



Global Environment Facility

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GEF OPERATIONAL PROGRAM #13  
ON  
CONSERVATION AND SUSTAINABLE USE OF BIOLOGICAL  
DIVERSITY IMPORTANT TO AGRICULTURE

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## INTRODUCTION

1. Agricultural biodiversity is of fundamental significance to human societies, providing socio-cultural, economic and environmental benefits. It is essential to food security and poverty alleviation. Much of the knowledge about agricultural biodiversity is maintained by farmers themselves, many of whom are women. Domesticated crops and animals result from human management of biological diversity, and their continued evolution through improvement by breeders and farmers constantly responds to new challenges to maintain and increase productivity. The conservation and sustainable use of other aspects of agricultural biodiversity presents opportunities for enhancing soil fertility, naturally controlling pests, reducing the use of pesticides while increasing yields and incomes. A large proportion of crops depend on a diverse variety of insect pollinators for good yields and the genetic variability of the landraces and wild relatives of domesticated plants and animals are essential breeding sources. Diversified agricultural production and polycultural systems also offer opportunities to expand new markets and further stimulate the conservation of biodiversity important to agriculture.

2. The underlying causes for the loss of agricultural biodiversity are extremely complex. They are closely related to the needs of increasing food demands, growing market pressure, conventional patterns and policies of economic and agricultural development, and other demographic, economic and social factors. Many agricultural practices such as reliance on monoculture, exotic/cross breeds, high yielding varieties, mechanization, and misuse of agricultural chemicals have caused negative impacts on biological diversity at all levels - ecosystems, species and genepools - on both natural and cultural landscapes, and may be unsustainable, at least in the long term. Such loss of biological diversity, may be accompanied by the loss of the cultural diversity of traditional communities, and their impoverishment.

3. Taking into account these benefits and threats, conserving and sustainably using biological diversity important to agriculture is to a large extent in the local, national and regional development interests of the countries concerned. The global interest in maintaining agricultural biodiversity is linked to the fact that most species important to agriculture are, or may be of benefit not only to the region of their origin, but other regions of the globe as well. Additionally the conservation and sustainable use of associated agricultural biodiversity can contribute to maintaining the health and quality of the global environment, by for example providing habitats for wildlife, protecting watersheds, and reducing the use of harmful chemicals. Consequently, using agricultural biodiversity sustainably may provide environmental, economic and socio-cultural benefits on national, regional and global scales. GEF support would therefore help to integrate global environmental imperatives into existing sustainable development efforts in the appropriate regions and countries.

## CONVENTION GUIDANCE

4. The goal of this operational program is to promote the objectives of the Convention, in the area of agricultural biodiversity in line with the relevant decisions of the Conference of the Parties notably, III/11 (Buenos Aires, 1996 ), IV/6 ( Bratislava, 1998) and V/5 (Nairobi, 2000). It responds to these decisions within the GEF mandate, which is to operate as a mechanism for the purposes of providing new and additional grant and concessional funding to meet the agreed incremental costs of measures to achieve agreed global environmental benefits.

5. The Third Meeting of the Conference of the Parties ( COP) to the Convention on Biological Diversity (CBD/COP/III) adopted decision III/11 on the conservation and sustainable use of agricultural biological diversity. The decision established a multi-year program of activities aimed at promoting the positive impacts and mitigating the negative impacts of agricultural practices on biological diversity in agro-ecosystems and their interface with other ecosystems. Additional guidance was provided by Decision IV/6.

6. The COP decision III/5 further called on the Global Environment Facility, in accordance with decision III/11, to provide financial resources to developing countries for country-driven activities and programs, consistent with national priorities and objectives, for supporting, as a priority, efforts for the conservation and sustainable use of biological diversity important to agriculture.

7. COP Decision IV/6 welcomed the efforts being made by the financial mechanism in the development of its operational policy framework on agricultural biological diversity and urged the early completion of this framework in line with decision III/11, to provide effective implementation support to Parties and Governments in all agricultural ecosystems.

8. At its Fifth meeting, COP adopted elements for the further elaboration of its program of work. The four program elements are: (i). Assessments: to provide a comprehensive analysis of status and trends of the world's agricultural biodiversity and of their underlying causes (including a focus on the goods and services agricultural biodiversity provides), as well of local knowledge of its management; (ii) Adaptive management: to identify management practices, technologies and policies that promote the positive and mitigate the negative impacts of agriculture on biodiversity, and enhance productivity and the capacity to sustain livelihoods, by expanding knowledge, understanding and awareness of the multiple goods and services provided by the different levels and functions of agricultural biodiversity; (iii) Capacity building: to strengthen the capacities of farmers, indigenous and local communities, and their organizations and other stakeholders, to manage sustainably agricultural biodiversity so as to increase their benefits, and to promote awareness and responsible action; and (iv) Main streaming: to support the development of national plans or strategies for the conservation and sustainable use of agricultural biodiversity and to promote their mainstreaming and integration in sectoral and cross-sectoral plans and programmes. The scope of the program of work includes both genetic resources for food and agriculture (plant, animal and microbial), and the associated biodiversity in agricultural ecosystems that provide goods and services such as nutrient cycling, decomposition of organic matter,

pest and disease regulation, pollination, maintenance of the hydrological cycle, erosion control and so forth. The programme of work incorporates the ecosystem approach in line with COP decision V/6.

#### AGRICULTURAL BIODIVERSITY PROGRAM OBJECTIVES

9. The objective of this operational program is to promote: the positive impacts and mitigate the negative impacts of agricultural systems and practices on biological diversity in agro-ecosystems and their interface with other ecosystems; the conservation and sustainable use of genetic resources of actual and potential value for food and agriculture; and the fair and equitable sharing of benefits arising out of the use of genetic resources. These objectives will contribute to the objectives of the CBD in the area of agricultural biological diversity, in accordance with COP guidance as well as the objectives of the Convention to Combat Desertification (CCD). Because agricultural biodiversity affects rural farming communities, which are among the world's poorest, GEF support will provide significant means for alleviating poverty while increasing productivity of biological and land resources. The Operational Program is not intended to substitute the existing GEF Operational Programs 1 to 4 on conservation of biodiversity in various ecosystem types, but rather to provide an operational framework for additional activities more specific to the conservation of agricultural biodiversity.

#### CONSERVATION, SUSTAINABLE USE AND SHARING OF BENEFITS

10. Activities will aim at sustaining the functions of biological diversity in agricultural ecosystems in order to maintain or enhance the goods and services provided by such biological diversity, including both those which support agricultural production, and wider services such as provision of clean water, control of erosion, and moderation of climatic effects. In this way, the impact of agriculture on the environment would be integrated into the planning and management of the wider ecosystem. GEF activities will be focused on maintaining goods and services which are positive externalities and on overcoming barriers to the realization of benefits, global and local, derived from such goods and services, through, for example, capacity building, better valuation of biodiversity-derived benefits and access to information.

11. Activities will be sought both within and adjacent to conservation areas and in the wider agricultural landscape giving attention to areas that are particularly important for their agricultural biodiversity and/or threat of genetic erosion or other forms of biodiversity loss. These efforts will take into account priority areas identified pursuant to Annex 1 of the Convention, national priorities identified pursuant to Articles 7 and 8, as well as scientific assessments completed under the Convention and other international agreements. While certain activities may emphasize one or another of the three objectives of the CBD, most are likely to address all of them simultaneously.

12. The operational programs will support biodiversity conservation and sustainable use in the management of both natural and modified areas. This includes all human uses of ecosystems ranging from full protection through various forms of multiple use, with conservation easement, to full scale use - such as agriculture, forestry, aquaculture, livestock production, and urban development. Activities

that involve biodiversity management within the productive sectors of the economy promote long term sustainability because they will help address the underlying causes of biodiversity loss and contribute to enhancing ecosystem structure and function.

#### EXPECTED OUTCOMES

13. A successful outcome is one where biological diversity important to agriculture globally, is conserved and used in a sustainable manner. There is a need to distinguish between agricultural biodiversity which is currently important for food security and sustainable livelihoods, ( for example, that which contributes to the breakdown of organic matter and recycling of nutrients to maintain soil fertility; the maintenance of viable ecological systems including productive vegetation, fish and other animal populations; the elimination of invasive species; provision of ecological services to the wider ecosystem ); and biodiversity important to future food security, such as genetic resources with the potential to thrive in future environments.

#### MONITORING AND EVALUATION

14. The GEF operational programs in biodiversity outline how outcomes of project implementation will be monitored and evaluated. The following additional monitoring attributes apply more specifically to agricultural biodiversity: <sup>1</sup>

- (i) assessments of changes in the diversity and density of biocontrol agents, pollinators, and soil microorganisms in relevant agroecosystems
- (ii) surveys of trends in using land races, underutilized crops, and other rare species, as well as the breeding of traditional livestock and the in situ conservation of their wild relatives
- (iii) surveys on the impact of regulatory change, fiscal, trade, incentive and capacity building measures on the market shares of agricultural products that have been produced and processed in sustainable agricultural production systems that promote agricultural biodiversity, such as organic farming

15. Verifiable indicators to monitor outputs at the project level will be developed to include project specific indicators to measure the removal of specific constraints, such as the recognition of specific sustainable farming techniques that enhance agricultural biodiversity. Local institutions such as national agricultural research systems and councils will be closely involved in such monitoring activities.

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<sup>1</sup> These elements relate to the assessment activities of the program of work, element 1.

## ASSUMPTIONS AND RISKS TO ACHIEVE THE OUTCOMES

16. Overall assumptions and risks in the implementation of biodiversity operational strategies are listed in GEF Biodiversity Operational Programs, paragraphs 13 and 14. As in all projects, it is assumed that the baseline activities on which the project would build (or the funding for activities for which the project would complement), will have been committed by collaborating institutions in a timely manner. In the case of agricultural biodiversity, a particularly important assumption is that the country's proposed approach to taking advantage of new opportunities in agricultural biodiversity is fully achievable, economically viable, and socially acceptable within the overall policy, trade, and regulatory framework of the country. It is also assumed that the essential cooperation and partnership will be forthcoming from other institutions working in this area such as, Food and Agricultural Organization (FAO), International Fund for Agricultural Development (IFAD), International Plant Genetic Resources Institute (IPGRI), International Livestock Research Institute (ILRI) and other international agricultural research centers of the CGIAR.

## SUSTAINABILITY AND REPLICATION

17. The outcome of new approaches to meet basic human needs while conserving the resource base would be sustained conservation and/or enhancement of agricultural biodiversity without continued external support. After a period of GEF support, agricultural biodiversity would be maintained through its contribution to sustainable livelihoods. Although there are a few instances where some economically non viable practices might need continued support from the global community, (e.g. setting aside land or delayed grazing or ploughing), the best strategy which assures sustainability is to make use of viable alternative farming approaches and species that are economic and socially acceptable. There are a wide range of examples of successful and diverse production systems that integrate practices such as mixes of crops-livestock-fish and forestry species. Replication potential will also be significantly enhanced as the industry grows and market access and other barriers are overcome. Successful outcomes would be replicated elsewhere on the basis of experience gained.

## PROJECT OUTPUTS

18. Outputs in agricultural biodiversity include the removal of threats and causes of agricultural biodiversity loss, sectoral integration through incorporating biodiversity protection into main production sectors, sustainable use of agricultural biodiversity through sustainable land management, enhancement of supply and demand of agricultural biodiversity, and stronger institutions with well trained staff to address the issues. Additional potential project outputs will include increased general status of ecosystems, through habitat restoration, return of endangered species in some cases, watershed conservation etc. There will also be an increase in the economic viability of production of products which are based on biodiversity positive methods of production.

## GEF ELIGIBLE ACTIVITIES

19. Activities outlined in the GEF Biodiversity Operational Programs which address objectives of the CBD in agricultural biodiversity:

- (i) integrating agricultural biodiversity conservation and sustainable use objectives in land use and natural resources use management plans;
- (ii) identifying and conserving components of biological diversity important for sustainable use of agroecosystems, with regard to the indicative list of Annex I of the CBD;
- (iii) demonstrating and applying techniques to sustainably manage biodiversity important to agriculture, including wild relatives of domesticated plants, animals and their gene pools;
- (iv) supporting capacity building efforts that promote the preservation and maintenance of indigenous and local communities knowledge, innovation, and practices relevant to the conservation and sustainable use of agrobiological diversity, with their approval and involvement;
- (v) incorporating components of targeted research (including diversification of crops and breeds) important for the conservation and sustainable use of agricultural biodiversity in programmatic intervention when instrumental for the achievement of GEF biodiversity program objectives in specific ecosystems and countries consistent with national priorities; and
- (vi) including sustainable use awareness components, when relevant, in program objectives and that are consistent with national priorities.

20. Activities in the GEF Biodiversity Operational Programs which can be modified to sustainably manage agricultural biodiversity:

- (i) integrated rural development on a sustainable basis, e.g., farmers' seed supply and exchange, participatory plant breeding, and range management which may need to involve not only livestock, but also agriculture, infrastructure, marketing, wildlife and tourism;
- (ii) integrated management of crops and animals that conserve biodiversity and reduce the use of pesticides and other inputs that may harm biodiversity;



- (iii) soil conservation and restoration of degraded areas to conserve and sustainably use biodiversity;
- (iv) natural resources management activities which emphasize integrated resource use with conservation and development, such as use of water resources and its distribution to ease grazing pressure and prevent vegetation deterioration;
- (v) designation of protected areas that contain important pools of wild relatives of crops, breeds;
- (vi) energy conservation projects that emphasize alternative energy sources to conserve the vegetation and biological diversity in human use;
- (vii) establishment of cost recovery mechanisms and financial incentives for sustainable use; and
- (viii) community-based farming and pastoral systems using indigenous technical knowledge.

21. Additional activities by which countries can conserve biodiversity important to agriculture within their normal sustainable development programs: <sup>2</sup>

**Creating or enhancing an enabling environment.**

- (i) country-driven information, advisory, and extension services that draw special attention to viable farming and pastoral practices helping to conserve and sustainably use agricultural biodiversity;
- (ii) advisory services to facilitate policy reform that would support the conservation and sustainable use of agricultural biodiversity;<sup>3</sup>
- (iii) ensuring public participation in the development of sustainable agricultural and resource use policies; and
- (iv) development of national data and information services that can improve the supply and exchange of agricultural biodiversity.

**Innovative economic tools and approaches.**

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<sup>2</sup> All activity types constitute responses to priority issues outlined in decision III/11 of the COP.

<sup>3</sup> cop decision III/11 paragraph 15 c cop decision III/11 paragraph 15 g cop decision III/11 paragraph. 15 i

- (i) introducing regulatory incentives or removing disincentives (such as economic instruments, fiscal, trade and other incentive instruments) for sustainable agricultural production practices that help to enhance biological diversity;
- (ii) promoting the development of markets and business opportunities for diverse production systems such as organic agriculture.
- (iii) raising consumer awareness and improving demand in favor of diverse varieties instead of uniform products;
- (iv) enabling access to innovative financing and financial risk management mechanisms to promote private investment in farming systems that conserve and sustainably use agricultural biodiversity; and
- (v) activities to enable the reduction of transaction costs in farming systems which conserve agricultural biodiversity and use it sustainably i.e., support for the establishment of appropriate production, marketing, trading, and distribution techniques.

### **Creating new incentives.**

- (i) particular attention to indigenous groups and rural communities who maintain agricultural biodiversity of global importance through their farming practices.
- (ii) development and introduction of gender-specific incentives and reward schemes for the use and conservation of indigenous knowledge that supports the conservation and sustainable use of agricultural biodiversity;<sup>4</sup>
- (iii) development of necessary human and institutional capacities to promote sustainable solutions in agricultural biodiversity conservation, including training, demonstration, technology transfer etc.;

### LAND DEGRADATION

22. The intertemporal degradation of agricultural land - that is, a decline in long term productive potential - is already seriously limiting production, especially in the developing world. Degradation is also associated with off site-problems of sedimentation, carbon emissions affecting climate change, reduced watershed function and changes in natural habitats leading to loss of genetic stock and biodiversity. In response to these concerns, GEF activities in agricultural biodiversity will pay special

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<sup>4</sup> See cop decision III/11 annex 1.

attention to addressing issues related to land degradation including rehabilitation of degraded areas. In this respect GEF activities may contribute to activities which contribute to the objectives of the CBD and CCD.

## PARTNERSHIPS

23. There are many institutions like the CGIAR, FAO, the private sector, etc, and stakeholders who have experience in the complex issues of agricultural biodiversity. Some have specific mandates in this field and many have facilitated development of agreed action plans which set out major objectives and commitment of countries in the conservation and sustainable use of biological diversity important to agriculture. Such action plans include, e.g., the Global Plan of Action for the Conservation and Utilization of Plant Genetic Resources for Food and Agriculture, which was adopted at the International Technical Conference, Leipzig, 1996 and supported through decision III/11, and the Global Strategy for the Management of Farm Animal Genetic Resources, which is under development in the FAO Commission on Genetic Resources for Food and Agriculture. The GEF will support eligible activities carried out under such programs. The GEF will work in partnership with these institutions and stakeholders, building on existing strengths and comparative advantages thus ensuring complementarity. Although the GEF does not provide support for international institutions or networks of organizations to carry out their mandates -- even when these mandates include protection of the global environment -- such institutions and networks may often be well placed to execute specific country-driven projects for the GEF. In such partnerships, costs would be shared: the GEF would finance specific incremental project costs while the partner organizations that execute the project would finance their own overheads, out-of-country expenses, and the cost of implementing their regular mandates and work program.

## PUBLIC INVOLVEMENT

24. The GEF Council approved the policy paper *Public Involvement in GEF-Financed Projects*, in April, 1996, which constitute one of ten operational principles to be followed in the design and implementation of projects. This policy ensures that the project has sufficient funding and technical support to carry out consultations with, and participation, as appropriate of, the beneficiaries and affected groups of people. In most projects dealing with agricultural biodiversity, the groups most vulnerable to project outcomes would be farming communities and surrounding villages whose incomes would be dependent on agricultural outputs and services.

25. The participation of disadvantaged groups, such as indigenous communities and women, will be given attention. Such participatory approaches are also consistent with the guidance from the CBD/COP, which covers strategic partnerships with, wherever possible, relevant stakeholders in government, civil society (including the academic institutions), and the private sector. Projects dealing with agricultural biodiversity will clarify the conditions of cooperation and transparent mechanisms to ensure the active participation of key stakeholders in planning, implementing, and monitoring of project activities.

