The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their Utilization is a multilateral environmental agreement adopted under the auspices of the Convention on Biological Diversity (CBD). The Protocol was adopted by the Conference of the Parties to the CBD in October 2010, in Nagoya, Japan. The Protocol came into force on October 12, 2014, 90 days after its 50th ratification.

The objective of the Nagoya Protocol is for the benefits arising from the utilization of genetic resources and associated traditional knowledge to be shared fairly and equitably with the providers and holders of said resources and knowledge, so as to contribute to the conservation and sustainable use of biodiversity. The Protocol thus reinforces and supports the three objectives of the CBD, which are:

- The **conservation** of biological diversity
- The **sustainable** use of the components of biodiversity; and
- The **fair and equitable sharing of benefits** arising out of the utilization of genetic resources.

The term **genetic resources** is not directly defined in the Nagoya Protocol. However, based on the definition in the CBD, genetic resources means any material of plant, animal, microbial or other origin that contains functional units of heredity (i.e. genes) and is of actual or potential value.

The Nagoya Protocol does not apply to human genetic resources.

Under the Nagoya Protocol, **utilization** means any research and development carried out on the genetic and/or biochemical compositions of genetic resources. Utilization does not include the direct use of genetic resources to produce commodities such as oils, fragrances, and extracts.
Some examples of utilization are:

- Research to identify active compounds for the development of medicines, cosmetics, agricultural chemicals, etc.;
- Use of indigenous plant resources for crop improvement, including “molecular-assisted” breeding using biotechnology;
- Taxonomic research for the identification of new species;
- Research (e.g. genome sequencing) to identify favourable traits for breeding;
- Genetic modification.

The Nagoya Protocol reaffirms that States have sovereign rights over their natural resources and consequently the authority to regulate and control access to those resources.

Therefore, a key requirement of the Nagoya Protocol is that a person or institution that wishes to have access to genetic resources in a foreign country should first obtain the necessary permission from the country where the resources are located. Countries providing the genetic resources should create conditions to facilitate, rather than restrict, access to those resources, as long as the access is for the purpose of sustainable and environmentally sound use.

The goal of the benefit-sharing provisions of the Nagoya Protocol is that countries and communities that provide genetic resources and/or traditional knowledge associated with genetic resources should receive a fair and equitable share of the benefits that come from the use of those resources and/or knowledge.

Benefits may be money (e.g. royalties or licence fees), but they may also be non-monetary. Examples of non-monetary benefits include training and education, cooperation in research and development, transfers of technology, access to scientific information, joint ownerships of intellectual property rights, and preferential access to products developed from genetic resources.

There are clear, fair and transparent rules and procedures for accessing genetic resources;

Benefit-sharing should be done on the basis of mutually agreed terms, i.e. an agreement between the providers and the users about the conditions of utilization and the benefits to be shared.

- Parties to the Nagoya Protocol are expected to take measures (in the form of legislation, policy and/or administrative arrangements) to ensure that, among other things:
  - A system is in place for issuing permits for access to genetic resources;
  - Genetic resources used within their jurisdictions have been accessed in accordance with the rules and requirements of the country that provided the resources;
  - Benefits arising from the use of genetic resources are shared fairly and equitably;
  - Benefits arising from the use of traditional knowledge associated with genetic resources are shared fairly and equitably, according to mutually agreed terms, with the indigenous peoples and local communities that are the holders of that traditional knowledge.

More information about the Nagoya Protocol and access and benefit-sharing can be found at the Nagoya Protocol website (http://www.cbd.int/abs/) and the website of the Access and Benefit-Sharing Initiative (http://www.abs-initiative.info/).
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For several years American institutions carried out bioprospecting research in Suriname under the International Cooperative Biodiversity Group programme. Research in Suriname was curtailed in 2003.

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In 2013 the European Patent Office granted a controversial patent for insect resistant pepper plants. The source of the insect resistance was a wild pepper found in Jamaica, which was subsequently crossed with commercial pepper plants.