

Financing the conservation of agricultural diversity

The crops and livestock we use must be continuously improved and adapted to changing environmental conditions if we are to ensure food security for the generations to come. The absolute precondition for this is the preservation of agricultural biodiversity and the associated agroecosystems. But for years this agrobiodiversity has been diminishing worldwide. Only comprehensive financing instruments, which target international, national and regional levels, will allow us to preserve what we still have for the future.

Ex situ, in situ

The majority of the genetic diversity used worldwide in agriculture is in the hands of numerous small farmers, who, thanks to their breeding activities, keep adapting local livestock and crops to the local conditions. Farmers in developing countries still produce between 60 and 90 % of their seeds themselves (see Issue Paper “Farmers as breeders” in this series). In order to preserve this diversity *in situ*, in the areas where the species occur naturally, small farmers need support and incentives. This can take the form of promoting seed markets, developing new products from local varieties, improving marketing, introducing agricultural ecotourism or direct promotion in the form of subsidies.



Money changer in Togo: Conserving agrobiodiversity calls for creative financing solutions. Photo: Helmut Albert



Child with sweet potatoes in Bolivia: The *in situ* preservation of root crops in particular is an important precondition for adapting to future challenges. Photo: Eberhard Goll

The wild varieties of our crops and livestock that still exist today are another valuable genetic reservoir, which must be preserved. But even the 8,500 or so national parks, which exist around the globe, cannot guarantee their survival, since many parks have too few staff and insufficient funding, combined with inadequate management. They need support, so that they can better protect their unique diversity and use it more sustainably. The preservation of agrobiodiversity in the areas of origin and under practical conditions is particularly important because in this way the species can adapt to changes such as climate change, for instance, generation by generation, which is not possible *ex situ*, as in gene banks.

There are around 1,500 gene banks in operation around the globe, providing *ex situ* conservation of this sort for an estimated six million species and varieties. Here we find above all a large selection of wheat, maize and rice varieties. But not all plants produce seed which can be stored in a gene bank. Others reproduce with tubers, seedlings or cuttings. Crops like this are pre-served in plant gardens, as “living collections”. Only some of these valuable gene banks and living collections have a certain future. In many, the materials are stored under inadequate conditions, and there is a danger that they might be irretrievably lost.



Cereals are particularly well suited for *ex situ* collections, but these require special financial support. Photo: Guenay Ulutunçok

International financing instruments

Most international and national financing instruments are tailored to preserve biodiversity in general rather than agrobiodiversity in particular. The preservation of the latter is a secondary consideration. Major international financing instruments include the Global Environment Facility (GEF), the *Fonds Français pour l'Environnement Mondial (FFEM)*, the Global Crop Diversity Trust and the European Agricultural Fund for Rural Development (EAFRD).

Global Environment Fund



Logo of the Global Environment Fund

The GEF was set up in 1991. It is the key international financing instrument for measures to implement the Convention on Biological Diversity (CBD), the Framework Convention on Climate Change (FCCC) and the Convention to Combat Desertification (CCD).

GEF-funded projects are implemented via the World Bank, the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP). GEF measures are packaged into 15 Operational Programs, or OPs, along geographic and thematic lines. OP 13 is entitled "Conservation and Sustainable Use of Biological Diversity Important to Agriculture". It was launched specifically to conserve and ensure the sustainable use of agricultural genetic resources, but also to ensure that benefits accruing are shared equitably. The funds of this programme are used to finance activities to promote agricultural genetic diversity. Such activities include

- " Taking stock of worldwide agrobiodiversity, the products and services derived from it, and the associated indigenous knowledge; analysis of trends and their drivers;

- " Identification of methods, techniques and political strategies to promote agrobiodiversity and mitigate adverse impacts;
- " Training for farmers and indigenous communities and their organisations on the sustainable management of crops and livestock;
- " Integration of the topic of agricultural biodiversity when national plans, strategies and action programmes are drawn up (mainstreaming).

It is also possible to promote measures to preserve and ensure the sustainable utilisation of agricultural biodiversity within the framework of other Operational Programs – OP 1 (Arid and Semi-Arid Zone Ecosystems), OP 3 (Forest Ecosystems), OP 4 (Mountain Ecosystems) and OP 15 (Sustainable Land Management). Conservation focuses on *in situ* conservation, while sustainable utilisation encourages activities such as the management of natural resources, tourism, marketing and the establishment of cost reimbursement and financing mechanisms to conserve (agricultural) biodiversity.

GEF, however, only finances costs incurred when additional biodiversity components are added to ongoing or planned projects, which did not originally provide for such activities. The amounts made available vary from USD 50,000 to 1 million.

Fonds Français pour l'Environnement Mondial



Logo of the *Fonds Français pour l'Environnement Mondial*

The French Global Environment Facility (FFEM) was established by the French government in 1994. It is administered by the French development agency, *Agence Française de Développement (AFD)*.

FFEM finances the conservation of agricultural genetic diversity and endangered ecosystems, as well as the sustainable management of these, through two programmes:

- " Protection and conservation of biodiversity
- " Soil degradation and desertification.

Financing is made dependent on the local population being involved and on the sustainability of measures. The activities must also be designed such that they can be transferred to other regions and situations.

Funding from the FFEM is provided only in the form of co-financing, with a ceiling of 50 % of the total costs of a project or EUR 2.5 million. Further, the funding for the other half of the project must be secured. Without this guarantee, FFEM will not provide funds.

For local NGOs, communities and small and medium enterprises in developing countries there is a special FFEM programme for small-scale projects (*Programme de Petites Initiatives*, PPI) with funding contributions of up to EUR 50,000. These small-scale projects in the field of (agricultural) biodiversity aim to protect endangered local ecosystems, preserve rare or threatened species or reintroduce species that have been lost, and ensure the sustainable economic utilisation of rare or threatened species. Here too the principle of co-financing applies. This small-scale project programme finances about 20 initiatives every year.

Global Crop Diversity Trust



Logo of the *Global Crop Diversity Trust*

The Global Crop Diversity Trust was set up in 2004. It is a foundation based in Rome, which was specifically established to preserve agricultural biodiversity. It brings together

public- and private-sector donors, and has capital reserves of USD 260 million. The trust is an important financing instrument in connection with the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). It uses its funds to support in particular the preservation of globally valuable collections of plant genetic material, in gene banks or living collections, and to train staff and other stakeholders in this field. The trust also supports information systems for the concerns of agricultural biodiversity, including databases, documentation of collections and the exchange of information through networks.

The promotion guidelines of the trust are laid down in regional strategies and strategies for individual plant species. Funds are only provided for projects that comply with these guidelines. In 2006 the trust approved assistance for the first time for urgently needed work to preserve various collections of genetic materials, including rice, coconut and apples. The Global Crop Diversity Trust does not fully finance the projects. It ascertains the degree of support required and then decides on the amount of funding it is willing to provide – depending on the own funds of the organisations responsible and the importance of the collections.



Logo of the EAFRD

European Agricultural Fund for Rural Development (EAFRD)

Since January 2007, measures taken in EU member states to encourage sustainable farming, protect biodiversity and preserve the rural cultur-

al heritage have been eligible for assistance. This is made possible by the new European Agricultural Fund for Rural Development (EAFRD), which the European Commission uses to support rural development.

Alongside these special financing instruments, numerous bilateral and multilateral development projects also offer a huge potential for implementing activities to preserve threatened livestock breeds and crop varieties *in situ*. For instance, value chains for products from plants and domestic animals that are currently rarely used can be promoted within the scope of income-generating activities. In this way, part of the funding for these projects can be used to preserve agricultural biodiversity and the related indigenous knowledge.

National financing instruments

Various countries – both industrialised and developing – also provide national funds for the conservation of genetic resources. Although the funds of the developing countries in particular are limited, there are sometimes ways of supporting efforts to preserve gene banks and collections for which the country itself is responsible. In addition some countries have put in place special national ecofunds, which are financed from national and international resources, and are deployed in particular for smaller-scale measures. Generally these funds focus on natural biodiversity, but also offer the possibility of promoting agricultural biodiversity.

Germany:



Logo of the *Zukunftsstiftung Landwirtschaft*

In Germany, the *Zukunftsstiftung Landwirtschaft* (Foundation on Future Farming) was set up in 2000 by a number of foundations, private businesses and individuals in order to support

organic farming. The focuses of promotion are livestock breeding and seed propagation and preservation without the use of genetic engineering. To provide funding, a livestock breeding and a seed fund have been set up. Every year about one million euros are available to finance individual projects to amounts of between EUR 10,000 and 50,000.

Kazakhstan:



Logo of the Fund

The government of Kazakhstan and the UNDP together founded the Biodiversity Conservation Fund of Kazakhstan in 2007; it is resourced from GEF funds. Part of the fund involves a programme for small-scale projects in the fields of

ecotourism, preservation of valuable species and natural landscapes and the sustainable use of natural resources.

Brazil:



Logo of the Brazilian Biodiversity Fund

The Brazilian Biodiversity Fund (FUNBIO) was established in 1995 and granted USD 20 million of GEF funds. The budget is supplemented with donations. It also finances agrobiodiversity projects.

More than 50 other environmental funds of this sort already exist in countries as diverse as India, Colombia, Peru, El Salvador and Bulgaria. Further schemes such as the Nepal Trust Fund for Biodiversity are currently being set up.

User-friendly financing instruments

Nevertheless the number of instruments worldwide which assist measures to conserve agricultural biodiversity remains small. Many funds are still geared primarily to conserving natural biodiversity. More efforts are thus needed in order to open them up for the conservation of agricultural biodiversity. In particular the *in situ* protection should be promoted by ensuring that these resources are used, since this makes possible a certain adaptation of the species to changing climatic conditions. Even this, how-

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- stimulate an interest in the conservation and sustainable use of biological diversity,
- present quickly and clearly concrete actions and experiences,
- explain new concepts and issues relating to the topic of biological diversity,
- encourage and stimulate the mainstreaming of this topic within development cooperation projects and programmes.

We look forward to your suggestions and experiences so as to enable us to improve this series.

ever, will not be able to protect and preserve all the important traditional livestock breeds and plant varieties. In some cases this will only be possible by subsidising farmers who make it their job to preserve these genetic resources. The Chinese government, for instance, pays out subsidies of this sort to farmers keeping the now rare Hu sheep.

Many project ideas need only a small funding volume, but the funds must be approved swiftly with as little red tape as possible. This means that financing instruments must be flexible in terms of the scope of the project, and that they must have rapid decision-making procedures and offer the option of submitting project applications at any time. New results-oriented systems for providing financial rewards to the custodians of rare livestock breeds and plant varieties could help, such as those currently being developed at the University of Göttingen.

Agricultural biodiversity is not bound to individual countries. It generally follows regional ecology and traditional conditions. Promotion funds which take decisions at regional level would be better adapted to these circumstances than centralised bodies. They could take their lead from the regional and species-specific strategy papers produced by the Global Crop Diversity Trust. They should, however, not focus solely on the crops that are deemed most important to feed the world, as does the Global Crop Diversity Trust, but include locally important local plants and livestock in conservation measures.

Further information:

http://www.fao.org/AG/agp/agps/Pgrfa/pdf/overvi_e.pdf

FFEM:

<http://www.ffem.fr/jahia/Jahia/lang/fr/accueil/pid/237>

Global Diversity Trust:

<http://www.croptrust.org/documents/web/RoleOfTrust-May07.pdf>

<http://www.conservationfinance.org/>

Keienburg, T., A. Most, J. Prüter (Ed.) (2006): Entwicklung und Erprobung von Methoden für die ergebnisorientierte Honorierung ökologischer Leistungen im Grünland Nordwestdeutschlands. NNA-Berichte 19, 20-30.

Imprint

GIZ is implementing the sector project “Sustainable management of resources in agriculture” on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

Issue Paper series “People, Food and Biodiversity”
Published by: sector project “Sustainable management of resources in agriculture” (Division 45)

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