

International agreements on agrobiodiversity

At a time when a growing world population needs to be fed on limited resources in a changing climate, the conservation and sustainable use of agricultural biological diversity gains utmost importance. Agrobiodiversity plays a crucial role in food security and nutrition, as well as in the provision of environmental services and livelihoods. It is critical to the sustainability, resilience and adaptability of agricultural production systems. To promote awareness and share knowledge on conservation and the sustainable use of agrobiodiversity, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), has published this series of agrobiodiversity factsheets.

The present factsheet deals with the global governance of agrobiodiversity. It contains the relevant international legal instruments designed to reverse the current loss of agrobiodiversity and to reward those conserving agrobiodiversity and for sharing their associated traditional knowledge. Aspects covered include access and benefit-sharing, Farmers' Rights and the protection of traditional knowledge, genetic resources as a global commons, intellectual property rights, as well as human rights issues.

Background

As agrobiodiversity is such an important issue for the survival of humankind, the diversity of plant and animal genetic resources for food and agriculture, as well as species and ecosystem diversity, needs to be well protected and sustainably used at local, regional and international levels. Which international agreements are in place for that? There are the processes around the UN Convention on Biological Diversity (CBD) and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Other agreements deal with intellectual property issues, such as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the WTO, and the Convention of the International Union

What is agrobiodiversity?

Agricultural biodiversity includes all components of biological diversity of relevance to food and agriculture, and all components of biological diversity that constitute the agricultural ecosystems: the variety and variability of animals, plants and micro-organisms, at the genetic, species and ecosystem levels, which are necessary to sustain key functions of the agro-ecosystem. Agrobiodiversity is the outcome of the interactions among genetic resources, the environment and the management systems and practices used by farmers and herders. It has developed over millennia, as a result of both natural selection and human interventions.

for the Protection of New Varieties of Plants (UPOV). There are many other agreements, which directly or indirectly influence agrobiodiversity and the traditional rights of farmers and herders as producers, maintainers and developers of agrobiodiversity. [IIED \(2014\)](#) provides an overview on international agreements on biodiversity conservation, [Santilli \(2012\)](#) is about the laws on agrobiodiversity, and [Andersen \(2008\)](#) describes the international agreements related to plant genetic resources in agriculture and how their interaction affects developing countries.

The Convention on Biological Diversity

The United Nation's Convention on Biological Diversity (CBD) is a global, legally binding treaty for the conservation and sustainable use of biodiversity, which includes agricultural biological diversity. Established in 1992 at the UN Conference on Environment and Development in Rio de Janeiro, it is one of the three 'Rio Conventions'. The CBD has three objectives:

1. the conservation of biodiversity,
2. the sustainable use of the components of biological diversity, and
3. the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.



The CBD entered into force in December 1993. In September 2015, it had 196 parties including the European Union (EU). The only countries of the world that have not accessed the CBD are the USA and the Vatican (see [CBD](#)). The USA is mainly concerned about its intellectual property interests.

Drawing on the principle of national sovereignty, the CBD recognized the rights of states to regulate access to the genetic resources in their territories. In granting the states the rights to the biological resources in their territories, the CBD also requires them to maintain these resources. The CBD acknowledges the leading role of the FAO and its Commission on Genetic Resources for Food and Agriculture (CGRFA) in agricultural biodiversity.

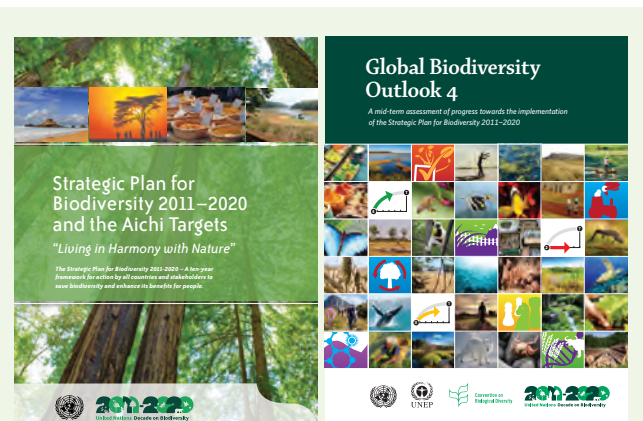
In order to reduce the dramatic loss of biodiversity, in 2010, the CBD Conference of Parties (COP) adopted the Strategic Plan for Biodiversity 2011–2020 in their tenth meeting (COP10) in Nagoya, Aichi Prefecture (Japan). The Strategic Plan comprises five strategic goals and 20 measurable targets known as the Aichi Targets. The United Nations supported the Strategic Plan by declaring 2010 as International Year of Biodiversity, and 2011–2020 as UN Decade on Biodiversity. FAO assists the implementation of the Strategic Plan with different tools (see [FAO, 2014](#)).

Aichi Targets relevant to agrobiodiversity

- Aichi Target No. 3: Incentives reformed
- Aichi Target No. 4: Sustainable consumption and production
- Aichi Target No. 7: Sustainable agriculture, aquaculture and forestry
- Aichi Target No. 9: Invasive alien species prevented and controlled
- Aichi Target No. 13: Genetic diversity maintained
- Aichi Target No. 16: Nagoya Protocol in force and operational.

For more details, see [CBD \(2013\)](#).

The CBD member states are responsible for their biological diversity including agrobiodiversity, and for implementation of the CBD. The key instruments of its implementation are National Biodiversity Strategies and Action Plans (NBSAP), which have to be integrated into broader national plans for environment and development. National Focal Points (NFP) serve for communication with the CBD; they report at regular intervals on national progress with CBD implementation. The most recent (fifth) instalment of these national reports was due on 31st March 2014. It was to focus on the implementation of the 2011–2020 Strategic Plan, and thus contributed to the fourth edition of the Global Biodiversity Outlook (GBO4). GBOs periodically summarize the latest data on the status and trends of biodiversity on a global level and draw conclusions relevant to the further implementation of the Convention.



The Global Biodiversity Outlook 4 (GBO4, [CBD, 2014](#)) serves as mid-term review of the implementation of the Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets ([CBD, 2010](#)). The GBO4 shows significant progress towards meeting some components of the majority of the Aichi Biodiversity Targets. However, in most cases this progress is not sufficient to achieve the targets set for 2020. The analysis of the major primary sectors indicates that drivers linked to agriculture account for 70% of the projected loss of terrestrial biodiversity. The GBO4 concludes that addressing trends in food systems including realising sustainable farming and food systems is crucial in achieving the Strategic Plan for Biodiversity 2011–2020.

CBD Protocols

Besides forming decisions, the CBD can also develop protocols as independent treaties that have to be ratified by the CBD parties to enter into force. For the time being, there are two protocols under the CBD: The Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-Sharing. A third protocol, a supplement to the Cartagena Protocol, the ‘Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety’, has not yet entered into force. All three protocols are important to agrobiodiversity.

The Cartagena Protocol on Biosafety

The ‘Cartagena Protocol on Biosafety to the Convention on Biological Diversity’ entered into force in 2003. In September 2015, it had 170 parties. The Cartagena Protocol is an international agreement that aims at ensuring safe handling, transport and use of genetically modified organisms. According to this protocol, the import of genetically modified plants intended for cultivation may occur only with the consent of the importing country. The protocol applies the precautionary principle – those who want to import genetically modified organisms have to prove that this will not result in harm. The Cartagena Protocol allows signatory states to restrict or ban imports even if there is no conclusive evidence that the geneti-

cally modified organism might cause damage. For further information, see the following GIZ factsheet (in the present text, GIZ factsheets, hyperlinked, are marked with ►):

► [GIZ, 2009: Biosafety – Implementation of the Cartagena Protocol](#)

During the drafting of the Cartagena Protocol, no agreement could be reached regarding damage resulting from the transboundary movements of genetically modified organisms. For such cases, a supplementary protocol was drafted and adopted in 2010: the ‘Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety’. By September 2015, 33 parties have ratified the protocol. It will enter into force 90 days after being ratified by at least 40 parties.

The BMZ is supporting projects which are contributing to the implementation of the Cartagena Protocol, for example a regional project which is supporting GMO-free soya production and commercialization for farmers in the Danube region of Bosnia and Herzegovina, and Serbia. This is achieved

through improvement of policy framework conditions and research and extension services (see [GIZ Danube Soya](#)).

The Nagoya Protocol on Access and Benefit-Sharing

The fair and equitable sharing of the benefits arising out of the utilization of genetic resources is one of the three objectives of the CBD. From 2004 until 2010, the community of nations negotiated a set of international regulations on the access to genetic resources and the equitable sharing of benefits. After tough negotiations, the ‘Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity’ was adopted at the COP10 in Nagoya (Japan) in October 2010. It entered into force in 2014. In September 2015, the Nagoya Protocol had 66 parties, which now have to implement it in their national law.

The teff case

In 2005, an access and benefit-sharing agreement was made on teff genetic resources between Ethiopia and the Dutch company Health and Performance Food International (HPFI). Teff (*Eragrostis tef*) is a food grain endemic to the Ethiopian highlands, where it has been cultivated for several thousand years. Rich in nutritional value, it is an important staple crop for Ethiopians, and since it is gluten-free, it is interesting as health food and sports and energy food for markets in other parts of the world.

Provisions of the agreement included various payments to Ethiopia including 5 % of net profits, involvement of Ethiopian researchers, and sharing of results with Ethiopian scientists. The Teff Agreement was seen as one of the most advanced of its time. It was seen as a pilot case for the implementation of the CBD in terms of access to and benefit-sharing from the use of genetic resources. But the high expectations were never met: the only benefits Ethiopia received were a payment of EUR 4000 that had been paid upfront towards the beginning of the implementation of the agreement and a small, early-interrupted research project.

Ethiopia provided access to the teff genetic resources under the agreement, but HPFI failed in large part to comply with its obligations. In 2007, HPFI obtained a patent from the European Patent Office on the processing of teff flour and related products in the Netherlands, which, in practice, covered all ripe grain and all genetic resources of teff in addition to relevant products. With this patent, HPFI has assumed the right to commercially exploit teff exclusively throughout the world for the next twenty years. Though HPFI was declared bankrupt in 2009, it established other companies and transferred values to these companies. These companies, in turn, continued to produce and sell teff flour and teff products, and expand their activities to other countries and continents.

In the end, Ethiopia received almost nothing, but lost its right to utilize and reap benefits from its own teff genetic resources in the countries where the patent is valid. For more information, see [Andersen and Winge, 2012: The Access and Benefit-Sharing Agreement on Teff Genetic Resources: Facts and Lessons](#), and [GIZ, 2014: The teff case – Ethiopia \(poster\)](#).



Discussion during the meeting of the Parties to the Cartagena and the Nagoya Protocols during COP12 in Pyeongchang, Republic of Korea, October 2014.



The Nagoya Protocol on Access and Benefit-Sharing is an international legal framework, which aims at sharing the benefits arising from the utilization of genetic resources and associated traditional knowledge in a fair and equitable way, thereby contributing to the conservation and sustainable use of biodiversity. It creates greater legal certainty and transparency for both providers and users of genetic resources, by establishing more predictable conditions for access to genetic resources and helping to ensure benefit-sharing with the provider of genetic resources.

Access and benefit-sharing (ABS) is based on free, prior and informed consent granted by the providers of genetic resources. Mutually-agreed terms regulate rights and requirements between two or more parties. Benefit-sharing can be both monetary and non-monetary (e.g. transfer of financial resources, technologies and knowledge, especially of the private sector). The Protocol puts pressure on companies in the pharmaceutical, cosmetic and food industry regarding their usage of genetic resources and helps prevent illegal appropriation of genetic resources and related traditional knowledge ('bio-piracy').

BMZ, in collaboration with other donors, is supporting the ABS Capacity Development Initiative which supports the development and implementation of national ABS regulations and the development of capacities to negotiate ABS in various international fora and at national levels. For more detailed information on the international ABS regime, see [Santilli \(2012, Chapter 6\)](#), [ABS Initiative](#) and

- ▶ [GIZ, 2009: Genetic Resources – Access and Equitable Benefit-Sharing](#)
- ▶ [GIZ, 2012: Access and Benefit-Sharing \(ABS\)](#)
- ▶ [GIZ, 2015: Agrobiodiversity access and benefit-sharing](#)

The International Seed Treaty

The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), commonly known as the International Seed Treaty, regulates the multilateral exchange of a defined list of genetic resources of important food and fodder crops, and recognizes Farmers' Rights. Adopted in 2001, by September 2015, it had 136 contracting parties including the

EU. Among those countries not joining are the USA, China, South Africa, and New Zealand. The ITPGRFA is an international agreement based on the FAO's constitution.

The principal objectives of the ITPGRFA are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of benefits derived from their use, in harmony with the CBD, for sustainable agriculture and food security. The ITPGRFA requires its member countries to conserve their plant genetic resources for food and agriculture in accordance with the CBD, to ensure their sustainable use, to safeguard their free exchange, and recognize farmers as custodians and managers of genetic diversity (this is known as 'Farmers' Rights'). States hold sovereign rights over their own plant genetic resources, but agree to facilitate access to these resources for the purpose of 'utilization and conservation for research, breeding and training for food and agriculture'.

Farmers' Rights and the ITPGRFA

Farmers' Rights include the right to protection of farmers' traditional knowledge of plant genetic resources, the right to participate in sharing of the proceeds arising from their use, the right to participate in decisions on issues relating to conservation and sustainable use of these resources, and their right to keep seeds and planting materials grown on their farms, to plant them, to share them with others and to develop them.

The ITPGRFA is the first legally binding international agreement to recognise Farmers' Rights. Responsibility for implementation lies with national governments; they have to consider Farmers' Rights in their national legislation (see [Farmers' Rights Project](#)).

For further information on Farmers' Rights and agrobiodiversity, see [Santilli \(2012, Chapter 8\)](#) and [Andersen and Winge \(2013\): Realising Farmers' Rights to Crop Genetic Resources: Success Stories and Best Practices](#), and

- ▶ [GIZ, 2006: Farmers' Rights and agrobiodiversity](#)

The core of the ITPGRFA is the multilateral system for facilitated access to 35 specified food crops and 29 forage crops. The system also includes the collections in the gene banks of the International Agricultural Research Centres of the Consultative Group on International Agricultural Research (CGIAR) and other international and national institutions with agreements with the ITPGRFA.

The multilateral system enables providers and users of genetic resources to exchange genetic material between the parties, equitably sharing benefits arising from commercial use, on the basis of standard contracts (Standard Material Transfer Agreement, SMTA). The SMTA describes the rights and obligations of all parties involved, as well as provisions regulating monetary and non-monetary sharing of benefits resulting from the use and marketing of plant genetic resources.

Crop genetic resources as a global commons

[Bioversity International \(2013\)](#) studied methods for supporting the collective pooling and management of shared plant genetic resources for food and agriculture. This included support through laws regulating access to genetic resources and the sharing of benefits arising from their use, with focus on the ITPGRFA. The report analyses a range of relevant background factors, including the impact of climate change on countries' interdependence on plant genetic resources, and germplasm flows in and out of international gene banks. It shows where challenges remain in terms of the multilateral system's performance as a central feature in a global system of collective action to conserve and sustainably use plant genetic diversity, and equitably share benefits derived from that use. The report presents ways to increase the scope, utility and sustainability of the global crop commons and offers options for policy initiatives to further strengthen the support which the multilateral system provides to the global crop commons.

The aspect of crop genetic resources as a global commons is also covered by [Santilli \(2012\)](#) in her comprehensive analysis of the impact of the legal system on agrobiodiversity and on small-scale farmers who conserve and manage agrobiodiversity, by [Kloppenborg \(2014\)](#) as well as by [Kotschi and Wirz \(2015\)](#).

The International Seed Treaty has resulted in an improved multilateral exchange of genetic materials and has strengthened joint efforts to preserve seeds and planting materials in gene banks (*ex situ* conservation). The conservation of plant genetic resources by farmers in the field (*in situ* conservation) and their sustainable use are key provisions of the treaty. However, as the multilateral system was not functioning at

the level hoped for, in 2013, the 'Ad Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System' was established and discussions on its improvement are ongoing. The working group is giving attention to landraces, farmers' varieties, crop wild relatives, informal seed systems, nutrition issues, and wider consideration of farmers' needs.

► [GIZ, 2009: The International Treaty on Plant Genetic Resources – status of implementation](#)

Treaties on intellectual property rights

In recent years, the seed sector saw an increase of granting intellectual property rights to newly developed plant varieties. At the same time, the sector experienced a concentration of seed companies into few multinational companies. Intellectual property refers to various sets of exclusive rights that are granted to applicants as a reward or incentive for intellectual endeavour. They include patents, copyrights, trademarks/trade names, utility models, plant variety protection laws, geographical indications, and *sui generis* traditional knowledge laws.

Intellectual property rights make access to genetic resources and their free use more difficult or even prevent it for breeders and farmers. The informal seed system in which farmers freely cultivate, exchange and further develop seeds is being increasingly blocked by the commercial seed sector. The broad debate concerning the role of intellectual property rights in agriculture is deadlocked, and positions have become polarised. At one end of the scale is the call for strong property rights as a driving force for innovation and the possibility of refinancing of investment. At the other end is a rejection of strong property rights, to enhance food security based on small-farm agriculture that at the same time preserves biological diversity (see [GIZ, 2010](#), and [GIZ, 2015a](#)).

Intellectual property rights must be designed in such a way that ethical principles are taken into consideration, the rights of farmers are respected, fair growth in developing countries is supported, and the implementation of the CBD, as well as research and cultivation of new varieties, are not hindered.

Today, the most relevant intellectual property protection systems affecting agrobiodiversity are the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) under the WTO regime, and the convention of the International Union for the Protection of New Varieties of Plants (Union Internationale pour la Protection des Obtentions Végétales, UPOV). While the USA uses patents to protect newly developed genetic resources (the first plant, a climbing rose, was patented in 1931), Europe applies plant variety protection in line with the UPOV convention.

► [GIZ, 2010: The role of intellectual property rights in agriculture](#)
► [GIZ, 2011: Intellectual Property Rights in Agriculture. Plant variety protection and its effects on food security and biological diversity](#)



TRIPS

As part of negotiations that led to the creation of the WTO, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was adopted in 1994. The TRIPS agreement requires WTO signatory states to provide intellectual property protection for plant varieties, but allows governments quite a lot of choice in how they put this requirement into effect. WTO members may extend patent protection to cover plant varieties or may choose, as European countries have, to keep conventional plant breeding out of the patent system. In the latter case, though, TRIPS requires a specific ('*sui generis*', Latin for stand alone, in a class of its own) intellectual property regime for plant varieties. UPOV is one such intellectual property regime.

Alternative *sui generis* approaches have been developed by several countries so far, including India, Malaysia and Thailand (most promising is the plant variety protection law in India). Similarly, Zimbabwe's, Zambia's and Uganda's plant variety protection laws also deviate in some elements from the UPOV

Convention and would possibly not comply with it. Since these countries have not, to date, been faced with any complaints of non-compliance under the dispute settlement provisions of TRIPS, a study of these extant alternatives could be a pragmatic way to identify elements of a TRIPS-compatible *sui generis* system. For designing *sui generis* plant variety protection systems in developing countries, see [Correa, \(2015\)](#).

UPOV plant variety protection

The UPOV Convention is a multilateral treaty signed in Paris in 1961. It entered into force in 1968 and was revised in 1972, 1978 and 1991. In September 2015, UPOV had 73 members. Both the ITPGRFA and the UPOV Convention aim at supporting plant breeding activities and encouraging the development of new varieties of plants. The ITPGRFA, which entered into force in 2004, does so by providing a system for facilitated access to plant genetic resources, while the UPOV Convention does so by establishing a system for plant variety protection.

The UPOV Convention and human rights

[GIZ \(2015b\)](#) has commissioned an integrated assessment of potential impacts of UPOV 91 on the right to food and other human rights as well as on Farmers' Rights. The rights of plant breeders and Farmers' Rights as defined in the ITPGRFA are both within the national jurisdiction of each country. Generally, farmers have an implicit right concerning their genetic resources, including seed and planting material, unless it is challenged by other law, e.g. plant variety protection law. UPOV-based plant protection laws protect the rights of plant breeders; however, they hinder the farmers' customary practices of exchanging and selling seed from their own harvest – important elements of farmer-managed breeding and seed systems. This involves risks for the realisation of the right to food and Farmers' Rights, which can be more or less pronounced in each country. Depending on other measures taken by a state, e.g. ensuring that vulnerable groups have access to seed, the plant variety protection law can be in harmony with the right to food or not.

The study also analysed whether the UPOV regulations are suitable for the agricultural conditions in developing countries. The concept of 'intellectual property' in the seed sector emerged historically from countries with an effective formal seed sector. In developing countries, the most important source of seed is farmer-managed seed systems which rely on traditional knowledge and the farmers' practices of freely saving, using and exchanging seed (see also [GIZ, 2015a](#)). At least 40 – 50% of all agricultural land in developing countries is estimated to be 'marginal'. Here, agricultural intensification is not economic and low-input systems prevail. Under such conditions, farmers depend especially on a functioning informal seed system and a rich genetic diversity and varieties that are well adapted and continue to develop to the local environment. The UPOV criterion of 'uniformity' could become a challenge for protecting varieties relevant to stress-prone environments and low-input farming systems, thus hindering rather than promoting breeding progress for these conditions.

Developing countries that have not yet joined UPOV should consider opting for alternative *sui generis* systems of plant variety protection that allow for more flexibility in meeting the obligations of different treaties, for balancing the interests of diverse actors, and for protecting and promoting Farmers' Rights, compared with the UPOV system.

The UPOV Convention facilitates the international protection of new varieties of plants that meet certain minimum standards (novel, distinct, uniform and stable features). UPOV allows each member state, within their domestic laws, to grant intellectual property rights to breeders who have developed new plant varieties.

UPOV contains certain exemptions: the farmers' privilege (the right of farmers to save and re-use harvested seeds of a protected variety), and the breeders' exemption (allowing other plant breeders to use protected material, without a licence, to breed new varieties). However, in its latest version from 1991 (UPOV 91), the protection of plant breeders' rights has been strengthened, while farmers' privilege and the breeders' exemption were not adequately addressed. UPOV 91 partially restricts the use of farm-saved seeds and propagation materials of protected varieties and, thus, prohibits their exchange and sale by farmers. Concerns have therefore been raised that UPOV 91-type plant variety protection laws overly restrict the traditions of seed management and sharing among farmers, thereby reducing the effectiveness and integrity of the informal seed system and, thus, negatively affecting farmers' livelihoods and national food security in developing countries (see [QUNO, 2011](#), and [The Berne Declaration, 2014](#)).

Implementation of international agreements on agrobiodiversity

GIZ analysed the level of implementation of international agreements on agrobiodiversity by case studies in five countries (India, China, Ethiopia, Brazil, and Peru). In all five countries, the conservation of agrobiodiversity is mainly in the hands of small farmers and indigenous communities. All countries have undertaken significant efforts to translate international obligations to conserve biodiversity into national laws and policies. The focus has been on conserving natural biodiversity and plant genetic resources, but less importance has been attached to the conservation of agrobiodiversity, and even less to that of animal genetic resources. More intensive measures are needed to reduce the loss of agricultural genetic resources. The practical implementation of legal provisions is constrained by a lack of awareness, a shortage of resources, and limited capacity. Coordination among ministries, the private sector and civil society need to be improved. Concepts are required to create value for diversity, craft incentives for conserving it, for sharing benefits, and

ensuring the rights of farmers. Despite these shortcomings, certain countries have acquired significant experience and have developed innovative approaches that can inspire future initiatives.

► [GIZ, 2011: *Implementing international agreements to conserve agrobiodiversity: Lessons from five countries*](#)

Germany's commitment to biodiversity

As a signatory to the biodiversity-related international agreements, Germany is committed to implementing them at home as well as to supporting its partners in doing so through development cooperation. Germany is supporting the implementation of the CBD and the ITPGRFA through different national and supra-regional projects. Every two years, the German Government publishes a list of projects and programmes related to biodiversity, that are implemented within the framework of German international cooperation. In 2014, there were 269 ongoing projects and pledges for new projects made in 2013 with main focus and principle objective to support at least one of the three objectives of the CBD (see [BMZ and BMUB, 2014](#)).

Outlook

Genetic resources provide the building blocks that allow classical plant breeders and biotechnologists to develop new commercial varieties and other biological products. Neither genetic resources nor the biotechnologies that apply to them have a clear market value by themselves; this only exists for the commercial products obtained through them. Since the 1960s, a number of international bodies and agreements (TRIPS/WTO, UPOV) have passed regulations for intellectual property rights that allow the right-holders to obtain part of the profits from the commercial products they have developed. Since the 1990s, other international agreements (CBD with the Nagoya Protocol, ITPGRFA) have granted equivalent but collective rights on the providers of the genetic resources.

This situation calls for a symmetrical and balanced system of incentives to promote, on the one hand, the developments and application of new biotechnologies and to ensure, on the other hand, the continued conservation, development and availability of genetic resources to which these technologies apply. It is now up to national governments to implement these provi-



Photo: © GIZ



Friederike Kraemer
naren@giz.de

sions, including the development, as appropriate, of national legislation that takes fully into account the two ‘pillars’ of the system, thereby allowing for harmony and synergy in the implementation of the various binding international agreements. The aim should be to ensure long-term food security, protect livelihoods and provide incentives to maintaining biological and genetic diversity.

In particular, assistance is needed for the formulation of national seed laws – for example in drafting a *sui generis* plant variety protection law according to the country’s respective conditions, needs and interests. Other important fields where support is needed are capacity-building, awareness-raising, and mainstreaming of international agreements on agrobiodiversity, in such a way that all levels of society as well as all relevant sectors are involved.

Important links

- ABS Capacity Development Initiative: www.abs-initiative.info
- Cartagena Protocol on Biosafety: bch.cbd.int/protocol
- Convention on Biological Diversity: www.cbd.int
- Farmers’ Rights: www.farmersrights.org
- Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES): www.ipbes.net/
- ITPGRFA: www.planttreaty.org
- Nagoya Protocol on Access and Benefit-Sharing: www.cbd.int/abs
- Sector Project Implementing the Biodiversity Convention: www.giz.de/biodiversity
- Sector Project Sustainable Agriculture (NAREN): www.giz.de/sustainable-agriculture

Further information

- CBD, 2010: Strategic Plan for Biodiversity 2011 – 2020, including Aichi Biodiversity Targets. www.cbd.int/sp and www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf
- FAO, 2014: FAO’s tools and guidance to assist implementation of the Convention on Biological Diversity and the Strategic Plan for Biodiversity 2011-2020. www.fao.org/fileadmin/templates/biodiversity_paia/FAO_Instruments_Strategic_Plan_Aichi_Targets.pdf
- FAO and Bioversity International, 2011: Plant Genetic Resources and Food Security – Stakeholder perspectives on the International Treaty on Plant Genetic Resources for Food and Agriculture. www.bioversityinternational.org/uploads/tx_news/Plant_genetic_resources_and_food_security_1532.pdf
- GIZ, 2010: Triggering the Synergies between Intellectual Property Rights and Biodiversity. www.giz.de/fachexpertise/downloads/gtz2010-en-iprs-and-biodiversity-reader.pdf
- GIZ, 2015a: Farmers’ Seed Systems – The challenge of linking formal and informal seed systems. www.giz.de/expertise/downloads/giz2015-en-dokument-expert-talks-farmers-seed-syst.pdf
- GIZ, 2015b: The UPOV Convention, Farmers’ Rights and Human Rights: An integrated assessment of potentially conflicting legal frameworks. www.giz.de/fachexpertise/downloads/giz2015-en-upov-convention.pdf
- UNEP, 2015: Sourcebook of opportunities for enhancing cooperation among the Biodiversity-related Conventions at national and regional levels. wcmc.io/Sourcebook

Published by Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn, Germany

Sector Project Sustainable Agriculture (NAREN)
Friedrich-Ebert-Allee 36+40 Dag-Hammarskjöld-Weg 1-5
53113 Bonn 65760 Eschborn, Germany
T +49 (0) 228 44 60-0 T +49 (0) 6196 79 - 2359
F +49 (0) 228 44 60-0 F +49 (0) 6196 79 - 1115
naren@giz.de
www.giz.de/sustainable-agriculture

Author Dr Christine Martins

Design Ira Olaleye

As at November 2015

GIZ is responsible for the content of this publication.

On behalf of Federal Ministry for Economic
Cooperation and Development (BMZ)

Special unit ‘ONE WORLD – No Hunger’

Addresses of the BMZ offices	BMZ Bonn Dahlmannstraße 4 53113 Bonn, Germany T +49 (0)228 99 535 - 0 F +49 (0)228 99 535 - 3500 poststelle@bmz.bund.de www.bmz.de	BMZ Berlin Stresemannstraße 94 10963 Berlin, Germany T +49 (0)30 18 535 - 0 F +49 (0)30 18 535 - 2501
---------------------------------	--	---