

Section 2 : Conservation and Management of Resources for Development

Chapter 14 : Promoting sustainable agriculture and rural development

Major changes are needed in agricultural, environmental and macro-economic policy at the national and international level to promote sustainable agriculture and rural development (SARD).

A. Agricultural policy review, planning and integrated programmes in the light of the multifunctional aspect of agriculture, particularly with regard to food security and sustainable development

The absence of a coherent national framework for sustainable agriculture and environmental development is widespread, particularly in economies which are in transition from planned to market oriented systems. Such frameworks need to incorporate environmental considerations into economic activities, to assess the impact of such policies on the agricultural sector, including rural welfare and international trading relations, and to consider measures to offset any associated problems.

Objectives

By 1995, to review and establish policies and programmes that integrate environmental and sustainable development with agricultural policy and macroeconomics.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- undertake management related activities such as review of agricultural policies and problems associated with agriculture
- develop incentives to encourage sustainable agricultural development
- establish baseline information on the status of natural resources relating to food and agricultural production
- disseminate information and education to all
- strengthen ministries for agriculture and natural resource planning.
-

B. Ensuring people's participation and promoting human resource development for sustainable development

The greater the degree of community control over the resources, the greater the incentive for human and economic resource development.

Objectives

To promote greater public awareness of the role of people's groups and organisations in sustainable agriculture and rural development.
To ensure equitable access of rural people to resources, both financial and natural.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- collect and disseminate of information
- provide education and support services for rural workers
- assign responsibilities for land to encourage investment in land resources
- decentralise decision making
- develop networks to accelerate the development and implementation of ecological agricultural practice.

C. Improving farm production and farming systems through diversification of farm and non-farm employment and infrastructure development

Agriculture must be intensified to increase production to meet future needs without encroaching onto fragile ecosystems and marginal land. This often involves increased specialisation, which tends to increase the vulnerability to environmental stresses and market fluctuation.

Objectives

To improve farm productivity in a sustainable manner, enhance self-reliance of farmers and to create employment opportunities both on-farm and off-farm.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- provide essential rural infrastructure
- create rural non-farm employment
- monitor farming and farming technologies to identify constraints and solutions
- promote education and vocational training to all
- strengthen research on agricultural production systems.

D. Land-resource planning, information and education for agriculture

Inappropriate use is a major cause of land degradation and depletion. Uses often disregard actual potentials, carrying capacity and other limitations.

Objectives

To harmonise planning procedures, involving farmers in the planning process.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- establish databases of land resources and relevant economic and social information and disseminate relevant information
- identify resource problems and mechanisms to encourage environmentally sound use of resources
- encourage integrated planning at watershed level to reduce soil loss, protect surface and ground water sources
- establish agricultural planning bodies at national and local levels to decide priorities, channel resources and implement programmes
- train professionals at the national, regional and district level
- develop discussion on policy at all levels through the use of media, conferences and seminars.
-

E. Land conservation and rehabilitation

Objectives

To improve the general planning and utilisation of land resources.

Activities

Government, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- implement programmes that resolve the physical, social and economic causes of land degradation
- implement programmes for the rehabilitation of degraded land and the conservation of land, providing appropriate incentives and training
- strengthen national data banks on land resources
- evaluate conservation and rehabilitation practices and programmes, especially indigenous practices
- strengthen institutional capacity to implement effective and socially appropriate conservation and rehabilitation practices
- coordinate land conservation and rehabilitation policies and programmes with related programmes such as development.

F. Water for sustainable food production and sustainable rural development

This is included in programme area F of chapter 18.

G. Conservation and sustainable utilisation of plant genetic resources for food and sustainable agriculture

Plant genetic resources for agriculture (PGRFA) are an essential resource to meet future needs for food. Existing diversity in crop species is not used to the extent possible for increased food production in a sustainable way.

Objectives

To safeguard genetic material.

To study the usefulness of differing plants for food production.

To develop a fair and equitable process to share the benefits of this work between the sources of the material and its users.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- strengthen research into plant genetic resources for agriculture including on-site conservation areas
- promote crop diversification where appropriate
- disseminate all information gained
- provide training in plant genetic resources for agriculture
- strengthen the legal status and provide long-term commitments for germplasm collection.

H. Conservation and sustainable utilisation of animal genetic resources for sustainable agriculture

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- prepare an inventory on available animal genetic resources
- develop programmes to preserve endangered populations
- provide relevant training on the issue
- establish in-country artificial insemination centres
- prepare a global inventory/world watch list.

I. Integrated Pest Management and Control In Agriculture

II.

Conservative estimates put preharvest and postharvest losses caused by pests at between 25 and 50 percent. Pests affecting animal health also cause large losses. Chemical control of agricultural pests has been dominant, but its overuse has adverse effects on farm budgets, human health, the environment and international trade. Integrated Pest Management (IPM), which combines biological control, host plant resistance, appropriate farming practices and minimises the use of pesticides, is the best option for the future as it guarantees yields, decreased costs and contributes to sustainable agriculture.

Objectives

To implement programmes to promote and develop integrated pest management and put this within the reach of farmers.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- adopt systems to control and monitor the incidence of pests and use of pesticides
- gather baseline information on the use of pesticides and human and environmental side effects of their use
- encourage research into non-chemical pest management techniques and target specific pesticides that degrade to harmless substances
- provide education on pesticide use and integrated pest management
- reform national policy to ensure the appropriate use of pesticides.

J. Sustainable Plant Nutrition to Increase Food Production

Loss of soil fertility often results in more marginal lands and fragile environments being put under agricultural use, thus increasing land degradation and other environmental problems.

Objectives

To provide education and help on environmentally sound soil fertility management strategies.

By the year 2000 establish infrastructure to enhance effective decision making on soil productivity.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- formulate and apply strategies to enhance soil fertility to meet sustainable production
- strengthen education and research into plant nutrient requirements and management.

K. Rural Energy Transition to Enhance Productivity

Objectives

To by 2000, initiate, in rural communities, the transition to environmentally sound, diversified energy sources by making available alternative new and renewable energy sources.

Activities

Governments, in cooperation with international organisations, non-governmental organisations and the private sector, should:

- intensify research into rural energy demands, efficient energy use and environmentally sound technology
- enhance public awareness of rural energy problems, stressing economic and environmental advantages of renewable energy sources.

L. Evaluation of the effects on plants and animals of increased ultraviolet radiation caused by the depletion of the stratospheric ozone layer

Objectives

To undertake research to determine the effects of increased ultraviolet radiation resulting from stratospheric ozone layer depletion on the earth's surface, animal and plant life and agriculture, and to develop appropriate strategies to mitigate adverse effects.