in agriculture; men accounted for 60.3 percent and women for 39.7 of the total agriculture and forestry workforce. In agriculture, men work as highly qualified machine operators whereas women remain unqualified, seasonal labourers. Female employment in agriculture was high. Privatization has not provided rural income and employment opportunities due to the interplay of complex factors. Women, however, have taken advantage of other opportunities such as food processing and the sale of agriculture products from their home gardening (ADB, 2001).



Pacific Islands



Pacific Islands' rural women

In the countries of the Pacific Islands, smallholders represent the largest production unit, producing goods for use in the home, for exchange, and for sale in domestic and export markets. Traditionally, women and girls assumed primary responsibility for food production and family food security by growing crops in homestead gardens, rearing small livestock, producing handicrafts and engaging in other value added activities (such as copra making, fish drying, weaving, coconut oil production, preparation of traditional medicines, planting materials and seeds). Men, on the other hand, engaged in cash cropping. Over time, as cash cropping acquired a higher status for its economic value and contribution to national development, the various kinds of agricultural work performed by women remained associated with food security and were regarded as somewhat lesser in importance in the emerging economic model. Although some reports indicate that agricultural production may be declining in the Pacific, the limited data available show that women's role in agriculture is increasing throughout the entire production and post production cycle, as shown in Table 7.

The most current data on women and men's work in the family smallholder system comes from the 1999 Samoa Agricultural Survey, which indicates that women of all ages are engaged in farm management, production and marketing. According to the survey, the overwhelming majority of farm operators are male (17 993) as opposed to female (185); two out of every five farm labourers are female; women are

Table 7. Type of weekly farm and craft activity by age and sex in Samoa

Life cycle Age	Farming		Farming assistance		Farming sales		Handicrafts	
	Male	Female	Male	Female	Male	Female	Male	Female
10–14	177	0	5 020	1 481	309	113	218	1 088
15–19	1 756	70	4 487	1 346	572	180	232	1 813
20–24	3 057	13	2 556	1 767	709	275	257	2 470
25–29	2 637	11	2 041	1 839	858	261	197	2 446
30–34	2 441	13	1 448	1 463	889	373	254	1 976
35–39	1 861	44	1 486	1 329	623	300	189	1 927
40–44	1 774	0	831	1 354	651	357	145	1 838
45–49	1 130	10	815	1 116	378	217	97	1 276
50–54	1 028	13	716	817	340	253	103	1 253
55–59	777	0	639	614	250	120	183	1 394
60–64	699	0	830	356	263	90	212	1 110
65–69	393	10	576	241	172	31	188	966
70+	264	0	338	108	86	13	240	746
Total	17 993	185	21 781	13 831	6 100	2 583	2 515	20 303

Source: Samoa Agricultural Survey (1999).

responsible for almost half of agricultural trading and women outnumber men in handicraft production by a ratio of nine to one. Given the similarities with neighbouring countries, this data set reinforces the view that sharing tasks by gender is the norm in family systems throughout the Pacific Islands.

The findings of the Samoa Agricultural Census further reflect the role of women in waged agricultural employment and point to new trends for women to become involved in part-time farming. Women in part-time employment spend an average of 58 hours per month in agriculture, which is close to the amount of time recorded for agricultural workers (63 hours) and more than that of male part-time workers (53 hours). Women in full-time waged employment spend roughly 8 hours per week working in agriculture in addition to their full-time jobs. These trends, which also have been observed in neighbouring Pacific Island nations, may reflect a loss of confidence in agriculture, the desire to spread risks, the need to supplement incomes because of the increased cost of living and/or the low degree of regular or specialized input required. High levels of female participation in part-time agricultural work also reflect unique local factors. For instance, in Samoa those factors probably are tied to the shortage of agricultural labour caused by migration, whereas in Tuvalu they point to the absence of men because of employment on seagoing vessels.

“In the countries of the Pacific Islands, smallholders represent the largest production unit, producing goods for use in the home, for exchange, and for sale in domestic and export markets. Traditionally, women and girls assumed primary responsibility for food production and family food security by growing crops in homestead gardens, rearing small livestock, producing handicrafts and engaging in other value-added activities. Sharing tasks by gender is the norm in family systems throughout the Pacific Islands.”

Studies indicate that women in Fiji and Samoa play a significant role in the dairy industry, and that women in Vanuatu are involved alongside men in pasture establishment, weeding and fencing on 73 percent of cattle smallholdings.

Studies from Fiji show that among inhabitants of the same village, women recognize and use more plants, which can be explained by their multiple family and community responsibilities (Lechte, 1998).

Worsening economic conditions in Fiji, the Solomon Islands, Vanuatu and Samoa have stimulated a marked increase by women in informal trading, particularly in agricultural goods (such as crops, marine goods, livestock, handicrafts and cooked foods), which augurs well for family food security. A random sample from the Solomon Islands shows that some 66 percent of women engage in informal trade, compared to 70 percent in Samoa. The survey also underlined the importance of income from informal trading in these countries where it represents the single source of income for as much as 70 percent of families in the Fiji sample, 33 percent in the Solomon Islands and 24 percent in Samoa. Cook Islands’ women’s significant involvement in agriculture is reflected in their extensive role as market gardeners to

meet local consumer demand that serves the tourism industry. Women also tend to raise livestock, do subsistence fishing, process fish, make copra and do pearl farming. These women's role in agricultural activities changed from that of traditional domestic input to small commercial producers within the last 20 years. Many women continue as unpaid workers for family and community endeavours (Kingstone, 1995).

Deep-sea fishing, an essential part of local economies in the Pacific Islands, traditionally was the domain of men; women and girls traditionally gleaned the reef and inshore lagoons for marine foods as shown in Table 8. Recently, increasing global demand for marine products, new technology (for instance in the aquaculture and seaweed industries), depleting fish stocks and the need to earn cash have initiated changes in the traditional gender divisions of labour. Consequently, women now are more involved in fishing than previously, particularly in atoll communities like Kiribati where marine products have become key export goods.

Table 8. Women's participation in fishing activities in South Tarawa by type of activity and place

Place	Type	Women's participation (percent)
Lagoon	Fishing rod	35–50
	Hand lining	5–10
	Gillnetting	5
	Seaweed farming	at least 80 in the outer islands
	Shellfish	95
	Lantern fishing	75
Reef	Collection	50
	Fishing rod	5–10
	Gillnet	5
	Lantern	3–5
Ocean	Pole/line	0
	Trolling	0.5
	Drop and deep bottom lining	0.5

Source: Tekinatiti T. and Wichman V. SPC Report Materials from Focus Group Meeting, Fisheries Division, representatives of fisherwomen, and Atoll Research Programmes/USP Research Staff (September 1995).

The above review examined the working lives of rural women in various Asian and Pacific Island countries and presents evidence of the crucial contribution by women of all ages to food production and food security across the region. The extensive and diverse responsibilities taken up by rural women in local agricultural and non-farm production systems are established in the community and household nexus in which they function, and are influenced by national and global factors beyond their control.

Persisting household drudgery

Rural women throughout Asia and the Pacific region work long hours and confront drudgery as a reality of their daily existence. Poor women pursue a number of survival strategies to earn enough cash to feed and maintain their families; one indisputable facet of these strategies is the frequent and inordinate extension of working hours inside and outside the home. A review of case studies provides evidence suggesting that poor access to basic services such as water and sanitation, coupled with the need to search for fuel and food supplements, extends and intensifies the typical day of a rural woman, while adding innumerable difficulties.

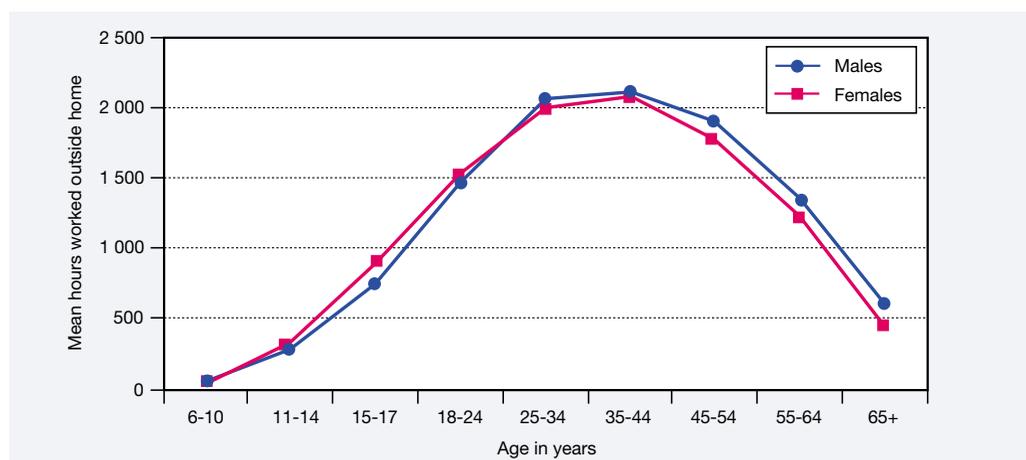
A case study of mountain women in Darjeeling, India recorded their increased difficulty to find fuelwood in the forest following deforestation, and the consequent addition to women's workload and the toll on their health (Gurung, 1999). Similarly, women in Nepal take on the double burden of working for the family and on the farm (Acharya, Acharya, and Sharma, 1999). A recent IFAD study found that women in Nepalese hill districts had heavy workloads and high levels of physical vulnerability, albeit with differences between classes and castes, working for about 16 hours per day compared to only 9–10 hours for men. In addition to being overworked, the study found that many of these women also were hungry (IFAD, 1999). In Pakistan, the plight of many rural women and girls is little different. Not only are their responsibilities for water fetching, food preparation, agricultural and other household duties physically demanding, but they also rob girls of the opportunity to attend school (Bari, 2000). At the same time, the "invisibility" of women as farmers means that little attention is paid to perilous aspects of their work such as the detrimental health effects of pesticides on Pakistani cotton pickers who are exclusively female (Nathan *et al.*, 1999).

In China, a village study in Yunnan Province found that women are responsible for fetching fuel wood and typically spend two to three hours per day carrying 70–80 kg of fuel wood from far mountainous areas to their homes (Jieru, 1999). According to a study from the Philippines, rural women work up to 16 hours per day, much longer than men (APEC North-South Institute, 1999). In Mongolia, where the move toward privatization has increased the workload of female herders, lengthening their (already long) working day, women's labour appears to be over utilized, though no reliable time use data based on systematic study are currently available (UNIFEM, 2001).

In Central Asian countries in transition, the economic reforms have created economic uncertainty and hardship. To provide for their family's needs, rural women take up additional work in home farms, dairy and livestock sectors. Rural families are characterized by large family size demanding time for care giving tasks. The service sector to assist rural households is yet to evolve adequately. These factors contribute to women's work load and drudgery (ESCAP, 1999).

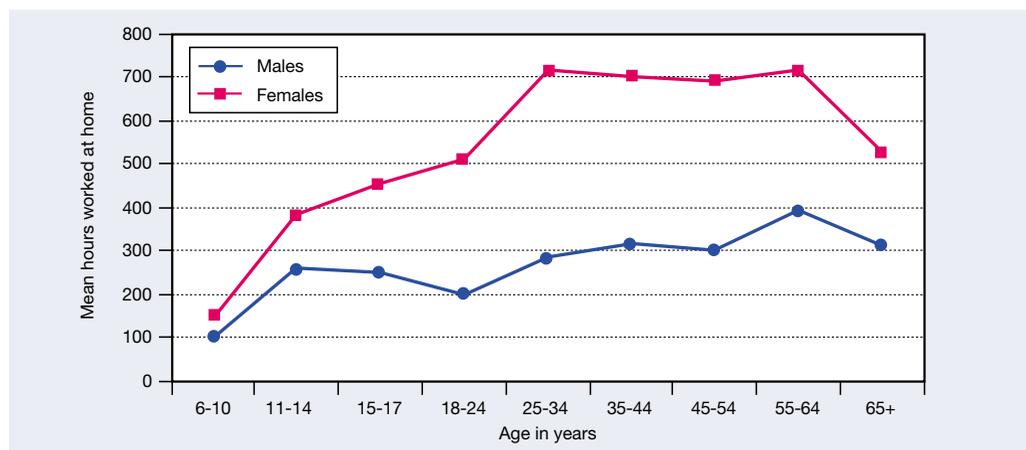
Vietnamese men and women spend nearly the same amount of time on income-generating activities (as illustrated by the Viet Nam Living Standard Survey for 1997/98 illustrated in Figure 5), but women spend almost twice as much time as men on household work (as shown in Figure 6). Consequently, the total number of hours worked by women is consistently greater than that of men at each point in the life cycle (Desai, 2001).

Figure 5. Hours worked in income-generation in the past year in Viet Nam



Source: J. Desai, Viet Nam through the lens of gender: Five years later. Preliminary results of second Viet Nam living standards survey.

Figure 6. Hours worked in past year in household maintenance activities in Viet Nam



Source: J. Desai, Viet Nam through the lens of gender: Five years later. Preliminary results of second Viet Nam living standards survey.

In Pacific Island countries, households balance the amount of time spent on subsistence farming and cash cropping with social obligations, domestic duties, and off-farm business and employment commitments. A comparison of women's and men's domestic work in Samoa reveals that young men (between the ages of 10 and 24 years) appear to spend more time cooking than women (as shown in Table 9). It is important to keep in view that ceremonial cooking is a male domain task. Because women continue to play a predominant role in child care and washing, both traditional female domains, it is likely that they continue to face drudgery. Women in the Cook Islands continue to carry the work load for multiple tasks comprising food production, domestic work, family care giving, health care, social agents, community and kinship obligations and commercial and religious responsibilities. As economic opportunities expand for women to take up wage work outside the home to help meet family needs, most of the home responsibilities continue to rest with women, thus their work load has significantly increased (Kingstone, 1995).

Table 9. Participation in different types of domestic activities in Samoa by age and sex

Life Cycle Age	Cooking		Washing		Looking after children	
	Male	Female	Male	Female	Male	Female
10–14	6 494	4 109	938	3 869	1 489	3 163
15–19	7 398	5 453	1 022	5 228	721	3 007
20–24	6 241	5 585	1 272	5 364	840	3 797
25–29	4 884	5 290	954	5 393	1 395	4 228
30–34	3 904	4 284	693	4 257	1 303	3 471
35–39	3 103	3 664	562	3 627	1 191	2 933
40–44	2 120	2 726	291	2 806	625	1 774
45–49	1 260	1 897	167	2 030	417	1 281
50–54	1 002	1 712	193	1 928	313	1 184
55–59	640	1 200	86	1 381	381	1 138
60–64	563	848	122	1 062	421	928
65–69	313	516	95	653	253	781
70+	153	233	20	296	170	580
Total	38 075	37 517	6 415	37 893	9 521	28 266

Source: Samoa Agricultural Survey 1999.

The drudgery of rural women's work raises gender equality considerations concerning rural women and their efforts to improve household food security. Time is the key resource in women's strategies to access food and livelihood commodities, yet most rural women in Asia and the Pacific region have insufficient time. A heavy work burden leaves women little time to participate in capacity improvement interventions even if opportunities are available. According to an assessment by the World Bank,

women in developing countries generally work longer hours than men and bear a disproportionate share of the responsibilities and time for household maintenance and care activities. The amount of time devoted to such responsibilities frequently means that women have fewer opportunities than men to participate in market-based work or to earn income independently, which in turn affects their bargaining and decision-making power within the household and means they have less time free for rest and personal care (World Bank, 2001). In recognition of these challenges, the World Bank and others have proposed a range of gender-responsive actions to reduce the burden on women's time. In Cambodia, for example, interventions have been proposed to improve physical infrastructure that will reduce women's travel time, and to develop users' groups to reduce the time spent by women on gathering water and fuel and on water resource management (World Bank, 2002).

As agricultural diversification continues to shift labour-intensive activities into the domain of rural women, it is even more important to understand the effects of women's increased work burden on the well-being of rural households, and to ensure that interventions to empower women also focus on providing for their practical needs to reduce household drudgery. The work burden of rural women also should be reviewed in the context of work intensity and its gendered effects on well-being which affect intrahousehold "bargaining" and the gender division of labour (Jackson and Palmer-Jones, 1998).

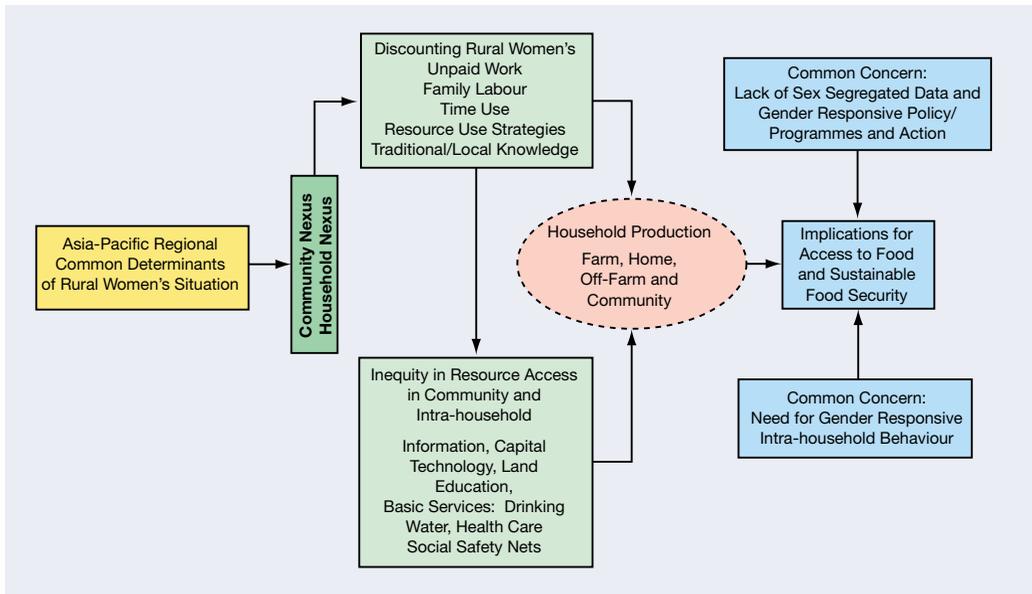
Given women's situation, addressing rural neglect manifested in working women's inadequate access to water, fuel wood, sanitation and health resources should be an important priority in the gender equality manifesto.

Enduring indifference to rural women's work and inequity in resource access

An analytical review of rural women throughout Asia and the Pacific region identifies two common determinants of their situation, namely the persisting under valuation of rural women's work by the community and the household and the inequity in access to resources as shown in Figure 7.

An outcome of the inexorable indifference to rural women's work at both the household and community level is that women's contributions to agricultural and household production routinely are discounted and/or ignored. The combined forces of social ignorance and economic indifference lead to explicit and implicit inequity in women's access to various resources that are necessary to support and improve their contributions to a wide range of activities. Deep-rooted attitudes further undervalue the worth of women within the household, resulting in gender biases that affect community interactions and the policy arena. The limited availability of data on rural women's work, coupled with a lack of attention to and value for unpaid work in the agriculture and rural development sector, further perpetuates women's

Figure 7. Common determinants of the situation of rural women in Asia and the Pacific



Source: R. Balakrishnan

inequitable situation. Official underestimation of rural women’s contributions, based on inadequate information about the agricultural sector’s human capital potential and constraints, results in policy and programme initiatives that do not reflect the true status of the human resources available for agriculture productivity and rural economic vitality. **Indeed, the persisting underestimation of rural women’s contributions results in sector policies and development strategies that ignore rural women and ultimately that undermine national efforts to promote agricultural development and sustainable food security.**

Unpaid work: Persisting social ignorance and economic indifference

One of the most persistent challenges hampering a comprehensive understanding of rural women’s situation in Asia and the Pacific region relates to the general lack of reliable, systematically gathered and objectively analysed data. Stephens observes that problems arising from the scarcity of data on rural women often are exacerbated by misleading information on women’s role in agriculture. Thus, women farmers seldom are reflected in development policy and plans and they reap commensurately few rewards for their increasing hours working on the family farm (Stephens, 2002). In particular, the undercounting of women’s participation in agriculture and income-generation production within the rural economy is a common weakness of available macrostatistics in the region. In the case of South Asia, it is stated:

Despite the critical involvement and contribution of women in agriculture, their presence is officially invisible with few statistics reflecting their actual contributions to agricultural output and rural employment, and thereby to the Gross Domestic Product. The data surveys are male focused with little acceptance and understanding of the role women play. The process of measurement itself has numerous flaws (Mahbub ul Hag Development Centre, 2003).

As a result of the prevailing, erroneous social perception of what constitutes work, the majority of rural women workers are invisible to national statistics, which fail to recognize unpaid work in the household, on family land or in family enterprises (such as cooking, cleaning, care of children and the elderly, the collection of water, fuel and fodder) (Menon-Sen, and Shiva Kumar, 2001).

“Work “refers to the participation of individuals in productive activities for which they either receive remuneration (in cash or in kind) for their participation or are unpaid because they are contributors to a family business enterprise. It also includes subsistence production of goods for their own households and non-economic activities such as domestic work, family and elderly care, construction or repair of owner occupied buildings, and volunteer work for which individuals receive no remuneration.”

In Bangladesh, women account for 83.2 percent of the 42.5 percent of unpaid family helpers in rural areas (Bangladesh Bureau of Statistics, 1996). In Cambodia, women account for 66 percent of unpaid family workers in the labour force over 15 years of age. In India, national statistics classified just

United Nations. 2000. The world's women 2000: Trends and statistics. *Social Science Indicators*, Series K. No. 16. New York.

22 percent of rural women as workers in 1997. However, national data collection agencies recognized the serious under-counting of women's contribution as workers, and the National Sample Survey estimated that as much as 17 percent of rural women and nearly 6 percent of urban women were incorrectly recorded as “non-workers”.

One report explained,

In South Asia, female employment rates recorded by official sources are usually low because of arbitrary definitions. If definitions are revised and all activities for which women are traditionally responsible incorporated, a huge difference in activity rates is noted. An undercounting of women's work is demonstrated in Pakistan, Bangladesh and Sri Lanka (Mahbub ul Hag Development Centre, 2003).

This phenomenon of statistical invisibility is illustrated in Pakistan where only 15 percent of women are registered in the Labour Force Survey, even though the 1980 Agricultural Census estimated that 73 percent of women in agricultural households were economically active. The 1990/91 Labour Force Survey reported

a female economic activity rate of just 7 percent using the conventional questionnaire. However, this rate increased to 31 percent when respondents were also asked questions about specific activities like transplanting rice, picking cotton, grinding, drying seeds and tending livestock. In countries with cultural norms like Pakistan's, where women's waged work is considered a threat to the male ego and identity, women are insufficiently remunerated for their considerable contributions to multiple home-based economic activities (Bari, 2000).

In the Philippines, excessive undercounting of women in the rural workforce largely results from confusion and ambiguity in the definitions of "productive work", "housework" and "the worker". However, the main reason that women's work is excluded in the calculation of the gross national product is that much of it is of subsistence nature and done within the family setting (APEC North-South Institute, 1999). In some other countries, changes in the rural economy have had a fundamental shift in the type of work performed by women, which is reflected in national employment statistics. For instance, in the Maldives, the development of an export-oriented fishing industry deprived women of opportunities to work for a cash income, thus causing them to become invisible unpaid family labourers (Dayal, 2001). Although statistics indicate that women play a vital role in the economies of Pacific Island countries, women in several of these countries struggle to have a say in community fisheries management because their informal day-to-day fishing activities are not recognized as work by governments, industry and banks. As a result, they are less able to receive loans to develop small businesses, less likely to receive skills training in manufacturing positions and less likely to be reached with valuable information about conservation practices (Robinson, 2000).

Summarizing the findings of studies completed among mountain women in the Hindu-Kush area of the Himalayas, Gurung (1999) asserts that "suffering from the myopia of labelling women's subsistence work 'domestic' and therefore trivial, development planners have not, until recently, recognized the critical contribution of women's work to agriculture production and the very survival of the family." As a result of this short sightedness, the incalculable role and contribution of rural women in the unpaid work sector throughout Asia and the Pacific region continue to be ignored in economic analyses and are undervalued by the society.

Since women's contribution to agriculture and food security is held in such low esteem, few if any supportive measures are available locally to improve women's situation and to reduce hardships resulting from discrimination in resource access. At the same time, the general lack of national economic analyses that consider the demonstrable contribution of working rural women results in gender-blind policies and programmes that have negative effects on national productivity. In this context, ambiguities in definitions of work must be clarified so that the contributions of currently invisible women workers are no longer concealed. Indeed, the case of home-based workers demonstrates the need for improved informal sector statistics,

“All work is productive work. All work is economic work. All people who perform work, paid or unpaid, are economically active.”

ESCAP and UNDP, 2003.

acknowledge that “[a]ll work is productive work. All work is economic work. All people who perform work, either paid or unpaid, are economically active” (ESCAP and UNDP, 2003).

as well as a better understanding of the effect of policies on the informal sector and the contribution of the informal sector to national economies (Chen, Sebstad and Connell, 1999). It is important to

Facets of inequity in rural women’s access to resources

A recent World Bank study highlighted the double disadvantage poor women confront in access to resources and opportunity for articulation – they are poor and women (World Bank, 2001). It is easy to present illustrations of women’s current realities in rural areas of Asia and the Pacific region where inequity in access to resources is intensified by persistent neglect in provisioning of services and infrastructure facilities in rural areas. These persisting inequities are further reinforced by traditional perceptions and attitudes that perpetuate gender biases and discriminate against rural women’s access to community and household resources. At the same time, degradation of the natural resource base is threatening women’s access to subsistence livelihood resources in rural areas. Another growing concern is that the forces of globalization could further marginalize rural women and result in greater inequity in access to resources. New and emerging technologies in both the agriculture and information sectors may well bypass poorly educated rural women and widen their knowledge gaps. The following review highlights the resource access inequities experienced by rural women in the region.

Land assets

Many countries still lack adequate provision for women to hold land rights independently of their husbands or male relatives. Statutory laws often do not ensure independent land rights for women. In traditional or under “customary” practices, women’s direct ownership access to land may be limited, yet they may have greater management and use rights than men. Land ownership in rural areas determines the asset for production as well as access to credit and agriculture support services and the social power to negotiate for resources and membership in decision-making agencies (FAO, 2002). Rural women’s access to land – as owners and users – presents a mixed picture of conflict between legal rights and customary laws, as well as inheritance of property directed by family priorities and personal practices (Agarwal, 1994; Bari, 2000; Tinker and Summerfield, 1999; Meinzen-Dick *et al.*, 1997). In Sumatra the inheritance system is evolving from a strictly matrilineal system to a more egalitarian system in which sons and daughters inherit the type of land that

is more relevant to their respective work. Although gender bias is non-existent or small in land inheritance, daughters tend to be disadvantaged with respect to schooling (Quisumbing and Otsuka, 2001).

In South Asia, according to Agarwal (1994), “land defines social status and political power in the village, and it structures relationships within and outside the household. Yet for most women, effective rights in land remain elusive, even as their marital and kin support erodes and female-headed households multiply. In legal terms, women have struggled for and won fairly extensive rights to inherit and control land in much of South Asia, but in practice most stand disinherited. Few own land; even fewer can exercise effective control over it.” In India, women’s land rights are seen as particularly important in the context of demographic changes in occupational patterns, with more and more men migrating to urban areas or looking for non-farm work in rural areas. Given that the relative share of women in the agricultural labour force is higher than that of men, the lack of women’s land rights is seen as a major bottleneck in improving agricultural production (Rao, 2005).

Although an egalitarian trade in resources may prevail in certain societies, most often land laws or their implementation are biased against women. In the rural context, lack of ownership or direct lease rights to land may further prevent women from accessing other resources such as irrigation and credit (Mehra, 1995). For instance, throughout the Pacific Islands family members hold most land in customary tenure under the protection of the family head. Although rights to land may be passed on through patrilineal or matrilineal lines, women tend to have difficulty activating their rights for a number of reasons. Specifically, customary beliefs dictate that women do not need land because agriculture is male work and women are protected by the family support systems. There is also a fear that land given to women is lost land since women marry out of the family. Recently, these and other social customs have been formalized into legal rights, which discriminate against women. The codification of customary laws into statutory laws in Kiribati in the Lands Code¹ stipulates that in the distribution of an estate between sons and daughters, the shares of the eldest son should exceed that of his brothers, and the shares of sons should exceed the shares of daughters.

Natural resource assets

Women are rural agriculture producers, and rural production depends on natural resources as primary assets to produce crops, home garden, fishing, food processing and crafts. Women also collect non-wood forest products for food and production. The forests also offer fuel wood, shelter materials and medicinal plants. Hence, food security and the economic vitality of the local communities are affected by the

¹ Native Lands Ordinance Cap. 61, Part IX: Section 11-ii-Kiripati.

availability of and access to natural resources. Natural resource degradation has direct consequences for rural women's productivity and access to livelihood alternatives. "In rural areas the depletion of natural resources by environmental degradation has a significant effect on [the] daily life of a woman and [the] well-being of her family" (Rodda, 1993). Most studies to date have focused on the effect of forest and coastal resource degradation on women's access to resources, but information on the impact of soil and water resource degradation on female work patterns is very limited. One study has illustrated how the livelihoods of indigenous communities in Northern Sarawak, Malaysia that traditionally have been based on hunting, gathering and shifting agriculture, are being threatened by logging, deforestation and changes in government policies regarding native land. The consequences are severe soil erosion, deterioration in the quality of river water, a reduction in biodiversity and a decline in fish and wildlife populations. The subsequent search for alternative livelihoods induced male migration, leaving women behind to cope with a declining resource base (Heyzer, 1996).

Gender inequalities in access to environmental resources, command over labour, capacity to diversify livelihood strategies and decision-making processes contribute to significant differences in how men and women experience poverty and environmental changes (Masika and Joekes, 1997). Analyzing regional variations and temporal shifts in rural India over a 30-year period, Agarwal (1997) concluded that natural resource degradation, privatization and the appropriation of natural resources by the state have tended to result in particularly adverse implications for female members of rural households. In Northern Pakistan, forest cover has been reduced dramatically in recent years at the same time that agricultural productivity has risen significantly with an increase in livestock farming. In parallel, the workload of women in agriculture has increased. Whereas men spend a greater proportion of their time in income-generating activities, enabling them to monopolize the community's access to the monetary economy, women are left relatively powerless (Joekes, 1995).

A study in Nepal examined the workload of rural women in the context of availability of environmental goods collection over the past two decades. It found that although all household members spent less time collecting various local resources, such as water and wood, the amount of time women spent on collection fell by the largest proportion and the female share of the total collection time also decreased. Given the large amount of time women in the region spend on collection and the burden it entails, this finding suggests a positive trend, which may be a result of the increased availability of local environmental resources. For instance, each of the sites studied had installed at least one water tap, and some also had noted an improvement in their community forest during the 14-year period in question (Cooke, 2000).

A study on women and food production in the Pacific Islands of Samoa, Fiji, the Solomon Islands and the Marshall Islands found that the quality of home gardens depended on land availability, amount of land, soils, women's access to planting

materials, training, labour availability and knowledge about pests and diseases. On some atolls, problems of poor soils and garden washout from rain and sea spray also presented difficulties. In each of the countries studied, the women with the most successful gardens belonged to dual income or high status families. This suggests that training alone might be insufficient to achieve family food security (Fairbairn-Dunlop, 1997).

Local groups and social capital

The development of women's groups is a strategy to expand women's access to information, increase their comparative bargaining power and create opportunities for collective action to access economic inputs. In reality, however, persisting gender biases, deep-seated community dynamics and women's time constraints prevent women from actively participating in these organizations which were intended to bring about social capital benefits and female empowerment. The widespread trend to transfer responsibility for irrigation management from the state to communities or local user groups has by and large ignored the implications of intra community power differences on the effectiveness and equity of water management. Gender is a recurrent source of such differences. Despite the rhetoric on women's participation, a review of evidence from South Asia shows that female participation is minimal in water users' organizations, in part because the formal and informal membership criteria exclude women (Meinzen-Dick and Zwarteveen, 1998).

Factors that constrain women's participation in formal institutions for environmental management include rules, norms, perceptions, entrenched territorial claims, the household's economic and social endowments and women's individual economic endowments and personal attributes (Agarwal, 2000). For example, women who have primary responsibility for both domestic and farm work have extremely full days and are unlikely to have the time to attend meetings. Some women in rural areas may also lack links to male-dominated and government hierarchies. A Food for Work Programme in Cambodia found that women without husbands and those who were poor tended to be isolated from other villagers because of the amount of time they must spend working alone, foraging for food, hauling water and caring for the home (World Food Programme, 2001).

In Thailand, a study found gender differences in participation in local organizations. Women tend to belong to local organizations that are focused on home economics and household tasks. Men are more likely to join local organizations that seek to improve agriculture productivity and generate income. A minimum level of assets – in the form of land, livestock or human capital – is normally required as a precondition for participation in local organizations. Often poorer households and women lack sufficient assets to be eligible for membership. Additionally, women have less access than men to decision-making processes in local organizations (Balakrishnan *et al.*,

2003). An excessive workload that involves managing multiple tasks as unpaid workers in farm and rural production, domestic work and care giving responsibilities leaves little time for women to be active and effective participants in local organizations. Yet another facet of participation is that although women are visible numerically in the local organizations, they have limited opportunities to articulate their needs and concerns by themselves during the planning process which is dominated by men.

Education: Formal and informal

Gender difference in access to education is a key contributor to inequality in rural women's access to other resources. Many studies carried out in different parts of the world have documented the importance of women's education for positive outcomes in child schooling and nutrition. Yet education also is critical for female empowerment. Women must have at least basic education if they are to develop the skills needed to participate in knowledge-intensive agriculture and economic activities. Women who lack access to basic education are likely to be excluded from new opportunities and, where longstanding gender gaps in education persist, they will be at increased risk of falling behind men in their ability to participate in development (King and Alderman, 2001). Across Asia, studies have documented women's unequal participation in education and training. One such study carried out in 25 villages in Pakistan found that a number of serious supply-side constraints (inadequate primary schools for girls close to villages, lack of female teachers) deny girls access to primary education (Sawada and Lokshin, 2001).

Similarly in South India, research has identified factors that keep poor boys and girls out of the classroom. These include poverty, the opportunity cost of children's labour and entrenched social and cultural norms that give rise to inequality of caste, class and gender (Subrahmanian, 1997). A survey undertaken by the Asia-Pacific Economic Cooperation found that the time allocated for unpaid work was the major barrier preventing women from improving their skills and training (APEC North-South Institute, 1999). Existing rural disparity in educational infrastructure, combined with inadequate quality control, partially explains lack of access to good learning as well as social perceptions that undervalue the importance of education for girls among the current generation of rural girls. For adult women farmers and producers, literacy deficiency is a legacy in rural areas for cultural and economic reasons held by their families. In the present generation of adults, rural women's illiteracy is the major barrier to their social and economic advancement; for the future generation of rural women the major barrier is rural girls' lack of access to formal education.

Technology

Rural women in their dual roles as producers in farm and home production and as caregivers need technologies to ease their work stress and improve productivity and family welfare. According to one renowned Indian scientist, “[I]f women are empowered with technological information and skills, all the members of the family will benefit” (Swaminathan, 2001). However, traditional biases, which are internalized by scientists, technocrats and technology disseminators, contribute to the gap between gender differentiated technology needs and actions for gender responsive technology development and technology transfer. Access to technology is not neutral, and is particularly not gender neutral (Balakrishnan, 2000).

“Access to technology is not neutral, and is particularly not gender-neutral. Internalized traditional biases contribute to the gap between gender differentiated technology needs and actions for gender responsive technology development and technology transfer.”

In developing countries, technology development and dissemination programmes have not been responsive to household drudgery associated with different production activities routinely undertaken by women. In particular, these programmes have failed to recognize rural women’s demand for technology that improves their productivity. For instance, in Nepal, little effort has been made to develop and diffuse new and improved agricultural tools tailored to women farmers even though national policies and programmes have sought to promote women’s empowerment (Guatam, 1999). A participatory assessment of the intrahousehold effects of modern agriculture technologies in Bangladesh identified reasons why poor women fail to utilize knowledge of new technologies; those reasons included unfavourable land tenure, gender division of workspace that is validated by purdah and limited size of homestead plots (Naved, 2000).

Most technical solutions in the livestock sector, even those directed specifically at women, have ignored women’s actual needs. Improvements designed to intensify the production system generally have increased women’s workloads. Appropriate technologies should be designed to consider not only women’s workload, but also the potential effect of the technology on their status and the economic control over resources and property (Niameer-Fuller, 1994). Although some efforts have promoted participatory technology development, the participants most often were defined to be male farmers, an error perpetuated by traditional perceptions held by extension service and agricultural education providers. Such a limited understanding by the agents of technology transfer placed a low value on women’s ability to learn and to use technologies, thus making women farmers invisible.

A major finding of the recently completed Asia-Pacific Gender Science and Technology Project in Kiribati, Fiji and Samoa that focused on biotechnology, green

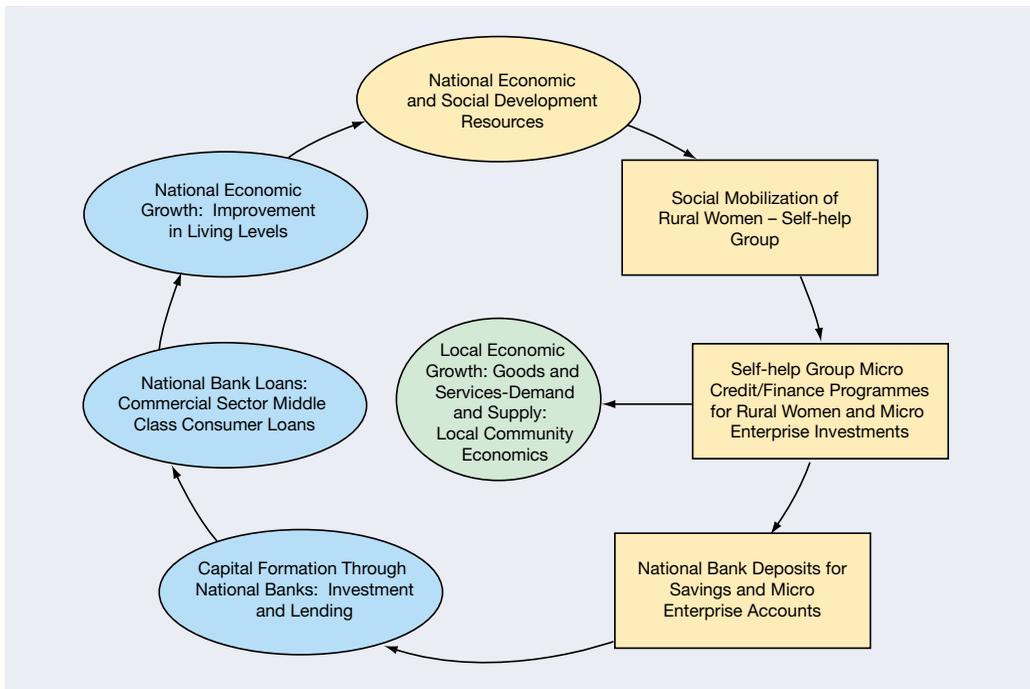
health, water, energy and information technology, was that women's main access to technology is through women's NGOs such as Ecowomen Fiji, Wainimate and research institutes affiliated to the University of the South Pacific that tend to rely on donor funding. Agricultural research and extension services still tend to direct their attention to men and export crops. Rural infrastructure in Asia and the Pacific region must be improved to increase access to off-farm employment opportunities and to facilitate the adoption of new technologies and information and support services by women farmers (Nathan *et al.*, 1999).

Credit

The provision of microcredit – usually collateral-free and group-guaranteed – has provided an important source of capital for rural men and women in Asia and the Pacific region. High economic rates of return have been attributed to the excellent repayment performance of rural women. The group-based microcredit and microfinance approaches have served the short term credit needs of rural households well, improving cash flows where petty trade opportunities have been available (Zeller *et al.*, 2001). In the Asian region, the mixed effects of microcredit have been documented (Kelkar, Nathan and Rownok, 2004). These include the incremental benefits of microcredit on women's livelihood and social solidarity as well as the potential for changing social relations. On the other hand, negative effects are increased social conflict in the community, the tendency of men to control women's access to economic assets and women being used as the front person for control over the loans or financial decisions. Most often the microenterprises are based on the existing domestic production skills. Expansion of the microenterprises is limited by the loan sizes and by the poor access to opportunities to improve skills or to cost effective technology and knowledge of market complexity. Microfinance programmes exhibit clear differences in terms of their approach – particularly the commitment to build rural women's capacity to become self-reliant producers and confident credit holders in their individual right – and the results they achieve (UN DAW and UNIFEM, 2001).

The collective effect of rural women's small savings on the national economy is not categorically established. The critical relevance of women's efforts is inadequately acknowledged and women's due status as partners contributing to local economic vitality and national capital is denied. Women not only contribute to national production as unpaid workers, but they also increasingly are the key economic actors who contribute to the financial flow of the national economy through their participation in microcredit and microfinance programmes. The illustration below conceptualizes microcredit and women's economic contribution (Figure 8). Women's small enterprises collectively result in the cash flow within the local economy, and their savings deposited in national banks result in capital formation for commercial investments and middle class loans to support consumption of life style consumer

Figure 8. Microcredit and rural women’s economic contribution



Source: R. Balakrishnan

durables. The current rationale of microcredit as an instrument of mobilising women or as an investment in social capital should be re-examined in the light of the economic reality that these women contribute to the national economy by creating capital for other investments including bank loans to urban middle class to support their consumption.

The repayment terms dictated by microcredit tenets (compulsory weekly repayments plus a contribution to savings) and interest rates have not been appropriate to meet the fund needs of agriculture households, which do not normally have a weekly cash flow given their reliance on longer term agriculture production and livestock rearing cycles. Consequently, the women-centred credit model has pressed rural women to pursue additional, alternative income-generating strategies to keep up with repayment schedules, thereby causing an increase in their workload. Recent studies questioned the assumption that microcredit is an effective instrument for women’s empowerment by indicating that, in some cases, women serve as a front to access credit for men in the household, thus lacking direct control over the credit obtained in their name. In short, a preoccupation with performance – measured primarily in terms of high repayment rates – has affected the incentives of those who grant and recover credit, resulting in less attention being paid to whether and how women can have meaningful control over their own investment activities (Goetz and Gupta, 1996).

In the Pacific Islands, women tend to experience difficulties obtaining credit through commercial banks given their lack of collateral and the small size of the loans requested. The fact that banks are normally located in urban areas, coupled with women's lack of knowledge about banking procedures, further impedes female access to capital. In this context, many women's groups have developed savings and loans schemes where members make regular deposits and have the option to borrow at reasonable interest rates. However, major constraints associated with these schemes have included management weaknesses as well as the high costs of running small schemes and making them available in rural areas (Fairbairn-Dunlop and Struthers, 1997).

Female-headed households

Female-headed households in rural areas demonstrate specific vulnerability in terms of access to resources, access to social networks to improve their access to development resources and at times the labour requirement to undertake agriculture practices to improve productivity. An assessment by IFAD recognized the feminization of rural poverty in Asia and noted two key dimensions of this trend. Notably, female-headed households in the region usually are poorer than male-headed households, and poverty is more severe and binding for women in that it is more difficult for women and their children to escape it (IFAD, 1999). According to this study, female-headed households represent a significant proportion of households in Cambodia, Nepal and Bangladesh. In Cambodia, 35 percent of household are female-headed; in Nepal and Bangladesh female-headed households are 16 percent of landless and marginal households.

The migration of men and grown children in Cambodia has had both positive and negative consequences. Some men and children who work away from the village may send money home, significantly improving the standard of living for the family there. On the other hand, wives whose husbands leave for long periods may suffer some of the same deprivations as poor women without husbands. For instance, a study by the World Food Programme has shown that women in households with no men have inadequate access to decision-making networks, legitimate knowledge and assets like rice and labour (World Food Programme, 2001). Similarly, the Viet Nam Living Standard Survey identified labour shortage in female-headed households as an important resource constraint in expanding economic assets and agriculture productivity. For instance, in rural parts of Viet Nam median profits of female-operated enterprises are 84 percent of those of men (Desai, 2001).

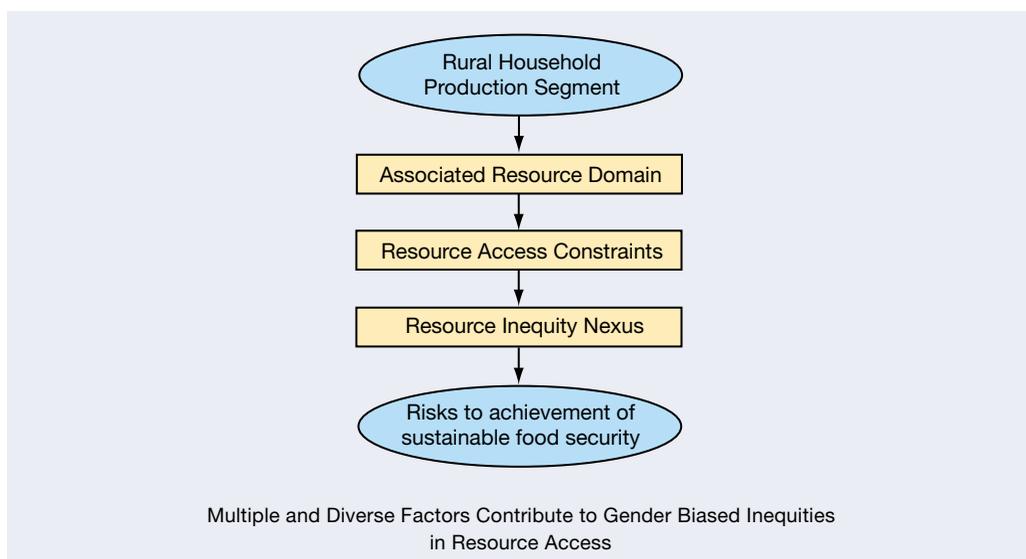
Specific hardships faced by women in the Pacific Islands include a shortage of family labour as a result of migration and children at school, a reluctance of youth to perform agricultural work, as well as seasonal male labour trends. For example in Kiribati and Tuvalu, men are engaged in waged employment on sea vessels for long periods

at a time. At the same time, family support systems that traditionally protected women from negative changes in the economy are being eroded, an increasing number of marriages are breaking up and the number of unmarried pregnancies is increasing, all of which contributes to an increase in the number of female-headed households. In short, such factors substantiate that women are the group most vulnerable to poverty throughout the Pacific Islands today.

Rural women’s resource access inequity matrix

The interlinked, complex relationships among various gender-based inequities vis à vis rural women’s access to resources are highly relevant to achieving sustainable food security and rural economic vitality. These linkages, though simplified, can be visualized as presented in Figure 9 and further elaborated in Table 10.

Figure 9. Gender based access inequities and food security



Source: R. Balakrishnan

The various facets of resource access inequity facing women associated with specific production segments are explained further in Table 10. This matrix illustrates the nexus of inequity and its relationship to sustainable food security across a range of production segments. Major food security risks include limited incentives to improve land and productivity, inadequate opportunities and restricted capacity to diversify income sources, women’s insufficient time to improve agriculture production, poor nutritional gains for rural households, uncertain access to food at times of family crisis, seasonal unavailability and crop loss. These factors have major implications for the availability of sufficient food to ensure national food security.

Table10. Rural women’s resource access inequity matrix

Households Production Segment	Associated Resource Domain	Access Problem/constraints	Inequity Nexus	Risks to achievement of sustainable food security
Farm Production	Land	<ul style="list-style-type: none"> • Lack of ownership and access to land • Uncertain access to productive land 	<ul style="list-style-type: none"> • No legal land rights • Customary laws and local practices • Poor implementation of land law legislation granting equal access • Women’s reluctance to exert land law rights and ownership responsibilities • Privatization of common property 	<ul style="list-style-type: none"> • Lack of incentives to improve land and productivity in the agriculture sector with implications for the availability of food and national food security
	Forest resources	<ul style="list-style-type: none"> • Lack of access to non-wood forest resources • Lack of access to pasture space and fodder for livestock 	<ul style="list-style-type: none"> • Forest preservation measures • Change in community resource use as a result of privatization 	<ul style="list-style-type: none"> • Lack of means to diversify income and access to food
	Soil and water	<ul style="list-style-type: none"> • Lack of good land with fertile soil • Lack of access to irrigation and water for production 	<ul style="list-style-type: none"> • Degrading quality of soil in limited land available for subsistence production and inability to negotiate access to fertile land • Poor quality of water and lack of participation in water users’ groups • Inability to articulate needs and demands within water users’ groups 	<ul style="list-style-type: none"> • Lack of incentives to improve land and productivity in the agriculture sector with implications for the availability of food and national food security

Table10. Rural women’s resource access inequity matrix *(continued)*

Households Production Segment	Associated Resource Domain	Access Problem/constraints	Inequity Nexus	Risks to achievement of sustainable food security
Farm, home and off-farm production	Technology	<ul style="list-style-type: none"> • Lack of access to technology suited to production activities carried out by women • Lack of access to household technology • Lack of technology to scale up production and improve quality • Lack of access to current technologies, production methods and technical information 	<ul style="list-style-type: none"> • Past and ongoing neglect of women’s needs and roles in technology development • Displacement of women with mechanization given lower female skills and education, and gender biases that favour men • Assumption that technology for household tasks is synonymous with female domestication • Neglect of women’s home production technology needs • Weak and insufficient technology training programmes for women • Women’s lack of time and education to take advantage of skills training and technology transfer programmes 	<ul style="list-style-type: none"> • Limited means to diversify income and access to food • Lack of incentives to improve productivity in the agriculture sector with implications for the availability of food and national food security
	Labour	<ul style="list-style-type: none"> • Lack of labour available for agriculture technologies • Lack of labour to take up domestic tasks 	<ul style="list-style-type: none"> • Increased number of female-headed households because of male migration • Lack of male labour and small family size in female-headed households • Change in family structure and kinship networks 	<ul style="list-style-type: none"> • Few available means to diversify incomes and access to food • Lack of incentives to improve productivity in the agriculture sector with implications for the availability of food and national food security

Table 10. Rural women's resource access inequity matrix (continued)

Households Production Segment	Associated Resource Domain	Access Problem/constraints	Inequity Nexus	Risks to achievement of sustainable food security
Farm, home and off-farm production, (continued)	Credit	<ul style="list-style-type: none"> Lack of access to formal credit for agricultural production and for establishing and scaling up enterprises 	<ul style="list-style-type: none"> Poorly-developed agriculture banking and rural credit systems Lack of traditional kinds of collateral (e.g. land or house) means women are seen as unreliable clients for large amounts of credit Men are considered as heads of households for official credit transactions 	<ul style="list-style-type: none"> Few available means to diversify incomes and access to food Lack of incentives to improve productivity in the agriculture sector with implications for the availability of food and national food security
	Agriculture support services Institutional resources	<ul style="list-style-type: none"> Lack of access to inputs for agriculture production and off-farm production Lack of off-farm labour employment Lack of access to development organizations and government agencies 	<ul style="list-style-type: none"> Poor agriculture-support delivery system Lack of appropriate information and outreach to rural women Traditional bias that ignores the roles of women in agriculture and therefore the need for gender-sensitive farm sector extension programmes Limited education and lack of understanding about public sector and programmes among women Inadequate investment in rural employment programmes 	<ul style="list-style-type: none"> Few available means to diversify incomes and access to food Lack of incentives to improve productivity in the agriculture sector with implications for the availability of food and national food security

Table 10. Rural women's resource access inequity matrix (continued)

Households Production Segment	Associated Resource Domain	Access Problem/constraints	Inequity Nexus	Risks to achievement of sustainable food security
Farm, home and off-farm production, (continued)			<ul style="list-style-type: none"> • Women's lack of education and appropriate skills to take advantage of new economic opportunities • Traditional marginalization of women by public sector institutions • Women's inadequate knowledge about public sector agencies and services • Women's lack of ability to deal with public sector development agencies 	
	Market and commercial linkages	<ul style="list-style-type: none"> • Limited access to reliable markets • Insufficient links with urban commercial centres 	<ul style="list-style-type: none"> • Poor market infrastructure and limited market information services in rural areas • Economic and social organizations that use the productive resources of rural producers, but ignore female producers • Global economic linkages 	<ul style="list-style-type: none"> • Lack of means to diversify income and access to food • Lack of incentives to improve productivity in the agriculture sector with implications for the availability of food and national food security

Table 10. Rural women's resource access inequity matrix (continued)

Households Production Segment	Associated Resource Domain	Access Problem/constraints	Inequity Nexus	Risks to achievement of sustainable food security
Home production	Drinking water, sanitation, health care and child care services	<ul style="list-style-type: none"> Lack of access to basic services to manage family care responsibilities 	<ul style="list-style-type: none"> Poor service infrastructure in rural areas Traditional assumptions that women need little and are used to managing the difficult tasks Lack of roads and transportation routes linking rural communities to service centres 	<ul style="list-style-type: none"> Inadequate time and efforts by women to improve agricultural production with implications for the availability of food and national food security Poor nutritional gains for rural households
Community production	Formal safety nets	<ul style="list-style-type: none"> Lack of access to cash or supportive services at times of family crises Lack of access to community organizations Lack of access to family networks 	<ul style="list-style-type: none"> Past and current neglect of appropriate crop/livestock and personal /medical insurance or cash transfer for rural communities. Lack of expertise to deal with externally organized community organizations Men dominating the deliberations of community organizations and assuming leadership positions Women following the tradition of not articulating effectively their needs for resources Women's lack of time and expertise as barriers for active involvement Breakdown in extended family system and traditional kinship networks 	<ul style="list-style-type: none"> Uncertain access to food among rural families at times of family crises and crop loss Lack of means to diversify income and access to food

Regional trends affecting the situation of rural women

Recent developments in the social, economic and technological arenas have important effects on rural women across Asia and the Pacific region. The relevant trends are globalization, regional economic integration and accelerated commercialisation, urbanization, advances in agriculture and information technologies, political instability, civil war, HIV/AIDS, livestock epidemics and natural disasters. The multiple impacts on rural women bring significant implications for agricultural productivity, rural production and economic vitality, household food security, family health, family economic security and welfare. Few systematic studies have examined how these trends affect rural women. Nonetheless, it seems reasonable to hypothesize that economic integration and advances in agriculture and information technologies present both opportunities and threats for rural women's livelihoods and work, whereas political instability, natural disasters and HIV/AIDS exert considerable additional pressure on rural women's access to resources and their work as farmers and producers.

Economic transformation and agriculture's contribution

Regional economic transformation was accompanied by a steady reduction in the relative share of agriculture to the Gross Domestic Product (GDP) across the region. While this reduction was striking in some countries – for instance in Thailand the contribution of agriculture to GDP dropped from 23.2 percent in 1980 to 9.1 percent in 2000 – it was not uniform throughout the region as documented in Table 11. Indeed, although the relative share of agriculture in the economy decreased in Asia and the Pacific region as a whole, agriculture continues to make an important contribution to the economy and by extension to food security and rural poverty alleviation in many countries. In 2000, agriculture accounted for 59.9 percent of the GDP of Myanmar. Bhutan, Cambodia, Lao PDR, Mongolia, Nepal and Uzbekistan each derived more than a third of their GDP from agriculture, whereas in Pakistan, Tajikistan, Viet Nam, Papua New Guinea and Tonga agriculture contributed a quarter or more to the GDP. It is noteworthy that China and India – the two most populous countries in the region – continue to derive a significant portion of their GDP (15.9 percent and 25.3 percent respectively) from agriculture.

In the region, most countries with substantial dependence on agriculture also are low-income food deficit countries (LIFDCs). The paradox seems to be that countries that depend on agriculture also lag in achieving improvements in food security. An alternative view could be that the countries that are competing to serve the world agriculture market with cheap food to meet global consumer preferences confront food insecurity struggle at home. These data suggest that in countries with a high reliance on the agriculture sector, the rural populations – including women – could

Table 11. Contribution of the agriculture sector to GDP in selected countries in Asia and the Pacific region (percent)

	Low-income food deficit country	1980	1990	2000
Asia				
Bangladesh	yes	41.2	29.4	24.6
Bhutan	yes	56.7	43.2	33.2
Cambodia	yes	...	56.6	37.1
China	yes	30.1	27.0	15.9
India	yes	38.1	31.0	25.3
Indonesia	yes	24.8	19.4	16.9
Kazakhstan		26.0	41.8	8.6
Korea, DPR	yes	...	...	...
Korea, Republic of		...	...	...
Lao PDR	yes	...	61.2	53.2
Malaysia			15.2	8.6
Mongolia	yes	13.6	15.2	33.4
Maldives	yes	...	...	9.5
Myanmar		46.5	57.3	59.9
Nepal	yes	61.8	51.6	39.8
Pakistan	yes	29.6	26.0	26.3
Philippines	yes	25.1	21.9	15.9
Sri Lanka	yes	26.2	22.9	19.4
Tajikistan	yes	...	27.1	27.4
Thailand		23.2	12.5	9.1
Uzbekistan	yes	...	33.1	34.9
Viet Nam		50.0	38.7	24.3
Pacific Islands				
Cook Islands		...	21.2	16.6
Fiji		22.1	...	18.4
Kiribati	yes	31.5	18.6	...
Marshall Islands		...	13.9	13.5
Papua New Guinea	yes	33.1	29.0	28.7
Salomon Islands	yes	...	...	22.1
Tonga		38.5	35.1	28.5
Vanuatu	yes	...	20.7	15.8
Samoa (Western)	yes	...	...	16.2

Source: Asian Development Bank, *Key Indicators of Developing Asian and Pacific Countries (Table 13: Sectoral Share of GDP), 2001.*

FAO, *Low-Income Food Deficit Countries*: <http://apps.fao.org/notes/876-e.htm>

face the highest risk of food insecurity and low incomes. Consistent neglect of the agriculture sector in many countries throughout Asia and the Pacific region has made it a career of last choice for men and women with other more profitable options.

Economic structural transformation marked by decreasing reliance on agriculture has several implications for the economic role of rural women in the sector and consequently for food security. Firstly, fundamental changes in national economic systems and the agricultural sector result in a loss of livelihood opportunities. Secondly, subsistence food production to satisfy household food needs can become unsustainable and households become increasingly dependent on the cash economy to access food. Thirdly, opportunities are lacking for displaced rural women to find viable livelihood alternatives within the rural production system to give an economic return on their labour. Finally, as agriculture production is transformed to become competitive amidst increased global economic linkages, rural women with limited skills and low education are likely to face greater risk of economic vulnerability. With the agriculture sector being organized for export driven production, land resources are being consolidated leaving subsistence farmers to sell the land; thus women may become agricultural labourers instead of farmers of family holdings. As women usually receive lower wages than men, their ability to ensure access to food will be adversely affected.

In this context it is important to address the issue of rural poverty in the region. The percentage of the population below the poverty line declined in the region from 32 percent in 1990 to 22 percent in 2000. Yet the region is still home to 720 million poor people or two thirds of the world's poor (ADB, 2005). In Asia and the Pacific region poverty is basically a rural problem, and the gap between rural and urban poverty is widening over time in spite of impressive progress in the last three decades in economic growth and poverty reduction. Two thirds of the world's poor live in this region and the majority of the poor are women. Most live in rural areas. Thus it can be inferred that rural women are the poorest among the poor. The increasing representation of women among the poor is referred as the "feminization of poverty". In many rural areas of Asia, more women than men are among the "working poor" than among the poor as a whole. Women also are disproportionately concentrated in the lowest remunerated categories of self-employment and casual labour (IFAD, 2002). **The reinforcing causal link between the "feminization of poverty" and the "feminization of agriculture" is a key rural gender equality concern in the region with considerable importance to rural poverty eradication programmes.**

Global economic integration

Initial unbridled enthusiasm for globalization across the region was gradually tempered by the realities of internal vulnerabilities, notably the lack of safety nets for the working poor and rural poor at times of economic crisis. In spite of the

economic crisis that rocked the region in the 1990s, there remains a pragmatic realization that globalization cannot be circumvented, and that it must be properly managed for the benefit of the larger population rather than the enrichment of a few. The current reality is that regional economic integration – formal as well as informal – continues to affect household food security in Asia and the Pacific region. The households' access to "food basket" commodities depends on economic and social circumstances beyond their local farming system. For example, labour migration for employment and overseas remittances have a positive effect on household food security in many Asian and Pacific rural communities. Similarly, aid and remittances play a major role in the relatively small economies of the South Pacific. In several Pacific Island countries per capita aid is amongst the highest in the world, and in many cases remittances exceeds export earnings.

The economic crisis in Southeast Asia brought a significant increase in urban poverty. Although the effects on rural areas and agriculture were not as great as initially feared, they were nevertheless considerable. Indeed, given the significant variations between and within countries, some rural areas suffered seriously. In general, the rural poor were adversely affected by crisis-induced cutbacks in rural expenditures by governments, reduced remittances and the return of unemployed urban workers that increased demands on rural households' incomes (Hooke *et al.*, 1999). Very few systematic studies analysed the impact of the Asian economic crisis on rural women, largely because the crisis was seen as an urban phenomenon. At the global level, the failure to consider important aspects of gender relations (including women's unpaid reproductive work and intrahousehold allocation) leads to an inaccurate evaluation of the effect of economic liberalization on women both inside and outside

"The effectiveness of rural women's livelihood strategies to support families and reduce adverse family financial impacts during the Asian financial crisis and other urban economic shocks remains poorly understood."

the labour market (Fontana, Joeques and Masika, 1998). This begs the question of whether and how rural women's livelihood strategies might have mitigated the effect of the economic crisis in rural Asia.

Economic integration can occur within national boundaries as well as among countries. These two distinct forms of integration may or may not be linked to the trend of accelerated economic globalization. Rural production can move from subsistence agriculture to the cash economy with or without access to global markets. The demand for agricultural commodities in the global market acts as a force that can influence production and affect rural women's situation, albeit with differences dependant on the scale and type of the farming enterprise (United Nations General Assembly, 1999). Demand for cash can drive the commercialisation process of subsistence production as women take steps to sell their home-grown produce, small livestock and home-produced foodstuffs in local markets and urban centres. Such home-grown enterprises are likely to face competition from larger scale, industrially processed food products.

For those fortunate groups with land holdings of a sufficient scale to be devoted to contract farming (either undertaken by farm households themselves or by agriculture processing enterprises), and the advantageous attainment of education and skills, it would be easy to trace the direct effect of the global market demand for agricultural produce. In these production systems, which aim to capture a share of the global agricultural market, women with basic skills and education seem to find opportunities to expand their economic options. However, an inadequate understanding of formal labour contract processes and rules places women at risk of exploitation. At the same time, global consumer shifts in taste and demand have increased the economic risks to rural women involved in these kinds of contract agriculture enterprises (UN DAW–UNIFEM, 2001). In Pacific small island countries, the intensive competition to export similar products such as papaya to the bigger countries within the region presents problems, and the trade restrictions in the importing countries present uncertainties to the local small producers where women are highly represented.

Rural development service gap amidst regional prosperity

Uneven development in the region – largely at the expense of rural areas – has amplified the difficulties facing most rural men and women who continue to act as rural producers in family farms and subsistence agriculture and who also play a vital role in export-driven agriculture production. Although parts of rural Asia and the Pacific have experienced unprecedented technological and economic transformation in recent decades, the resulting economic growth has not translated into improved welfare for most rural residents. The main reasons for the lack of improved welfare are the general lack of supportive institutions (particularly health and education services) and the inadequate attention to improvements in rural infrastructure (ADB, 2000). At the macro policy level the significant contributions of women to rural production and food security have generally been ignored, and poorly, if at all, considered in agriculture and rural development sector reform strategies and budgetary allocations.

Although development in Asia and the Pacific region has tended to focus attention on fast-growing urban population centres, recent reports estimate that the number of rural Asians will not likely decline any time soon. The Asian Development Bank estimates that there likely will be 2.2 billion rural Asians by the year 2020, and that this rural population will have much lower access to health and education and an overall lower level of general well being (ADB, 2000). In most countries of Asia and the Pacific region, the proportion of people who do not have access to proper shelter, clean and reliable water, and adequate sanitation in rural areas is higher than in cities and towns (UNEP, not dated).

Uneven economic development has resulted in imbalances between rural and urban areas, and between agricultural and industrial areas both in economic opportunities and service infrastructure including education. Lack of basic services such as health

More than 1.5 million people live in the Pacific Island countries (PICs), not counting Papua New Guinea. About 75 percent live in rural areas with a subsistence life style. There is increasing demand for adequate water supply and sanitation in the growing urban areas in the region and for dependable and safe rural water supply. The problem of availability of water resources is much greater in atolls where in most places rainfall is low and seasonal and there are no natural storage possibilities. In the volcanic islands, where rainfall is plentiful, there are problems to maintain and adequately operate water supply systems that were built by external support agencies.

Source: United Nations Programme of Technical Cooperation, and Asian Development Bank Water and Sanitation Project, No. MIC96X01.

care, clean water supply and sanitation makes it particularly difficult for rural women to fulfil their domestic and care giving activities. Lack of schools within close proximity to the villages is an impediment to rural girls' access to education.

Demographic shifts and population dynamics

Much of Asia has entered the final phase of the demographic transition: human fertility is gradually declining to match the decline in mortality that began during the 1960s. The three facets of the demographic scenario are declining fertility, an increasing population of elderly and an increasing population of youth.

When the world's population reaches about 2 000 million in 2050, half of it will reside in Asia. Two other significant characteristics observed in the region are the ageing of the elderly and the feminization of ageing. A considerable proportion of the elderly is living in rural areas where social and welfare services are underdeveloped (ESCAP, 2002). Another striking feature in the Asian region is the substantially higher labour force participation compared to the West because of Asia's higher concentration in agriculture and in the informal sector, both of which do not have a compulsory retirement age (Chang, not dated). Hence the "greying" of agriculture and rural communities is a certainty in Asia. The demographic changes in China that contribute to the greying of farming and the economic hardship for the ageing farmers are illustrated in the example below.

As agriculture industrializes and market-oriented reforms continue in China, the traditional idea that farmers can rely on their children or land to support them when they get old is no longer valid. The population peak will arrive in 2030, when the country's senior citizens will make up one-fourth of the total population. Thanks to the long tradition of respecting the elderly, family-based support is popular in China, especially in rural regions. However, more young farmers are now leaving their home for well-paid jobs in urban areas. Some even settle there. Many older

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people now have to live alone. Although land is usually considered as the last guarantee of life for old farmers, income from tilling the land is often not enough to support them because of the lower price of agriculture products and higher costs of growing. There are local situation specific constraints for farmers to fully participate and benefit from the voluntary state insurance system and commercial insurance.

Source: Elderly people in rural areas need help, China Daily, 6 June 2000.

The increasing mobility of rural youth in highly populated countries contributes to the growing migrant population in urban centres. Ageing and a changing gender balance in rural areas – intensified as men and the young men are pulled to urban centres in search of better opportunities – are likely to further complicate rural demographics. Consequently, people with fewer options – generally poor, illiterate rural women – have been compelled to assume a major role in the agriculture sector, resulting in the “feminization of farming”. Such a demographic composition in rural areas may lead to neglect of this rural population group by planners, thus presenting a worrisome possibility of further marginalization of the rural sector. As countries like Bangladesh, China and India seek to generate employment in small scale rural industries, microenterprises and town and village enterprises, the capable young women and men are lured away from agriculture, thus intensifying the demographic trends. Internal migration acts as a pull factor, drawing younger people to urban areas in search of more lucrative opportunities and leaving the elderly, particularly older women, behind as the principal farmers. Such a transformation of the rural population structure, along with the longer life span for women in Asia, contributes to the “feminization of the rural community”.

Population pressures seriously affect rural households in many parts of Asia and the Pacific region, with particular implications for women’s work, livelihood strategies and care-giving activities. For instance, the population of the Pacific Islands doubles every 30 years, placing considerable stress on natural resources and food security. Rapid urban drift – predominantly of young men resulting in an acute shortage of agricultural labour – results in rising population densities such as in the Marshall Islands where 8 000 people live on Ebeye atoll less than 0.5 km² in size. Very high densities also exist in the urban centres of South Tarawa (Kiribati), Majuro (Marshall Islands) and Funafuti (Tuvalu), thus intensifying pressures on availability of land for home gardens and clean water supply, and resulting in very high unemployment levels and increased vulnerability to poverty.

HIV/AIDS posed threats to rural communities

Asia and the Pacific region now accounts for one in every five new HIV infections worldwide. Over 8 million people in the region were living with the virus at the end

of 2002, of whom 2.6 million were young people aged 14 to 24 (ESCAP, 2003). The effect of HIV/AIDS on rural populations and food security is a growing concern in many parts of the region, not least in the Mekong Basin countries. HIV/AIDS is highly prevalent throughout the Mekong countries, particularly in Myanmar and Thailand (Bain, 1998). The spread of HIV/AIDS has been linked to an increasingly mobile population, moving in search of new work opportunities created by increased economic integration, unprecedented growth, and the shift from a centrally planned to a market economy. It is at the subnational level that the effect of HIV/AIDS on the economic output is likely to be hardest, especially in a region where more than 800 million people live on less than one US dollar a day (ESCAP, 2002). In rural parts of Cambodia, the high cost of medicine and the rural credit system combine to make HIV/AIDS a significant cause of landlessness. In Thailand it was found that among affected households one popular financial management strategy adopted was disposing of productive assets such as land, animals and equipment (ESCAP, 2002).

In the health sector, the spread of HIV/AIDS in many parts of rural Asia has served as a wakeup call for action, overtaking the traditional stance of silence and denial. A few countries in the region, particularly Thailand, enacted place measures in the past decade to combat HIV/AIDS. Such early commitment is paying off, but many regional countries still struggle to find a cohesive action strategy.

Anecdotal and observational information further indicates that the movement of urban immigrants infected with HIV/AIDS back to their rural villages likely will increase the demands on rural women's support as income-earners and caregivers. The rural women in HIV/AIDS high incidence countries will face additional economic and work burdens as the family structure changes because of the attrition of family members.

Regional political realities and governance dynamics

The regional trends in political realities that affect the rural livelihoods of women highlighted here are civil conflict and the movement towards decentralized governance.

Civil conflicts

Rising levels of political instability and the increased occurrence of civil conflict throughout Asia and the Pacific region have intensified pressures on rural producers, both women and men. The dire impact of war on agriculture and food production in countries like Afghanistan, Timor-Leste and Sri Lanka is widely known. Less, however, has been written about the effects of civil war and ethnic tensions in places like Nepal, Aceh, Bougainville and the Solomon Islands in the Pacific. For women, political instability and conflict tend to result in increased agricultural work as men have been drawn away to wage war. Even in countries that apparently are peaceful today, the legacy of conflict lingers. Landmines in cultivated fields are an enduring

reminder of past conflicts and constitute a real danger to rural communities. In countries such as Cambodia and Lao PDR, the number of abandoned ordinances is so great that farmers are forced to abandon productive land.

Situation of Rural Women in Sri Lanka's Post Conflict Rural Economy

Just six kilometres from the major urban city of Trincomalee, 32 year old Ambika (a pseudonym) and her family live in a dilapidated house with no electricity, drinking water and sanitation facilities. Her husband is 36 years old. She has three surviving children after two children died when they lived in the 'welfare camp' – one at childbirth and the other at three months.

They returned to Kappalthurai in 2002 after ten years in a welfare camp to find their land occupied by strangers. Now they are living and farming on two acres of encroached state land. They are not concerned about getting their land back. Ambika was a farmer before displacement. After they returned she had obtained a loan to cultivate paddy but could not repay it because of crop failure on account of the drought. There is no alternative source of water as tanks are in a state of disrepair. She also has to protect her crop from wild elephants. Despite all these obstacles she has a great desire to continue farming. She grows her own seeds, goes to the store three kilometres away to purchase fertilizers and sells the produce to the trader who comes to the village.

She attends to household chores and looks after the children. She collects firewood from the nearby forest for cooking and goes to a neighbour's well to obtain drinking water. She has a homestead with vegetables and poultry. She ensures that her children go to school, but she has to travel a long distance when she needs medical attention.

Ambika is a member of the Madar Sangam (Women's Rural Development Society), but it is her husband who has joined the Farmers' Organization. She has no awareness of gender issues and accepts her situation.

She is still not sure of their future and therefore does not want to build up assets or improve their housing condition as they could be displaced if war breaks out again. Her main wish is an end to the war.

(W. Leelangi & CENWOR, 2004).

Decentralized governance

Within the governance arena, the push for decentralization in the region presents opportunities for taking action for the advancement of rural women at the local community milieu. In countries such as Bangladesh, India and Pakistan national efforts have been made to expand the participation of women in local governance councils and organizations through specific numerical quotas. Though women are becoming increasingly visible in the local governance bodies, their informed participation is yet to become a reality.

Many countries in the region promote decentralized governance and thus development responsibilities are shifted to local authorities. This has created disassociation between the national commitment to the global gender equality agenda and the local commitment to its implementation. Most importantly, there is a widespread lack of understanding of the national commitment and inadequate resources to support a social agenda promoting gender equality. Traditional gender biases and power dynamics in the local communities do not support transformation towards gender equality; local elites, both men and women, are unwilling to support gender equality approaches and women's empowerment strategies in development interventions. Local governance structures may have decentralized responsibility for development, but not the authority for revenue generation and the provision of adequate funds to develop and implement programmes for the advancement of rural women.

Policy and institutional constraints impeding rural women's advancement

National governments in the region have embraced CEDAW, though with differences in levels of commitment and progress in terms of achievement. Since 1979, countries in the region also implemented agencies such as the National Commission on Women, civil society organization coalitions and national ministries for the advancement of women, as well as units under the regional economic organizations (ASEAN, APEC and SAARC) to promote the advancement of women. Following declaration of the Beijing Platform for Action, regional governments responded by creating new agencies and expanding the national institutions for the advancement of women. These institutions have become specialized agencies within national governments with a mandate to focus on the agenda for gender equality and the advancement of women. The regional responsibility of working with these national ministries falls under the Economic and Social Commission for Asia and the Pacific. Countries in the region also developed national plans of action for women, reflecting the national commitments to the Beijing Platform for Action that serve as blueprints for achieving gender mainstreaming and women's empowerment objectives. Nonetheless, an inherent weakness of inadequate attention to the concerns of rural women in these institutions and policy instruments remains.

In part, the foundation of these inherent weakness and invisibility of rural women can be traced to UN measures for women's empowerment and the indicators of Millennium Development Goals (MDGs). Gender Empowerment Measure (GEM) indicators used by the UN to measure women's advancement include urban biased indicators and do not reflect the current realities of rural women. GEM indicators include the relative percentage share of women in parliament, in administrative and management positions and professional and technical jobs, and in adjusted GDP per capita (UNDP, 2004). It is essential to examine objectively whether these indicators measure the advancement of rural women in the unpaid family work sector

and facing social restrictions and resource constraints to provide for the household economy. An MDG indicator for measuring advancement of women is the changes over time in women's participation in non-agriculture sector employment (UNDP, 2004). Though the limitations of these indicators can be explained by data limitations in the rural sector, they also illustrate the lack of an articulate lobby and collective action to address the persisting rural gender inequality.

Most often the national ministries for gender mainstreaming and advancement of women are not adequately funded to undertake macropolicy and structural changes. They lack fundamental understanding of technical aspects related to agriculture and rural development sectors. In a few countries such as Fiji, Philippines and Sri Lanka and in some states in India a gender budgeting approach is being introduced (Goetz and Jenkins, 1996). As one report explained:

Budgetary policies can ignore gender-specific needs and have differential impacts on men and women because of the systematic differences between the sexes in relation to the economy. Gender responsive budgeting applies a gender lens to budgetary resource allocation, providing more visibility to women's unpaid work (UNIFEM and NIPF, 2003).

In the Philippines, gender budgeting policy continues to serve as a key element in implementing gender mainstreaming, but there is need for budget literacy and defining accountability. There is some urgency to ensure that the GAD budget policy survives the current austerity measures amid the raging financial crisis in the Philippines (Umali, 2004).

In the region, diverse technical line ministries serve as agencies of change to address the concerns of rural women as actors in agriculture and the rural economy, and as stakeholders in rural communities. Ministries of agriculture, livestock, fisheries, environment and irrigation and rural development are examples of technical line ministries. The trend has been to create focal units or focal persons for gender or women within these technical line ministries, though with limited interaction among the various focal persons in the discrete line ministries. Consequently, the institutional situation remains with parallel structures to achieve objectives associated with the advancement of women and development in rural areas. Agencies focused on gender equality and women follow the agenda for gender equality, women's empowerment and advancement of women. The technical ministries vested with responsibilities for the development of agriculture, rural communities and the rural economy function on their own fulfilling their technical objectives. Hence, these two parallel paths for development seldom cross unless

“In Asia and the Pacific region a cohesive macro policy approach or framework for integration of rural women's concerns and effective strategies to transform the agriculture sector by taking advantage of the human resource potential vested among rural women has not emerged.”

explicit efforts are made to bring an integrated approach that would fulfil the agenda for the promotion of rural women. It is crucial that policy dialogue and interagency interaction for programme development to promote rural women should cut across many technical areas. Because of these institutional constraints and policy limitations, however, national efforts remain insufficient to respond to the real resource and service requirements of rural women.

Social programmes for empowerment of rural women

The Asia and Pacific Islands region is dynamic in social experiments focusing on assistance to rural women. Most frequently the programmes to assist rural women are funded by international development agencies. Though the trend in countries like Bangladesh, China, Malaysia, Thailand and India seems to move towards identifying national resources to achieve social equities for rural development, in general social programmes in many countries are mostly driven by donor assistance targeting rural women. A common trend of promoting a gender equality agenda driven mostly by external resources raises the issue of sustainability of economic and social empowerment activities directed to rural women. India enacted a complex social programme delivery structure and involvement of multiple ministries serving rural women. There, the challenge is to make effective use of the assistance with accountability to the community stakeholders, timeliness of delivery and achieving positive effects. In contrast, many countries face the challenge of finding resources – both financial and human – to support the national plans of action for gender equality and advancement of women. In resource poor policy environments, the agenda for advancement of rural women does not rank high when allocation priorities are set. Monitoring at the local community level will become increasingly important to ensure rural gender equality. However, to date gender differentiated indicators, and processes to monitor and evaluate gender equality and the advancement of women in rural situations, have not been satisfactory. The region also witnessed the tremendous growth of non-government organizations (NGOs) in developing programmes for rural women. These non-government agencies have become implementing agencies for the donor driven projects to assist rural women. Though some NGOs have done remarkable work, those that act as a mediating agency between funding sources and rural women tend to create dependency among rural women on the NGO. Asian rural women still have not mastered the art of dealing with public institutions in their own right because of limited knowledge of the complex process and bureaucratic rules and procedures in accessing public resources.

Self-help groups and microcredit/finance programmes

Asia and the Pacific region pioneered participatory rural appraisal and mobilization of rural women, and consequently witnessed the remarkable growth in women's groups focused on economic empowerment. A popular mode of social capital

mobilization is through organizing women's groups in rural communities. Self-help groups in India, for example, mobilise the human potential of rural women, often by using microcredit as an entry point to mobilise them and to organize the community based groups. Throughout Asia and the Pacific region, microcredit frequently is the central component of development strategies aimed to improve the economic empowerment of rural women. Although rural women's savings have contributed to capital mobilization in the region, women themselves have not recognized the significance of their contribution to fund accumulation in national banks and thus to affect macroeconomic capital market dynamics.

In recent times, a pragmatic understanding of the role of microcredit/finance is emerging in the region, with the recognition that credit alone cannot contribute to economic and social empowerment of rural women. Historically in Asia and the Pacific region, microcredit programmes have not addressed the credit needs of small and marginal farmers. The perceived problems in extending microcredit to farmers include the risk of investing in agriculture; seasonality of agricultural production; poor loan repayment performance of agricultural lending and the technical nature of the agriculture production system. Agriculture communities' microcredit needs should be addressed more thoroughly (Hakim, 2004). From another perspective, in countries such as Cambodia, government regulations monitor the flow of funds and microcredit delivery. Though such regulations are necessary to ensure accountability, some measures have made women's access to credit relatively more complicated and difficult to process. Yet another trend, found in India, is for commercial banks to join forces with traditional microfinance providers to serve women's credit needs. Restrictions on microcredit loans set by global financing agencies often pose additional problems for rural women. As financial markets integrate at the global level and formal credit organizations are promoted as primary funding sources to improve agricultural productivity and rural enterprises, it becomes urgent to investigate the constraints that the associated stringent measures and competitive processes place on rural women's access to microcredit programmes.

In Cambodia, despite the growing maturity of the microfinance industry, there are still a wide range of issues that have not been addressed by most microfinance institutions. In particular, many microfinance products and services do not enable, or encourage, women to effectively increase their economic security. As a very high percentage of Cambodia's female population over the age of fifteen are involved in some form of economic activity, it is important that microfinance services and support for micro-enterprise development is provided in a manner that enables women to effectively participate and benefit.

Programme design, implementation and operations all heavily influence women's levels of participation in microfinance programmes. Whereas most organizations claim to have gender policies in place, in many cases there appears to be very little

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understanding of the constraints faced by women, particularly when attempting to access microfinance services. The methods that microfinance organizations use to introduce their services to women and the ways in which products and services have been developed and delivered can also exclude women.

Enabling simple physical access to programme services is the first step. However, it is also important to help women to access markets, collateral, information, appropriate technologies, and to overcome difficulties relating to minimal education levels.

(C. Robyn, 2003).

Environmental destruction and natural disasters

The 1999 UNDP Human Development Report identifies the importance of the environment for human development. The report states,

Human development also depends on unpaid work by men and women in the household or community, providing “care” so essential to human survival. And it also depends on the natural environment, another essential resource for all, particularly for poor people who derive their livelihood from natural resources. It recognizes seven threats to human security, differing for individuals at different times, and included among these are economic insecurity, food insecurity and environmental insecurity (UNDP, 1999).

This care aspect could be expanded to include care for the environment as the base for livelihood, most often accomplished through the unpaid work of men and women living in agriculture and rural communities. There is a growing concern that destruction of the environment to support economic growth and new life styles comes with negative consequences for rural livelihoods. The UNDP report identifies two types of environmental emergencies: the “silent emergency” of chronic environmental degradation, and the “loud emergency” associated with such things as wild swings in temperature and rainfall (UNDP, 1999). Irrespective of underlying causes, Asia and the Pacific region experiences its fair share of natural disasters and repeated cycles of disaster recovery with dire consequences for livelihood stability.

Environmental degradation and vulnerability

Documented evidence substantiates that the loss of environmental resources in Asia and the Pacific region threatens human livelihoods. In the report, *State of the environment in Asia and the Pacific* (ESCAP and ADB, 1995), the situation related to forest use and livelihood options is explained as follows:

Among the tropical regions of the world, Asia and the Pacific have the fastest rate of deforestation (1.2 percent per year), the fastest rate of commercial logging, the highest volume of fuel wood removals, and the fastest rate of species extinction. Among the subregions, Southeast Asia has the highest deforestation rate followed by South Asia. The large and rapidly growing populations and high economic growth in many countries are placing exceptional demands on the region's forest resources. The two major causes of forest destruction in the region are clearing for agriculture (including shifting cultivation) and excessive cutting of industrial timber and fuel wood. Fuel wood collection, an important source of livelihood for millions of poor people in the region, also accelerates the rate of deforestation.

The World Bank identifies eight major global environmental issues that contribute to environmental instability: Global climate change; loss of biodiversity; stratospheric ozone depletion; freshwater degradation; desertification and land degradation; deforestation and unsustainable use of forests; marine environment and resource degradation and persistent organic pollutants. In each category various social and economic factors are recognized; none is positive, and all adversely affect the livelihood security of people dependent on natural resources (Watson *et al.*, 1998). Though the effects of forest resource loss on women's lives are well articulated in the development literature the impact of desertification, land degradation and the loss of biodiversity on rural livelihoods, particularly those of women, are not well documented.

Within the tribal populations, women traditionally have greater responsibility in the domestic arena which drives them to interact more with the surroundings. This greater affinity results in a deeper understanding of the complex micro-environments and in an accumulation of dynamic gender specific knowledge. The people of Kolli hills (India) recognize the use of a variety of plant species for food and primary health. Women know which wild tubers are edible and men are aware of the utility of these plant resources. And women are more familiar with plant species that are useful in primary health care.

Tribal and rural farm women and men have been cultivating and managing the crop genetic resources at their personal expense for the public good. These are the foundations for modern plant breeding and biotechnological sectors. They have to be recognized, supported and rewarded in accordance with the provisions given in the legislation.

(R. Rengalakshmi, *et al.*, 2002).

Disasters and vulnerability

Asia and the Pacific region has suffered repeatedly from natural disasters such as flooding, drought, typhoons and earthquakes and rare but catastrophic tsunami have created hardship for rural communities as a result of considerable damage to

livelihood assets and loss of human lives. An increasing incidence of natural disasters in recent times has resulted in a serious loss of property and agricultural assets, which has threatened agricultural production and intensified vulnerability leading to food shocks and food insecurity (Ninno *et al.*, 2001; FAO, 2001; O'Brien, 2001). The region witnessed famine in *Democratic People's Republic of Korea* because of drought, and the dire situation in Mongolia that brought the threat of a food security disaster in a community dependent on livestock and land for its livelihood. The example of arsenic poisoning of rivers in Papua New Guinea illustrates a man made environmental emergency that ruined the livelihoods of fisher folks. Floods in Bangladesh and drought in the southern Indian states are becoming common occurrences that lead to the immediate loss of livelihoods and threaten the long-term economic viability of households and the community as a result losing the asset base. Evidence confirms that prolonged drought causes migration of rural households seeking alternative livelihoods in urban centres, usually low wage work, and of farm household members becoming casual agricultural labourers.

In the Asian region, particularly in East Asia two major disasters have affected the national economy and the health of the population. The first is the human epidemic of Severe Acute Respiratory Syndrome (SARS) that affected the general economy. So far, the effect of SARS on rural households has not been well documented. The second disaster, the Avian Influenza epidemic, directly affected agriculture households in East Asia. Avian Influenza is potentially dangerous for human lives in the region and could become a global human health hazard. It is documented that the economic impact of the Avian Influenza varied depending on the type and scale of poultry

“Because of the crisis in Viet Nam, the poultry sector has decreased in size. Poultry production in the surveyed households before the outbreak was the main economic activity for 68 percent of the male headed poultry farms and 32 percent of female-headed, whereas in July 2004 the survey found these rates to be 30 percent and 12 percent respectively.”

Households with few assets and no other animals than poultry have experienced Avian Influenza as a shock, leading to reduction in assets.”

(F. Dolberg, 2005).

production systems. The direct impact was caused by the death of sick animals on farms, stamping out the virus, cleaning the farms and the associated costs and other implications for farmers, their families and workers (Dolberg, 2005).

Women are more vulnerable during disasters because they have less access to resources, are victims of the gendered division of labour and are the primary caregivers to children, the elderly and the disabled (Jones, 2005). According to OXFAM, more women than men were killed

by the Asian tsunami, as figures from India, Indonesia and Sri Lanka suggest. In some areas the disaster claimed four times as many women as men. The report states that women were worse hit because they were waiting on beaches for fishermen to return, or at home looking after children at the time (OXFAM, 2005).

Various case studies and local narratives suggest that gender is a highly significant factor in the construction of social vulnerability to risk, and in the responses to hazards and disasters. Men and women clearly have different coping strategies during the disaster cycle. For instance, during the cyclone of 1991 in Bangladesh, a greater number of casualties were reported among women, who failed to receive warning signals largely because of socially imposed constraints on female mobility and their responsibilities to care for children and livestock. Similarly, women suffered more during the post disaster period, experiencing a sharp increase in workloads because of their multiples roles. At the same time, although many of their traditional income-generating activities disappeared (home gardens and livestock), women (unlike men) were unable to look for work outside the home (UN Economic and Social Council, 2002). In this context, gender-responsive institutional changes and collective action strategies are needed in disaster management to balance women's vulnerability to disaster with their proven capabilities to cope under difficult conditions (D'Cuhana, 2001).

Ahmedabad-based Disaster Mitigation Institute (DMI) undertook to assess the compound effects of sustained drought and a major earthquake on the livelihoods of poor women in the district of Surendranagar. Women's livelihoods in disaster-vulnerable regions are a particular concern, as the Institute identifies women as important community actors, income-earners, and stewards of natural resources whose efforts increase the food, water, housing, and fodder security of the rural poor. Noting the invisibility of women in relief operations, lack of gender-specific data, and inattention to women's unique needs in disasters, a recent DMI publication concluded:

"...women are active workers in South Asia. Although the majority of work is home based, how disasters impact such work is neither studied nor known."

(Elaine Enarson, 2001).

Emerging technologies: Production and communication

In Asia and the Pacific region the focus on emerging technologies considered here fall under two general categories, namely the technologies associated with agriculture and rural production and the information and communication technologies.

Agriculture technologies

Agriculture technologies can be grouped into two broad categories, namely the mainstream agriculture technologies and alternative agriculture technologies. Mainstream agriculture technologies are defined here as those technologies that are promoted by the agriculture research, education and extension organizations to improve productivity and that depend on high external inputs. Alternative agriculture

technologies are defined as technologies that promote local control in production systems, empower local communities, restore the environment and use low external inputs (Savant, not dated). The proponents of mainstream agriculture promote productivity. The promoters of alternative agriculture emphasize sustainability. Though it should be obligatory for those working on improving the situation of rural women to assess current and potential gender specific impacts of technologies promoted by competing paradigms, in reality very limited attention has been paid to addressing such women specific impacts of competing technologies. For example, a Cambodia-IRRI-Australia Project documented that women's labour requirements intensified when the farm adopted high yielding rice varieties and other new varieties. More work was also involved with extra fertilizer applications, improved seed storage techniques and knowledge intensive activities like Integrated Pest Management (IPM). Demand for women's labour decreased by land levelling and direct seeding (Nesbitt, 2003).

New technologies for agriculture are generally knowledge intensive and thus demand improved resource management practices. It is imperative to weigh both the benefits and disadvantages of these advanced technologies for rural women as well as the implications for their economic opportunities in such a changing technological milieu. Knowledge intensive technological development favours the educated and skilled in the developing countries of the region. Given the regional situation where rural women record less formal educational attainment, it is important to anticipate and counter the adverse impact of these knowledge-intensive technologies on the work and livelihood strategies of rural women workers.

Integrated Pest Management

The Asian region has pioneered both the green revolution and Integrated Pest Management as technologies for improving food production and resource management. The green revolution approach in the last century was promoted to improve agriculture productivity. IPM is promoted as a technology to improve resource management and contribute to sustainability. The concept and practice of IPM has been widely adopted first beginning with rice, then to cotton and vegetable production. IPM from a crop-based approach to a community-based approach is promoted in the region. In Pakistan, FAO implemented Cotton-IPM Project focused on the health risk concerns of farm women and their families in intensive pesticide dependent cotton production and developed programmes to train women facilitators to train farm women on cotton-IPM practices (FAO, 2003). To date, there has been limited well-researched documentation on the role of women in IPM, its relevance to women's crops and the impact on their workload and the contribution of their unpaid labour for the economic efficiency of the IPM based production systems (Mancini *et al.*, not dated).

Biotechnology

Biotechnology has emerged as a significant technology in Asia and the Pacific to expand agriculture production gains. Marked by strong ideological differences between the non-governmental sector (mostly against) and the scientific community and private sector (in favour), the debate about the benefits and hazards of biotechnology continues unabated. The extent to which modern biotechnology will contribute to the achievement of food security for all is still an open question (Pinstrup-Andersen, Pandya-Lorch, Rosegrant, 1999). In this context, most governments in the region appear to be following a “watch, wait and see” approach. There is general lack of information about the extent to which women farmers in the region know about and understand the potential opportunities and risks of a new agricultural revolution driven by biotechnology. Yet given the low educational attainments of women throughout the region, and the highly sophisticated organization of production likely to be required in biotechnology-based agriculture, it seems reasonable to speculate that the majority of rural women would be further marginalized by such developments.

Livestock revolution

Livestock technologies for expanding production to meet the regional growth in demand for livestock products will also present challenges to rural women’s role in this sector. According to Delgado *et al.* (1999),

The Livestock Revolution is a structural phenomenon that is here to stay. As in the case of the green revolution, the stakes for the poor in developing countries are enormous. How good or bad the livestock revolution will be for the people of the developing countries, depends on how these countries choose to approach it. Lack of policy will not stop the Livestock Revolution, but will ensure that the form it takes is less favourable for growth, poverty alleviation and sustainability in developing countries.

Women play a crucial role in livestock production on homesteads or in backyards, but “[i]n rural areas, far from cities and markets, the predominant system is one of scavenging with very few inputs provided by the owner, who will typically be a woman” (Dolberg, 2005). Thus it would be important to identify strategies to improve rural women’s livestock based livelihood as the livestock revolution pervades the region. Asian lessons learnt from the green revolution in the cereal crops sector and the white revolution of the dairy sector should guide the planners in devising livelihood strategies for women in the livestock sector.

Farmer Field School

The Farmer Field School (FFS) approach is an innovative communication modality developed for effective transfer of IPM technology (FAO, not dated). Limited research

information and anecdotal notes have begun to appear on women's participation in FFS for IPM, especially in East Asia (Rola, 2003). In Indonesia it was observed that many development programmes have had an adverse effect on female farmers, including within the IPM work. In order to overcome this limitation, alternatives such as intensive participatory approaches and Gender Field School experiments have been encouraged (Fakih, 2003).

There was a difference in women's participation in IPM FFS training programmes in Nepal because of cultural factors that supported or negated their participation. In one area where men were involved in non-farm activities to generate income there was not much competition for women from the local men to take part in IPM farmer field schools. But in another location, where the dominant ethnic group restricted women's movement outside their home, their participation in IPM Farmer Field Schools was very limited (FAO, 2000). The study in Viet Nam presents the differential participation of women in IPM in FFS. Four years after the start of the programme female participation nationally was 19 percent or one in every five participants in a FFS is female. Between 1994 and 1996 female participation increased from 13 to 19 percent. However, it still does not reflect the importance of women in agriculture. Especially in the south and centre the participation of women is low, less than 10 percent. In the north, female participation is over 35 percent. For women it was more difficult to arrange their time to go to FFS since they have many responsibilities at home and work. If women want to attend a FFS they need to get support from their family to do so. For men whether to join the FFS or not is more an individual decision (FAO, 1996).

Additionally, women's heavy workload and their responsibilities in on-farm, off-farm and household production deter their participation. Moreover, limited technical content or monocrop oriented training may not interest them. Thus, the current modality of Farmer Life School (FLS) for covering wide ranging topics may have greater potential to attract the women in rice based systems. The FLS is a tool that helps farmers to develop their critical thinking on their livelihood (Vuthang, 2003). Later FFS approaches have been applied to provide an integrated knowledge package to agriculture communities. But the content development in the FFS/FLS falls short in fulfilling the technology information needs of rural women who perform multiple roles in response to production demands of rural economies both on the farm and in the home.

Information and communication technologies

Recent debates on overcoming the digital divide are indicative of increasing interest among international agencies and investors in promoting the use of information and communication technologies (ICTs) in development (UNDP, 2001; IFPRI, 2000).

According to one report,

In the rural context, the ICTs usually provide very little employment or direct income unlike labour-intensive manufacturing and the Green Revolution, both of which created substantial employment. ICTs then need to be evaluated mainly in terms of their effect on productivity of other sectors (agriculture, farming or other rural, non-farm economic activities) and especially on agency development, including that resulting from sharing experiences of mobilization and innovations (IFAD, 2002).

Many countries in Asia and the Pacific region recognize the potential of Information and Communication Technologies to improve women's access to information and knowledge, enhance education and learning, and accelerate technology transfer. Radio and television are used extensively in several countries to inform and educate rural women about topics such as health, nutrition and agriculture. The most often quoted cases found in websites on ICTs potential benefits for rural women's rural livelihoods are: Bangladesh Grameen Communications' venture of rural women's cell phone enterprises; M.S. Swaminathan Research Foundation supported Pondicherry Village Information Shops; e-Chaupal for market information; SEWA's programme on skills development to support women's work in the informal sector; Sri Lanka Kotmale project and information kiosks and telecentres in the region.

Despite the potential, however, the threat of an increased "digital divide" that would widen information, education and knowledge inequality between urban and rural communities is real. "Access to ICTs is still a distant reality for the vast majority of people. The countries in the South, particularly rural populations, have been left out of the information revolution. In many of these countries there is a lack of basic infrastructure, resulting in high costs for installing and running ICTs" (Gurumurthy, 2004). Indeed, already evident is the wide variations in Internet access and in the availability and quality of relevant language content both between and within countries in the region. In the Pacific Islands, for instance, women's access to, and use of information technology, is largely confined to urban areas and generally limited compared to most Asian countries (Fairbairn-Dunlop, 2001). A number of barriers to the increased use of ICTs for the empowerment of rural women include inadequate infrastructure, high costs and limited capacity, all of which are more acute in rural areas (Aitkin, 1998). More importantly the content relevancy presents the greatest challenge to the use of ICTs for the advancement of rural women. Indeed, according to Green and Trevor-Deutsch (2002),

The major barrier to the use of ICTs for women is its lack of relevancy to their lives. Women encounter barriers to the use of ICTs when the learning content is not directly relevant to their livelihood, and when it does not value their knowledge, wisdom and experience.

Certainly, there are opportunities to use ICTs to educate and empower a large number of rural women and men provided that user-friendly and gender-responsive content and applications are developed, and the agents of development are well trained and gender-sensitive. One such application is on the education front. With appropriate and adequate investment in content and learning resources a distance education modality could reach women in the rural areas. ICT applications can be either directed to women as primary users of ICTs and/or for capacity building among service providers and social agents who serve the women's programmes. In the rural context, women as primary users of ICTs are still a social curiosity rather than a common occurrence. The opportunities for using ICT applications for improving livelihood skills for rural clients are currently mediated through development service providers (government and non-government) and hence they must be trained in ICT applications to improve women's livelihood. It would be important to distinguish the potential of ICTs to improve the livelihood of women to ensure economic empowerment and their prospects to improve access to information and knowledge to improve their quality of life and informed participation in various spheres of society.

Accelerating advancement of rural women in Asia and the Pacific region

A review of the situation of rural women and the regional trends relevant to agriculture and the rural economy that affect their situation across Asia and the Pacific region highlights a few realities. Although the contribution of agriculture as a proportion of national economies has declined, the role of rural women in farm and family economies has increased significantly. Yet despite this substantial increase in their responsibilities and workload, the enormous contribution of rural women to agriculture and rural economies is neither widely nor formally recognized at the local or national level. Because of this lack of awareness and appreciation of their contribution and roles, efforts to support agricultural development and food security tend to ignore women's resource needs, as well as the barriers and constraints they face in fulfilling their productive roles both on farm and at home. At the same time, new regional trends and external forces are fundamentally changing the context in which rural women operate, and presenting opportunities and threats to their livelihoods. Across Asia and the Pacific region the development community has embraced an agenda for the advancement of women and there also are emerging opportunities for the integration of rural women to improve agriculture productivity. The social and economic progress of rural women, however, is still inequitable. In the current milieu it is important to identify strategies to refocus attention on the situation of rural women in agricultural development and food security and their rights for resources and to strengthen policy and programme interventions that accelerate the advancement of rural women.

Information on rural women

Efforts should be made to collect sex-disaggregated data and gender-differentiated information for all aspects of agriculture and rural development in the region. Such information would a) enable a fact based understanding of regional rural women's contributions, resource deprivations and powerlessness, b) advance the development of gender-specific rural human assets and labour resource and activity databases, which could be analysed and compared within and across countries and c) provide reliable information to guide policies and programme formulation for the advancement of rural women. There is an urgent need to improve awareness among national governments of the importance of sector specific sex-disaggregated data, and of building the capacity of national agencies to collect, manage and analyse such data. In countries where national sample surveys or other periodic surveys already collect sex-disaggregated information, action should be taken to systematically analyse the data in order to develop a comprehensive understanding of the situation of rural women. Advances in information technology and sophisticated data management systems should be exploited in order to compile relevant, needs-based and user-friendly information resources about the situation of rural women, and this should be made available to policy makers, programme managers and advocacy groups.

It is important to develop strategies to improve the national census and agricultural census data to include sex-disaggregated information. Such macro data sets are an important basis for international comparison required by UN agencies. In the long run, a standardized data base would be most helpful to assess the progress made on the status of rural women.

It is also absolutely essential to develop country specific special studies that address women's and men's situations in agriculture and the rural economies. These studies should have household level data disaggregated by sex and should be all inclusive, that is they should go beyond activity analysis to include information on access, ownership and control of assets and resources and also gender specific constraints and limitations. Such databases should be maintained at the decentralized governance level. The decentralized governance officers should be trained to understand and use the sex-disaggregated information in local development planning.

With the assistance of donors and international agencies in many countries in the region, living levels data, including sex-disaggregated data on time use, have been collected. But these have not been analysed in depth to create sex-disaggregated information and a rural profile of the status of women. It would be helpful to mobilise external financial and technical assistance to analyse and utilize the existing data sets to create useful information for gender responsive planning and programme interventions to assist rural women.

Gender Empowerment Measures that really measure rural gender inequality should be developed. Though they can be modelled on the UN GEM, the indicators should reflect the realities of rural women. An example would be instead of women's participation in parliament, it could measure women's participation in local governance and leadership in community based organizations. Furthermore, the per capita income share indicator could be substituted with income value for time use data for unpaid family work in farm and home production. Such RURAL GEM (RGEM) would focus on rural women's advances or lack thereof compared to men in the respective countries and help monitor gaps in achieving rural gender equality. As a monitoring and evaluation tool RGEM could provide information for guiding policy directives and resource allocation for the advancement of rural women. The local governance authorities could use the RGEM information in local planning for gender responsive development.

Gender planning in agricultural and rural development

In Asia and the Pacific region the processes and benefits of using available sex-disaggregated data and gender-differentiated information in agricultural and rural development planning are still not widely understood. Inadequate efforts to use available data in planning processes highlight the necessity for capacity building within agencies that are involved in the formulation of agricultural and rural development policies and programmes. Organization wide efforts should focus on the integration of gender considerations and gender-differentiated indicators throughout the sequential phases of the policy formulation process as well as of the programme and project cycle. In part, the prevailing confusion can be attributed to a situation where the planners are not effectively linking gender analysis outcomes to gender planning processes. It is also suggested that gender mainstreaming has come to represent a narrow set of analytical tools and training in applying these tools for gender analysis rather than the process of designing strategies to improve opportunities for rural women.

Hence, a progressive process is needed to improve generations (current and future) of planners and macro economists in various agencies in developing countries to gain a comprehensive knowledge of gender biases impeding the improvement in the status of rural women as associated with increasing productivity in agriculture and rural economies. A communication gap between gender advocates and the policy makers; the former presents the issues as part of the social equality agenda, whereas the latter views development as chiefly concerning economic productivity. Such a communication gap should be narrowed by cross learning on the value of gender equality in achieving economic development objectives, particularly poverty alleviation. It is crucial to support a gender responsive and women inclusive curriculum for agriculture and rural development students within the national agriculture education system. It would be most appropriate for such knowledge to

be acquired as part of their formal learning so that it becomes internalized professional knowledge with the long term and sustainable impact of creating a professional commitment to considering women as farmers and producers in the national planning process. On the other hand, the advocates of gender equality and gender specialists should make an effort to contextualize gender concerns within the realities of agriculture and rural development.

Valuation of unpaid work

The importance of women's unpaid work in the home and farm production systems should be clearly recognized by national governments, bilateral and multilateral development organizations and academic institutions so that an appropriate technique to value this work is found and agreed upon. The household production model for farm family production offers one approach to quantify unpaid work inputs in terms of food security. Concerted efforts will be required to convince different stakeholders, including rural women, to recognize and reward unpaid work in agricultural and rural production. Though there are UN discussions on including unpaid work in national accounting systems to systematically recognize women's contribution, it is important to improve the social valuation of women's work in household and community contexts. The local level development and governance agencies should be targeted to increase their awareness and skills to include women's unpaid work in their planning processes. Local knowledge, needs and constraints assessments among both men and women in rural areas should become internalized and integral components of the process of local planning.

Empowering rural women with education and information

Many countries in the region have focused on girls' education as an important process to equalize the gender gap and make investments in women's futures. Such educational interventions are beginning to pay off with incremental gains in female educational attainment. Still, poor access to schools and learning centres and the relatively high cost of education continue to be barriers for poor rural families to support girls' education. In addition, unrelenting social prejudice against female education continues to cause the gender gap in rural education. The generation of adults that were denied education contribute to high female illiteracy in rural areas and they are becoming the primary farmers. Rural girls continue to face economic and social barriers to formal education and thus may not achieve their full potential as adults. Hence, the situation calls for increased resources and intensified efforts at the national level to substantially improve formal education for rural girls as well as enhance female adult literacy in rural areas and empower rural women with technical information and knowledge to improve their health and participation in the increasingly complex world. The potential of new information and communication technologies to reduce the educational disadvantages faced by older rural women

through the development and dissemination of needs-based information in appropriate formats and accessible mediums should be leveraged.

Reduction in household drudgery for productivity and empowerment

Persisting traditional perceptions on the worthlessness of women's unpaid work must be challenged if drudgery is to be reduced. At the same time, efforts should be made to expand basic services in rural areas in order to ease women's multitasking demands in the home and on the farm, and to develop appropriate technologies that reduce the amount of time women spend on daily household tasks. The time gained by reducing household drudgery could be invested in improving women's health and productivity. But investment in interventions to reduce women's drudgery is not seen as a productive investment by planners and considered as domestication and a home economics approach by the feminists. Hence, a change in approach is required, namely one based on the view that reducing women's drudgery has health and time management outcomes that could be both empowering and productive. The provision of services and goods to reduce drudgery could directly improve rural women's ability to participate in a diversified economic enterprise system and social and political activities in the community.

Technologies and training for rural women

Given their local knowledge and multiple roles, rural women should be fully involved throughout the development of women's work oriented technologies. In-depth assessments of the roles and constraints faced by rural women in different circumstances should be undertaken in order to guide the development and application of appropriate technologies. Training should build the capacity of rural women according to their multisegment production tasks, and new information and communication technologies should be harnessed to improve rural women's access to technical information and public sector support services. The existing models of farmer field school and farmer-to-farmer learning approaches may have ignored gender biases that prevent women from taking advantage of such technology transfer approaches. It is important to explore the concept of increasing rural women's skills as technology trainers and knowledge providers in the rural areas. The technical experts in the extension, outreach and agriculture centres could ably support rural women's local efforts if the traditions of ignoring women's technology needs could be changed.

Systematic study of rural gender dimensions

A few recent case studies and empirical findings have assessed the rural impact of recent trends in globalization, technology advances, HIV/AIDS and the like in the region, but the overall effect of these developments on rural households and in

particular on women has not yet been studied systematically. Hence, systematic studies should be carried out to identify and evaluate the effects of significant regional development trends and critical incidents on rural women's roles, work, access to resources and livelihoods. The findings of these studies should be widely disseminated targeting the policy makers in the development sector who influence policies and programmes so that new opportunities available to rural women can be leveraged and potential negative effects minimized. It is essential that future analysis of gender in rural areas be anchored in the context of these macro trends in order to develop effective interventions that support rural women to effectively manage these forces of change.

Conclusion

Across Asia and the Pacific region, rural women's contribution to the agriculture sector and rural production is marked by considerable diversity, and influenced by factors unique to the specific community and household in question. The general situation is characterized by patterns of change and continuity, or in other words, flexibility and rigidity. Mounting economic pressures have compelled many women to modify their roles and to perform a range of tasks not normally associated with women. Despite these new responsibilities in the economic sphere, however, women have largely continued to maintain their traditional gender roles in the domestic sphere. By comparison, men's roles have not adapted in the same way. For instance, as women have taken on a greater share of traditionally male activities, the rigid boundaries of social norms have been maintained for men. For women, this has given rise to an increasing workload, an increasing responsibility for physically demanding activities and poor returns on their efforts.

In this context of an increased and more onerous workload for rural women, the effect of persisting gender inequities in access to productive resources is even more significant. Indeed, it has been associated with an increased risk of food insecurity in the region. Lack of attention to women's work and drudgery of tasks and inequitable access to resources are imbedded in gender biases, which are passed on through cultural conditioning and social norms, at both the household and community level. Reflected in intrahousehold behaviour, these biases also spill over into the institutional context and policy arena, contributing to unrelenting rural gender inequality. Regional trends in economic integration, environmental degradation, migration, technology, and continuing vulnerability to natural disasters have a significant impact on the various contexts within which rural women operate. However, the nature of the opportunities and threats that these trends present for rural women – and, by extension, for agricultural production and food security – have not yet been systematically studied, analysed and quantified to support policy and programme formulation.

Based on the preceding analysis, the following interventions are recommended to improve the situation of rural women in Asia and the Pacific region: i) improve the collection and analysis of sex-disaggregated data in the agriculture and rural production sectors, as well as the capacity of national agencies in this regard; ii) improve the gender planning capacities of national agencies; iii) pursue interventions that attach a valuation to unpaid work; iv) empower rural women through improved education and access to information and technology; v) improve rural women's access to basic services to reduce drudgery and enhance their participation in technology development; vi) take advantage of advances in new information and communication technologies to improve women's access to information and technical knowledge and vii) undertake analytical studies to assess the impact of regional trends in economic integration, emerging technologies, HIV/AIDS and vulnerability to natural disasters.

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