

“Convention on Biological Diversity and the Cartagena Protocol on Biosafety”

At the 1992 Earth Summit in Rio de Janeiro, Brazil, world leaders agreed on a comprehensive strategy for “sustainable development”. One of the key agreement adopted at Rio was the Convention on Biological Diversity . This pact among the vast majority of the worlds governments sets out commitments for maintaining the worlds ecological underpinnings. The main goals of the Convention are: (1) the convention of biological diversity; (2) the sustainable use of its components; (3) and the fair and equitable sharing of the benefits from the use of genetic resources.

Article 28 of the convention provides for the formulation of a Protocol to address the implementation of various aspects of the agreement. An issue of growing international concern is related to the need to protect human health and the environment from the unidentified effect of modern biotechnology. It is predictable that modern biotechnology have a great potential for promotion of human well being, particularly in meeting critical needs for foods, agriculture, and health care. As a result to address concerns the Cartagena Protocol on Biosafety was adopted in Montreal on the 29th January 2000 at an extraordinary meeting of the conference of the parties to the Convention on Biological Diversity.

The Cartagena Protocol on Biosafety established a comprehensive framework to ensure an adequate level of protection in the field of safe transfer, handling and use of organisms resulting from modern biotechnology that may have adverse effect on conservation and sustainable use of biological diversity.



For further information visit the following websites:

<http://www.cbd.int/default.shtml>
<http://www.oecd.org/biotrack>
<http://www.who.int/foodsafety/biotech/en/>
<http://www.fao.org/home/en/>
<http://www.unep.org/biosafety/>



Regional Caribbean Biosafety Project
National Biosafety Council
UNEP/GEF Project

Tele: 00 (501) 824-4872/824-4899

Fax: 00 (501) 824-3773

BIOSAFETY and BIOTECHNOLOGY



Potential Benefits of Biotechnology!

Genetic engineering promises remarkable advances in medicine, agriculture, and other fields. These may include new medical treatment and vaccines, new industrial products, and improved fibers and fuels. Proponents of the technology argue that biotechnology the potential to lead to increase in food security, decreased pressure on land use, sustainable yield increase in marginal lands or inhospitable environments and reduce use of water and agrochemical in agriculture.



Potential Risks of Biotechnology!

Biotechnology is a very new field, and much about the interaction of LMOs with various ecosystems is not yet known. Some of the concerns about the new technology include its potential adverse effect on the biological diversity, and potential risk to human health. Potential areas of concern might be unintended changes in the competitiveness, virulence, or other characteristics of the target species, the possibility of adverse impact on non-target species (such as beneficial insect) and ecosystem; the potential for weediness in genetically modified crops (where the plant becomes more invasive than the original, perhaps by transferring its genes to wild relatives); and the stability of inserted genes (the possibilities that a gene will lose its effectiveness or will be re-transferred to another host).



What is Biotechnology?

The term “Biotechnology” refers to any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for a specific use.

Biotechnology in the form of traditional fermentation techniques has been used for decades to make bread, cheese or beer. It has also been the basis of traditional animal and plant breeding, such as hybridization and the selection of plants and animals with specific characteristics to create for example crops which produce higher yields.

The difference with “Modern Biotechnology “ is that researchers can now take a single gene from a plant or animal cell and insert it in another plant or animal cell to give it a desired characteristic, such as a plant that is resistant to a specific pest or disease.

In the **Biosafety Protocol**, modern biotechnology means the application of: (a) In vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (rDNA) and direct injection of nucleic acid into cells or organelles or (b) The fusion of cells beyond the taxonomic family.

What is Biosafety?

Biosafety is a term used to describe efforts to reduce the potential risk resulting from Biotechnology and its products. For the purpose of the Biosafety Protocol, this is based on the precautionary approach, whereby the lack of full scientific certainty should not be used as an excuse to postpone actions when there is threat of serious or irreversible damage. While developed countries that are at the center of the global biotechnology industry have established domestic Biosafety regimes, many developing countries are only now starting to establish their own national system.

What is a Living Modified Organism (LMO)?

A Living Modified Organism (LMO) is defined in the Cartagena Protocol on Biosafety as any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology. In everyday usage LMOs are usually considered to be the same as GMOs (Genetically Modified Organisms) but definition and interpretation of the term GMO vary widely.

Common LMOs include agricultural crops that have been genetically modified for greater productivity or for resistance to pests and diseases.

Example of modified crops include: tomatoes, cassava, canola, corn, cotton and soybeans.

What are LMO products?

LMOs form the basis of a range of products and agricultural commodities. Processed products containing dead modified organisms or non-living components include certain vaccines; drugs; foods additives and many processed, canned, and preserved foods. They can also include corn and soybeans derivatives used in many foods and nonfoods, cornstarch used for cardboard and adhesives, fuel ethanol for gasoline, vitamins, vaccines and pharmaceuticals and yeast-based foods such as beer and bread.