

# Status and Trends in Access to Genetic Resources and Traditional Knowledge in Sri Lanka

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## 1.0 General

Sri Lanka respectively signed and ratified the Convention on Biological Diversity (CBD) in 1992 and 1994. The CBD has facilitated a national commitment to ensure the conservation and sustainable use of Sri Lanka's biodiversity and an international commitment to work collectively with other countries to work towards the same objectives.

Sri Lanka formed the National Co-ordinating Group on the Conservation of Biological Resources during the CBD's negotiations. The National Co-ordinating Group discussed issues relating to the draft convention. The objectives of the Co-ordinating Group were focussed on biological diversity conservation when the CBD was signed. The implications of ratifying the Convention were discussed in depth. The National Co-ordinating Group recommended the CBD's ratification and the establishment of a National Experts Committee on Biological Diversity. These recommendations were placed before the National Workshop on the Convention on Biological Diversity. The Cabinet of Ministers gave final approval to ratify the Convention and to establish a National Experts Committee on Biological Diversity.

The National Conservation Strategy, the National Environmental Action Plan, the Forestry Sector Master Plan, the National Coastal Zone Management Plan and Coastal 2000 are some of the sectoral and cross-sectoral policy instruments that have addressed conservation and sustainable use of biodiversity in Sri Lanka. These are being implemented. A Biodiversity Conservation Action Plan (BCAP), presenting a framework for action in response to CBD article 6, has been completed.

## 2.0 Genetic Resources and Benefit Sharing

Sri Lanka is an agricultural country. Therefore, to fulfil the basic requirements of the people, access to genetic resources is a general practice in Sri Lanka. Sri Lanka has not reached self-sufficiency in major food items such as rice, wheat and

cane sugar, therefore food items have been imported that originate from the genetic resources found in other countries. Access to indigenous genetic resources, undertaken mainly by government institutes, such as the Department of Agriculture and other research institutes, is needed to improve agricultural and plantation crop varieties and animal breeds.

The Import and Export Control Act is the apex legislation regulating the import and export of goods to and from Sri Lanka. Under this law, all imports and exports require a mandatory license. The Customs Ordinance provides the basis to enforce this act and several other import and export restrictions.

The Flora and Fauna Protection Ordinance (FFPO) regulates the import and export of fauna and flora. Under FFPO, exports of fish, mammals, birds, reptiles, amphibians, coral or invertebrates, or parts thereof, can only be permitted to promote scientific knowledge. However, FFPO does not apply to domestic animals and aquarium fishes. The FFPO provisions related to genetic resources collecting, exporting and importing are shown in Box 11. The Animal Diseases Act regulates imports of “animals” (meaning horses, mules, asses, sheep, swine, goats and other animals published in the Gazette).

#### **BOX 11: Provisions of the Sri Lanka Flora and Fauna Protection Ordinance**

The Provisions of the Fauna and Flora Protection Ordinance are summarised below.

**Section 30.** Any person shall not (a) kill injure or have in his possession or control any mammal or reptile alive or dead; (b) have eggs or nests etc., of any mammal or reptile; and (c) have in his possession, sell or purchase any part of the body of a mammal or reptile which is not included in schedule I of the Ordinance.

**Section 31.** Any person shall not (a) kill or injure birds; (b) destroy bird eggs or nests etc.; (c) have in his possession or control birds whether dead or alive; (c) have in his possession any part of a bird other than the birds included in schedule III and IV of the Ordinance

**Section 31A.** Similar prohibitions in section 30 (above) apply to amphibians and fish included in schedule III and IV of the Ordinance.

**Section 31B.** Similar prohibitions in section 30 (above) apply to any invertebrate included in schedule IV (A) of the Ordinance.

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## **BOX 11: Provisions of the Sri Lanka Flora and Fauna Protection Ordinance**

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**Section 37.** No person shall import into Sri Lanka without a valid permit any animal whether alive or dead or any part of such animal without a valid permit. (This section does not apply to any fish included in schedule IV of the Ordinance).

**Section 40.** No person shall export from Sri Lanka without a permit any animal or coral whether alive or dead or any part of any such animal or coral. (This section does not apply to species that are not indigenous to Sri Lanka).

Sections 30, 31, 37 and 40 do not apply to any domestic animal.

**Section 42.** No person shall (a) collect, destroy or uproot any plant included in schedule V and which is public property or the property of any other person; (b) destroy any plant included in schedule V even if it is his own property; (c) offer to sell any plant included in schedule V; (d) remove, uproot or destroy any tree on which any orchid or any other epiphytic plant is growing.

**Section 45.** Regulations can be made concerning the export of any plant.

SCHEDULE I	-	List of unprotected mammals and reptiles.
SCHEDULE II	-	List of unprotected birds.
SCHEDULE III	-	List of protected amphibians
SCHEDULE IV	-	List of protected fish.
SCHEDULE IV(A)	-	List of protected invertebrates.
SCHEDULE V	-	List of protected plants.
SCHEDULE VI	-	List of protected trees.

The Forest Ordinance regulates seed and forest product imports and exports, while the Plant Protection Ordinance regulates plant, invertebrate and insect imports. Wide powers exist under this law to make regulations to import plants under a species license and to make accompanying conditions.

Sri Lanka has signed and ratified the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). It potentially can be used to regulate the export and import of genetic material from threatened and endangered species listed in its three appendices.

## **2.1 Gaps in the legal framework to implement the Convention**

CBD Articles 15, 16, and 19 respectively deal with access to genetic resources, access to and transfer of technology and the distribution of benefits from biotechnology. Article 15 refers broadly to three key issues:

- the sovereignty of Contracting Parties over their genetic resources;
- access to genetic resources subject to mutually agreed terms; and
- access to genetic resources subject to prior informed consent.

In Sri Lanka, the sovereign rights of the State over its biological resources are not recognised explicitly by law.

Existing laws do not recognise the concept of genetic material. No legislation related to genetic resources in Sri Lanka has provisions conditioning access subject to mutually agreed terms and prior informed consent.

The BCAP preparation process identified the need to review biodiversity-related legislation. Subsequent terms of reference required a review of laws related to protecting, conserving and using biological resources and recommendations on necessary changes.

In the area of research collaboration, most of the state organisations that deal with the conservation and use of biodiversity conduct research on various aspects of biodiversity. However current research levels are inadequate to support an effective programme to conserve and sustainably use biodiversity.

## **2.2 Constraints on implementing the CBD access and benefit sharing provisions in Sri Lanka**

The lack of adequate trained manpower and poor co-ordination between the concerned agencies will be major constraints on implementing the CBD access and benefit sharing provisions.

## **3.0 Traditional Knowledge and Benefit Sharing**

Sri Lanka's rural people are knowledgeable on biodiversity and sustainable practice in agriculture and health. Communities have thrived with collective farming practices, family-based craftsmanship and healing methods. This information has been passed from generation to generation.

Similarly, germplasm from specialised crop varieties has been passed through families. Knowledge on the use of medicinal plants in traditional medicine has also passed from generation to generation. High temple priests, village elders and elderly practitioners of traditional medicines are the custodians of this valuable data. Elderly fisherman living along the coastal belt hold traditional knowledge related to sustainable fishery practices.

### **3.1 Issues, trends and patterns related to access to traditional knowledge**

Information on Sri Lankan indigenous/traditional knowledge that is related to biodiversity is not recorded properly. It has been passed orally from generation to generation. This is a major issue related to access to traditional knowledge. Existing legal mechanisms related to IPRs can not adequately protect rights over indigenous knowledge.

There is considerable demand for traditional knowledge related to conservation and sustainable use of medicinal plants, including ethno-botanical and ethno-pharmacological information, as compared to traditional knowledge in other fields. The international market has created this demand.

In the past, indigenous knowledge related to biodiversity was not considered a resource or technology. It was not legally protected. Therefore no clear policy or legal mechanism emerged to protect traditional knowledge related to biodiversity.

The Code of Intellectual Property, Act No. 59 of Sri Lanka, is the existing law on intellectual property. It protects rights relating to: (1) inventions (patents); (2) industrial designs; (3) literary, artistic and scientific works (copyrights); and (4) marks, trade names and unfair competition. There are no provisions to protect traditional knowledge under the Code.

The BCAP addresses collecting, using and protecting traditional knowledge in relation to biodiversity. The Plan was prepared in broad consultation with government, non-governmental and private sector stakeholders in Sri Lanka. A number of recommendations were made.

For example, the BCAP recommended launching a social programme to collect and archive data on indigenous knowledge pertaining to biodiversity. The programme would institutionalise the process, while controlling and regulating access to the information gathered.

The BCAP also recommended that the legal framework recognise and protect the country's indigenous knowledge. Petty patents, or another similar system could be used, irrespective of a time limit.

Finally, the BCAP recommended gathering information on indigenous knowledge based on plants used in medicine. Vertical integration in biodiversity prospecting should move beyond basic levels of direct use in traditional (Ayurvedic) medicine to the preparation of marketable finished products.

In the meantime, strategies must be urgently formulated to regulate access to indigenous knowledge, soft technologies, such as ethno-botanical and ethno-pharmacological information, and other information collected in the course of a donor-funded project to conserve and sustainably use medicinal plants. As an interim measure, the relevant authority for indigenous medicine has taken steps to create a mechanism to protect the rights involved. Even without a legal mechanism, the need to maintain confidentiality of information with appropriate strategies has been recognised.

The National Experts Committee on Biological Diversity guided an in-depth study of IPR related to Sri Lanka's biodiversity. The study's recommended actions will be considered when a legal mechanism on indigenous knowledge is formulated.

Presently, no proper legal mechanism exists to direct benefits to local communities when others use their traditional knowledge. Not patentable under Sri Lanka's intellectual property regime are:

- (1) Plant or animal varieties or essentially biological processes to protect plants or animals, other than micro-biological process and the products of such processes; and
- (2) Methods to treat the human or animal body by surgery or therapy, and diagnostic methods practised on the human or animal body.

Traditional knowledge can be related to these excluded categories of innovation.

The BCAP has already addressed benefit sharing issues regarding access to genetic resources and traditional knowledge. Under the Action Plan's legal section, one objective provides the basis for resources owners and users to share fairly and equitably the benefits that arise from using genetic resources and indigenous knowledge.

#### **4.0 Action taken to create conditions to facilitate access to genetic resources for environmentally sound use**

Box 12 outlines the steps Sri Lanka has taken to create conditions to facilitate access to genetic resources while ensuring benefit sharing. It will be difficult to determine whether genetic resources will be used for environmentally sound uses. This may have to be assessed with information provided under the prior informed consent procedure when the access agreement is negotiated.

##### **BOX 12: Actions Taken by Sri Lanka to Facilitate Access to Genetic Resources and Ensure Benefit Sharing**

Identification of a Strategy for Establishing a National Access and Benefit Sharing Framework through the Biodiversity Action Plan

The Sri Lanka Biodiversity Action Plan developed in 1988 recommended a number of actions on access to genetic resources and benefit sharing. These are summarised below:

- a) Recognise legally the State's sovereign right over its biological resources, including genetic resources.
- b) Establish a legal framework to control and regulate access to genetic resources and ensure collaborative research when indigenous biodiversity is used for bioprospecting.
- c) Establish a legal framework and regulatory mechanism to control research on living modified organisms (LMOs) and control their release.
- d) Review and amend, if necessary, the legislation on the import and export of living organisms to provide adequate protection to indigenous biodiversity.
- e) Clarify legal issues on the import of all organisms, including micro-organisms and LMOs.

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## **BOX 12: Actions Taken by Sri Lanka to Facilitate Access to Genetic Resources and Ensure Benefit Sharing**

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- f) Provide a legal framework to implement CITES to protect endangered species.
- g) Draft regulations on the import and export of timber and seeds of forest tree species and other forest products to implement section 24 of the Forest Ordinance, as amended by the Forest (amendment) Act, No. 3 of 1995.
- h) Draft legally binding regulations to require an agreement to be negotiated with a local institution when non-nationals carry out research on any component of indigenous biodiversity. The agreement should (a) ensure close collaboration with Sri Lankan scientists and institutions and (b) ensure availability of research results.

### **Formulating National Criteria for Research Collaboration**

The draft National Criteria for Research Collaboration are now being examined by the CBD focal point in Sri Lanka. These include a self-regulatory code of ethics for researchers in the country and rules to regulate “biodiversity and biotechnology research as related to biodiversity”. The national criteria address many issues already described earlier.

### **Reviewing the Present Status of Access to Genetic Resources**

The Ministry of Environment, working through its Experts Committee on Biological Diversity, has already undertaken several studies on the CBD’s provisions. Access to genetic resources and benefit sharing have been emphasised especially. These studies address:

1. Intellectual property rights (IPRs) in relation to biological diversity;
2. Proposed measures to ensure that Sri Lanka’s interest is safeguarded when access is provided to genetic resources;
3. The movement of genetic material to and from Sri Lanka in 1995; and
4. The current status of fresh water fish exports from Sri Lanka.

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Developing Draft Legislation for the Establishment of a National Regulatory Mechanism for Access to Genetic Resources and Benefit Sharing

The Ministry of Environment (MFE), the focal agency for implementing the CBD in Sri Lanka, established a Legal Task Force in March 1999 to develop a legal and institutional framework for regulating access to genetic resources and the fair and equitable sharing of benefits, pursuant to a Cabinet Paper to this effect. The Task Force was mandated to advise the Government of Sri Lanka on how an access and benefit sharing (ABS) mechanism should be established for implementing the CBD and for meeting the specific interests of the country. The resulting recommendations submitted to MFE in August 2000 contained the structure and organisation of an ABS mechanism in the form of draft legislation and amendments to existing legislation and institutional frameworks.

The draft legislation applies to genetic resources and derivatives, from in-situ or ex-situ sources, of all species indigenous to the territory of Sri Lanka and of migratory species naturally occurring within the territory of Sri Lanka and of varieties of species non-indigenous to the territory of Sri Lanka that have developed distinct characteristics within the territory of Sri Lanka. Traditional uses have been exempted from the draft provisions to allow these to continue, and the term 'traditional use' has been deliberately left undefined in view of the uncertainty surrounding the scope of such a definition given the subjectivity of many such activities to particular circumstances. Access to human genetic resources was also omitted because of the bio-ethical issues it raises and also to enable access to human genetic resources essential for the diagnosis and treatment of illnesses.

The draft establishes an Inter-Agency Committee as the focal point for taking decisions pertaining to access and benefit sharing, including:

- i) reviewing applications for access to genetic resources;
- ii) deciding on prior informed consent for the purpose of granting access to genetic resources;
- iii) negotiating mutually agreed terms for the purpose of benefit sharing;
- iv) monitoring the activities being carried out under the access agreements;
- v) ensuring fair and equitable sharing of benefits resulting from the activities being carried out under the material transfer agreements; and
- vi) co-ordinate activities between institutions related to access to genetic resources and derivatives.

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## **BOX12: Actions Taken by Sri Lanka to Facilitate Access to Genetic Resources and Ensure Benefit Sharing**

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This Committee will consist of a representative of all those state agencies that are central to matters pertaining to biodiversity conservation, namely:

- i) Ministry of the Minister in charge of the subject of Environment
- ii) Department of Wildlife Conservation
- iii) Forest Department
- iv) Department of Fisheries and Aquatic Resources
- v) Department of Agriculture
- vi) Department of Animal Production and Health
- vii) Ministry of the Minister in charge of the subject of Foreign Affairs
- viii) Ministry of Health and Indigenous Medicine
- ix) Attorney-General's Department
- x) National Intellectual Property Office
- xi) Department of National Museums

Also included will be two members of the scientific community, and two members of the NGO Community with knowledge of biodiversity conservation. Other persons may be co-opted on a case-by-case basis when the need arises.

This Committee will be also served by Technical Committees which the Inter-Agency Committee can establish. The Inter-Agency Committee will also be served by Biodiversity Unit of MFE which was identified as its Secretariat.

The process of access itself involves screening applications for adequate information and the environmental soundness of accessing the desired genetic material and of their proposed uses; PIC and MAT procedures that seek to include local communities and private landowners in the negotiating and benefit sharing processes. Benefit sharing will be facilitated through a Biodiversity Fund created out of access fees, financial benefits and money voted to it by Parliament. It shall be utilised for the conservation of biological diversity in Sri Lanka, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources among all citizens.

Whilst the use of many species in the development of commercial applications with little benefits accruing to countries of origin is rightly a cause for concern, the opportunities for and benefits of initiating more responsible partnerships should also be recognised. Thus, in keeping with the spirit of the CBD as set out in Article 15, the approach recommended for Sri Lanka seeks to balance the need to minimise unlawful and unfair appropriations of Sri Lanka's biodiversity on the one hand, and to encourage responsible collaborations by which both scientific and financial benefits for the country and its people.

## **5.0 Stakeholder Participation and the National Access and Benefit Sharing Planning Process**

Whilst the Task Force initially consisted of state agency representatives, to ensure the continued inputs of all relevant sectors as well as experts in this field, the original 18 member inter-sectoral Task Force was expanded to 30 persons for the process of developing the framework. Many of those co-opted represented either NGOs, the private sector, or the academic or research communities. The modus operandi shifted from meetings to a series of full day sessions to facilitate more intensive and in-depth discussions.

Discussions proved to be lively and the issues complex, eliciting divergent views and positions which made obtaining consensus on every issue near impossible. Many key areas such as scope and definitions were revisited and revised in an attempt to reach the best balance between varying points of view.

The final Draft thus represents the product of a significant amount of deliberation and effort on the part of all Task Force members. The recommendations contained therein are what the Task Force, based on its deliberations, felt is the most prudent course of action in Sri Lanka for regulating access to genetic resources and capturing and distributing, in a fair and equitable manner, benefits arising from access and the use of resources accessed.

MFE is currently in the process of preparing the Task Force Report containing the Draft for a national stakeholder review which it intends to initiate shortly.

Stakeholder participation will be further encouraged in the following access and benefit sharing activities executed pursuant to the BCAP:

- Raising community awareness via NGOs on the value of indigenous biological diversity and the economic and monetary benefits that can be derived from it;
- Creating awareness among the State sector stakeholders that planners and other related government sector officers have the responsibility to ensure that benefit sharing facilitates income distribution and the sustainable use of biological resources;
- Formulating legislative and lease out mechanisms for eco-tourism; and
- Introducing tax concessions and other incentives to encourage the private sector to sponsor and participate in biodiversity conservation-oriented activities.