

Sustainable Agriculture and Natural Resources Management

Sustainable Agriculture and Natural Resource Management activities seek to increase agricultural productivity through adoption of practices that maintain the long term ecological and biological integrity of natural resources. Activities in this sub-sector cut across the rural, social, and environmental issues of natural resource management to sustain significant increases in farm productivity through the efficient use of land and other resources. The goal is to provide better economic returns to individuals and contribute to the quality of life and economic development.

Rationale for Integrating Gender into Agriculture and Natural Resource Management

Strategies for sustainable agriculture development and NRM stress participation and empowerment of farmers and communities, as well as partnership development among all stakeholders. Gender relations at the community and family levels play a crucial role in the success of their efforts to harmonize agricultural intensification with environmental integrity and promote social equity while maintaining economic and production objectives.

Uttar Pradesh Sodic Land Reclamation Project in India

The project sought to reverse the trend in productivity decline in vast stretches of sodic lands through a land reclamation process. It also aimed to make the process sustainable by preventing further increases in sodicity through the effective management of programs with strong community participation and NGO support. Not only has the project used the latest technological methods, but also it has emphasized social aspects to ensure stakeholders commitment in sustaining the activities to manage the sodic lands.

The project is ahead of its target thanks to the motivation and participation of male and female farmers. Some of the highlights are:

- 45,000 hectares of land have been reclaimed and brought under cultivation
- cropping intensity has gone up
- 58,000 landless laborers have been allocated land and the need to seek off-farm employment has been reduced
- women's groups have been formed which have become important centers of economic activity
- access to institutional credit has improved: banks now extend group credits to women for related activities such as dairy farming, nursery raising, and trading
- the overall social and economic wellbeing in the villages has improved.

The project's enormous success is based on using social and institutional mechanisms to coordinate community efforts. Some important lessons:

- Correct sequencing of project activities: first, establish property rights and land titling, then create groups and organizations, and finally, bring in the technical solutions and resources
- Encouraging equal participation of men and women in problem solving; and
- Developing local capacity among local people for decentralized management of degraded lands.

In a remarkable development, the project initiatives have resulted in a new legislation in land titling requiring joint registration in the names of both husband and wife for allocation of reclaimed land.

Systematic Integration of Women in a National Program: Indonesia Integrated Pest Management (IPM) Training Project

The IPM Training project is implemented in 12 main rice-producing provinces to stabilize agricultural production, particularly rice, and promote environmentally sound crop production systems. Using farmer field-school methodology, the project trained farmers and farmer-trainers and built awareness about the health and environmental hazards of continued use of pesticides in rice production.

Project outcomes had a far-reaching impact on rice production systems in the country. At the implementation completion in 1999, a total of 900,000 farmers and 23,000 farmer-trainers, of which 160,000 were women, had been trained in IPM. Crop yield was maintained although pesticide use was reduced and the project improved the environment and farmers' health.

In spite of strong social, cultural and religious barriers, a significant number of women beneficiaries participated in all project activities. Women farmers were successfully trained in IPM, and leadership developed among women farmer-trainers. Women became very active in post field-school activities and in farmers' networks and associations. The following gender-related activities led to the success in integrating women in project activities all around the country:

- A national target of 30% participation of women farmers in IPM field schools
- Gender analysis by farmers during planning and selection of participants for farmers' field-schools (FFSs). Guidelines were issued also to match the percentage of women farmer-trainers with the percentage of female participants in the FFSs
- Annual gender studies on women's participation and leadership in the National IPM program
- Monitoring and evaluation of women's participation in individual field-schools
- Women's participation as IPM alumni and leaders in post-field schools' activities played a big role in networking among women farmers and in the informal spread of IPM.

Checklist of Gender-Related Issues and Activities during Project Cycle

	Identification and Preparation	Design and Appraisal	Implementation and Supervision	Implementation Completion
Socio-economic	<ul style="list-style-type: none"> ✓ Division of labor between men and women in farming activities in project area ✓ Constraints men and women farmers face in improving productivity ✓ Men's and women's access and control over resources at household level ✓ Men and women farmers' understanding and capacity to adopt sustainable practices 	<ul style="list-style-type: none"> ✓ Gender inclusive project activities geared towards meeting specific needs of men and women ✓ Interventions to improve women's access to productive resources within existing social and cultural context ✓ Community mobilization in adoption of sustainable practices and NRM 	<ul style="list-style-type: none"> ✓ Women's farm productivity and their role in decision making ✓ Quality of participation of women in agriculture and NRM ✓ Awareness among men and women about sustainability in farming practices 	<ul style="list-style-type: none"> ✓ Women's role in agriculture and NRM strengthened ✓ Improvement in women and men farmers' income and overall social wellbeing
Policy and Institutional	<ul style="list-style-type: none"> ✓ Prevailing system in land tenure security and women's land rights ✓ Existing capacity of institutions to provide support to farming needs of men and women 	<ul style="list-style-type: none"> ✓ Project initiatives to address gender differences in land rights ✓ Capacity building in extension and other services to address gender 	<ul style="list-style-type: none"> ✓ Women farmers' access to land ✓ Training of staff trained in gender, ✓ Gender balance among staff ✓ Gender focus in extension activities 	<ul style="list-style-type: none"> ✓ Gender equity in access and management of land resources
Technology Development	<ul style="list-style-type: none"> ✓ Farmers' knowledge of sustainable farming and NRM ✓ Gender specific technology needs to improve productivity and sustainability 	<ul style="list-style-type: none"> ✓ Technological support in conservation approaches by community, women's groups ✓ Focus on women and the less privileged—productivity increase in degraded lands and post harvest technology 	<ul style="list-style-type: none"> ✓ Information dissemination on farmer oriented sustainable practices in agriculture and NRM ✓ Women's participation in field demonstrations and technology adoption 	<ul style="list-style-type: none"> ✓ Improved management and sustainability of land resources ✓ Increase in productivity and fertility of degraded land
Notes to Task Teams	<ul style="list-style-type: none"> ✓ Collect background information on men's and women's dynamics in agriculture and NRM to identify gender issues. 	<ul style="list-style-type: none"> ✓ A preliminary gender study or an engendered PRA is advisable to help identify specific areas of emphasis in the project. 	<ul style="list-style-type: none"> ✓ Emphasis should be given to assessing improvement in the quality of women's participation. 	<ul style="list-style-type: none"> ✓ Impact of women's participation should be seen in overall context - social, economic, environmental.

Suggested Gender-Related Indicators for Agriculture and Natural Resource Management Projects

Sub-sector Indicators	Input Indicators	Output Indicators	Impact Indicators
<ul style="list-style-type: none"> ◆ Changes in the role of men and women in agriculture in project area ◆ Increase in number of female headed households, women as land-owners, etc. ◆ Increase in awareness about conservation- oriented practices among men and women. 	<ul style="list-style-type: none"> ◆ Incorporation of women farmers/ landless laborers in project activities ◆ Women's level of participation in extension programs' planning and implementation ◆ Mass media materials on technology and practices available ◆ Support for technology adoption –research, training, inputs ◆ Amount of funding for gender specific activities. 	<ul style="list-style-type: none"> ◆ Improvement in access to resources by men and women farmers ◆ % of men and women adopting sustainable practices ◆ Increase in number of women participating in field training and farmers' groups activities ◆ Increase in productivity of degraded lands. 	<ul style="list-style-type: none"> ◆ Improvement in land management practices, reduction in land resource degradation ◆ Improvement in productivity of degraded lands and ◆ Improvement in women's income ◆ Women's empowerment and overall well being –nutrition and health.