Awareness of the Convention on Biological Diversity

This overview document is intended to build awareness of the Convention on Biological Diversity and associated collections stewardship considerations.

The CBD (United Nations Convention on Biological Diversity) is an international treaty that came into force on December 29, 1993. The United States has signed but not ratified this treaty. The Convention on Biological Diversity (CBD) changed the fundamental concept of ownership of "biodiversity" from the "common heritage of humankind" to the "sovereign right" of each country. Thus it made each nation responsible for regulating its own biodiversity, and it opened up new, as of yet unresolved, regulatory questions about cross-boundary biodiversity and biodiversity beyond national jurisdictions. Users of biodiversity resources are now responsible for complying with regulations on biodiversity use at the nation level (and some countries delegate it down to lower levels). These regulations are changing as countries gain experience in this sphere. These frequent changes and the implications of the ownership rights have created a condition of uncertainty for biological and anthropological research and collections work.

The key rationale for this change was to create a new value stream for conservation. If the value of biodiversity could be maximized, the theorizing went, then more money would flow to countries of high biodiversity and there would be more resources for conservation and sustainable development. When countries and communities understand that their resources contain value, they of course become more concerned about its movement out of the country and out of their control. Since the research community is broad and spans the basic to applied to commercial sectors, creating hard and fast lines between non-commercial and commercial research is not always easy.

These concerns have led to the 20 year-long (and counting) set of changes to national and international practices on research, collections, collaborations, and benefit sharing.

The convention has three main objectives:

1. The conservation of biological diversity
2. The sustainable use of the components of biological diversity
3. The fair and equitable sharing of the benefits arising from the utilization of genetic resources (this objective is also called ABS)

The conservation and sustainable use objectives of the CBD are based on having sound information and science. Smithsonian researchers work within many of the programs either directly (e.g., the Global Taxonomy Initiative or the Global Plant Conservation Strategy) or help supply information for programs on protected areas, forests, marine and coastal biodiversity, invasive alien species, and agricultural biodiversity.

The ABS objective has turned out to be much more difficult to implement than was originally imagined. Uncertainties about the ways to measure and therefore share "benefits arising from the utilization of genetic resources" has created a condition where countries have been reluctant to develop final regulations. This in turn, has made collecting and movement of specimens more difficulty and uncertain since the passage of the CBD.

An additional layer of complexity comes from another part of the CBD (Article 8J) which also develops the concept of benefit sharing, this time for the utilization of traditional knowledge, innovations and practices relevant for the sustainable use and conservation of biological diversity (often referred to as TK). The TK discussion is sometimes intermixed with the genetic resources discussions, but we will keep them separate as they are affecting different processes within countries and internationally (with many of the TK discussions now occurring in the World Intellectual Property Organization [WIPO]).

The Nagoya Protocol is a proposed new international treaty adopted under the CBD in Nagoya, Japan in late 2010. Its objective is to further help nations put into place the third objective of the CBD. It has not yet come into force, which will occur after 50 countries have ratified the Protocol. We are following the preparatory discussions for the Nagoya Protocol carefully to make sure that we can fulfill any changed obligations which might arise from those discussions. The U.S. is not expected to ratify the Nagoya Protocol, but any work by U.S. researchers in other countries will need to be compliant with that country's regulations coming from their responsibilities under the Protocol.

While the Nagoya Protocol has not yet come into force, it does not change the basic structure of the ABS pillar of the CBD. Countries have ownership of biological and genetic resources and it is up to them to develop appropriate laws and regulations to manage those resources. NMNH staff and those we authorize to act on behalf of the museum must follow national laws wherever we work. The new regulations might carry additional obligations which we are not used to, such as restrictions on use, third party transfer, and tracking of the sharing of benefits. These obligations place demands on the museum's internal documentation, data, and research procedures.

Researchers' obligations: The CBD and the Nagoya Protocol rely on fulfilling open government concepts of "prior informed consent" and "mutually agreed terms", known as PIC and MAT. Understanding these concepts will greatly assist in making sure we have all of the appropriate paperwork and permissions to do the research we intend to do.

PIC: Prior informed consent is given from the country and other relevant stakeholders, such as the direct owner of the material. So knowing if you are on private land, state, national, and or community land is important to get the right permissions. You must provide a full explanation of what and how you will collect and the expected uses of the collected material. A key issue to remember is that there may be more than one level of PIC in a country. For example, you may need a general research permit (PIC from the central government); a collecting permit (PIC to a park or biodiversity authority or property owner); transport permits (both within the country of collection and internationally—think CITES,

phytosanitary documents). These are similar to loan documents which we have people sign when they wish to borrow material from the collections.

MAT: Mutually agreed terms refers to the specific obligations, terms and conditions, which are agreed to in exchange for getting access to the material. These terms might address issues of use restrictions (technologies and/or end-result focus [commercial or non-commercial use]), restrictions on third party transfer, reporting requirements, data sharing and/or other benefit sharing.

Benefit-sharing: What values are returned to the country of origin. Benefits run the gamut from direct payments to knowledge attained. Having materials in Smithsonian collections provides long-term security that there will be access to the materials. The Nagoya Protocol has an annex with a list of possible monetary and non-monetary benefits which might be listed in a MAT agreement (see below).

In some countries there will be a single document with PIC, MAT and all benefit sharing arrangements, in others, it will be a number of different documents.

Traditional knowledge: The recognition of specific rights over the knowledge, innovations, and practices of indigenous and local communities embodying traditional lifestyles is a novel feature of the CBD. Article 8J of the CBD encourages the sharing of benefits from the utilization of TK. Due to international politics and the leadership of a few individuals, this discussion has gotten very tied up with redefinitions of intellectual property rights—a long and imperfect process. One of the key issues is over the restriction of use of such knowledge. As knowledge is shared (and frequently withheld) communally, finding the right people to have PIC and MAT discussions with is not always clear. Multiple claims on the same knowledge across different communities further complicate this approach.

Final thoughts: The complications arising from the valuation concepts of the CBD are still being played out. For a public research and knowledge organization such as the Smithsonian, this creates inherent conflicts and opportunities which need to be acknowledged

Annex. Monetary and Non-monetary Benefits

1. Monetary benefits may include, but not be limited to:

(a) Access fees/fee per sample collected or otherwise acquired;
(b) Up-front payments;
(c) Milestone payments;
(d) Payment of royalties;
(e) License fees in case of commercialization;
(f) Special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity;
(g) Salaries and preferential terms where mutually agreed;
(h) Research funding;
(i) Joint ventures;
(j) Joint ownership of relevant intellectual property rights.

2. Non-monetary benefits may include, but not be limited to:

(a) Sharing of research and development results;
(b) Collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, where possible in the Party providing genetic resources;
(c) Participation in product development;
(d) Collaboration, cooperation and contribution in education and training;
(e) Admittance to ex situ facilities of genetic resources and to databases;
(f) Transfer to the provider of the genetic resources of knowledge and technology under fair and most favorable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;
(g) Strengthening capacities for technology transfer;
(h) Institutional capacity-building;
(i) Human and material resources to strengthen the capacities for the administration and enforcement of access regulations;
(j) Training related to genetic resources with the full participation of countries providing genetic resources, and where possible, in such countries;
(k) Access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies;
(l) Contributions to the local economy;
(m) Research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources;
(n) Institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities;
(o) Food and livelihood security benefits;
(p) Social recognition;
(q) Joint ownership of relevant intellectual property rights.

More information on ratification, contracting Party obligations, implementation tools and mechanisms can be found at the following CBD website: www.cbd.int. Within the Smithsonian, this is being followed by Len Hirsch, lph@si.edu.

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