



Agenda Item 4(a)
Document No.: ICW/95/16
Distribution: General
Date: November 1, 1995

International Centers Week 1995
October 30 - November 3
Washington D.C.

Renewal of the CGIAR: The Final Milestone

Beijing Conference and Implications for the CGIAR

Attached is a report entitled: *The Fourth World Conference on Women: Implications for the CGIAR.*

The report is transmitted for information and should be considered as background material to Agenda Item 4(a), sub-item Gender Issues.

THE FOURTH WORLD CONFERENCE ON WOMEN: IMPLICATIONS FOR THE CGIAR¹

Agnes R. Quisumbing
International Food Policy Research Institute
Presentation for International Centers Week, 1995

The recently concluded Fourth World Conference on Women (FWCW) in Beijing brought together the largest number of women and men ever to gather in connection with a UN global conference. It was a colorful, exuberant gathering of women and men from all over the world, attended by around 17,000 registered participants from 189 member states and associate members. In addition to those taking part in the official UN Conference, over 30,000 people attended the parallel NGO Forum on Women' 95, held in Huairou from 30 August to 8 September 1995.

1. The Beijing Process

Five regional preparatory meetings were held between June and November 1994, each region producing its own platform for action. Negotiations by government delegations on the Beijing document began during the final preparatory meeting held in New York last March. Many delegations were dissatisfied with the document, with major disputes about human rights, sexual and reproductive rights, resources, and the use of the word "equity." A glaring omission, from the agricultural perspective, was the role of rural women as farmers. Early versions of the Platform addressed rural women as entrepreneurs, but did not recognize women's roles as agricultural producers. Neither did the draft pay adequate attention to nutritional issues affecting women, particularly micronutrient deficiencies and women's health and nutritional needs over the life cycle. By the end of the Prepcom, 30 to 40 percent of the document was in brackets, reflecting the lack of consensus on many issues. Despite an additional week of informal consultations, the draft Platform tabled at Beijing was heavily bracketed: issues in 171 out of 362 paragraphs remained in dispute.

The Fourth World Conference on Women marked both increased diversity, with strong and equal leadership from the South as well as the North, and a stronger sense of unity among women North and South, addressing persistent problems of inequality, lack of access to resources, and lack of power. This Conference also witnessed the growing strength and contribution of nongovernmental women's organizations as a catalyst for change. The energy

¹I would like to thank Lynn Brown (IFPRI), Michael Collinson (CGIAR Secretariat), Pablo Eyzaguirre (IPGRI), and Hilary Feldstein (CGIAR Gender Program) for their valuable contributions to this presentation.

and dynamism of the NGO community was visible in the many exhibits, displays, workshops, and cultural activities held at Huairou. The distance did not deter delegates from attending sessions at the Main Conference and NGO sites, as buses ferried delegates to and from Beijing and Huairou.

By the end of the Beijing conference, the 189 delegations had adopted, by consensus, the Beijing Declaration and Platform for Action. The Main Committee agreed on the Platform at 2:20 a.m. on the last day, after a 10-hour session of negotiation and compromise. This document was subsequently approved by the Plenary. Many believe that this document represents sustained, more broad-based advances in achieving the goals of equality, development, and peace compared to the 1985 Nairobi document. Some important women's rights were reaffirmed: the universality of human rights, women's reproductive rights, and the equal right to inherit. For the first time, economic issues were prominent in the discussion of women's rights, although reproductive issues still remained a major focus of the discussion.

The Platform of Action, which had little reference to rural women as farmers in early drafts, has evolved to reflect women's crucial contribution to food security as agricultural producers, managers of natural resources, and users of agricultural technology. The final Platform states unequivocally the role of women as key economic agents, contributing through both remunerated and unremunerated work at home, in the community, and in the workplace. It also emphasizes the increasing dependence on women's incomes by a large proportion of the world's population, as the number and importance of female-maintained households increase.

The impact of the Beijing conference will depend on actions and policies to be undertaken after Beijing. While governments have the primary responsibility for implementing the Platform for Action, intergovernmental organizations such as the CGIAR have an important role to play. Prompted by the call of the government of Australia for countries to make this a "Conference of Commitments," many nations and international organizations pledged their commitment to implementing the Platform for Action.

2. The CGIAR Input to the Beijing Process

The International Food Policy Research Institute (IFPRI) and the International Plant Genetic Resources Institute (IPGRI) in collaboration with the CGIAR Gender Program participated in preparing for the Fourth World Conference on Women and in the Conference itself. IFPRI contributed a paper on the link between gender and poverty to *The World's Women 1995: Trends and Statistics*, one of the official UN documents for the Conference. IFPRI researchers also contributed a background paper on time allocation for the World

Bank Special Study on Gender and Development. At the preparatory meetings in New York last March 1995, the Gender Program and IFPRI jointly organized a workshop on Women and Food Security with the Food and Agriculture Organization of the United Nations (FAO); a similar workshop was held at the NGO Consultation. For the Prepcom, IFPRI prepared a brief summarizing its research entitled "Generating Food Security: Women as Producers, Gatekeepers, and Shock Absorbers", and the CGIAR Gender Program made a presentation on the women farmers and scientists as partners in agricultural research.

In August 1995, the CGIAR Secretariat commissioned IFPRI and IPGRI to represent the CGIAR in Beijing. During the FWCW in Beijing, the CGIAR made the following contributions:

- Presentations by IPGRI and IFPRI at the Emphasis Day on Rural Women organized by FAO, which focused on women's role as guardians of biodiversity and women's importance in household food security and nutrition security (see the attached Annex);
- Release of an IFPRI Food Policy Report, focusing on women's key roles in food production, income generation, and nutritional security;
- Release of an IPGRI publication, *The Forgotten Farmer*, on women's indigenous knowledge and biodiversity and a paper on "Rural Women: A Key to the Conservation and Sustainable Use of Agricultural Biodiversity"; and
- Press briefings by IFPRI staff for the BBC, VOA, India Today and the Australian media.

3. Implications for the CGIAR

The Platform identifies twelve critical areas for concern, and lists actions which governments, international organizations, NGOs, and the private sector can undertake. These areas are: poverty, education, health, violence against women, armed conflict, economic participation, inequality in power and decision-making, lack of advancement opportunities, human rights, women and the media, natural resources and the environment, and the girl child. Among these twelve areas of concern, four are directly relevant to the CGIAR's research and institutional mandates :

- poverty and women
- inequality in economic activities and access to resources
- inequality between men and women in the sharing of power and decision making at all levels; and
- inequalities in the management of natural resources and safeguarding the environment.

3.1 Setting the context of CG work

The Platform recognizes that women are important economic agents, have multiple roles in home, community, and workplace, and are becoming more important in agriculture. Inequality in access and rights to economic resources--land, water, trees, and technology--and the design of technologies which ignore women's preferences and constraints, hinder them in fulfilling their multiple tasks.

Increased recognition of women's roles and economic rights. The Platform emphasizes that women are important economic actors. Moreover, the reaffirmation of the universality of human rights includes economic rights such as rights to land, water, trees, and technology. The platform also recognizes that the productive capacity of women should be increased through access to capital, resources, credit, land, technology, information, technical assistance and training. This is important not only to increase agricultural production, but also to raise women's own income and status within the household in order to improve nutrition, education, and health.

Many assertions were also made regarding the possibility that women were overrepresented among the poor, or the "feminization" of poverty. The growing number of female-headed households in rural areas also received much attention. Yet, research on these issues is limited, and thus our ability to take them into account in prioritization and in designing and implementing appropriate technologies and policies is constrained.

Women and the environment. The Platform identifies women as natural resource managers and important to environmentally sustainable growth. It emphasizes the need to collaborate with rural women, acknowledge their scientific knowledge, and involve them as partners in the design and testing of technology.

Women's nutrition and health needs. The Platform emphasizes the continuing discrimination against girls in nutrition and health care. It urges governments and international organizations to promote and ensure household and national food security and to implement programs aimed at improving the nutritional status of girls and women. We already know from our research that growing enough food is only part of the answer. Nutrition questions draw attention to two issues of importance for CG research:

- the fact that in a large number of sites, research shows that income going to women is much more likely to be spent on the nutrition and health needs of household members.

- the possibility that micronutrient deficiencies, many of which are prevalent among women, can be addressed by better nutrition interventions and advances in plant breeding.

Women and science. Substantial evidence already exists regarding the high economic and social returns to educating women and girls. The Platform recognizes the importance of advanced study in science and technology in enabling women to take an active role in industrial and technological development. The Platform urges that women not only benefit from technology, but also participate in the process of technology development from the design to the application, monitoring, and evaluation stages. As the pool of educated women in the scientific profession increases, there will be a greater number of potential candidates for CGIAR recruitment and training who are likely to bring their own important perspectives to the technology and policy drawing board.

3.2 The CGIAR: Current and future contributions

The discussion on rural women highlighted the CGIAR's ongoing contribution to reducing rural poverty. The Platform for Action affirms the importance of developing agriculture, forestry, livestock, and fishing sectors for household and national food security. The CGIAR, as a partner of national governments, is contributing to the formulation and implementation of policies and programs to help women in agriculture. Moreover, as it continues to be more sensitive to gender analysis and poor women producers, the CG is one vehicle for contributing to poverty eradication. By designing technologies appropriate to the needs of poor women, and enabling them to generate incomes, the CG helps create an enabling environment to build and maintain sustainable livelihoods.

The CG is also developing gender-based methodologies and conducting research on gender and poverty, including the design of conceptual and practical methodologies for gathering gender-disaggregated data and incorporating gender perspectives into policymaking. The CG is beginning to build a critical mass of women leaders in science and technology, and is examining ways to increase women's access to senior levels of decision making.

The CG can continue to play an important leadership role in agricultural research and policy by including women as well as men in ecoregional work and undertaking technology impact assessments. By conducting much needed research on trends in women's involvement in agriculture, the CG can better inform the design of technologies and policies to benefit poor agricultural producers. Through its research, the CG also contributes to building the information base on women's rights (right to full and equal access to economic resources, including right to inheritance and ownership) with respect to land, water, trees, credit, natural resources, and appropriate technologies.

In the future, the CG can contribute even more by including rural women, not only as subjects of research, but as genuine partners in agricultural development. The Platform for Action emphasizes the need for more research that understands and supports the role of women as decision makers at all levels concerned with agriculture, natural resource management, and biodiversity--from policy, research and development, to their role as actual managers of the resources themselves. Where women are being marginalized as a result of development processes, the very success of agricultural development, and the security of the natural resources upon which it depends, are at risk. Participatory research approaches can help ensure that women's expertise and knowledge are reflected in research and development efforts to the same degree that women are important as decisionmakers and managers of natural resources.

As indicated in the papers to follow this presentation, the CGIAR is already making progress with respect to the training and recruitment of women scientists and the use of gender analysis and work on women-specific problems in technology design. The Fourth World Conference on Women is an opportunity for the CG to assess that progress and to commit itself to continuing and improving upon these efforts. Doing so puts the CGIAR squarely in the leadership role in reducing poverty through greater attention to increasing women's incomes and productivity.

**RURAL WOMEN: A KEY TO THE CONSERVATION AND SUSTAINABLE USE
OF AGRICULTURAL BIODIVERSITY**

Fourth World Conference on Women, Beijing 4-15 September 1995

Emphasis Day on Rural Women

by

Pablo Eyzaguirre and Ruth Raymond

International Plant Genetic Resources Institute (IPGRI)

Rome, Italy

Summary

Greater participation by rural women in the development process is essential for equity reasons and because of the central role that women play as agricultural producers. The international policy and scientific communities now recognize the important role that women play as resource managers and their particular needs as managers and users of genetic resources. Attempts to alleviate poverty, improve the quality of life and preserve the natural resource base will fall short of expectations if women are not included. Rural women have special interest in the diverse and multiple uses of plants and other biological resources given their varied and complex responsibilities in rural households. Their participation as key decision-makers and users of agricultural biodiversity is essential for the conservation of genetic diversity for development and for the well-being of future generations.

The Role of Women in Agriculture and the Management of Biological Resources

In many countries women comprise the bulk of the labour in agriculture. Statistics show that women's contribution ranges from 40 percent in Latin America to 60 and 80 percent in Asia and Africa. Their contribution to food production in developing countries is even higher. In sub Saharan Africa for example women produce on the average 70 percent of the food in the region. What is often ignored is not only their contribution in terms of labour, but their decision-making about how natural resources are used to satisfy the varied needs of rural households. It is rural women's expertise and responsibility for making decisions about the use of biological resources which makes their contribution and participation central to the sustainable management of our natural resources, particularly the plant and animal genetic resources that support agriculture.

Maintaining Agricultural Biodiversity

Biodiversity is a basic resource upon which the food security and sustainable development of human society depends. Biodiversity exists at three levels: the ecosystems, the species, and genetic diversity within species. At the ecosystems level it reflects the differences between grasslands, deserts, rainforests, mountain ecosystems and coastal marshes, for example. Within each ecosystem are unique and vital communities of species upon which the well-being of people and indeed all life depends. Biodiversity at the species level is concerned with the number and adaptation of species in ecosystems. The number and types of grasses in a savannah, or trees in forest, or fish in a lake, or crops on a farm are all indicators of the stability and productivity of ecosystems. Genetic diversity within species is perhaps the least understood aspect of biodiversity and receives less public

attention. Yet it is this genetic diversity that enables species, to adapt to new environments, to new pests and diseases, and to changing climates.

Plant and animal genetic diversity has enabled farmers, gardeners, pastoralists, and scientists to develop an immense range of crop varieties and livestock breeds. In spite of the increasing use of modern biotechnologies to transfer useful genes between species, variation that occurs within domesticated species and their near relatives continues to underpin the genetic improvement of crops and animals; the breeding of resistance to parasites or tolerance of drought. Rural peoples and particularly rural women's concern with intra-species diversity most commonly relates to the differences between traditional varieties of crops such as wheat, maize, rice, potatoes, and the improved varieties that are produced intensively by modern agriculture. Many of the characteristics that women farmers have valued and maintained in traditional cultivars are not often present in the improved varieties that favour maximum yields as opposed to multiple uses and stability. Some of these plant characteristics are also important to conserve for future productivity and plant improvement as well.

Explosive growth in the world's human population in the last 100 years has led to rapid changes in the global environment. More of the planet's land, water, and biological resources are being used to support this growing population. As land use changes, as forests are cleared, as wetlands are drained, as the area of cropland and cities increases, the habitats and ecosystems that maintain useful species and varieties are lost, often accompanied by the loss of useful species and genes. As new crop varieties or animal breeds replace traditional ones, so valuable genetic

variation is lost. We will need these genes in order to tailor our crops and animals to meet future challenges.

In addition to the genetic resources of crops and animals, we need to maintain the knowledge that rural peoples have about the useful species in their environments. This knowledge is a crucial source of information on the diversity within species or on how to identify and conserve useful species threatened by genetic erosion. Information on the different uses of plants, farmer preferences, and cropping practices has been passed down from generation to generation, from grandmother to granddaughter and grandsons. Because women rely on diverse biological resources to provide food and income for their families, they are reservoirs of knowledge of where useful species are found and maintained. Because women's responsibilities in rural production systems extends from the propagation, protection, harvesting, processing, storage and final preparation of food plants and animals, they may often have the most complete understanding of the uses and usefulness of a plants and animals.

Rural Women: Experts and Partners in the Use and Conservation of Agricultural Biodiversity

In much of the developing world, the conservation and use of plant genetic resources begins with women. As farmers, they are responsible for growing and collecting food. The processing and storage of food crops is also mainly their responsibility. As mothers, women are responsible for the domestic needs of their households and it is their job to gather and utilize food, fodder, fuel, medicinal plants, and fibre. For this reason, women often determine which crop varieties to

grow, which food to keep for home consumption and which to sell at the local market.

Women's special knowledge of the value and diverse uses of plants for nutrition, health and income has important implications for the conservation of genetic resources because **the decision to conserve a plant variety depends, to a large extent, on its usefulness to the farmer and the community.** Studies of the different roles of women and men in agriculture show that when women are in a position to choose, they usually adopt a variety of plants, trees and animals, taking into account factors such as processing, flavour and cooking time. Women are also more often than not concerned with how multiple uses of the same plant can add to household income. Women's focus on the household economy provides a balance to market-oriented pressures that emphasize high yield and uniformity.

In many households, women manage components of the farming system containing high levels of biodiversity - such as home gardens - and make extensive use of gathered species and tree products. Since women prepare the families' meals, this influences the variety of crops which they select for the home garden. Often, this is used as an experimental plot, where women tend indigenous and other species as they try them out and adapt them for use. Home gardens also serve as a refuge for less common species and varieties. Women also make extensive use of wild patches and marginal areas within farm communities. Here they gather traditional vegetables, condiments, and medicinal plants that are crucial for the nutritional well-being and health of rural families throughout the world.

GENETIC DIVERSITY

seed selection • storage • processing • multiple uses • planting • weeding • plant protection • harvest

Women
Farmers

GENETIC DIVERSITY

Forests are an invaluable resource for women. There are a great diversity of food items that women harvest from trees: leaves, fruits, berries, nuts, seeds, gums and saps, edible roots, tubers and bark. Grasses growing beneath the trees serve as fodder for animals, and the wild and semi-wild plants, which form part of the rural diet, often ensure survival in times of famine. In addition, many rural women rely on the income earned from the sale of forest products, such as bamboo and rattan used for furniture, baskets, mats, and other forest products used in medicines, honey and edible oils.

Policy Support to Women as Partners In Maintaining Biodiversity for Development

Growing concern about the global loss of biodiversity prompted 153 nations to sign the Convention on Biological Diversity at the 1992 United Nations Conference on Environment and Development (UNCED) in Brazil. The legally-binding Convention, which came into force in December 1993, lays the groundwork for the development national strategies and programmes to conserve and use their genetic diversity in a sustainable manner. The global community in turn is charged with ensuring that national programmes have the capacity to safeguard this diversity, the value of which goes far beyond a country's borders.

The Convention clearly recognizes "...the vital role that women play in the conservation and sustainable use of biological diversity", and affirms "...the need for the *full participation of women at all levels of policy-making and implementation for biological diversity conservation.*"

Agenda 21, the action programme adopted by UNCED, has as one of its key objectives the recognition and promotion of "the traditional methods and the knowledge of indigenous people and their communities, emphasizing the particular role of women, relevant to the conservation of biological diversity and the sustainable use of biological resources" and the guaranteed "participation of those groups in the economic and commercial benefits derived from the use of such traditional methods and knowledge" (Chapter 15.4). The programme identifies a number of steps which governments should take to make this a reality. These include:

- * Establishing plans to increase the proportion of women involved as decision-makers, planners, managers, scientists and technical advisers in the design, development and implementation of policies and programmes for sustainable development (Chapter 24.3).

- * Adopting integrated management systems, particularly for the management of natural resources; traditional or indigenous methods should be studied and considered wherever they have proved effective; women's traditional roles should not be marginalized as a result of the introduction of new management systems (Chapter 8.5)

- * Taking action to respect, record, protect and promote the wider application of the knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles for the conservation of biological diversity and the sustainable use of biological resources, with a view to the fair and equitable sharing of the benefits arising, and promote mechanisms to involve those

communities, including women, in the conservation and management of ecosystems (Chapter 15.5)

Implementing the Convention on Biological Diversity and Agenda 21 is first and foremost the responsibility of governments. It is recognized that international organizations should support and supplement national efforts; in this context, the United Nations system has a key role to play. The United Nations Environmental Programme (UNEP) and the Food and Agriculture Organisation (FAO) are the leading agencies in this global endeavour. Other international, regional and sub-regional organizations are called upon to provide support and expertise. Broad public participation and the active involvement of the non-governmental organizations and other groups are also encouraged.

Next year's Fourth International Technical Conference on Plant Genetic Resources, is aimed at implementing the Convention on Biological Diversity -- particularly as it relates to plant genetic resources for food and agriculture. Organized by the UN Food and Agriculture Organization, in close cooperation with IPGRI, the Conference to be held in Leipzig, Germany will bring experts together with officials of some 140 governments. It will consider for formal adoption a "Global Plan of Action for the Conservation and Sustainable Utilization of Plant Genetic Resources for Food and Agriculture"

The Global Plan of Action will identify gaps and propose priorities for action, building on Agenda 21. It is expected that the Plan will closely examine the role of rural women in the conservation and use of genetic resources and will provide

encouragement and practical support to governments in their implementation of the Convention and Agenda 21 as they relate to women.

The sixteen international research centres of the Consultative Group on International Agricultural Research (CGIAR) are also working to support the implementation of the Convention on Biological Diversity and Agenda 21. This is the world's largest international research system responsible for improvement of crops, livestock, forestry and farming systems mainly in developing countries. It can offer scientific and technical expertise in the management of natural resources, biodiversity databases, and information and techniques for the conservation and use of genetic resources in agriculture. In fulfilling its mandate to improve the productivity and sustainability of agriculture in order to alleviate poverty, the CGIAR centres have begun to pay increasing attention to the distinct roles that women play in this process (see *The Forgotten Farmer: Plant Genetic Resources, Women and the CGIAR*).

Working with Rural Women for the Conservation and Use of Agricultural Biodiversity

The implementation of the global and national agendas to link the conservation of biodiversity with development will ultimately depend on actions taken on the ground, in the environments and communities where our vital resources exist, where they are being used, and in many cases threatened. While we often think of government officials and technical experts as the main decision makers, in the case of agricultural biodiversity the ultimate decision-makers are the farmers and rural communities that use and depend upon biological resources for their income and survival. Any biodiversity policy or action that fails to involve the resource

users in the decisions and implementation of conservation is less likely to succeed. Any biodiversity conservation policy that fails to consider the needs and rights of rural communities for development and the sustainable use of resources is less likely to receive their participation.

As we have seen in the rural environment, women are distinct and key decision-makers and resource users. They have specific roles and needs with respect to the access and use of biological resources. Their active participation promotes biodiversity and favours more equitable and sustained development.

There are specific actions that we can take to work together with rural women in our common goal of conserving biodiversity for development.

- We have begun to incorporate gender and socio-cultural factors into the design and implementation of agricultural research and genetic resources conservation.
- We are beginning to focus scientific attention and support for the special environments that women create and manage such as home gardens that are rich in biodiversity.
- We are paying greater attention to the diverse and complex roles and functions that women play in the production and resource management of rural households; supporting women's roles, their decision-making and continued access to natural resources is crucial to the maintenance of biodiversity.
- We are using gender analysis to see how the different uses of biological resources by women and men; and to pay greater attention to women's concerns for the multiple uses and processing requirements of crops and how this can support the maintenance of genetic diversity in crops and animals.

- Finally, women have many responsibilities and little time. We are examining changes in the labour patterns of rural women and men in order to assess how technologies and policies can support the continued participation of women as farmers and resource managers.

The marginalisation of rural women from decisions and resources has an immediate and negative impact on biodiversity. Using participatory research approaches can help to ensure that women's expertise and knowledge is placed at the centre of the research and development process in the same degree to which rural women are at the centre of the agricultural production and biodiversity management process.

WOMEN: THE KEY TO FOOD SECURITY¹

Agnes R. Quisumbing
International Food Policy Research Institute
Consultative Group for International Agricultural Research

Eight hundred million people in the developing world currently face food insecurity, and the challenge of meeting their food and nutritional needs will become greater in the years ahead. Crop yields will have to increase to keep up with population growth and urbanization, and land for agricultural production is becoming scarce. While agricultural research continues to develop new varieties with higher yields and increased tolerance to unfavorable environmental conditions, an untapped source of agricultural growth could lie in reducing the bias against women in agriculture.

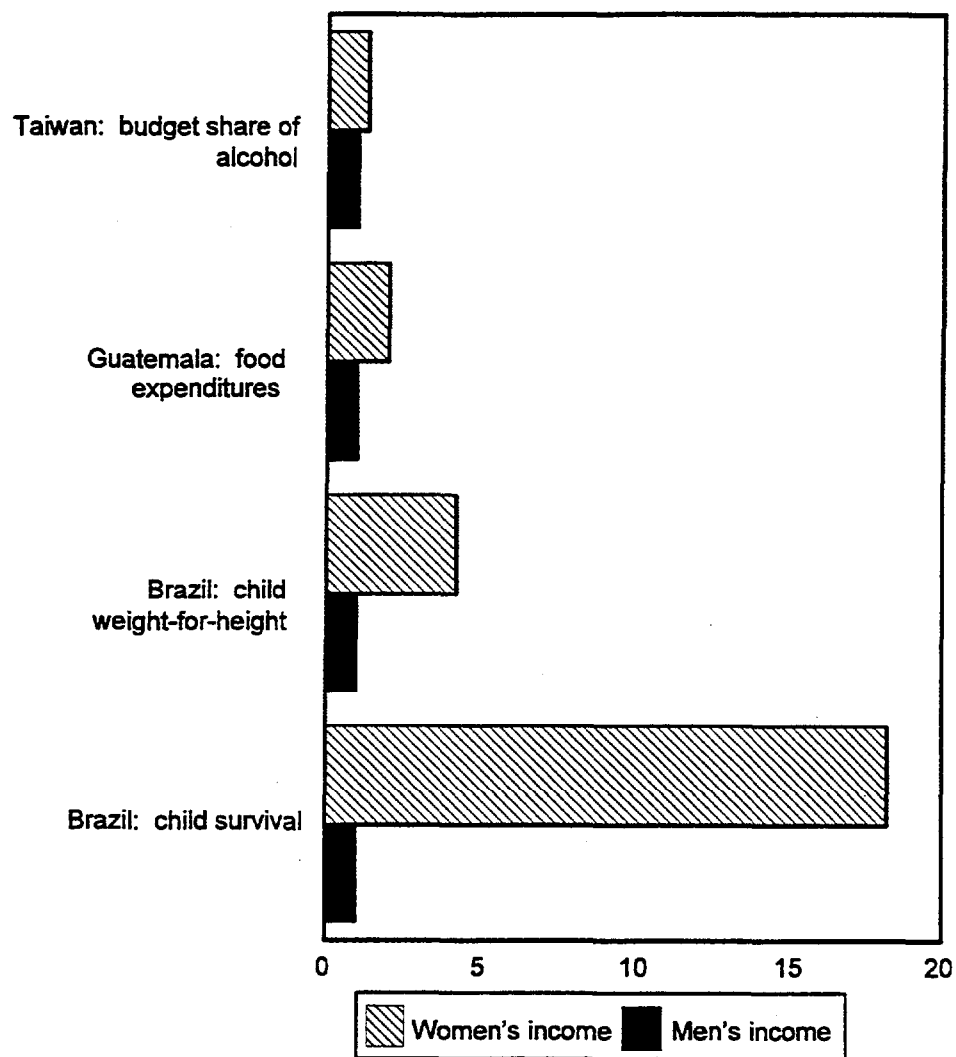
Women in developing countries play significant roles in maintaining the three pillars of food security: food production, economic access to available food, and nutritional security. Women's importance in agriculture is increasingly being recognized by governments and policymakers, as this emphasis day clearly demonstrates. What is less well known is the greater impact that women's incomes have on food security and good nutrition.

¹excerpted from A. R. Quisumbing, L. R. Brown, H.S. Feldstein, L. Haddad, and C. Pena, *Women: The Key to Food Security*, Food Policy Report (Washington, DC, International Food Policy Research Institute, August 1995).

In recent years, research at IFPRI and other institutions has shown that improvements in household welfare depend not only on the level of household income, but also on who earns that income. These studies, based on household surveys in many developing countries, find that women, relative to men, tend to spend their income disproportionately on food for the family. Moreover, women's incomes are more strongly associated with improvements in children's health and nutritional status than are men's incomes.

The following slide summarizes some of the evidence from Asia, Africa, and Latin America which shows that women's income, relative to men's income, has a greater impact on household food security and preschooler nutrition. In Southwestern Kenya, for a given household income level, the share of income controlled by women had a positive and significant effect on household calorie consumption. A study using Taiwanese data finds that, after holding per capita household income constant, women's income share has a significant and positive impact on household budget shares of staples and education and a negative effect on budget shares allocated to alcohol and cigarettes. In Guatemala, the average yearly profits from nontraditional agricultural export crops would increase household food expenditures by twice as much if they were under women's control rather than their husbands. Finally, one of the most careful studies ever conducted on the differential welfare effects of male and female incomes, shows that the positive effect on

Effects of men's and women's incomes



the probability that a child will survive in urban Brazil is almost 20 times greater when nonlabor income accrues to women rather than men.

Women are essential to the achievement of nutrition security. This depends not only on sufficient food at the household level but also on factors such as health and child care and access to clean water and sanitation. Women's time devoted to "care", namely, the time and attention devoted to meeting the physical, mental, and social needs of growing children and other household members, is an essential input into good nutrition. Moreover, women's own nutritional status is important for children's nutrition. Through prepregnancy nutritional status, weight gain during pregnancy, diet during lactation, and breastmilk production, better-nourished mothers lead to higher-birth-weight infants and better-nourished children. But women's nutritional status may be threatened when women act as shock absorbers for the household through the liquidation of their own nutritional status in lean seasons.

Women constantly face difficult choices in their time allocation decisions. Increased time spent in generating income (translated into higher food expenditures) and in using health and education facilities can improve child nutrition, but the loss of direct time spent in child care may offset this. Devoting more time to generating income may also worsen women's own nutrition. However, increasing female employment outside the home may increase women's bargaining power within the household. Development of technology that relieves women's time burdens in agricultural production and household

maintenance without sacrificing their ability to earn independent incomes is therefore critical.

CONCLUSIONS AND RECOMMENDATIONS

Women in developing countries currently play a crucial role in meeting the food and nutrition needs of their families through all three pillars of food security--food production, economic access to food, and nutrition security--but they do so with inadequate resources. If the constraints confronting women farmers were removed and women were granted access to the resources available to male farmers, they could make significant contributions to eradicating the food insecurity faced by millions of people.

To allow women to fulfill their potential in generating food security, national governments and international organizations must take policy steps in three broad areas. First, they must increase women's physical and human capital. Women's ability to produce food can be enhanced by improving women's access to resources, technology, and information. Governments can undertake legal and policy reforms to preserve women's traditional land rights, to allow women to own property, and to benefit in their own right from land reform programs. Such reforms should also include innovative ways to give women access to credit through nontraditional forms of collateral and local institutions like women's groups. Programs can support the development of farm technology that takes into account women's needs and their knowledge of indigenous

farming systems. Effective agricultural extension and literacy training for women, and increased education for girls, will increase productivity both today and in the future.

To maximize the positive effect that women's incomes have on household food security and nutrition, governments and donors must increase women's ability to earn income. Strategies should be geared toward increasing women's productivity both in paid work (whether in agriculture or other sectors) and in domestic production, so women can increase their incomes without sacrificing additional time, their children's welfare, or their own health and nutritional status. These include the development of technologies to reduce time spent in traditional home production activities such as milling and fetching water and the provision of community child-care facilities. More important, education and training may be the most crucial investments to be made in women who do not have physical assets. General education and skills training may also help many women gain employment outside agriculture.

Governments and policymakers must protect women's health and nutritional status. Good health and adequate nutrition are important to women at all stages of their lives. Development or safety net programs targeted towards women should focus on those that increase women's income-earning potential while reducing the energy or time intensity of their activities. Such efforts should also be supported by programs addressing girls' and women's specific health needs --especially in relation to puberty, pregnancy, and lactation. These include programs to relieve iron deficiency anemia, vitamin A and iodine

deficiencies, general reproductive health care, and pre-and post natal care. Lastly, women need to be empowered to seek health care for themselves and for those who depend on them for food and nutrition security.