

# **BIOSAFETY, BIOTECHNOLOGY and GMO's LEGISLATIONS in LIBYA**

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# National Biosafety Framework

*A combination of policy, legal, administrative and technical set of tools, designed to address safety for the environment and human health in the context of developing and applying modern biotechnology.*

*It often focuses on genetically modified organisms (GMOs) .*

# BIOSAFETY REGULATIONS

***\*ESSENTIAL TO REGULATE PRODUCTION AND RELEASE OF GMOs IN ANY COUNTRY WITH A BIOTECHNOLOGY PROGRAMME***

***\*ENSURES SAFE ACCESS TO NEW PRODUCTS AND TECHNOLOGIES DEVELOPED IN THE COUNTRY OR ELSEWHERE.***

***\*PROVIDES A LEVEL OF PUBLIC CONFIDENCE THAT PRODUCTS PLACED ON THE MARKET HAVE BEEN ASSESSED AS SAFE***

**Libya is in the process of the development, acquisition and application of relevant biotechnologies and its products developed elsewhere.**

**The conservation and sustainable use of Libya's rich biodiversity is a primary concern.**



It is likely that crops and crop products imported into Libya may contain some *GMOs* components.



Because of a modest capacities and absence of legislation enforcement, it is some times difficult to trace or estimate the volume of such components.



# **NEED FOR RISK MANAGEMENT**

**Adoption of transgenic crops in biodiversity centers, Libya as an example, without appropriate risk management practices, and related biosafety research in place could be detrimental to the conservation of biodiversity.**

**There is a need for strengthening capacity in risk assessment, risk management, and monitoring the environmental effects of transgenic crops in Libya.**



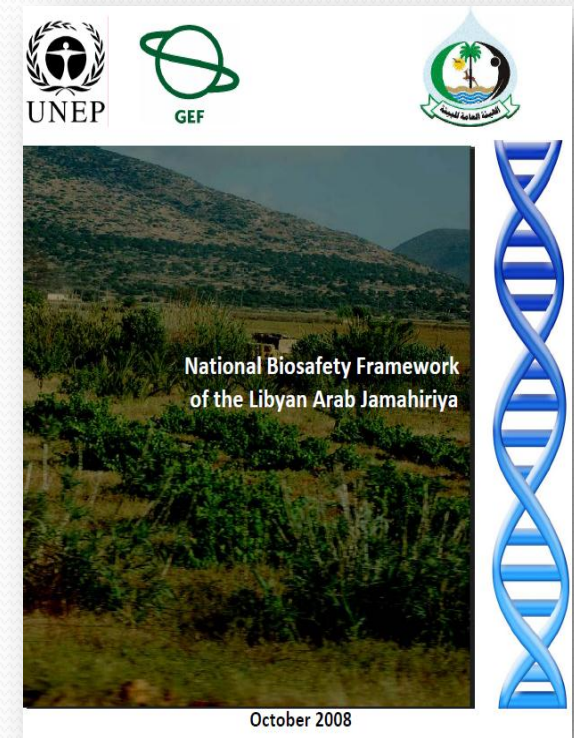
**On the other hand,  
agricultural biotechnology  
applications, if properly  
developed and integrated  
into agricultural systems,  
offer new opportunities for  
increasing food production  
while ensuring environment  
and health safety.**



# LIBYA's BIOSAFETY IMPLEMENTATION PROJECT

Libya has ratified the Convention on Biological Diversity in 12 July 2001 (Signed in 29 June 1992) and the Cartagena Protocol in 14 June 2005.

Libya has completed its National Biosafety Framework (NBF) in October 2008, with support of Cartagena Protocol secretariat.





**AIM:** To Develop and strengthen biosafety capacity in Libya for decision-making and management of potential risks associated with the application of modern biotechnology, in conformity with the Cartagena Protocol on Biosafety.





**Libya will be to activate its National Biosafety Framework (*NBF*) to allow safe biotechnology advancements for conservation and sustainable use of agro-biodiversity for long-term food security.**

**The focus will be on effective and efficient systems that are responsive to country needs, as identified in NBF.**



Historically, Libya was an example of economical and sustainable use of the available natural resources.

Production systems have already reached their maximum potential with the full use of limited resources such as water and natural vegetation.

Therefore,

The objectives of Libya in the next phase:



A. **Conform** to obligations under international law and to avoid conflicts with Libya's trade partners.

B. **Protect** biological diversity from possible risks due to intentional release of *GMOs* and their products into the environment, and hence promote the participation of Libya in safely harvesting the fruits of modern biotechnology.

C. **Protect** people's health and to promote safe use of modern biotechnology in environmental management



The following activities are envisaged to achieve these objectives:

- **Utilizing** funds available to members at Biosafety Protocol, in areas of Capacity Building on various levels, and the proper use of Biosafety Clearing House, BCH Mechanism.
- **Identification** of elements of the framework which need updating in light of recent advancements on the subject.





- **Outlining** and implementing a series of actions which would lead to a consensus on draft national legislation (Bylaw, regulations, decrees..), through circulation to stakeholders for opinions , involvement of the media, public hearings and possibly through specialized workshops.

- **Establishing** the necessary instruments for implementation of the proposed legislation; including training human resources and provision of reference laboratories capable of backing proper implementation of the legislation.



**The output** of these activities will be a legislative instrument capable of maintaining safe use of biotechnology products along with mechanisms for its enforcement.

**The outcome** will enable Libya in safely harvesting the fruit of biotechnology and to be a partner in safe international trade in *GMO* products without jeopardizing its biodiversity, ecological equilibrium and the health of its people.

# **LIBYAN NATIONAL COMMITTEE for BIOSAFETY & BIOETHICS (LNCBB)**

**Established in 2004, as the national competent body to deal with issues of Biosafety, Biosecurity, and Bioethics.**

**LNCBB** has worked closely with Biotechnology Research Center and Environmental General Authority (EGA) in formulating the National Biosafety Framework , NBF.

## **LIBYAN NATIONAL COMMITTEE for BIOSAFETY & BIOETHICS (LNCBB)**

**It is the granting authority as far as permissions for GMOs imports**

**It also played a major role in drafting the proposal for the National Biosecurity Law and several other proposed legislations dealing with Biosafety and Bioethics issues.**

**Among other tasks, it takes the responsibility for implementing the recommendations put forward in NBF**



## LNCBB's PRIORITIES IN NEAR FUTURE:

1. **Work** with EGA, UNEP and GEF, to reactivate the proposed NBF *implementation project* drafted in late 2009.
2. **Overcome** logistic difficulties that crippled the project at its nativity.
3. **Secure** sustainable funding for the project.



# ***The BIOTECHNOLOGY RESEARCH CENTER***



**Established in year 2000**

**Starting point for the transfer and adoption of modern Biotechnology in Libya.**

**This was subsequently followed by the emergence of related activities gradually in other Research Centers and Universities.**

## ***The* BIOTECHNOLOGY RESEARCH CENTER**



**But, the safety measures and the risk assessment mechanisms are still at a relatively modest levels.**

**However, work in the field of biotechnology in general and in the field of recombinant DNA, in particular, is still very limited due to lack of required capacity in terms of equipped laboratories and trained personnel**

**Libyan economy depends largely on imports of food and food commodities from abroad**

## ***The BIOTECHNOLOGY RESEARCH CENTER***



**The regulatory** institutions require provision of genetically modified organisms (GMO) free certificate from the country of origin for the imported goods to be allowed into the country.

The Biotechnology Research Centre also carries GMOs detection tests and can verify the credibility of the certificate in question.

## ***GMO detection tests carried by BRC***

<b>company</b>	<b>method</b>	<b>Test</b>
<b>AGIDA</b>	<b>ELISA and Strip</b>	<b>Protein detection</b>
		<b>1- cp4 EPSPS</b>
		<b>2-BT-Cry 34AbI</b>
		<b>3-BT-Cry IF</b>
		<b>4-BT-Cry 2A</b>
		<b>5-BT-Cry 3Bb1</b>
<b>Applied Biosystem</b>	<b>Real Time PCR Taq Man GMO Maize 35S detection kit</b>	<b>DNA detection 1-35S Promoter</b>



**Importing all kinds of seeds for agricultural production was prohibited since 2006.**

**Despite the importance of this decision for conservation of local varieties as well as advancing scientific research in the field of crop breeding, it could on the other hand open the way for smuggling seeds which may lead to entry of some plant species with genetically modified entities that may spread without control.**



# **BIOTECHNOLOGY and BIOSAFETY:**

## **national policies and strategies**

### **1- Objectives of Biotechnology research and development programs**

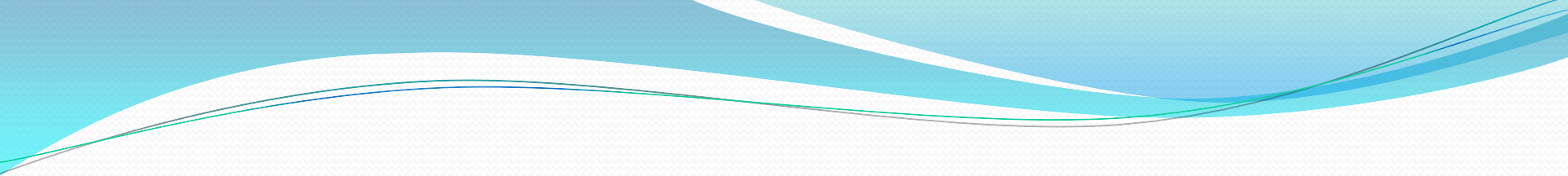
**Despite the absence of a national policy for research and development in modern biotechnology in Libya, BRC is trying to develop a strategy in coordination with *LNCBB***

**The objectives of the research programs at the BRC is to apply the technology in *agriculture, medicine, veterinary medicine and, plant tissue culture***



## 2- National priorities in the development of Biotechnology

- **Capacity building** to provide technically skilled human resources in the field of modern biotechnology
- **Development of policies** and programs for modern biotechnology and its safe applications in the fields of agriculture, health and environmental protection.
- **Enactment of laws**, regulations and legislation related to the use of biotechnology

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- **Cooperation** with international and global organizations such as UNEP, UNESCO and FAO to develop training programmers in the field of cell and molecular biology and improvement of plant production and protection of the environment.

# Biosafety and GMO Legislations

In general, there are about **18** enforced laws and **15** decisions dealing with matters of human and environmental biosafety in Libya

**Only one** such legislation briefly addresses GMOs issues:

**Law 15/2003** (Protection and Improvement of the Environment)

The law comprises 11 chapters and 79 articles. Though in brief, Chapter 10 deals with biosafety issues (GMO) directly

# **Biosafety and GMO Legislations**

## **ARTICLE (58):**

**All genetically modified seeds and strains are considered as threats to the environment and its natural resources**

## **ARTICLE (59):**

**Any importation, introduction to the country or selling of GMOs as food or feed is prohibited unless permission was obtained from the authorized agency.**



# **Biosafety and GMO Legislations**

## **ARTICLE (60):**

**Containment use of biotechnology products is restricted and only by permission from the authorized agency and only after taking the necessary precautions for safe management of the product and in conformity with the environmental requirements specified in the permission**

# **Biosafety and GMO Legislations**

## **ARTICLE (61):**

**Emergency plans must be prepared by those who were authorized to deal with biotechnology product in order to avoid any possible damage that might occur. Use of Best Practices is required**

## **ARTICLE (62):**

**Manipulated growth enhancers which might affect biodiversity are considered biotechnology products and will be treated accordingly**

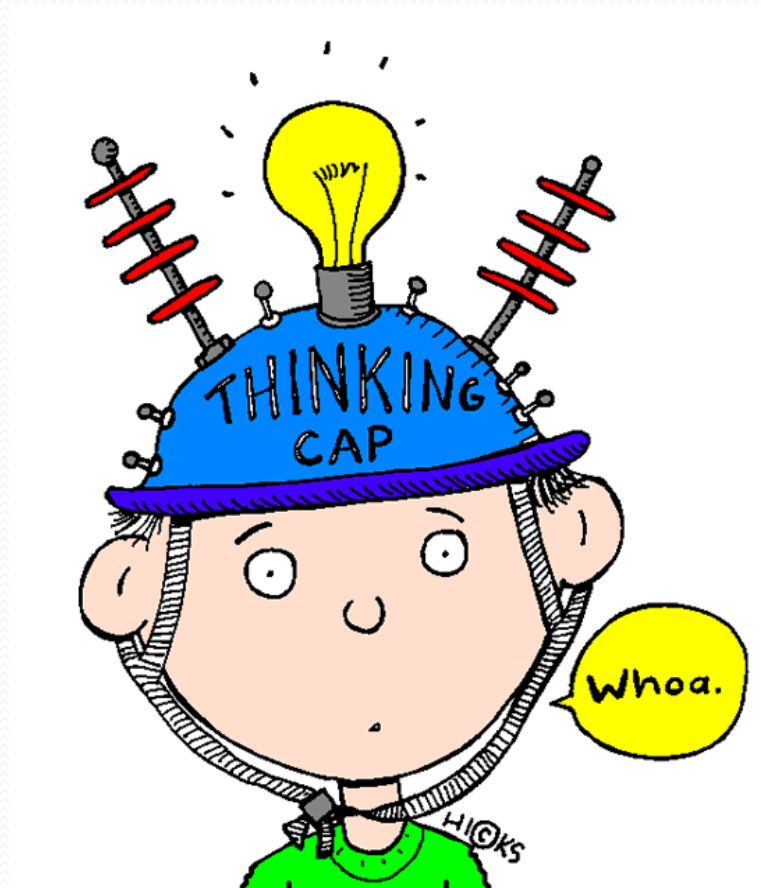
# **Biosafety and GMO Legislations**

**The legislation has its executive by-law issued but, some reservations were raised by a number of concerned agencies and people suggesting that it should be revised and updated.**

**The legislation itself need to be looked at as far as GMO importation is concerned.**

**There is not yet a clear “ Environmental National Policy ” in which related legislations are incorporated.**

**OK,  
WHAT SHOULD LIBYA DO TO GET THE  
IMPLEMENTATION PROJECT ROLLING ?**



# **LNCBB, EGA and BRC MUST SOON WORK CLOSELY TO ACHIEVE A QUICK START FOR THE PROPOSED LIBYAN BIOSAFETY IMPLEMENTATION PROJECT**

**LNCBB, EGA and BRC MUST ALSO JOINTLY COME UP WITH DRAFTS FOR:**

- *National policies and Strategies for Biotechnology and Biosafety.***
- *National priorities in the development of Biotechnology.***
- *Environmental National Policy***





*Thank You for Listening,  
See you in New LIBYA...*

