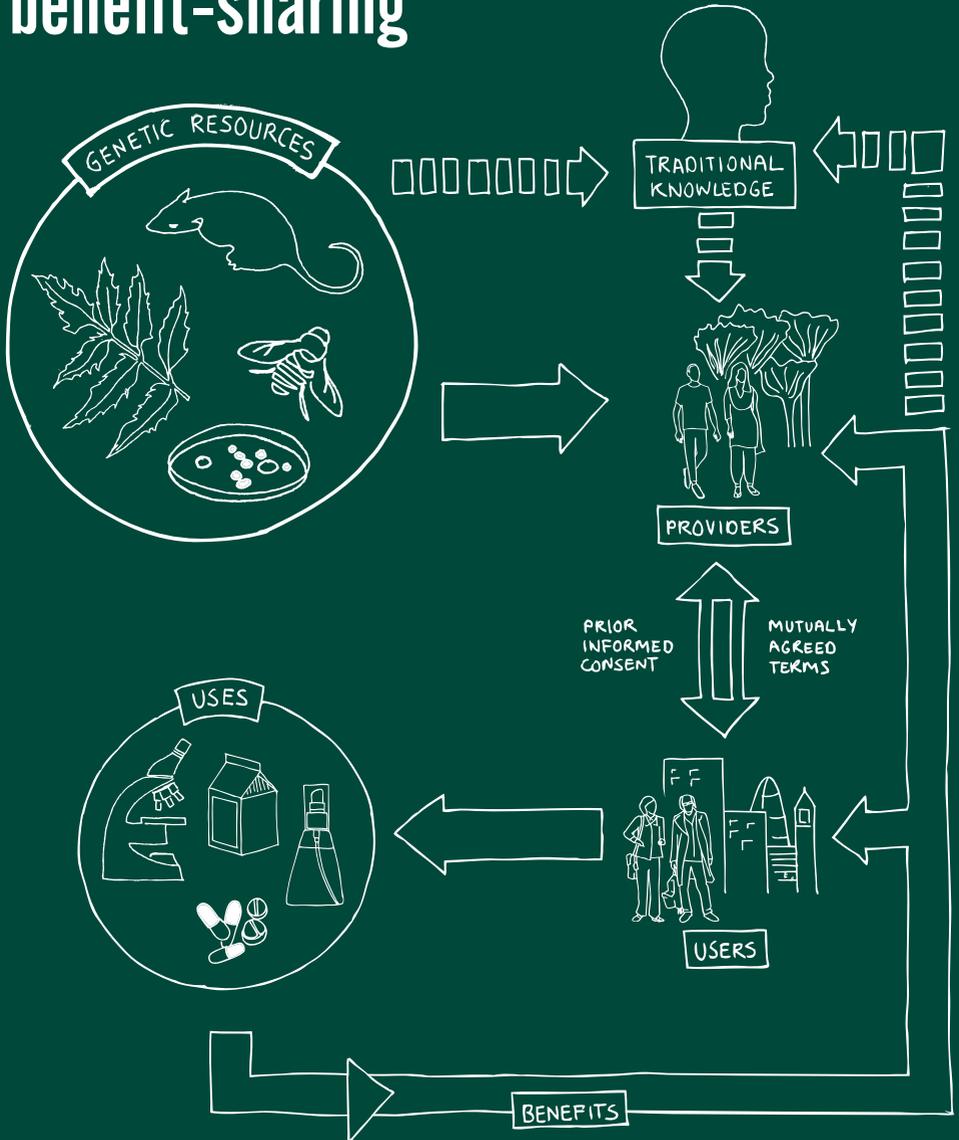


Introduction to access and benefit-sharing





What are genetic resources?

All living organisms; plants, animals and microbes, carry genetic material that could be potentially useful to humans. These resources can be taken from the wild, domesticated or cultivated. They are sourced from environments in which they occur naturally (in situ), or from human-made collections such as botanical gardens, genebanks, seed banks and microbial culture collections (ex situ).

Why are genetic resources important?

There are significant potential benefits to be gained by accessing genetic resources and making use of them. They provide a crucial source of information to better understand the natural world and can be used to develop a wide range of products and services for human benefit. This includes products such as medicines and cosmetics, as well as agricultural and environmental practices and techniques.

However, like many key resources in the world, genetic resources are not evenly distributed. What's more, the plants, animals and microbes in which they are found often make up complex and delicately-balanced ecosystems which can be threatened or endangered. The way in which genetic resources are accessed, and how the benefits of their use are shared, can create incentives for their conservation and sustainable use, and can contribute to the creation of a fairer and more equitable economy to support sustainable development.

Our current understanding of genetic resources owes a great deal to the traditional knowledge of indigenous and local communities. This valuable knowledge has been built up and handed down over generations. It is essential that the value of traditional knowledge is understood and valued appropriately by those who use it, and that the rights of indigenous and local communities (ILCs) are considered during negotiations over access and use of genetic resources. Failing to do this can put the knowledge, the resources and the communities at risk.

← Genetic resources refers to the genetic material from plants, animals or microbes that has a potential value to be used

Image copyright: Philip Lange/Shutterstock: Scorpiosa plant



Access and benefit-sharing

What is access and benefit-sharing?

Access and benefit-sharing (ABS) refers to the way in which genetic resources may be accessed, and how the benefits that result from their use are shared between the people or countries using the resources (users) and the people or countries that provide them (providers).

Why is it important?

Providers of genetic resources are governments or civil society bodies, which can include private land owners and communities within a country, who are entitled to provide access to genetic resources and share the benefits resulting from their use. The access and benefit-sharing provisions of the Convention on Biological Diversity (CBD) are designed to ensure that the physical access to genetic resources is facilitated and that the benefits obtained from their use are shared equitably with the providers. In some cases this also includes valuable traditional knowledge associated with genetic resources that comes from ILCs.

The benefits to be shared can be monetary, such as sharing royalties when the resources are used to create a commercial product, or non-monetary, such as the development of research skills and knowledge. It is vital that both users and providers understand and respect institutional frameworks such as those outlined by the CBD and in the Bonn Guidelines. These help governments to establish their own national frameworks which ensure that access and benefit-sharing happens in a fair and equitable way.

How does it work?

Access and benefit-sharing is based on prior informed consent (PIC) being granted by a provider to a user and negotiations between both parties to develop mutually agreed terms (MAT) to ensure the fair and equitable sharing of genetic resources and associated benefits.

- **Prior informed consent (PIC):** is the permission given by the competent national authority of a provider country to a user prior to accessing genetic resources, in line with an appropriate national legal and institutional framework.

- **Mutually agreed terms (MAT):** is an agreement reached between the providers of genetic resources and users on the conditions of access and use of the resources, and the benefits to be shared between both parties.

These conditions are required under Article 15 of the CBD, which was adopted in 1992 and provides a global set of principles for access to genetic resources, as well as the fair and equitable distribution of the benefits that result from their use.

Who is involved?

Providers of genetic resources: States have sovereign rights over natural resources under their jurisdiction. They are obligated to put in place conditions that facilitate access to these resources for environmentally sound uses. Providers agree terms, which include PIC and MAT, for granting access and sharing benefits equitably. Laws within the provider country may entitle others, such as indigenous and local communities (ILCs), to also negotiate terms of access and benefit-sharing. The participation of ILCs is necessary in instances where traditional knowledge associated with genetic resources is being accessed.

Users of genetic resources: Users are responsible for sharing the benefits derived from genetic resources with the providers. They seek access to genetic resources for a wide range of purposes, from basic research to the development of new products. They are a diverse group, including botanical gardens, industry researchers such as pharmaceutical, agriculture and cosmetic industries, collectors and research institutes.

National Focal Points: To facilitate access, users need a clear and transparent process that details who to contact and what the requirements and processes are in provider countries in order to gain access. National Focal Points are responsible for providing this information.

Competent National Authorities (CNAs): CNAs are bodies established by governments and are responsible for granting access to users of their genetic resources, and representing providers on a local or national level. National implementation measures establish how CNAs work in a given country.

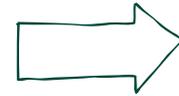
Key themes

IN-SITU

- FOUND WITHIN ECOSYSTEMS AND NATURAL HABITATS

EX-SITU

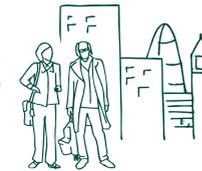
- FOUND IN BOTANICAL GARDENS, COMMERCIAL OR UNIVERSITY COLLECTIONS



PRIOR INFORMED CONSENT (PIC)



MUTUALLY AGREED TERMS (MAT)



NON-COMMERCIAL

- TAXONOMY
- CONSERVATION

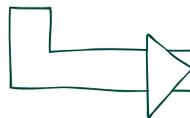
COMMERCIAL

- BIOTECHNOLOGY
- HORTICULTURE
- PHARMACEUTICALS



- STATES HAVE SOVEREIGN RIGHTS OVER NATURAL RESOURCES
- COMPETENT NATIONAL AUTHORITIES (CNAs) IN THESE STATES GRANT USERS ACCESS TO THESE RESOURCES

- RESEARCHERS
- UNIVERSITIES
- INDUSTRIES



MONETARY

- ROYALTY PAYMENTS
- JOINT OWNERSHIP OF INTELLECTUAL PROPERTY RIGHTS

NON-MONETARY

- RESEARCH AND DEVELOPMENT
- TRAINING AND EDUCATION
- TRANSFER OF TECHNOLOGY

There are five key themes that underpin access and benefit-sharing of genetic resources. These are covered in a series of factsheets, which tackle each theme individually.

Timeline

- 1992** The text of the CBD is opened for signature at the Rio Earth Summit
- 1993** The CBD is ratified and comes into force 29th December
- 1998** A panel of experts is established to clarify principles and concepts related to access and benefit-sharing
- 2000** The Conference of the Parties establishes the Ad Hoc Open-ended Working Group on Access and Benefit-sharing (ABS) with the mandate to develop guidelines to assist with the implementation of the ABS provisions of the CBD
- 2002** The Conference of the Parties adopts the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization
- At the World Summit on Sustainable Development, governments call for action to negotiate an international regime to promote the fair and equitable sharing of benefits arising from the use of genetic resources
- 2004** The Working Group on ABS is given the mandate to negotiate an international regime on access and benefit-sharing, in accordance with decision VII/19 D of the Conference of the Parties.
- 2008** The Conference of the Parties establishes a clear process for the finalization of the international regime on access and benefit-sharing.
- 2010** The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization was adopted by the Conference of the Parties at its tenth meeting in Nagoya, Japan in October 2010.



Genetic resources can be found both in situ within ecosystems or natural habitats, or ex-situ including botanical gardens, commercial or university collections



Factsheets

Further information on the key elements of access and benefit-sharing is contained in the following six factsheets:

Access and Benefit-sharing

What are the main procedures for gaining access to genetic resources? How should users and providers agree on how the benefits resulting from the use of genetic resources will be shared?

Uses of Genetic Resources

Why are genetic resources useful and how are they put to commercial and non-commercial use? How does this affect access and benefit-sharing?

Traditional Knowledge

Why is it useful, and how does it relate to access and benefit-sharing?

The Bonn Guidelines

How do these voluntary guidelines assist with the implementation of the access and benefit-sharing framework set out by the CBD?

National Implementation

How do governments, as providers and users of genetic resources, implement measures to govern access and benefit-sharing?

The Nagoya Protocol

What is the Nagoya Protocol, why is it important, and what does it cover?

Glossary

Biodiversity: Refers to the variability that exists among living organisms from all sources including among other things, terrestrial, marine and other aquatic ecosystems and the ecological complexes which they are part of. This includes diversity within species, between species and their ecosystems.

Biological resources: Includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.

Genetic material: Means any material of plant, animal, microbial or other origin containing functional units of heredity.

Genetic resources: Refers to the genetic material from plants, animals or microbes that has actual or potential value to be used. These uses can range from basic research that seeks a better understanding of the world's natural resources to development for commercial products.

In situ and ex situ: Genetic resources can be wild, domesticated or cultivated. "In situ" genetic resources are those found within ecosystems and natural habitats. "Ex situ" genetic resources are those found outside their normal ecosystem or habitat, such as in botanical gardens or seed banks, or in commercial or university collections.

Convention on Biological Diversity (CBD): Is an International Treaty which entered into force in 1993 which has three core objectives: the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

Bonn Guidelines: Voluntary guidelines intended to assist governments in the adoption of measures to govern access and benefit-sharing in their countries.

Prior informed consent (PIC): Is permission given by the Competent National Authority (CNA) of a country to an individual or institution seeking to obtain access to genetic resources, in line with an appropriate legal and institutional framework.

Mutually agreed terms (MAT): Is an agreement reached between the providers of genetic resources and users on the conditions of access and use of the resources, and the benefits to be shared between both parties.

State sovereignty: The CBD recognizes the sovereign rights of States over their natural resources in areas within their jurisdiction. Therefore it is their responsibility to develop the appropriate framework to create conditions to facilitate access to their genetic resources and to ensure fair and equitable sharing of the benefits derived from their use.

Providers of genetic resources: States have sovereign rights over natural resources under their jurisdiction. They are obligated to put in place conditions that facilitate access to these resources for environmentally sound uses. Providers agree terms, which include PIC and MAT, for granting access and sharing benefits equitably. Laws within the provider country may entitle others, such as indigenous and local communities (ILCs), to also negotiate terms of access and benefit-sharing. The participation of ILCs is necessary in instances where traditional knowledge associated with genetic resources is being accessed.

Users of genetic resources: Users are responsible for sharing the benefits derived from genetic resources with the providers. They seek access to genetic resources for a wide range of purposes, from basic research to the development of new products. They are a diverse group, including botanical gardens, industry researchers such as pharmaceutical, agriculture and cosmetic industries, collectors and research institutes.

National Focal Points (NFPs): To facilitate access, users need a clear and transparent process that details who to contact and what the requirements and processes are in provider countries in order to gain access. National Focal Points are responsible for providing this information.

Competent National Authorities (CNAs): CNAs are bodies established by governments and are responsible for granting access to users of their genetic resources, and representing providers on a local or national level. National implementation measures establish how CNAs work in a given country.



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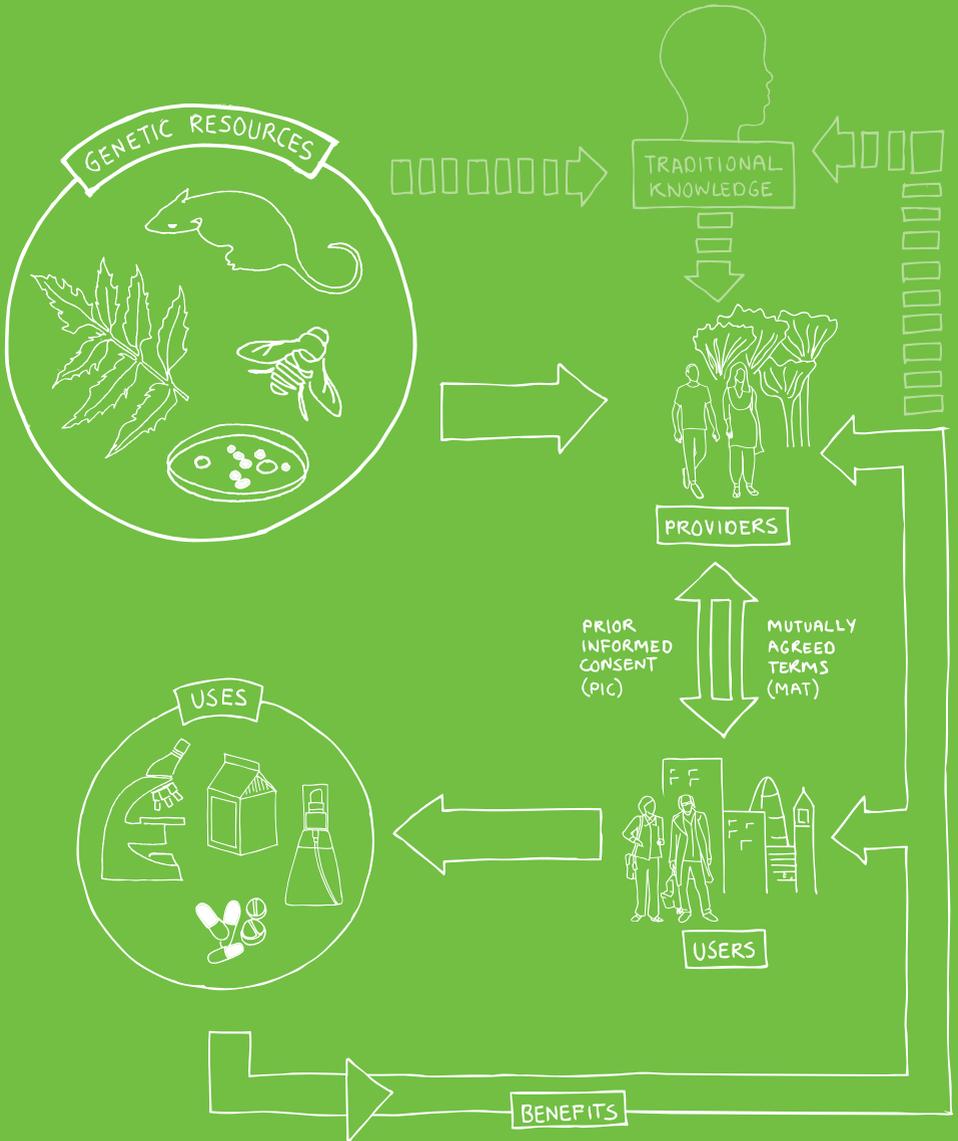
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Convention on Biological Diversity: ABS

THEME

Access and benefit-sharing





Users of genetic resources include research institutes or companies seeking access for basic scientific research or product development

Image copyright: Manuel Schäfer/Shutterstock

What is access and benefit-sharing about?

Access and benefit-sharing refers to the way in which genetic resources may be accessed, and how users and providers reach agreement on the fair and equitable sharing of the benefits that might result from their use.

Article 15 of the Convention on Biological Diversity (CBD) sets out rules which govern access and benefit-sharing. Under these rules, the governments of countries have two key responsibilities:

1. To put in place systems that facilitate access to genetic resources for environmentally sound purposes
2. To ensure that the benefits resulting from their use are shared fairly and equitably between users and providers

Users of genetic resources include research institutes or companies seeking access for basic scientific research or product development. To gain access, users must first get permission (known as prior informed consent or PIC) from the provider country. In addition, the provider and the user must negotiate an agreement (known as mutually agreed terms or MAT) to share the resulting benefits equitably.

Why is access and benefit-sharing important?

Access to genetic resources can lead to benefits for both users and providers. Access and benefit-sharing ensures that the way in which genetic resources are accessed and used maximizes the benefits for users, providers, and the ecology and communities where they are found.

Users seek genetic resources to deliver a range of benefits; from basic scientific research, such as taxonomy, to developing commercial products which contribute to human well being, such as pharmaceuticals.

Providers of genetic resources grant access to these resources in return for a fair share of the benefits that result from their use. In cases where research and development leads to a commercialized product, monetary benefits such as royalties, milestone payments or licensing fees must be shared with the provider. Providers can also benefit from technology transfer or the enhancement of research skills. Ideally, these benefits will also be used to improve conservation and the sustainable use of biological diversity. For developing countries, granting access to genetic resources in exchange for a share of monetary and non-monetary benefits could contribute significantly to poverty alleviation and sustainable development.

However, these benefits can only be realised if the conditions for fair and equitable benefit-sharing are agreed upon before access.

In some cases, access to genetic resources may depend on using the traditional knowledge of indigenous and local communities (ILCs). Access and benefit-sharing rules recognize the value of this knowledge by requiring users to obtain permission to use it, and to share any benefits that result from its use with the communities who own it.



Providers can also benefit from the enhancement of research skills. Ideally, these benefits will also be used to improve conservation and the sustainable use of biological diversity.

Who is involved in access and benefit-sharing?

Providers of genetic resources: States have sovereign rights over natural resources under their jurisdiction. They are obligated to put in place conditions that facilitate access to these resources for environmentally sound uses. Providers agree terms, which include PIC and MAT, for granting access and sharing benefits equitably. Laws within the provider country may entitle others, such as ILCs, to also negotiate terms of access and benefit-sharing. The participation of ILCs is necessary in instances where traditional knowledge associated with genetic resources is being accessed.

Users of genetic resources: Users are responsible for sharing the benefits derived from genetic resources with the providers. They seek access to genetic resources for a wide range of purposes, from basic research to the development of new products. They are a diverse group, including botanical gardens, industry researchers such as pharmaceutical, agriculture and cosmetic industries, collectors and research institutes.

National Focal Points: To facilitate access, users need a clear and transparent process that details who to contact and what the requirements and processes are in provider countries in order to gain access. National Focal Points are responsible for providing this information.

Competent National Authorities (CNAs): CNAs are bodies established by governments and are responsible for granting access to users of their genetic resources, and representing providers on a local or national level. National implementation measures establish how CNAs work in a given country.

Key agreements

Prior informed consent (PIC): Permission given from the CNAs of a provider country to a user prior to accessing genetic resources, in line with an appropriate legal and institutional framework.

Mutually agreed terms (MAT): An agreement reached between the providers of genetic resources and users on the conditions of access and use of the resources, and the benefits to be shared between both parties.

CASE STUDY

The International Cooperative Biodiversity Groups (ICBG) Bioprospecting Programme in Panama

The ICBG programme in Panama started in 1998. It focuses on ensuring that benefits arising from the use of Panama's genetic resources are shared with Panama as a provider country. The benefits have included building scientific infrastructure, creating research programs, training scientists, and developing drug-discovery programs for diseases.

One of the key aims of the program is to make sure that local researchers play a central role in any commercially-viable research into the uses of their own biodiversity. ICBG members have also passed these benefits onto others in the community, through dozens of talks annually to students in schools, local citizens in town meetings, the business community, government officials and visitors from outside of Panama. This process has increased the incentive for conservation, and has assisted in developing the Coiba National Park and establishing it as one of UNESCO's World Heritage Sites.



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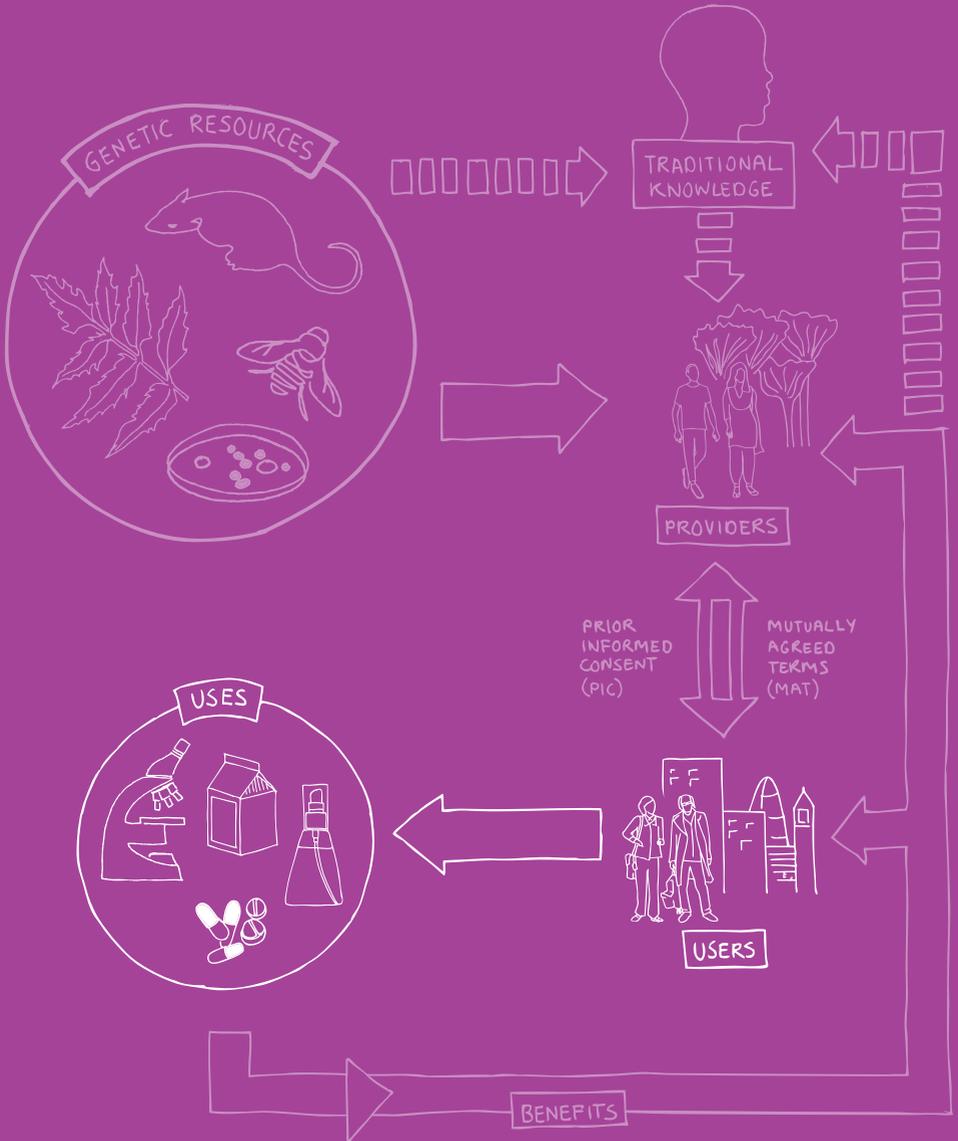
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Convention on Biological Diversity: ABS

THEME

Uses of genetic resources





What does 'using' genetic resources mean?

Using genetic resources, whether from plants, animals or micro-organisms, refers to the process of researching their beneficial properties and using them to increase scientific knowledge and understanding, or to develop commercial products.

Why are genetic resources useful?

The rapid development of modern biotechnology over the past decades has enabled us to use genetic resources in ways that have not only fundamentally altered our understanding of the living world, but has also led to the development of new products and practices that contribute to human well-being, ranging from vital medicines to methods that improve the security of our food supplies. It has also improved conservation methods that help safeguard global biodiversity. Genetic resources can be put to commercial or non-commercial use:

- In commercial use, companies can use genetic resources to develop specialty enzymes, enhanced genes, or small molecules. These can be used in crop protection, drug development, the production of specialized chemicals, or in industrial processing. It is also possible to insert genes into crops to obtain desirable traits that can enhance their productivity or resilience to disease.
- In non-commercial use, genetic resources can be used to increase knowledge or understanding of the natural world, with activities ranging from taxonomic research to ecosystem analysis. This work is usually conducted by academic and public research institutes.

The distinctions between commercial and non-commercial use, and the actors involved, are not always clear cut. Companies can cooperate with public entities on commercial research, and sometimes research with no commercial intentions leads to a discovery that has commercial applications.

← **Biotechnology industries span a range of activities including pharmaceutical, industrial and agricultural technology** →

Image copyright: Johnny Keny/Shutterstock

Different uses by sector

Commercial use

Biotechnology industries

Biotechnology industries span a wide range of activities including pharmaceutical, industrial, and agricultural technology. The use of genetic resources in these industries is extremely varied.

- **Pharmaceutical industry:** Chemical compounds or substances produced by living organisms found in nature continue to play an important role in the discovery of leads for the development of drugs and contribute significantly to the bottom lines of large pharmaceutical companies. For example, the US National Cancer Institute worked with a small pharmaceutical company to develop compounds called Calanolides, derived from a tree in the Malaysian rainforest. Research demonstrated that they have the potential to treat HIV (type 1) and certain types of cancer. Clinical trials are ongoing.
- **Industrial biotechnology:** Enzymes are used by textile, detergent, food, feed and other industries to improve the efficiency and quality of their products and production processes. Industrial biotechnology companies are particularly interested in genetic resources found in areas with high species diversity, as well as in extreme or unique environments, like salt lakes, deserts, caves, and hydrothermal vents.
- **Agricultural biotechnology:** Seed, crop protection and plant biotechnology industries rely heavily on genetic resources. Resources with traits that improve performance and farming efficiency for major crops are a key focus area for large seed companies. There is considerable growth in the value of the market for plant biotechnology-based products.

Ornamental horticulture industries

There are about 100-200 plant species used as genetic resources in commercial horticulture and 500 in domestic horticulture. Originally, this sector used plants from the wild, but now the majority of the resources are taken from sources like nurseries, botanical gardens and private collections. In 1998, the South Africa National Botanical Institute (SANBI) and the Ball Horticultural Company created a partnership which led to the commercialization of several South African horticultural and floricultural products.

Non-commercial use

Taxonomy

Genetic resources are a key source of information for taxonomy, the science of describing and naming species. Taxonomic research provides crucial information for effective environmental conservation.

Conservation

Genetic resources are the building blocks of life on earth. By developing our understanding of them, and conserving them, we can improve conservation of threatened species, and the communities who depend on them. Kew Gardens' Millennium Seed Bank project worked in partnership with farmers' groups, community-led nurseries and government agencies in over 50 countries to collect, conserve and use seeds from a wide range of useful and threatened species. Effective benefit-sharing means that the local communities that rely on these natural resources for food, medicine, fuel and building materials, can continue to do so.



A complex process

The use of genetic resources is rarely a simple process. Usually, it involves a number of actors and processes. In commercial research, for example, there tends to be a series of different research steps between gaining access to the genetic resource and the development of the final commercial product. Even in non-commercial use, research results are often passed on to other researchers, who use them to inform their own research.

This user chain can blur the distinction between providers and users, as the first user may become a provider for another user. Recognizing this has implications for the design of national access and benefit-sharing frameworks, as the second provider may need to go back to the original provider to renegotiate terms of access and benefit-sharing.

Who needs to understand the uses of genetic resources?

Providers: Understanding the uses of genetic resources is essential in enabling providers to understand their value, which in turn provides an incentive to conserve them and use them sustainably, as well as to ensure that any potential benefits that may result from their use are shared equitably.

Users: Users of genetic resources include a range of research institutions and industries. All of these depend on developing their understanding of genetic resources to further their work. End users can include anyone who buys or benefits from the commercialized products, or benefits indirectly from the value that genetic resources can have in improving production, such as increasing agricultural yields and food supplies.

Kew Gardens in London, UK: Non-commercial uses of genetic resources can be used to increase knowledge or understanding of the natural world

Image copyright: Jeff Gynane/Shutterstock



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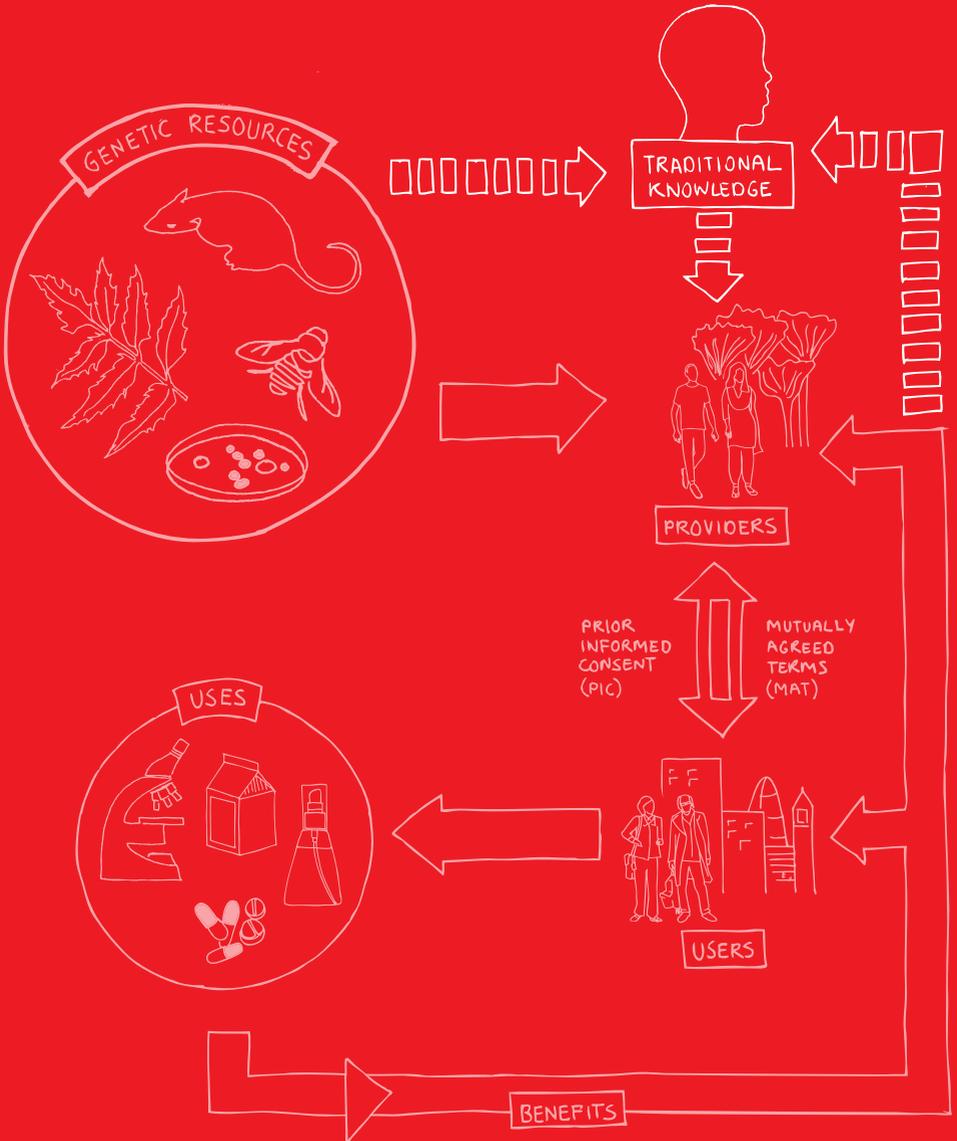
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Convention on Biological Diversity: ABS

THEME

Traditional knowledge





For centuries, communities around the world have learned, used and passed on traditional knowledge about local biodiversity

Image copyright: Marsha Goldenberg/Shutterstock: Medicine woman mixing plant and herbs

What is traditional knowledge?

Despite rapid recent advances in the scientific study of genetics, it is important to recognize that knowledge of the properties and benefits of biological resources is not simply a modern phenomenon. For centuries, communities around the world have learned, used and passed on traditional knowledge about local biodiversity, and how it can be used for a range of important purposes. From food and medicine, clothing and shelter, to developing skills and practices for agriculture and animal husbandry.

In the context of access and benefit-sharing, traditional knowledge refers to the knowledge, innovations and practices of indigenous and local communities (ILCs) related to genetic resources. This traditional knowledge is developed through the experiences of communities over centuries, adapted to local needs, cultures and environments and passed down from generation to generation.

Why is traditional knowledge important?

Indigenous and local communities rely on biological resources for a variety of everyday purposes, and see themselves as custodians and protectors of biological diversity. In this way traditional knowledge has helped preserve, maintain and even increase essential biological diversity over centuries.

Today genetic resources have a wide range of commercial and non-commercial uses. In many cases the same properties that make them useful to ILCs are now used by industry to develop popular products. They are also used by researchers to better understand biodiversity and the intricate web of life on earth.

In both cases, traditional knowledge is a vital source of information for identifying uses of genetic resources that humanity as a whole can benefit from. This knowledge is particularly valuable for bioprospectors, or users of genetic resources, who use it to guide them to plants, animals and microbes that are already known to have useful properties. Without this knowledge many species currently used in research and commercialized products may never have been identified.

As a result, traditional knowledge has significant implications for access and benefit-sharing of genetic resources. It's essential that traditional knowledge is valued appropriately by those who use it. This means making sure that access to traditional knowledge associated with genetic resources is subject to the prior informed consent of the ILCs involved and that they obtain fair and equitable benefits arising from its use.

Who is traditional knowledge relevant for?

Indigenous and local communities (ILCs): ILCs have relied on biological resources in their everyday lives for centuries. It is through this interaction over generations that they have developed knowledge of the different properties of biological resources and their uses.

Users: Traditional knowledge is helpful for users seeking access to genetic resources for use in academic research or commercial product development. Traditional knowledge of species whose properties have been used for centuries provides useful leads for researchers.

Competent National Authorities (CNAs): CNAs within providing countries of genetic resources are tasked with helping to create a balance in negotiations between ILCs and users, if traditional knowledge has been used in research or product development.

Protecting traditional knowledge

The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) has established a Working Group on Traditional Knowledge to direct and facilitate discussions between governments, ILCs and other interested parties about traditional knowledge. It provides indigenous and local community representatives with the opportunity to contribute their views and recommendations on related issues.

In Article 8(j) of the CBD, it states the need for governments to respect, preserve, maintain, and promote the wider application of traditional knowledge with the approval and involvement of the relevant ILCs.

For instance if users want to use traditional knowledge in their research and product development, they are required to seek the prior approval of the relevant ILCs and must negotiate mutually agreed terms that encourage the equitable sharing of any benefits that may arise from the use of this knowledge .

Some national governments are already implementing Article 8(j) of the CBD through national legislation, law reform and their own national biodiversity action plans, strategies and programmes. Amongst other objectives, this ensures that the prior informed approval of the relevant ILCs is sought before traditional knowledge is accessed and used.

The Traditional Knowledge Information Portal

The Article 8(j) homepage and the online Traditional Knowledge Information Portal has been created by the CBD to promote awareness and enhance access by ILCs and other interested parties seeking more information on traditional knowledge, innovations, practices and measures, to ensure the conservation and sustainable use of biological diversity. They can be viewed at: www.cbd.int/traditional and www.cbd.int/tk

CASE STUDY

Traditional knowledge of the Hoodia plant

The Hoodia plant is a succulent species indigenous to Southern Africa. It has been used for centuries by the indigenous San peoples to stave off hunger and thirst, when food is scarce and during long hunting trips. Traditional knowledge related to Hoodia has been passed down through generations of San peoples.

In 1996, the South African-based Council for Scientific and Industrial Research (CSIR) patented the active compounds of Hoodia, which were found to suppress appetite. The commercial potential of Hoodia as an appetite suppressant in the anti-obesity market led to licensing agreements between CSIR and some large pharmaceuticals companies to develop and commercialize a Hoodia-based product. However, these actions were initially taken without the consent of the San peoples.

As a result of media coverage of the potentially lucrative agreements made to develop the plant's properties and an outcry by a South African NGO, measures were taken to initiate negotiations between CSIR and the San peoples. This led to a benefit-sharing agreement, which included monetary and non-monetary benefits, and the setup of the San Hoodia Benefit-Sharing Trust. The agreement called for milestone payments during the product development period and royalty income in the case of successful commercialization of a product. Funds will be used for the development, education and training of the San community and to support projects and institutions working to improve research and protection of the San's traditional knowledge and heritage. Although it is expected that larger amounts of money will flow from the agreement at a later stage, some payments have since been awarded to the trust fund and are being used to strengthen the institutional base of the San across borders in Southern Africa.



Traditional knowledge is a vital source of information for identifying uses of genetic resources that humanity as a whole can benefit from

Image copyright: Lucian Coman/Shutterstock: Indigenous San man





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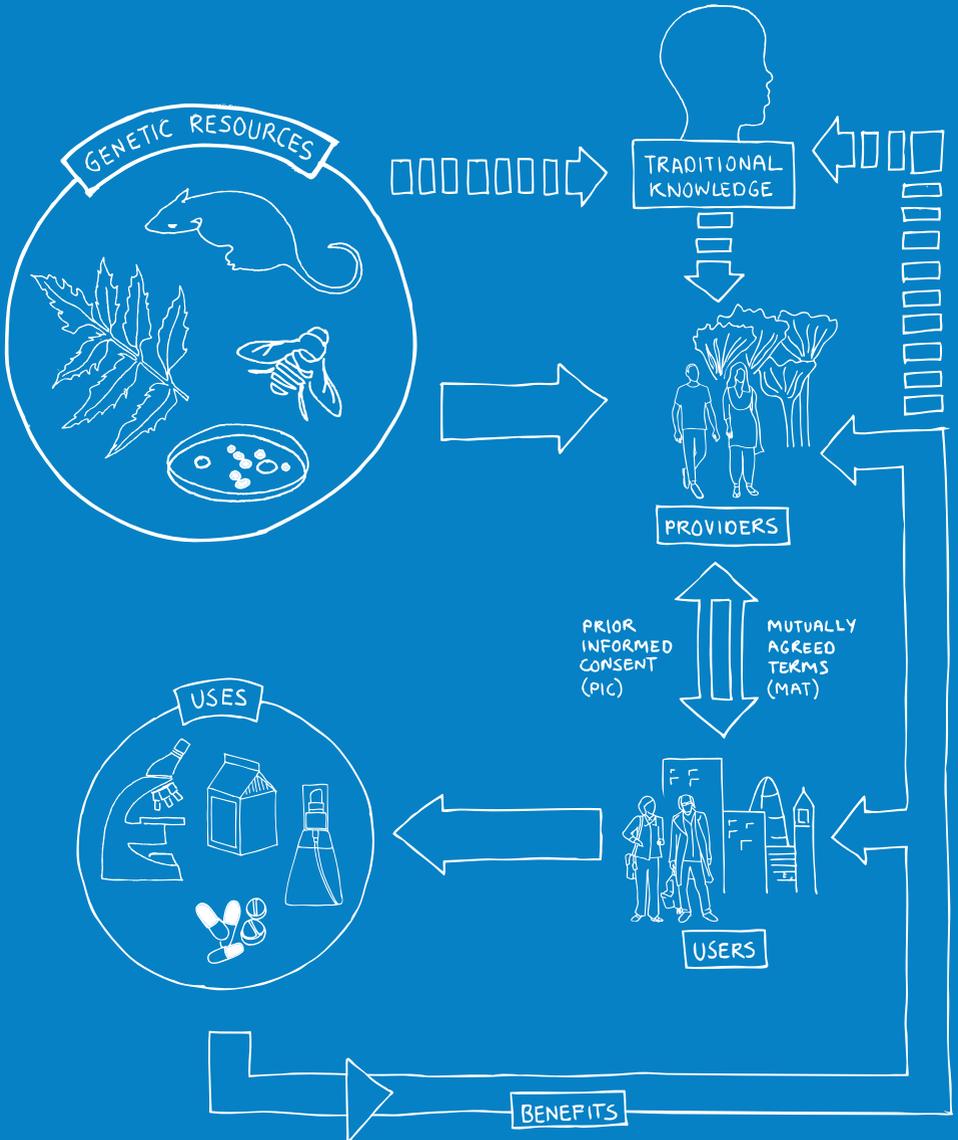
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Convention on Biological Diversity: ABS

THEME

The Bonn Guidelines



← The Bonn Guidelines were adopted by the Conference of the Parties to the CBD in 2002

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What are the Bonn Guidelines?

The Bonn Guidelines are intended to assist governments in the adoption of measures to govern access and benefit-sharing in their countries. They were adopted by the Conference of the Parties to the Convention on Biological Diversity (CBD) in 2002.

Their purpose is to help countries, as providers and users of genetic resources, to implement access and benefit-sharing (ABS) procedures effectively. Despite being voluntary, the Guidelines are recognized as an important first step for the implementation of the ABS provisions of the CBD.

Why are the Bonn Guidelines important?

The Guidelines assist in the development and implementation of national measures to ensure a transparent framework that facilitates access to genetic resources, and ensures that the benefits arising from their use are shared fairly and equitably.

The Guidelines have two main aims:

1. To guide countries as providers in setting up their own national legislative, administrative or policy measures for access and benefit-sharing, such as recommending the elements that should make up a prior informed consent (PIC) procedure
2. To assist providers and users in the negotiation of mutually agreed terms (MAT), by providing examples of what elements should be included in these agreements

Who are the Bonn Guidelines relevant for?

The Bonn Guidelines are for users and providers of genetic resources on two levels:

- 1. As governments:** Developing their national access and benefit-sharing measures
- 2. As institutions and individuals:** Looking to negotiate access and benefit-sharing agreements such as PIC and MAT

Contents and use of the Bonn Guidelines

Contents

The Guidelines outline key steps in the ABS process, which includes identifying the basic elements required for PIC and MAT. They also outline the main roles and responsibilities of users and providers, and include a list of monetary and non-monetary benefits that can arise from the use of genetic resources.

Basic principles and elements of prior informed consent (PIC)

The Guidelines stress the need for any potential user of genetic resources to seek the PIC of the resource provider.

Basic principles of an effective PIC system should include:

- Legal certainty and clarity
- Access to genetic resources should be facilitated at a minimum cost
- Restrictions on access to genetic resources should be transparent, based on legal grounds, and not run counter to the objectives of the Convention

Basic elements of an effective PIC system may include:

- The clear establishment of Competent National Authorities (CNAs) who can grant PIC
- Procedures for obtaining PIC from the CNAs
- Clearly specified timing and deadlines
- Specifications of use
- Mechanism for consultation of relevant stakeholders

Basic principles and elements of mutually agreed terms (MAT)

The Guidelines outline principles and basic requirements to be considered in the development of MAT, including:

- Legal certainty and clarity
- Facilitating the transaction through clear information and formal procedures
- Reasonable periods of time for negotiations
- Terms set out in a written agreement

The Guidelines provide an indicative list of MAT, which include:

- Type and quantity of genetic resources, and the geographical/ecological area of activity
- Any limitations on the possible use of material
- Whether the genetic resources can be transferred to third parties and under what conditions
- Recognition of the sovereign rights of the country of origin
- Capacity-building in various areas to be identified in the agreement

Find out more

The Bonn Guidelines can be downloaded from the Convention's website at:
<http://www.cbd.int/abs/bonn.shtml>

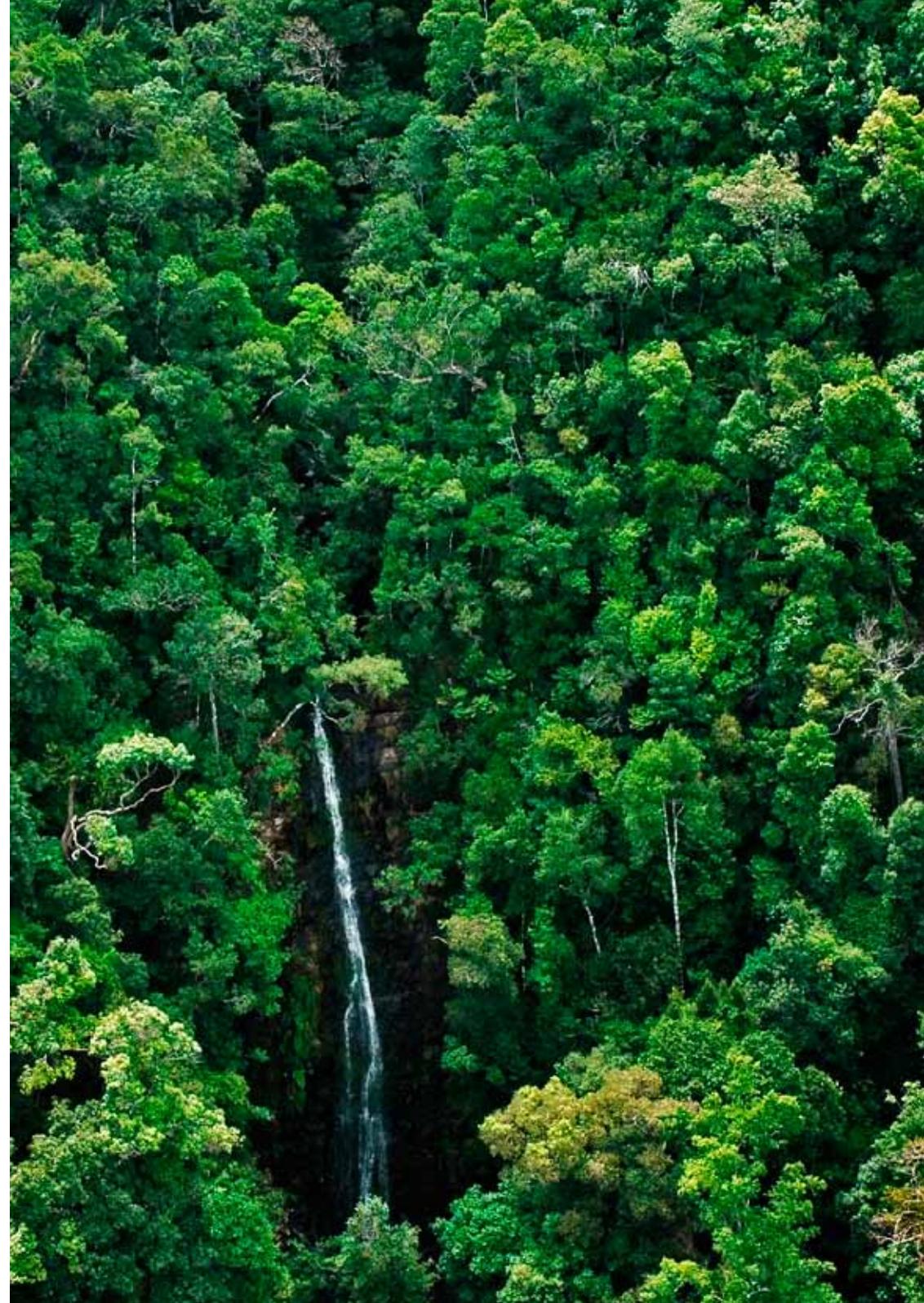
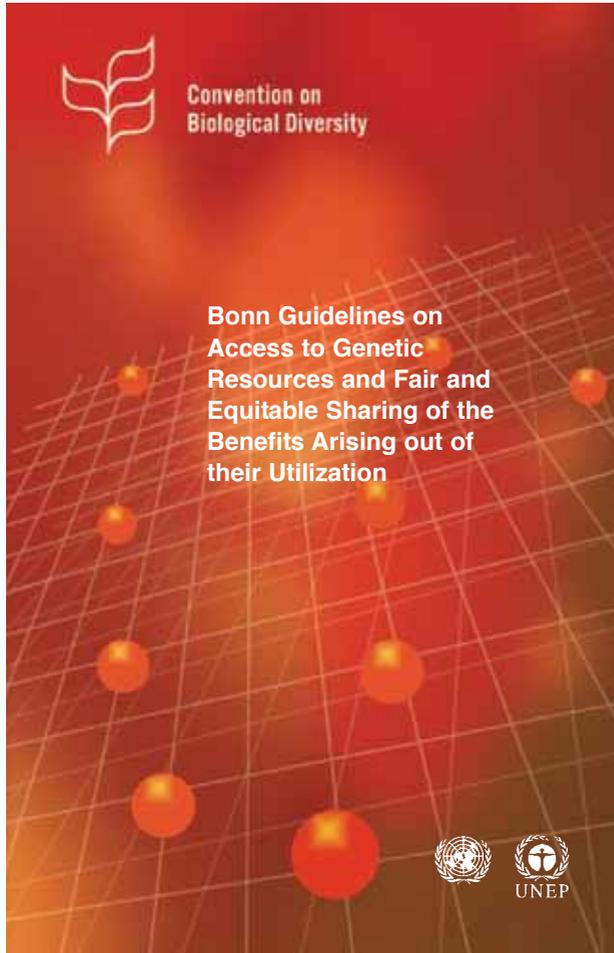


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Factsheets in the ABS series

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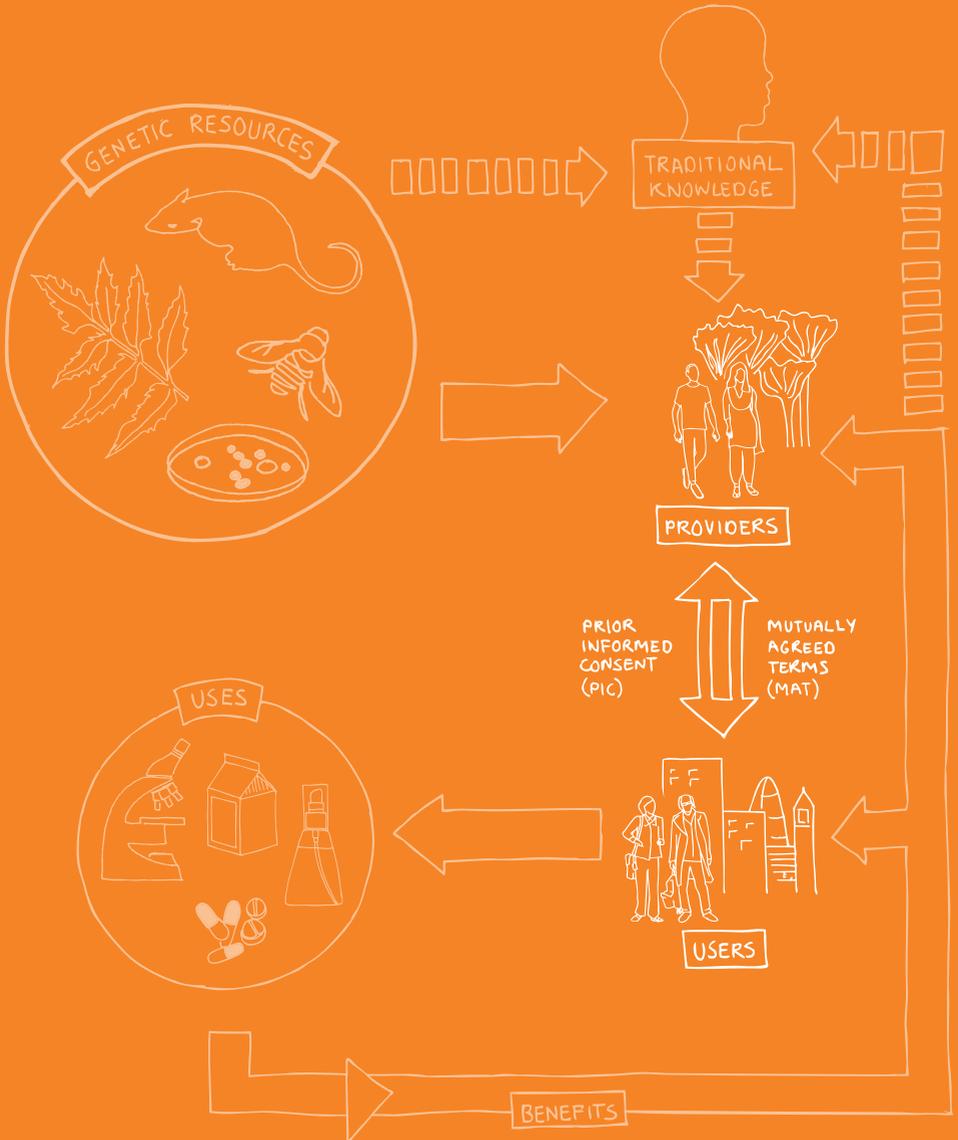


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Convention on Biological Diversity: ABS

THEME

National implementation



What is national implementation about?

National implementation refers to the measures governments take to facilitate access to genetic resources, and to ensure the fair and equitable sharing of benefits resulting from their use.

Although the main principles relating to access and benefit-sharing are set out in the Convention on Biological Diversity (CBD), governments can decide how best to implement them based on their individual circumstances. Governments should adopt clear legislative, administrative or policy measures to govern access to resources under their jurisdiction.

Measures for implementing access and benefit-sharing may include national or regional strategies, policies, legislations, regulations and codes of conduct. These measures specify relevant information and procedures, such as which competent national authority can grant access to which genetic resources, and how to obtain prior informed consent (PIC) and agree on mutually agreed terms (MAT) between users and providers.

Voluntary guidelines and codes of conduct have also been developed for users of genetic resources in order to raise awareness of, and encourage compliance with, the CBD access and benefit-sharing obligations.

Why is national implementation important?

The national implementation of measures on access and benefit-sharing is essential for the equitable sharing of the benefits resulting from their use. In order to achieve this, it is important that states consider measures for both providers and users to ensure:

- That a transparent framework exists to facilitate access to their genetic resources, and to make sure that benefits are shared equitably
- That users under their jurisdiction negotiate mutually agreed terms with the provider country prior to accessing genetic resources

These measures create legal certainty and a fair relationship between providers and users. Providers are confident that users will respect their procedures for access and that they will receive a fair share of any potential benefits. Users feel informed about which authorities they must contact and the measures they must follow to ensure access.

Who is national implementation important for?

Providers: Governments must implement national measures to ensure that clear and transparent procedures are in place to facilitate access to their genetic resources, and to ensure that users will share benefits resulting from the use of these resources with providers. This may include indigenous and local communities (ILCs) if they have provided access to traditional knowledge associated with genetic resources.

Users: National measures should contain clear procedures to inform users about the relevant national bodies they must contact, and the correct procedures they must follow, to be granted access to genetic resources in other countries.

National Focal Points (NFPs): NFPs contribute to national implementation by providing information as to who users must contact, and the requirements and processes in place to obtain access to genetic resources in a particular country.

Competent National Authorities (CNAs): CNAs are bodies established by governments and are responsible for granting access to users of their genetic resources, and representing providers on a local or national level. National implementation measures establish how CNAs work in a given country.



The issues

A variety of measures

Successful access and benefit-sharing depends on a clear understanding of the measures in place to govern the process. However, the measures to implement the principles in the CBD can take on a variety of forms, including national or regional strategies, policies, legislations, regulations or codes of conduct.

To date, countries have largely focused on developing measures as providers of genetic resources, in order to regulate access to their genetic resources, and to ensure they receive benefits that may arise from their use. It is crucial that all measures result in a clear framework by which users and providers can negotiate fair agreements around access and benefit-sharing.

Different levels of implementation

Many governments around the world have made efforts to implement the ABS provisions of the CBD at the national level. However, the way in which they do so varies significantly based on individual national circumstances, administrative structures and priorities. As a result, not all countries implement access and benefit-sharing measures to the same extent, or in the same way.

For providers of genetic resources, it is important to implement measures that govern access to genetic resources. A number of countries such as Australia, Brazil, India and South Africa have adopted such measures. Australia, for example, is home to around 10% of the world's species and nearly 80% of its native species don't occur naturally anywhere else. So as a provider it must protect a wealth of unique genetic resources. It does this by following the CBD's framework, including implementing procedures for agreeing PIC and MAT.



Measures for implementing access and benefit-sharing may include national or regional strategies, policies, legislation, regulation, and codes of conduct

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Australia has also developed its own national strategy and legislation to govern ABS, but many other countries do not have such detailed measures.

Most industrialized countries are predominantly users of genetic resources, and some have adopted measures to ensure compliance with the ABS requirements of provider countries. Belgium, Denmark, Germany, Norway, and Sweden, for example, have amended their patent laws to ensure that patent applications for products based on genetic resources disclose the origin of the genetic resources. Other groups of users, such as botanists and researchers have developed voluntary instruments, guidelines and codes of conduct to increase awareness and improve knowledge on ABS.

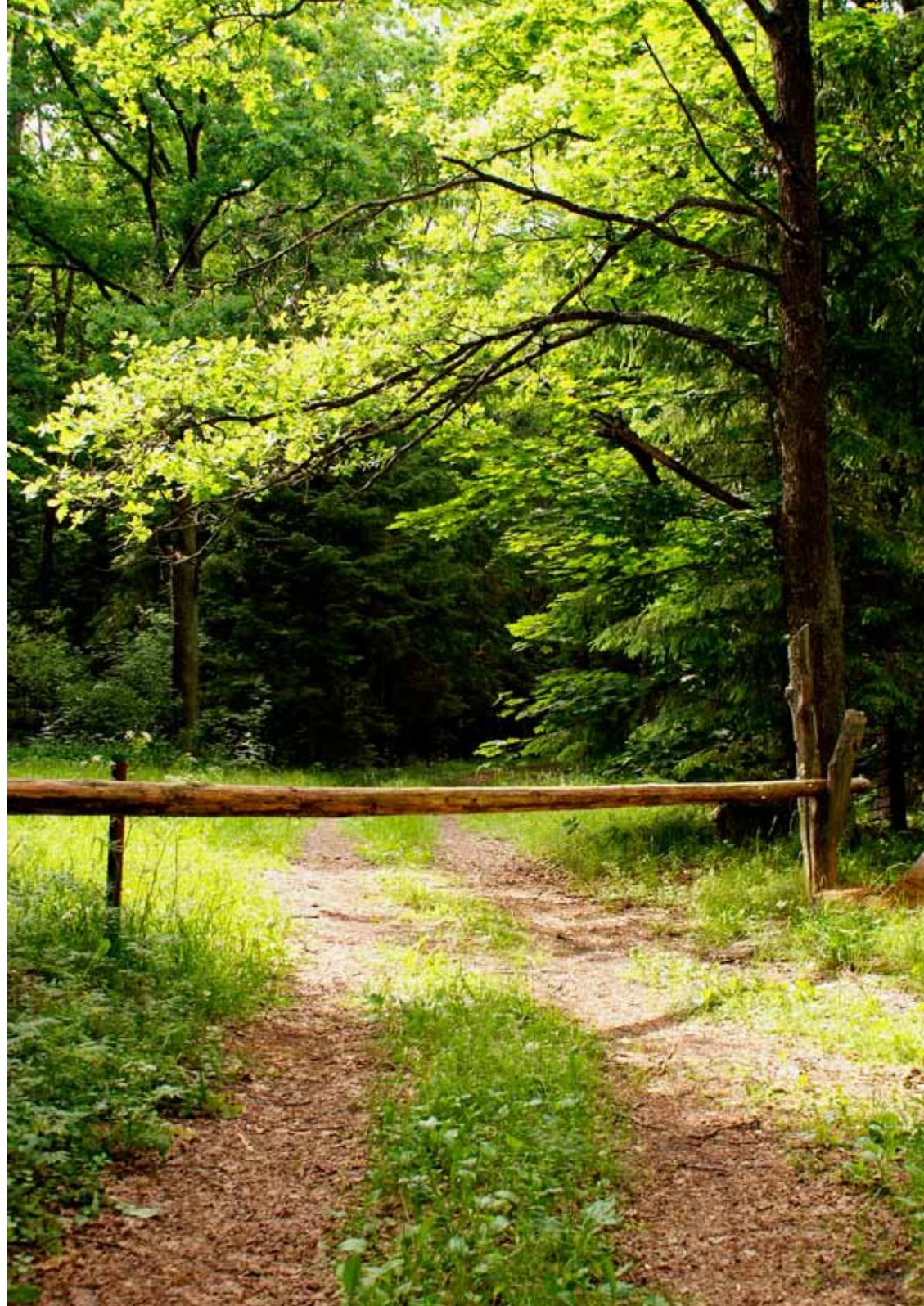
Understanding and communicating the different measures

The CBD Secretariat helps providers and users to understand the various ABS measures being implemented around the world by providing detailed information on national and regional access and benefit-sharing strategies on the Convention's ABS measures database (www.cbd.int/abs/measures).



National implementation measures were established to ensure that a transparent framework exists to facilitate access to genetic resources, and to make sure that benefits are shared equitably

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The Nagoya Protocol on Access and Benefit-sharing

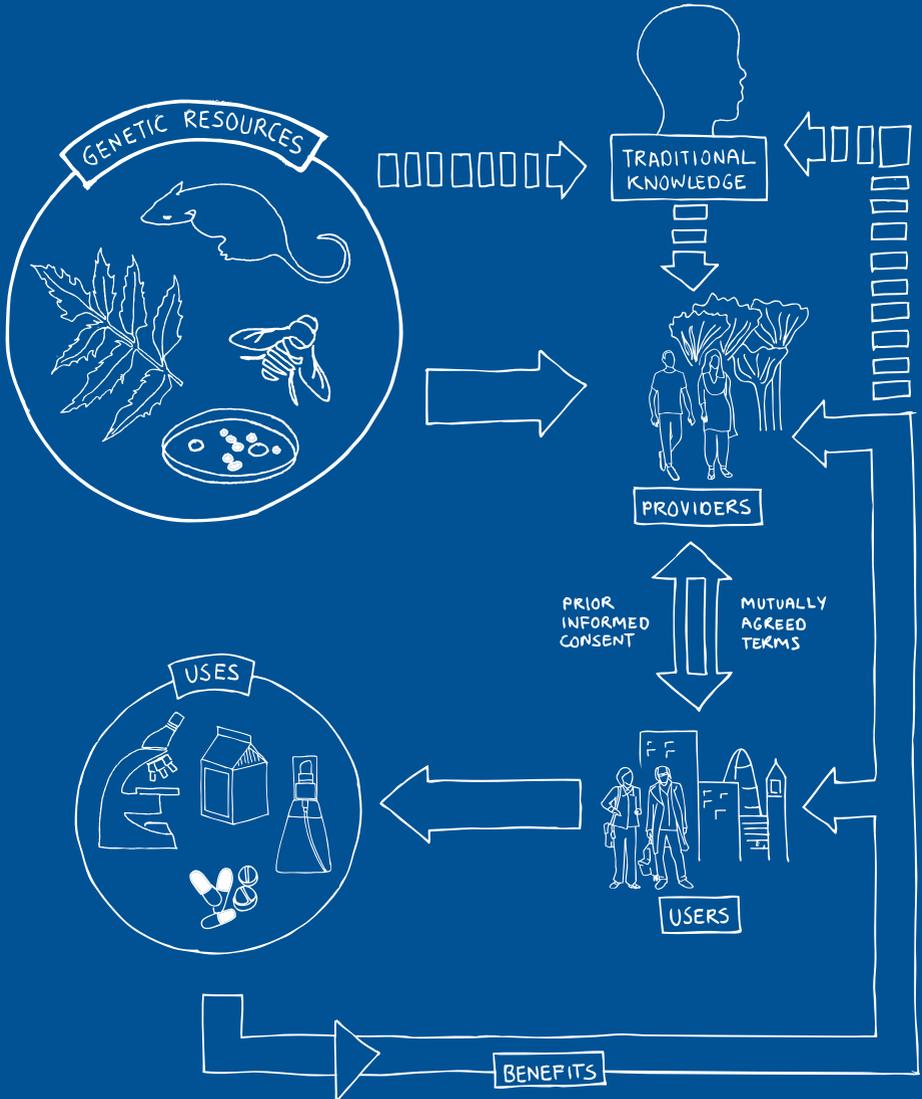
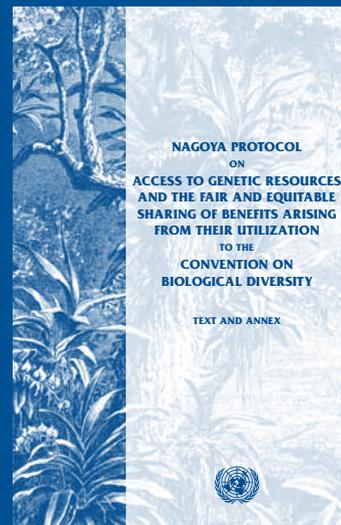




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Background

At the 2002 World Summit on Sustainable Development, governments called for action to negotiate an international regime to promote the fair and equitable sharing of benefits arising from the use of genetic resources. In 2004, the Ad Hoc Open-ended Working Group on Access and Benefit-sharing, established under the Convention on Biological Diversity (CBD), was mandated to negotiate an international regime on access and benefit-sharing. After six years of negotiations, the *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization* was adopted in Nagoya, Japan on 29 October 2010.



The full text of the Nagoya Protocol can be found at: www.cbd.int/abs/text/

What is the Nagoya Protocol?

The Nagoya Protocol on Access and Benefit-sharing is a new international treaty that builds on and supports the implementation of the CBD, in particular one of its three objectives, the fair and equitable sharing of benefits arising from the utilization of genetic resources. The Nagoya Protocol is a landmark agreement in the international governance of biodiversity and is relevant for a variety of commercial and non-commercial sectors involved in the use and exchange of genetic resources.

The Nagoya Protocol is based on the fundamental principles of access and benefit-sharing enshrined in the CBD. These principles are based on potential users of genetic resources obtaining the **prior informed consent (PIC)** of the country in which the genetic resource is located before accessing the resource, and negotiating and agreeing on the terms and conditions of access and use of this resource through the establishment of **mutually agreed terms (MAT)**. This agreement includes the sharing of benefits arising from the use of the resource with the provider as a prerequisite for access to the genetic resource and its use. Conversely, countries, when acting as providers of genetic resources, should provide fair and non-arbitrary rules and procedures for access to their genetic resources.

Why is the Nagoya Protocol important?

The Nagoya Protocol will create greater legal certainty and transparency for both providers and users of genetic resources. It helps to ensure benefit-sharing, in particular when genetic resources leave the country providing the genetic resources, and it establishes more predictable conditions for access to genetic resources.

By enhancing legal certainty and promoting benefit-sharing, the Nagoya Protocol encourages the advancement of research on genetic resources which could lead to new discoveries for the benefit of all. The Nagoya Protocol also creates incentives to conserve and sustainably use genetic resources, and thereby enhances the contribution of biodiversity to development and human well-being.

What does the Nagoya Protocol cover?

The Nagoya Protocol covers genetic resources and traditional knowledge (TK) associated with genetic resources, as well as the benefits arising from their utilization.

What are the core elements of the Nagoya Protocol?

The Nagoya Protocol sets out core obligations for its contracting Parties to take measures in relation to access to genetic resources, benefit-sharing and compliance.

Access obligations

Domestic-level access measures should:

- Create legal certainty, clarity and transparency
- Provide fair and non-arbitrary rules and procedures
- Establish clear rules and procedures for prior informed consent and mutually agreed terms
- Provide for issuance of a permit or its equivalent when access is granted
- Create conditions to promote and encourage research contributing to biodiversity conservation and sustainable use
- Pay due regard to cases of present or imminent emergencies that threaten human, animal or plant health
- Consider the importance of genetic resources for food and agriculture and their special role for food security

Benefit-sharing obligations

Domestic-level benefit-sharing measures should provide for the fair and equitable sharing of benefits arising from the utilization of genetic resources, as well as subsequent applications and commercialization, with the contracting party providing the genetic resources. Utilization includes research and development on the genetic and/or biochemical composition of genetic resources. Sharing

of benefits is subject to mutually agreed terms. Benefits may be monetary (such as royalties) or non-monetary (such as sharing research results or technology transfer).

The Nagoya Protocol also proposes the creation of a global multilateral benefit-sharing mechanism in order to address benefit-sharing with respect to genetic resources occurring in transboundary areas or situations where prior informed consent cannot be obtained. The nature of this mechanism is to be defined. Benefits from the mechanism are to be used to support the conservation and sustainable use of biodiversity globally.

Compliance obligations

Specific obligations to support compliance with the domestic legislation or regulatory requirements of the contracting party providing genetic resources, and contractual obligations reflected in mutually agreed terms, are a significant innovation of the Nagoya Protocol. Parties to the Nagoya Protocol should:

- Take measures to provide that genetic resources utilized within their jurisdiction have been accessed in accordance with prior informed consent, and that mutually agreed terms have been established
- Cooperate in cases of alleged violation of another Party's requirements
- Encourage contractual provisions on dispute resolution in mutually agreed terms
- Ensure an opportunity is available to seek recourse under their legal systems when disputes arise from mutually agreed terms
- Take measures regarding access to justice
- Take measures to monitor the utilization of genetic resources including by designating effective checkpoints at any stage of the value-chain: research, development, innovation, pre-commercialization or commercialization

The Nagoya Protocol also provides for the development, update and use of model contractual clauses for mutually agreed terms, as well as codes of conduct, guidelines and best practices and/or standards for different sectors.

For an overview of such instruments already in use, please go to www.cbd.int/abs/instruments.

How does the Nagoya Protocol address traditional knowledge associated with genetic resources and genetic resources held by indigenous and local communities?

The Nagoya Protocol addresses traditional knowledge associated with genetic resources with provisions on access, benefit-sharing and compliance. It also addresses genetic resources where indigenous and local communities have the established right to grant access to them. Parties to the Nagoya Protocol are to take measures to ensure these communities' prior informed consent, and fair and equitable benefit-sharing, keeping in mind customary laws and procedures as well as customary use and exchange of genetic resources.

By setting-out clear provisions on access to traditional knowledge associated with genetic resources, the Nagoya Protocol will assist in strengthening the ability of indigenous and local communities to benefit from the use of their knowledge, innovations and practices. The Nagoya Protocol will also provide incentives for the promotion and protection of traditional knowledge by encouraging the development of community protocols, minimum requirements for mutually agreed terms and model contractual clauses related to access and benefit-sharing of traditional knowledge associated with genetic resources.

Supporting mechanisms to assist with implementation

The Nagoya Protocol's success relies on its effective implementation at the domestic level. Supporting mechanisms provided by the Nagoya Protocol will assist its contracting Parties with implementation, these include:

- The establishment of national focal points and competent national authorities to serve as contact points for obtaining information, granting access and cooperation between Parties.
- An Access and Benefit-sharing Clearing-House, which is a web based platform to share information to support the implementation of the Nagoya Protocol. Each Party to the Nagoya Protocol shall provide, for example, information on domestic ABS requirements, on national focal points and competent national authorities, as well as make available permits or their equivalent issued at the time of access.

- Capacity-building to support key aspects of implementation. Based on a country's self assessment of national needs and priorities this can include capacity to:
 - Develop domestic ABS legislation to implement the Nagoya Protocol
 - Negotiate mutually agreed terms
 - Develop in-country research capacity
- Awareness-raising through promotion of the Nagoya Protocol and an exchange of experiences and information, with and among key stakeholders, including indigenous and local communities, the research community, and others.
- Technology transfer, primarily through collaboration and cooperation in technical and scientific research and development programmes, including biotechnological research.
- Targeted financial support for capacity-building and development initiatives through the Nagoya Protocol's financial mechanism, the Global Environment Facility (GEF).

When will the Nagoya Protocol enter into force?

The Nagoya Protocol is open for signature at the United Nations Headquarters in New York from 2 February 2011 until 1 February 2012. It will enter into force 90 days after the date of deposit of the 50th instrument of ratification by a Party to the CBD.



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