

CFS

## POLICY ROUNDTABLE

### Gender: Food Security and Nutrition

#### Matters to be brought to the attention of CFS

#### The Committee is asked to consider:

- Calling upon Member States and international organizations to include **improvement of women's, adolescent girl's and children's nutritional status** as an explicit goal and expected outcomes of agriculture, food and nutritional security-related programmes, emergency responses, strategies and policies.
- Calling upon Member States and international organizations to ensure that women in affected communities, women from CSOs, government ministries and other stakeholders have **meaningful participation in all decision making processes** related to guaranteeing the women's rights to food security, health, land, water and other productive resources
- Urging Member states to **introduce legislation recognizing and guaranteeing women's rights to food, health, land tenure, water and other productive resources, as well as access to credit, market, training, appropriate technology, social services including health and education**, as per international human rights conventions and declarations including CEDAW and the Beijing Platform for Action, CESCRC, CRC, ICPD Programme of Action and UNDRIP.
- promoting a **global initiative in reducing gender inequity in agriculture** with member states prioritizing funding for women food producers as follow up to the SOFA 2011 recommendations
- Identifying and supporting strategies and actions to further strengthen gender-sensitive food and nutrition security, including:
  - Statistics should be sex disaggregated, such as numbers of extension workers, farmers in cooperatives etc.
  - Gender analysis should be conducted for food and nutrition security projects and programmes and the findings of this analysis should inform project design, implementation, monitoring and evaluation.
  - Programs should be designed so that women and men have equal access to program services and operations, being cognizant of women's commitments to the domestic and reproductive economy.
- Developing a mechanism to monitor progress in the implementation of all Voluntary Guidelines including the Right to Food, and responsible management of land, fisheries and forests.

## 1. CHALLENGES

*Food Security – when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for a healthy and active life*

Food security is essentially built on three foundational pillars – food availability through production or markets, food access through market access and income, and food utilization. Women's ability to produce food and generate income is conditioned on prevailing social constructs and norms governing their ability to access the necessary resources and services.

The third pillar, food utilization is critical. It essentially translates food into nutrition security. Hidden hunger is one manifestation of the third pillar. The diet lacks the appropriate balance of macro- (calories) and micro-nutrients. Individuals may look well nourished, and consume sufficient calories, but are deficient in key micronutrients such as vitamin A, iron, iodine etc – hidden hunger. Individuals may live in poor health environments, with poor hygiene and sanitation, which results in frequent ill health and compromised nutritional outcomes despite sufficient food. Infants and very young children may have mothers who are so time constrained, particularly at peak times in the agricultural calendar, they are unable to feed a child as often as necessary due to the small stomachs of very young children and high nutrient needs.

Women are the gatekeepers of food security for most households, they are the people who translate a vibrant agriculture sector into food and nutrition security for their households. They are often the farmers who directly produce foods for their households as well as selling the surplus, with male household members more focused on cash crops. Substantial evidence indicates that female income is more likely to be spent on food and children's goods. Women are generally responsible for food selection and preparation. That role, together with factors such as their own nutritional status, child care and the health environment, determines whether the available food is used in a way that best supports good nutritional outcomes, particularly for children.

While poverty and food security are intimately connected, progress on nutritional improvement generally lags progress in poverty reduction. But evidence indicates we do not have to wait for poverty reduction to achieve nutritional improvement. Children in poorer households headed by women can have better nutritional outcomes than children in male headed households (Kennedy and Peters 1992). This reveals the importance of focusing directly on women's role in food, health and care in households as these play a critical role in determining child nutrition outcomes.

Women's own nutritional status also has a direct impact on the children's nutritional status, their learning capacity and their productivity later in life. Raising women's nutritional status is a powerful way to improve the human capital of the next generation, thereby sustainably increasing food and nutrition security. **(include a statement on women's nutritional status currently)**

The role of women in agriculture and the rural economy, the constraints that they face and their unique role in the nutritional outcomes of themselves and their family members implies that women and men face different challenges in economic crises and through climate change. At the heart of the gender challenge in food and nutrition security are the intra-household inequities in labour allocation, resource access, ownership, and control in the household economy, which is intimately linked to the market economy. While men have their key focus on the market economy, women are constantly juggling multiple roles sustaining the household and reproductive economy, providing community services, and engaging where possible with the market economy. While the market economy depends on the household economy most national accounts completely fail to recognise the household economy and, as such, public policy often neglects the household economy and the key role played by women. While much policy is gender blind, it is not gender neutral in its impacts due to the differing roles, resources, mobility and constraint sets facing men and women.

## I. KEY ISSUES

### *Women's roles in agricultural production*

Women are key players in the farming sector as shown in Table 1. Their roles in agriculture self employment is notable in Sub Saharan Africa and the Middle East and North Africa.

Region	Agriculture Self Employment		Agriculture Wage Earner	
	Male	Female	Male	Female
Sub Saharan Africa	56.6	53.5	4.0	1.4
South Asia	33.1	12.7	21.8	11.4
East Asia/Pacific	46.8	38.4	9.4	5.7
Middle East and N. Africa	24.6	38.6	9.4	1.0
Europe and Central Asia	8.5	6.9	10.1	5.4
Latin America, Caribbean	38.4	22.8	20.9	2.3

Extract WDR 2008 Table 9.2

Women's role in food production within agriculture is even greater. In many societies women supply most of the labour to food crops, and often control use or sale of their food produce. Food grains, grown predominantly for commercial sale, while dependent on women's labour generally have sales controlled by men. By some estimates women account for about 80% of basic foodstuffs for consumption and sale in Sub Saharan Africa, provide 90% of the labour for rice production in Asia, perform 25-45% of agriculture field tasks in Colombia and Peru, and constitute 53% of the labour force in Egypt (FAO 2007 website).

Many studies have attempted to assess whether female farmers are as productive as male farmers. Most of these studies found that male farmers achieved yields that were 20-30 percent higher than those of female farmers. The vast majority of studies found also that differences in yields were due to differences in input levels. Although most of these studies pertain to sub-Saharan Africa, similar input gaps are documented for all regions in SOFA 2010-11.

Closing the input gap on the agricultural land held by women would, assuming a gender yield gap of 20-30 percent, lead to an increase in agricultural output in the developing countries for which data are available by an average of 2.5 to 4 percent. Assuming the input and yield gaps are representative of other developing countries, this would imply global gains of a similar magnitude<sup>1</sup>. Assuming the increased production was consumed domestically then closing a yield gap of 20-30 percent would reduce the number of undernourished people, in the 34 countries for which data are available, by 12-17 percent. An estimated 925 million people in the world were undernourished in 2010, so gains of this magnitude could mean 100 to 150 million fewer people living in hunger<sup>2</sup>. For countries where hunger is more common and women play a major role in the agricultural sector, the proportional declines could be even greater.

### *Constraints to Women's agricultural production*

The asymmetries in ownership of, access to and control of the livelihood capitals, physical, financial, natural, social, human, negatively prejudice women's food production.

**Land** is less likely to be owned by women, and usually use rights, mediated through a male relative, are prevalent. Studies cited in Deere and Doss 2006 indicate that women represent just 5% of registered landholders Kenya, 15.5% in Nicaragua, 22.4 % in the Mexican ejidos and 10% of households in Ghana. Men are not only the registered owners of land in 23% of households but, on average they own almost 3 times the amount of land that women do. The following figure shows that women are less than 20% of the landholders in all the developing regions.

### **Share of male and female landholders in main developing regions**

Source Figure 8 SOFA 2011

Insecurity of tenure results in lower investment, potential environmental degradation, and compromises future production potential. In Ghana the primary investment in land is fallowing. However fallowing land is a delicate balance, with longer fallows potentially leading to loss of land when tenure is insecure but shorter fallows leading to lower yields. Goldstein and Udry (2005) demonstrate that those with less political capital in a village have less tenure security and as a result leave their land fallow for shorter periods. Within households, profits per hectare of a maize-cassava

---

<sup>1</sup>For details see "The State of Food and Agriculture. Women in Agriculture: Closing the gender gap for development." FAO, 2010-11.

<sup>2</sup>Data for the number of undernourished is from "The State of Food Insecurity in the World 2010. Addressing food insecurity in protracted crises." FAO, 2010.

intercrop from similar plots vary according to individual and length of fallow. Women have less tenure security and sacrifice profits per hectare with shorter fallows.

The asymmetries inside the household in terms of allocation of land, labour and inputs also compromise farm production. If households in Burkina Faso reallocated their existing levels of input in an optimal way, overall farm output could increase 10-20% (Udry et al 1995)

Under this section other constraints should be mentioned:

- The issue on access to land, water and other resources becomes more challenging for women and a threat to communities' food security because of countries investing heavily on agricultural land in developing countries where production costs are much lower and land and water are abundant. In addition, the conversion of agricultural lands into industries affect women and communities food security.
- The issue on monocultures/cash crops that erodes biodiversity based ecological agricultural production and its impact on health of women when being pesticide sprayers in agricultural lands.
- To secure tenure rights to women will provide support for nutrition to women and children. One of the solution to hidden hunger is the women's run home gardens.

**Agriculture technology** dissemination is one of the prime policy levers to increase agricultural productivity. But adoption of new technology depends on many things, including the availability of required assets to implement the technology, the perceived benefits, the method of dissemination, and gender roles.

Farm tools that are predominantly used in operations dominated by women, e.g. weeding or post-harvesting, are often not gender-specific. Technologies are not gender neutral: women tend to be of lower weight and height compared with men and may not have equal muscular strength. An example of women specific technology is the long-handle hoe introduced in several African countries which eased women's burden of work as compared to traditional short-handle hoes. The fact that these hoes were resisted in some countries highlights the challenges facing technology developers<sup>3</sup>. Greater involvement of women in agricultural research and higher education could also enhance the development of female-friendly technology.

The lack of technology and poor equipment also impedes small farm businesses owned by women. The Lao people's Democratic Republic only 5% of women owned small businesses had electrical or motorized equipment compared to 48% of male owned small business (UNESCAP).

**Access to inputs, such as improved seeds and fertilisers, and services such as finance, extension,** is also problematic for women even when they have access to land. Similarly they are less likely to benefit from agricultural extension services and therefore have less access to improved technologies. Women tend to process their crops on farm further than men's crops, but little is invested in technology research in crop processing.

These constraints to women's full participation in the agricultural value chain, also prejudices their engagement in modern agricultural value chains. These have led to the growth of contract farming or outgrowerschemes for high-value produce. Evidence shows that women supply much of the labour undercontract farming arrangements, but female farmers are largely excluded from signing contracts

---

<sup>3</sup>See "The potential for improving production tools and implements used by women farmers in Africa." IFAD, FAO, FARMESA, 1998, Rome, Italy.

themselves because they lack secure control over land, family labour and other resources required to guarantee delivery of a reliable flow of produce.

I think there is something missing about access to training / learning opportunities

### ***Why Focus on Women to improve food security and nutrition?***

While women's roles in agriculture and the production of food are critical in increasing available quality food, but their roles in the domestic and reproductive economy<sup>4</sup> are even more important when it comes to translating that available food into food security and nutrition and helping them free up time from unpaid care activities to engage in gainful employment.

Considerable evidence indicates that improvements in food and nutrition security in households are not solely the result of **increasing household income**. Increased control of incomes and production by women helps empower women. Who brings the money into the household is also vital. In the Cote D'Ivoire significantly more is spent on food and education and less on alcohol and cigarettes when a high share of household cash income accrues to women. To achieve the same improvements in children's nutrition and health with a US\$10 increase in women's income would require a US\$110 increase in male income (Hoddinott and Haddad 1995). Many other examples abound of the differential impacts of women's income on child nutritional status, child survival and education. (Haddad et al 1997)

This is the foundation for many of the successful conditional cash transfer programmes in safety net and **social protection systems**. The conditionality is often on an area in women's domain within the household, and the distribution point linked to it. Examples include attending growth monitoring and promotion sessions at local health clinics, or school attendance by children. These programs recognize both that increasing household income is important but that when this income is given to women it will also be spent differently magnifying the effects on human development.

Increasing the share of income under women's control or their asset holdings can also empower women more broadly within households, influencing their influence on other spheres of decision-making. For example, strengthening land ownership by women in Nepal is linked with better health outcomes for children (Allendorf 2007).

**Women's level of empowerment** is a key factor in nutritional outcomes. One study of 39 countries, found that women's status is a key factor in child nutritional status because more empowered women have better nutritional status themselves, are better cared for, and provide better care for their children (Smith et al 2003). South Asia has some of the highest rankings in the 2010 Global Hunger Index, with Sub Saharan Africa, despite the far higher levels of GNI in most parts of South Asia. In South Asia the low nutritional status, education, and social status of women is put forward as the explanation (von Grebmer et al 2009). According Smith et al (2003), equalizing women and men's status in South Asia and Sub Saharan Africa would have reduced the numbers of malnourished children by 13.4 and 1.7 million respectively.

**Domestic violence**, which can be seen as the antithesis of female empowerment, within households has also been shown to have impacts on women's and children's nutritional status. Research in Bangladesh showed that domestic abuse, particularly verbal abuse has a negative impact on women's nutritional status and on improvements over time. Women's acceptance of domestic violence also had negative impacts on the magnitude of child stunting and underweight levels (World Bank 2010).

In addition to the impact of domestic violence, other conflict contexts should be taken into account as impacting on women's and children's nutritional status. The militarization of communities, and the challenges of food security and nutrition of conflict more generally when women's own physical safety and bodily autonomy is violated.

---

<sup>4</sup>The domestic and reproductive economies include child bearing, care giving, cleaning, food preparation, cooking, laundry etc.

This is linked to the issue of emergencies which are absent from this document. Given situation in HOA at the moment, and the roundtable on protracted crises at last year's CFS, it would be great to have a section on how nutritional status of women and children can be protected/ensured in emergency contexts as well, such as consideration of type and quality of food transfers, modalities of interventions (vouchers/cash/direct food), reserves.

Food diversity: Women as the gatekeepers of food security are key to the dietary diversity of their households, in most societies. Women are generally responsible for food choices, often in terms of their own production as well as through purchase. Even in the Sahel where men control the granaries women are responsible for supplying the 'relishes' that go with the grains and it is these which provide the bulk of the micronutrients.

The prime sources for micronutrients are fruits, vegetables, and animal source foods including fish. Animal source foods are particularly good, they are high density in terms of micronutrients and those micronutrients are also more bioavailable to the human body.

**Hidden hunger**, the lack of adequate intakes of vitamin and minerals, deriving from a poorly diversified diet is costly to an economy and costly to its peoples, especially women. In Sierra Leone iron deficiency among women agricultural workers will cost the economy \$100 million in the next five years (Darnton-Hill and others 2005). **Insert MN deficiency, especially differential needs of women for iron and maternal mortality. Also focus on adolescent girls nutrition**

**The first 1000 days of a child's life** are the most important in a nutritional sense, which includes their experience in the womb and the first two years, and essentially determines their future human development. Women have the most intimate relationship with the child in this period, from pregnancy, through 6 months of exclusive breastfeeding and then through feeding the child appropriate complementary foods.

In Bangladesh, child mortality rates now show no gender differentials. However, when these are unpacked into infant mortality rates and age 1-5 years mortality rates a different picture emerges. Exclusive breastfeeding is not yet widely accepted as the best food for children under 6 months. As a consequence boys are more likely to receive other foods in addition to breastmilk prior to 6 months while a girl tends to fail to get adequate complementary food even after 6 months. This results in the infant mortality rate of boys being higher than girls in the first year, with the change point at around 8 months, when a girl can no longer survive on breastmilk alone. Thus from this point forward the mortality rate of girls increases such that the mortality rate of girls from 1-4 years is higher than that of boys.

**Intra-household allocation** of food, both in terms of quantities and the distribution of preferred foods, such as meats, dairy, fruit, varies widely across regions of the world, according to socio-economic circumstances and cultural practices based on age, gender, caste and ethnicity.

Investments in infant and child nutrition between conception and two years of age can avert the deaths of 1 million children per year, mitigate against disease and reduce the burden on health care systems, increase school attendance and educational attainment and improve economic prosperity and the ability of all citizens to reach their full potential. In economic terms, the benefit cost ratios of these investments are estimated to be 15.8 to 110. Investing in nutrition also enhances the resilience of societies in the face of price volatility and other shocks: well-nourished children are less damaged by shocks and bounce back more rapidly than those who are under-nourished. However, investing in nutrition in this period means investing in women.

**Women's access to health care for themselves and their children** - SCN

***Constraints to women's domestic and reproductive roles.***

Women face a key challenge in the vital role of generating food security and nutrition for their families - time poverty - resulting from juggling their triple roles in the domestic, reproductive and market economies. This time poverty can be crippling to their agricultural production activity given time poverty is a year round phenomenon, generally driven by their domestic and reproductive activities. But agriculture, particularly rainfed agriculture, has high seasonal labor peaks which are difficult for women to meet without sacrificing their domestic and reproductive activities, potentially compromising both their own and their children's nutritional status. In Africa, a largely rainfed system 50–70 percent of the labour is required within a four-month period; comparable figures for Asia, with far higher levels of irrigation, are 40–50 percent (Delgado and Ranade 1987).

**Water, sanitation, energy, and other forms of basic infrastructure services**, including transport for the household are usually provided by women and girls. Water, sanitation and energy are critical complementary inputs to ensuring that women are able to convert adequate food availability into good nutritional outcomes.

Poor water and sanitation result in a high incidence of diarrheal disease, a significant inhibitor of good nutritional status in children. A 2006 UNICEF report revealed that 88% of the deaths of children under 5 years of age, from diarrheal disease, resulted from unsafe water and sanitation resulting in about 4000 deaths per day.

Far less attention has been given to the fact that 95% of staple foods have to be cooked to be converted into human energy, and some for relatively lengthy periods. In the poorest households it is women and girls who are largely responsible for supplying energy through the collection of firewood, or the preparation of dung briquettes. In Uganda, if woodlots were within 30 minutes of the homestead and if the water source were within 400 meters, households would save more than 900 hours each year, with the benefits going primarily to women and girls. This is close to 0.5 person-years of work (Barwell 1996). In internal displacement situations, and refugee camp situations, this fetching of fuelwood and water can expose women to violence.

Additionally the indoor air pollution resulting from cooking with these fuels accounts for 3% of the global burden of disease, disproportionately affecting women and girls due to their role in cooking, and also young children due to their greater susceptibility to respiratory infections. This creates a negative, as opposed to virtuous circle for nutrition with repeated infections diminishing nutritional security.

**Income earning opportunities** for women, through the sale of their agriculture and other production, is constrained due to transportation issues. Cash crops, such as cocoa, coffee, tea, are often collected at the farm gate, whereas food crops need to be transported by the grower to local markets. In Africa this is commonly done by women headloading. Studies have found that women transport 26 metric ton kilometers per year compared to less than 7 for men, which is extremely time consuming. This leads some to argue that women account for 2/3 of rural transport in sub Saharan Africa (Blackden and Bhanu 1999).

Road infrastructure and transport also affects schooling of boys and girls differentially. In Nepal, when a school is more than a four mile walk from the road boys' enrolment is 56% and girls' enrolment is 31%. When the school is only a 30 minute walk from the road boys enrolment increases to 67% and girls to 51% (Shyam 2007). Given the critical role of women's education in good nutritional outcomes

**Education disparities** between boys and girls, and women and men, further impinge on women's unique roles in generating food and nutrition security for their families. While much progress has been made on education since 1950, with convergence in levels of male and female schooling, progress has not been even. In Sub Saharan Africa more boys gained access to secondary and tertiary education than girls between 1999 and 2008 worsening the gender disparities. In South Asia there are

95 girls in primary school for every 100 boys. Evidence of cumulative bias in education is shown in Pakistan where a girl aged 5-9 years is 14% less likely to be in school than a boy of the same age, but by the age of 10-14 years she is 24% less likely to be in school than a boy (WDR outline 2012 forthcoming). It is no coincidence that the highest rates of child malnutrition are found in South Asia and Sub-Saharan Africa.

Women's education is one of the most significant factors in reducing child malnutrition. One study showed, using time series data from 63 countries, that women's education contributed 43% of the reduction in child malnutrition over time compared to just 26% for improvements in food availability (Smith and Haddad 2000).

Women's lower levels of education also mean that they are far less likely to be in decision-making and management positions in agricultural research and higher agricultural education. In Sub-Saharan Africa only 14% of management positions were held by women, compared to 24% women in these fields (SOFA Box 6). Therefore women's voice in agriculture, and their knowledge is missing in policy going forward.

All of these constraints, both in the agriculture market economy, and in the domestic and reproductive economy for women compromise their roles in generating food security and nutrition for themselves and their families. The high workloads not only compromise women's own health and nutritional status, threaten pregnancy outcomes for both themselves and their babies, limit their time in childcare particularly in the critical first 2 years of their children's lives, but lead to lifelong economic costs for them, their children, and ultimately for the national economy.

### III. POLICY RECOMMENDATIONS

Women are key to translating a vibrant agricultural sector into food security, and through their reproductive and domestic roles to ensuring food security is translated into nutritional security. Improving women's own nutritional status is a powerful way to improve the health, longevity, mental and physical capacity, and productivity of women themselves and contribute to, thereby increasing food and nutrition security of the next generation. *The UNSCN Sixth Report on the World Nutrition Situation* calls for a renewed effort to invest in maternal nutrition in a sustainable and holistic manner. Not only is it the pathway to improved nutritional status and human development for the next generation, it is economically vital. Malnutrition is economically costly- it can cost individuals 10 percent of their lifetime earnings and nations 2 to 3 percent of gross domestic product (GDP) in the worst-affected countries (Alderman 2005).

A number of actions will relax the constraints that women face, and foster improvements in their own nutritional status, and improve productivity in all three roles – market, domestic, and reproductive.

The first key factor in market productivity, particularly in agriculture is levelling the playing field such that **laws and policies guarantee equal rights for men and women to control assets such as land, and to receive services such as health, education, extension and credit.** Government action should ensure that legislation does not discriminate against women in areas such as inheritance, wages, property ownership, divorce, and contracting. A first stage is auditing all existing laws for discrimination. and promote **social services that are publicly accountable and accessible, including public, community based health care, that is affordable and universally accessible.** Many studies are able to show that **privatization of public services in fact leads to an increase in the work burden of women.**

Many land titling programs in the past reinforced men's land rights but over the last decade many African countries have adopted new land laws to strengthen women's land rights, recognize customary tenure, and make lesser (oral) forms of evidence on land rights admissible. Between 2003-2005 Ethiopia, for example, issued certificates to about 6 million households (18 million plots), which documented inheritable land use rights, while still restricting market transfers. More than 80 percent of respondents indicated that certification improved women's situations (World Bank, FAO, IFAD 2008).

Leveling the playing field with regard to secure access to land is a first step to enabling women to move beyond subsistence production and into higher value and market oriented production, an important element of successful agriculture for development. Cassava, for example, widely grown by women and traditionally viewed as a subsistence food crop, is now enjoying a renaissance with use extending beyond food. In Ghana, the Sustainable Uptake of Cassava as an Industrial Commodity Project established systems linking farmers, especially women, to new markets for cassava products, such as flour, baking products, and plywood adhesives.

In order to secure women access to land, redistribution policies should be pushed, reviewed and implemented such as agrarian, fisheries, forestry and pastureland reforms as well as recognition and protection of ancestral domains.

However, as women enter more commercial levels of production it is important that they have access to rural finance services, both to access working capital and to save their earnings is critical, through their own accounts which do not require counter signatures of husbands or fathers.

**Include the improvement of women's, adolescent girls' and children's nutritional status among the main goals and expected outcomes of agriculture and food and nutrition security related programmes, strategies and policies.** A good example of this type of intervention is the introduction of orange-fleshed sweet potatoes in Mozambique, where white sweet potatoes were normally grown by women. These contain higher levels of provitamin A carotenoids and when introduced with nutrition education lead to reductions in vitamin A deficiency. This intervention was comprehensive in introducing new products, a small bread bun that replaced part of the wheat flour with sweet potato flour meant a young child's nutritional needs were met. It also introduced marketing standards regarding tuber size and quality so that some tubers would be retained by the household and consumed. Prevalence of low serum retinol of Vitamin A dropped from 60% in intervention children to 38% as a result of the introduction of orange flesh sweet potatoes, whereas in control children the level remained at 60% despite the availability of vitamin A capsules (Low et al [date](#)). One key obstacle is high input intensive agriculture with high use of pesticides, chemicals and reduced diversity – leading to focus on few staples.

**Focusing on diversified multiple cropping, agroforestry, agro-pastoralism, including livestock and fisheries, that enhances biodiversity and that is ecologically produced, can also be a win-win intervention in this regard, provided it engages women, which generates better nutritional outcomes as well as higher incomes.** When fruit, vegetable, livestock and aquaculture interventions include educational behaviour change designed to empower women they are more likely to produce biochemical indicators of improved nutritional status (World Bank 2007a). A CARE Bangladesh program showed that when women were included in the program the household was more likely to continue with aquaculture after CARE's withdrawal, and that the household economy and nutrition improved (Module 13, IAP2 World Bank, FAO, IFAD 2008).

The production of horticultural crops, on a more commercial basis, also increases the returns on land about 10-fold compared to returns for cereal crops (World Bank 2007b). It generates considerable employment in the field—horticultural crops require about twice the labour input per hectare of cereal crops—and generates more off-farm jobs in processing, packaging, and marketing. Women hold many of these new jobs (Module 12 TN 1 World Bank, FAO and IFAD 2008). This cannot only

increase local supplies of nutritious food but increase female incomes with the associated spending pattern on food and their children.

Getting women recognised as farmers in their own right is critical; their role should not be limited to the home sphere.

**Develop strategies aimed at increasing the number of women and their positioning at decision-making and policy influencing levels in the agriculture and food security sector.** Women have traditionally been excluded from many avenues of governance, whether in local user groups, producer organizations, local councils, or national government. Women need to be engaged at far more senior levels than is generally the case—in scientific research, in ministries of agriculture, and in local government.

Governments will need not only to advocate but also to legislate and demonstrate gender mainstreaming in national and local governance. Internal reforms, including affirmative action for women, are required to increase female representation in ministries of agriculture and in local government. Such reforms should include action plans that set time-bound goals and mechanisms that ensure accountability. Training for women needs to provide them with the required skills, particularly in countries where female education levels are low, and to ensure that they are fully conversant with their roles and accountabilities. In India, the panchayati raj (village councils) reserve seats for women and for members of scheduled castes and tribes. Studies have shown that reserving seats for women increases investment in the type of infrastructure that is relevant to women and that village councils are more effective when gender-sensitivity training is provided to both male and female councillors.

To begin the shift in social norms, governments need to model good practices to the private sector and civil society. They should ensure that public-private contracts for service delivery such as agricultural extension have benchmarks and targets with respect to women's access to service and project participation, with penalty clauses for nonachievement. Decentralization of resource management to user groups, such as user associations to manage water or communities to manage forests, should mandate participation of women. Not only should targets be set, but also reporting should be transparent to enable civil society to monitor target achievement and call for corrective action if progress is not made. For example, the Karnataka Watershed Development Project in India, designed to improve the productivity of the watershed, involved women from the beginning providing training programs and explicitly including them in farmer groups. The project improved agricultural yields, crop diversity (from 4 varieties to 9 varieties of crops) and household income went up by USD 373 in the community. More than 70% of women said the project improved their lives.

Producer groups or cooperatives for women are also important elements that allow women to aggregate their harvests, negotiate better prices, introduce value added processing, and potentially better access to transportation for their produce.

Governments will also need an eye to the future, given women's lower levels of schooling. Ensuring a pipeline of well-qualified female candidates for senior positions in public and private agriculture organizations will require increased emphasis on female education, including incentives such as cash transfers for the education of girls and scholarships for vocational and university training in agriculture sciences and policy. This is but one element in ensuring that women's voices, and their interests are better reflected in local, national, regional and global policy making.

**Invest in strengthening basic infrastructure for essential public services and rural institutions, and make these gender-sensitive.** This will provide girls with better access schooling and liberate women from time-intensive tasks, and will enable them to look for more rewarding and productive work. For example, in rural Mali provision of diesel-powered multifunctional platforms that supplied not only electricity for lighting but also motive power for labour-intensive work such as agroprocessing (milling and dehusking) and pumping water resulted in considerable time saving, fostered the development of processed products, and increased women's daily earnings by \$0.47

(Module 9 World Bank, FAO and IFAD 2008). Where fuel efficient stoves, and fuels other than biomass are available, women save 2 – 3 hours a day. Where mechanical energy is available to draw water, till and transport crops girls schooling can increase one or two grades (UNDP 2001)

Many examples exist of local managed technologies such as community-managed micro-hydro and solar water pumps, etc; that are sustainable and affordable to communities. .

**Building the human capital of women and girls through scaling up direct nutrition interventions, targeting educational efforts, and building their vocational skills thereby broadening women's choices, and strengthening their influence within their households and communities.– input SCN**

These interventions need to be complemented by investments in social protection that ensure that women and children have access to social services and income in times of crisis. A study in Zimbabwe looked at the impacts of the civil war in the late 1970s and exposure to drought in 1982 -84. It found that the shocks impacted on preschooler height for age, but not future adult height. However, this impact in pre-school has a long lasting impact –had the nutritional status of these children been protected then they would have grown 4.6 cm taller, completed 0.7 additional grades of school. This translates into a conservative estimate of 7-12 percent loss in lifetime earnings (Alderman et al 2003)

**The collection of sex-disaggregated data in food security and agriculture information systems is critical, and provides the foundation for gender-focused data analysis and for the better understanding of gender related constraints and more gender-aware policy decisions.** This gender analysis needs to take into consideration different gender constraints inside households, communities and nations. It should include nutritional impact assessments in food security and agricultural programming, at the early planning stages, to assure they are "gender sensitive", help improve nutrition, and mitigate potential adverse effects. Interventions that aim at removing the gender gap in agriculture and food and nutrition security need to be appropriately bundled and sequenced, and take account of their broader social contexts, including men, in the process. Absent such analysis, policies that may appear gender neutral will continue to have unanticipated impacts.

**Global economic trends, trade policies, bioenergy production, climate change can affect local food and commodity prices and, in turn, can induce rural households to reorient their livelihood strategies.** This can result in a change in the intrahousehold division of labour and associated earnings. Policies that favour crops sold by men for cash may nevertheless increase female labour burdens. The increased labour input to male controlled crops may reduce the available labour for female controlled crops and associated earnings. Gender analysis is important to ensure that macro policies do not shift the intrahousehold labour allocation pattern in such a way that male income increases relative to women, damaging food security and nutrition at the household level.

In summary, any agricultural and food security policy related to natural resources, technology, infrastructure or markets will affect men and women differently because they play different roles and experience different constraints and opportunities in the sector. Adequate policies require an understanding of the gender dimensions at stake and the inclusion of a gender lens which responds to the national context. Because some agricultural, food and nutritional policies and gender issues are location-specific, these may best be addressed through location-specific assessments and tailored policies and programmes. Because interventions may have gender-impacts that are difficult to predict, policies and programmes should include the collection of baseline data and rigorous monitoring and evaluation, and practitioners should be prepared to reformulate their activities in response to unforeseen developments. Making women's voices heard at all levels in decision-making is crucial in this regard.

