

FEED

Two decades
of experience: Investing in Ecosystem Services
and Adaptation for Food Security



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INVESTING IN OUR PLANET

EXECUTIVE SUMMARY



Two decades of experience: Investing in Ecosystem Services and Adaptation for Food Security

BACKGROUND

Agriculture and livestock production preoccupy more than half of the world's population, including nearly 2.5 billion in the developing world that depend almost entirely on small-scale practices for their livelihood. Sustaining productivity of agricultural and grazing land is, therefore, essential for achieving global food security. *Sustainable intensification*, through fostering best practices for crops, livestock, forestry and aquaculture, has been considered a key and desirable way to increase the productivity of existing land and water resources in food production. The challenge, however, is ensuring that all such intensification efforts are focused on existing production systems, while minimizing risk of stressors in the natural environment. Investing in global environment and adaptation benefits through agriculture and food security initiatives can play an important role in addressing the potential effects of intensification on ecosystem services. This is a priority for the Global Environment Facility (GEF), created in 1992 with a

mandate to serve as the financial mechanism of several major environmental Conventions – CBD, UNFCCC, UNCCD and the Minamata Mercury Convention. The GEF is the world's leading public financial fund dedicated to smart, environmentally sound choices that boost local economies and protect the planet. Because of the importance of agriculture and food security as a development priority in many of these countries, the GEF has been an important source of financing to address environment and natural resource management challenges. Yet there has been no systematic assessment of how GEF financing to generate global environment and adaptation benefits has supported the agriculture and food security sector.

Purpose of the Assessment

This assessment is an attempt to address this need by taking a close look at GEF financing in the context of agriculture and food security projects over the last two decades (1991–2011). The objective is threefold: a) to provide a synthesis of the GEF's experience in supporting the agriculture and food security agenda of eligible countries; b) demonstrate the GEF's

value-added for investing in agriculture and food security projects to generate global environmental benefits; and c) establish a basis to strengthen the GEF's role as partner for addressing environmental sustainability in the agriculture and food security sector. The assessment was based on financing provided through the GEF Trust Fund for the Biodiversity, Land Degradation, International Waters and Climate Change Mitigation focal areas; and two other trust funds that specifically support climate change adaptation in eligible countries: the Least Developed Countries Fund and Special Climate Change Fund.

Analytical Approach

Three parallel assessments were done to ensure consistency with the approaches and priorities of GEF financing through the focal area and trust fund windows. Since financing for global environment benefits occurs through the GEF Trust Fund, two parallel assessment were conducted for a) projects financed under the BD, CC-M and LD focal areas focusing on agroecosystem; and b) projects financed under the IW focal area focusing on aquatic systems (freshwater and marine). The third assessment was based on projects financed through the LDCF and SCCF for climate change adaptation benefits across all production systems.

From a total of 308 discrete GEF Trust Fund projects and programs identified as appropriate for the period covered by the assessment, 93 were designed specifically to address ecosystem services in the context of agriculture and food security needs in agro-ecosystems. For the IW focal area assessment, 51 projects and four programs were determined to have direct



links to food security through investments in freshwater systems, coastal marine ecosystems and long-term management of open ocean fisheries. A total of 78 projects related to agriculture and food security approved under the LDCF and SCCF were considered, of which only 28 and 17 respectively were designed to include interventions supporting food security. Overall, 192 projects and programs were used for the assessment, comprising 158 stand-alone focal area projects and programs, 30 multi-focal area projects, three multi-focal programs and one multi-trust fund program. In addition to the 51 under IW, there were 39 BD, 25 LD, and one CC-M stand-alone projects.



All 192 projects were analyzed qualitatively for GEF amounts allocated to the relevant components and interventions. For GEF Trust Fund projects, the analysis was based on global environment benefits associated with focal area windows. The benefits are essentially ecosystem services in production landscapes generated through management of a) *land resources* (e.g. soil and water conservation, soil carbon sequestration, improvements in vegetative cover); b) *agricultural biodiversity* (e.g. preserving genetic diversity, on-farm diversification); and c) *aquatic ecosystems* (e.g. protection of species and habitats for fisheries,

sustainable flow and improved quality of water for consumptive use). For LDCF and SCCF projects, investments are associated with *adaptation benefits* in the agriculture and food security sector – i.e. reducing vulnerability and increasing resilience to climate variability and projected effects of climate change. The focus on land, biodiversity, water, and adaptation was used to further assess GEF financing for specific project components supporting agriculture and food security.



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Highlights of Findings

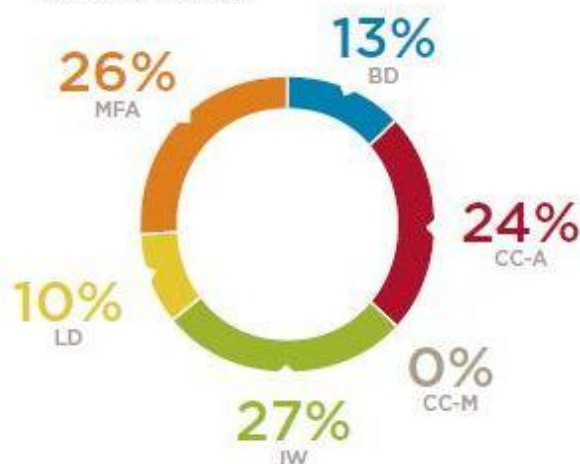
1. Trends in Financing from the GEF Trust Funds and Focal Areas: The 192 projects and programs together accounted for total GEF financing of US\$1,086.8 million and an additional US\$6,343.5 million in co-financing during the period covered by the assessment. The fourth GEF replenishment phase (2006–2010) accounted for 69 of the projects, with US\$285.1 million (26.2 %) of total GEF funding and US\$2,165.1 million (34.1%) of total co-financing. GEF financing under IW accounted for the largest single focal area funding, with US\$289.09 million (27%) of total GEF grants. This was followed

FIGURE ① Total GEF Grant and Co-finance (USD millions) for all projects and programs with links to Agriculture and Food Security
(Note: Total GEF amount includes grants from the LDCF and SCCF)



by financing for BD (US\$143.9 million) and LD (US\$104.7 million) stand-alone focal area projects. The CC-A financing overall amounted to US\$257.4 million (24%), but in addition to LDCF and SCCF includes eight multi-focal area projects funded under the Special Program on Adaptation. Other multi-focal area projects accounted for US\$288.5 million (26 %) of the total GEF grant, with contributions from the BD, LD, IW and CC-M focal areas.

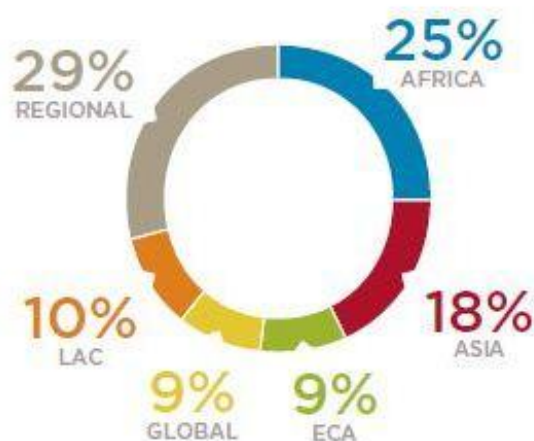
FIGURE ② Proportional breakdown of GEF Financing by Focal Area
(See Note in Table 3)



2. Trends in Financing across

Regions: GEF financing in Africa accounted for US\$277.1 million (25%) of the total grant, followed by Asia with US\$195.9 million (18%), LAC with US\$110.2 million (10%) and ECA US\$92.5 million (9%) regions. These trends are consistent with global needs for addressing food insecurity since the world's largest population of hungry and malnourished people reside mainly in Africa and Asia. The LDCF investment in Africa is more than twice the amount for Asia region, but the two regions together account for more than 90% of the total LDCF and SCCF financing. A total of US\$312.5 million (28.7%) was invested through 25 regional or multi-country projects targeting specific ecoregions, with 12 in Africa region, six in Asia, five in LAC and two in the ECA region.

FIGURE ③ Proportional Distribution of GEF Financing by Regions



3. GEF Investments Supporting

Agriculture and Food Security: A detailed analysis of all 192 projects included in the assessment showed that GEF financing for specific components supporting agriculture and food security amounted to an aggregate total of US\$810.6 million (75%) of total GEF grants. Specific components across all projects supporting sustainable fisheries and water

resources management used the largest amount: US\$379.8 million (47%). This is followed by project components targeting sustainable land management interventions with US\$179.3 million (22%); climate change adaptation actions with US\$138.1 million (17%); and management of agricultural biodiversity with US\$113.4 (14%).

A. *Sustainable management of fisheries* is crucial for poverty reduction in freshwater and coastal communities throughout the developing world, and GEF investments target interventions that help safeguard aquatic habitats and fish diversity for sustainability of the sector. At the same time, GEF investments support sustainable agricultural systems by targeting *efficient water management practices* that help to sustain flows (both surface and groundwater) and reduce downstream pollution. The level of GEF financing is consistent with the scale of interventions necessary to tackle these challenges, involving transboundary ecosystems and multiple countries.

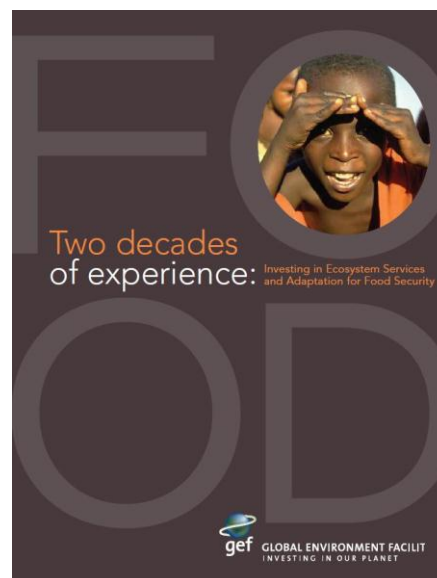


B. GEF investments for *sustainable land management* mainly target on-farm productivity of crops and livestock through improved management of land, soil, water and vegetative cover. As a means to ensure long-term sustainability of outcomes, GEF financing also supports an enabling environment for SLM, such as improvements in policy options, marketing, extension and training programs. Because of the emphasis on integrated natural resource management, GEF financing for SLM often includes resources from the LD, BD, CC and IW focal areas through multi-focal area projects.

C. GEF financing for *climate change adaptation* in the agriculture and food sector is linked directly to country priorities identified in the National Action Plans for Adaptation (NAPAs), and other national plans and strategies. The funds specifically target adaptation benefits by support for best practices and integrated approaches for resilience in production systems; creation of options and alternatives for land users to cope with expected changes in the production landscapes; enabling environments for CC-A at all levels; financial schemes for climate-resilient practices and technologies; and knowledge management and dissemination platforms.

CONCLUSION

The assessment has demonstrated that GEF financing to generate multiple global environment and adaptation benefits plays a vital role in supporting the agriculture and food security sector globally. The approach to GEF financing emphasizes targeted investments in projects that address objectives of the focal areas, including support to countries for implementation of the Conventions for which the GEF serves as financial mechanism. The value-added of GEF financing is evident from the diversity of interventions in projects, and the potential for sustainability of outcomes for people and the global environment. By aligning focal area priorities with global aspirations for sustainable intensification of production systems, the GEF is well-placed to help feed the world while investing in our planet.



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ACRONYMS

BD	Biodiversity
CBD	Convention on Biological Diversity
CC-A	Climate Change Adaptation
CC-M	Climate Change Mitigation
ECA	Eastern and Central Asia
IW	International Waters
LAC	Latin America and the Caribbean
LD	Land Degradation
LDCF	Least Developed Countries Fund
SCCF	Special Climate Change Fund
SLM	Sustainable Land Management
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change





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