

What Should You Know about Obtaining and Using Organisms from Other Countries?

A Few Basics on the Nagoya Protocol to the Convention on Biological Diversity

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All types of living organisms are genetic resources, and researchers that work with genetic resources from other countries need to be aware of a formal mechanism for sharing the benefits of using these resources. The Convention on Biological Diversity (CBD) developed such a mechanism, ratified in 2014 as the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization—more commonly known as the Nagoya Protocol (or simply Nagoya). While Nagoya applies to many researchers around the globe, figuring out how it applies to your specific research can be difficult.

By way of background, Nagoya was needed to address the perception that sovereign genetic resources were being utilized without sharing the benefits, leading to exploitation. In addition, neither the 1993 Convention on Biological Diversity (CBD) nor the 2002 Bonn Guidelines included a mechanism for sharing the benefits of using genetic resources with the provider country.

Most simply, the Nagoya Protocol requires a party (normally, a country) to establish local laws that detail how others may access sovereign genetic resources and share any benefits arising from their use. Because Nagoya relies on local legislation, a patchwork of established and developing legislation currently governs how a researcher may use genetic resources from a foreign country or transport resources from one country to another. Benefit sharing under Nagoya may be monetary (for commercial utilization of a genetic resource) or nonmonetary (typically, for nonprofit research activities). Nonmonetary benefits, which include

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training, capacity building, and collaborative research activities, are the most common for academic research.

The United States is not a party to the CBD or to Nagoya and does not limit access to genetic resources (although local entities or owners of genetic resources may do so). *Nonetheless, just as all drivers must drive on the left in the United Kingdom, researchers from the United States must follow the local laws in any country.* Nagoya emphasizes that research may be prohibited if it uses genetic resources that were exported as a commodity, such as grains, fruits, vegetables, or their associated microbes. Penalties for noncompliance can be applied to international researchers using the resources and to local researchers providing the resources and may include loss of access to genetic resources, revocation of research support, fines, and incarceration.

Because variations among local laws make it difficult for researchers to comply with the requirements of Nagoya, the CBD has established an [Access and Benefit Sharing Clearinghouse \(ABSCH\)](#), which provides information on obtaining prior informed consent on mutually agreed terms (PIC/MAT) and identify local responsible parties (National Focal Points). In addition, the Nagoya Protocol allows exemptions called *specialized instruments*, the most significant

of which is the [International Treaty on Plant Genetic Resources for Food and Agriculture](#). This treaty governs access to 65 major crop and forage plants and includes a multilateral benefit-sharing mechanism.

Several issues are worth mentioning. First, acquiring genetic resources for the development of diagnostic reagents falls within the jurisdiction of the requirements. However, simply detecting and identifying genetic material does not if the genetic material is not used, such as for a standard reagent. Second, the status of digital sequence information has not been addressed within the current protocol text and will be considered by an [ad hoc technical expert group](#) in February 2018; recommendations will be presented at the 14th Conference of the Parties in November 2018.

In summary, the ABSCH is a critical resource that each of us should use to ensure that our research complies with Nagoya, to protect our foreign collaborators, and to identify National Focal Points in any country in which we conduct research. ■