



Handbook on **Biosafety Clearing House:** An Information Sharing Platform

Phase-II Capacity Building Project on Biosafety



Ministry of Environment, Forest and Climate Change
Government of India

In association with



BCIL
Biotech Consortium India Limited
New Delhi

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Prepared by

Ministry of Environment, Forest and Climate Change (MoEF&CC)
and Biotech Consortium India Limited, New Delhi under UNEP/GEF supported Phase II Capacity Building Project on Biosafety

Material from this publication may be used for educational purpose provided due credit is given

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Information sources including booklet, factsheet, FAQs etc available at <http://bch.cbd.int>

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MESSAGE

India is a signatory to the Cartagena Protocol on Biosafety, an international treaty governing the movement of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. The Ministry of Environment, Forest and Climate Change, being the nodal agency for implementation of the Cartagena Protocol on Biosafety in India, is committed to meet its obligations.

The Cartagena Protocol on Biosafety was signed in 2000 and came into force in 2003. There have been several developments through inter-governmental meetings held on regular basis. Biosafety Clearing House (BCH), is an information sharing mechanism set up under the Biosafety Protocol for sharing of relevant scientific, technical and legal information. BCH is an important repository of up-to-date information about the Protocol.

I am pleased that two booklets have been prepared to inform stakeholders about the salient features of the Cartagena Protocol on Biosafety and Biosafety Clearing House as part of UNEP-GEF supported "Phase II Capacity Building Project on Biosafety", being implemented by MoEFCC.

I hope these booklets will help in enhancing awareness about these extremely important topics. I would like to congratulate all those who were involved in preparing this document and those involved in steering this initiative.

(Anil Madhav Dave)

अजय नारायण झा
AJAY NARAYAN JHA, IAS



सचिव
भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Secretary
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Ministry of Environment, Forest and Climate Change



FOREWORD

Capacity building is of strategic importance for effective implementation of any multilateral environment agreement (MEA) and the same is true for the Cartagena Protocol on Biosafety. Information sharing is one of the key components of capacity building projects and initiatives. The Ministry of Environment, Forest and Climate Change, being the nodal Ministry for implementation of the Cartagena Protocol on Biosafety and biosafety rules and regulations in the country, is committed to information sharing about key issues with the stakeholders.


MoEF & CC has brought out several publications from time to time for creating awareness about the salient features of Cartagena Protocol on Biosafety amongst stakeholders. Some of the publications have also been translated into other languages.

Continuing the practice, two booklets on Cartagena Protocol on Biosafety and Biosafety Clearing House have been prepared. These booklets provide an overview of India's compliance with the Protocol with an objective to serve as knowledge support for various stakeholders.

I hope these booklets will help in further strengthening our efforts for information sharing and creating awareness on this important protocol and biosafety issues.

Date: 10/03/2017

Place: New Delhi


(A. N. Jha)



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PREFACE

Awareness about the procedures towards the regulation of transboundary movement of living modified organisms (LMOs) is important, particularly in view of the global increase in trade and commercialization of LMOs. As a Party to the Cartagena Protocol on Biosafety, India has been actively engaged in implementation of its obligations in the country. India has also actively participated in the meetings of the governing body viz., Conference of Parties serving as the Meetings of Parties to the Cartagena Protocol on Biosafety held every two years and followed various decisions taken during these meetings.

Enhancing public awareness is one of the key objectives of the Strategic Plan on CPB (2011-2020) and accordingly, it is one of the key components of the ongoing UNEP/GEF supported Phase II Capacity Building Project on Biosafety, being implemented by the Ministry of Environment, Forest and Climate Change. As part of the project, two booklets namely "Understanding Cartagena Protocol on Biosafety: A Guide" and "Handbook on Biosafety Clearing House" have been prepared to inform the stakeholders about these important topics. The booklets have been prepared in a simplified and easy to understand language for sensitizing range of stakeholders including regulators, scientists, researchers, enforcement officials (customs and plant quarantine) and general public.

I appreciate the efforts of officers of Biosafety Division in MoEFCC and Biotech Consortium India Limited (BCIL) for putting together these booklets.

Dr Amita Prasad
(Additional Secretary, MoEF&CC)



CONTENTS

1.	Introduction.....	01
2.	Concept of ‘Clearing House’	02
3.	Components of Biosafety Clearing House (BCH)	02
4.	Who Can Use the BCH	03
5.	How is the Information Organized BCH	04
6.	Categories of Information in the BCH.....	06
6.1	National Contacts	06
6.2	Laws and Regulations.....	08
6.3	National Reports	08
6.4	Decisions and Declarations on LMOs.....	08
6.5	Roster of Experts.....	11
6.6	LMOs, Genes or Organisms.....	12
6.7	Capacity Building	13
6.8	Directory of International Organizations involved in Biosafety Activities ...	13
6.9	BCH Virtual Library.....	13
7.	Finding Information on the BCH Portal	16
8.	Country Profiles	19
9.	Access to Additional Information	20
10.	Benefits of Using the BCH	22



1. INTRODUCTION

The Cartagena Protocol on Biosafety (CPB) to the Convention on Biological Diversity (CBD) is an international agreement governing the movement of living modified organisms (LMOs)¹ resulting from modern biotechnology from one country to another. It was adopted in 2000 and entered into force in 2003. As on date 170 countries are Party to the Cartagena Protocol on Biosafety.

The Biosafety Clearing House (BCH) is an information exchange mechanism set up under the CPB to facilitate exchange of information on LMOs and assist countries that are Parties to the Protocol to comply with their obligations. In addition to enabling governments to inform others about their final decisions regarding the import of LMOs, the BCH contains information on National laws, regulations, and guidelines for implementing the Protocol. The BCH also includes information required



under the Advanced Informed Agreement (AIA) procedure, summaries of risk assessments and environmental reviews, bilateral and multilateral agreements, reports on efforts to implement the Protocol and other scientific, legal, environmental and technical information. Common formats are used to ensure that the information collected from different countries is comparable.

The BCH has been developed pursuant to Article 20² of CPB. It has been developed as an internet based system and is accessible at <http://bch.cbd.int/>. BCH is free and available to everyone. The Central Portal of the BCH is available in all the six official languages of the United Nations; Arabic, Chinese, English, French, Russian and Spanish. Each Party to the CPB is required to designate one National Focal Point for BCH, who is responsible for managing National records register in the BCH through the management centre.

India is a party of CPB and the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India is the nodal ministry or its implementation in the country . This handbook has been developed as part of UNEP/GEF supported Phase II Capacity Building Project on

¹A Living Modified Organism (LMO) is defined in the CPB as any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology.

²Cartagena protocol on Biosafety" CBD, Article 20. <http://bch.cbd.int/protocol/text/article.shtml?a=cpb-20>



Biosafety as a capacity building tool to guide potential users about the BCH. It provides an overview of what information can be found in the BCH and how different stakeholders can use it to find relevant information. The guidance documents^{3,4} provided by CBD Secretariat, frequently asked questions⁵ about BCH and other information available from BCH website has been used to prepare this handbook.

2. CONCEPT OF ‘CLEARING HOUSE’

The term “clearing-house” is generally used in the context of financial establishments (such as banks) that provide clearing and settlement services, so as to reflect only net balances. It is also used to include any agency that brings together seekers and providers of goods, services or information, thus matching demand with supply.

The BCH established under the CPB fulfills this role by facilitating exchange of biosafety information among Parties and other stakeholders. It is an internet based dynamic platform, where information is registered and also can be easily searched and retrieved. Information in the BCH is owned and updated by the users themselves, thus ensuring its timeliness and accuracy.

BCH functions like a “central information marketplace” where the providers and users of biosafety information interact and exchange that information in a transparent manner. To fulfill its role, the BCH has been designed to make finding and providing information as clear and intuitive as possible, for example by providing common formats and standardized terminology (controlled vocabulary). It serves as an important repository of up-to-date biosafety information that helps governments to make informed decisions and provides easy access to information for other stakeholders.

3. COMPONENTS OF BCH

The BCH consists of a Central Portal with linkages to a distributed network of national, regional and international nodes/databases. The Central Portal is the gateway to all sections of the BCH, including the search pages.

Information submission to the BCH databases is facilitated through a secure facility known as the “Management Centre”, which is accessible only to the BCH National Focal Points (BCH-NFPs) and other authorized users who are issued with login accounts and passwords. The registered

³Secretariat of the Convention on Biological Diversity (2004), The Biosafety Clearing House of the Cartagena Protocol on Biosafety; A Guide to the BCH. Montreal (<https://www.cbd.int/doc/publications/bch-brochure-en.pdf>)

⁴BCH Training Manuals (2012) https://bch.cbd.int/help/topics/en/webframe.html?Training_Materials.html <http://bch.cbd.int/help/faq/#SCI>

⁵<http://bch.cbd.int/help/faq/>



information is validated (i.e. verified for accuracy and authenticity) by BCH-NFPs prior to be made publicly available. This helps to ensure the highest level of security and reliability of the information in the BCH. The Management Centre where information is entered or updated, links to other relevant websites and the toolkit that helps users to understand how to use the BCH. It functions essentially as an interactive site map to assist in the navigation and use of the BCH.



In addition to the central portal, Parties have been provided with national nodes to provide country specific information on their respective portals. These nodes are interoperable with BCH. India's national node may be seen at <http://in.biosafetyclearinghouse.net/default.shtml>. The Indian BCH has information about national contacts, laws and regulations etc. as per BCH formats. It also includes details of project outcomes of UNEP/GEF supported Phase II Capacity Building Project on Biosafety.

4. WHO CAN USE THE BCH

BCH being a repository of up-to-date information on LMOs and biosafety, all interested users can freely search and retrieve information through the BCH website. Some examples of specific uses of BCH to different stakeholders are as follows:

- **Governments and risk assessors:** Much of the information in the BCH is owned and updated by national governments. It can be used to assist in making informed decisions by governments and risk assessors while evaluating the import or release of LMOs in their countries.
- **Scientists and academics:** The BCH facilitates scientific and technical cooperation by exchange of information requirements for LMOs in various countries such as summaries of risk assessment, capacity building opportunities, scientific databases etc. The technology developers can learn from information requirement and decision summaries to plan safety requirement and decision summaries to plan safety assessment of LMOs being developed by them.



- **Enforcement officials:** Enforcement officials such as customs officers, quarantine officials, food safety inspectors etc. need information about contact information of national authorities and national decisions on whether or not the import of specific LMOs is allowed. BCH can be used to access all such information readily.
- **Industry:** The BCH provides easy access to vital information, including details of national contacts, relevant laws and regulations governing genetically modified organisms, and decisions and declarations, especially relevant to imports and exports for ease of business.
- **General Public and Students:** Easy and open access to key information, facilitates effective participation of the public and non-government organizations in matters related to implementation of the CPB.

5. HOW IS THE INFORMATION ORGANIZED IN THE BCH

The information available in the BCH central portal comprises of the information requirements under Article 20 of the CPB as well as categories of information that has been specifically requested by the Parties in their periodic meetings. While Article 20 broadly lists the specific information that each Party must provide to the BCH, requirement to post information on BCH is referred to in other Articles of the CPB, as indicated in Table 1.

Table 1: BCH Requirements in Other Articles of CPB

Article 6-1: Decision of a party of transit to regulate the transport of LMOs through its territory.
Article 10-3 Final decisions regarding the importation or release of LMOs decisions regarding the importation or release of LMOs (i.e. approval or prohibition any conditions requests .e. approval or prohibition, any conditions, requests for further information, extensions granted, reasons for decision)
Article 11-1 Final decision regarding domestic use of LMOs that may be subject to a transboundary movement for direct use as food or feed or for processing.
Article 11-5 National laws, regulations and guidelines applicable to import of LMO-FFP s
Article 11-6 Declaration about decision making process in the absence of domestic regulatory framework.
Article 12-1 Review of decision regarding intentional transboundary movement of LMOs
Article 13-1(a) Cases in which in which transboundary transboundary movement can take place at the same movement can take place at the same time as the movement is notified
Article 13-1(b) Imports of LMO exempted from the AIA procedure.
Article 14-2 Bilateral, regional, international agreements and arrangements made before and after adhesion to the protocol
Article 14-4 Information on the application of domestic regulations to specific imports of LMOs



Article 17-1 Occurrence of unintentional transboundary movements that are likely to have significant adverse effects on biological diversity

Article 17-2 Contact details for emergency contact point for receiving notifications of unintentional transboundary movements of LMOs

Article 19-2 Contact details for national focal point and competent national authority or authorities

Article 19-2 Changes in the designation of national focal point or in the name and address or responsibilities of competent national authority or authorities

Information currently available on BCH is organized into National Records and Reference Records:

- a. **National Records** are submitted by Governments as mandated by Article 20 of the Protocol;
- b. **Reference Records** are submitted by general BCH users. These also include three registries regarding LMO information appearing in other BCH records viz. LMO registry, Gene registry and Organisms registry.

There are common formats prescribed by the CBD Secretariat for submission of the information to ensure uniformity. Some of these common formats could be part of both National or Reference records depending on the role of the user submitting the information. Records submitted by the BCH NFP or National Authorized Users (NAU) and validated by BCH-NFPs are treated as **National Records** while records submitted by other users and validated by the Secretariat are treated as **Reference Records**. Table 2 provides the list of type of records under each category.

Table 2: Information available on BCH

National Records		Reference Records	
National Contacts		LMOs, Genetic elements or Organisms	
i.	National Focal Points	i.	The LMO-UID Registry
ii.	Competent National Authorities	ii.	Gene Registry
iii.	National Biosafety Websites and Databases	iii.	Organism Registry
Laws and Regulations		Capacity-Building	
i.	National Laws, Regulations and Guideliness	i.	Biosafety Capacity Building Projects
ii.	Bilateral, Regional and Multilateral Agreements	ii.	Capacity Building Opportunities
		iii.	Compendium of Academically Accredited Biosafety Courses
		iv.	Capacity-Building Needs and Priorities



National Reports		Directory of International Organizations involved in Biosafety Activities	
	National reports and analysis		International organisations involved in activities relevant to implementation of the Biosafety Protocol with summaries of their activities and contact information.
Country's Decisions and other Communications		The BCH Virtual Library	
i.	Decisions on LMOs under Advance Informed Agreement	i.	Biosafety Information Resource Centre (BCH-BIRC)
ii.	Decisions on LMOs for food, for feed or for processing under Article 11	ii.	Scientific Bibliographic Database on Biosafety (Bibliosafety).
iii.	Other decisions & declaration	iii.	Access to Research4Life, a collective name for four public-private partnerships to provide the developing world with free or low cost online access to academic and professional peer reviewed content.
iv.	Risk Assessment		
Roster of Experts			
	Access a database of experts in biosafety, searchable using various fields.		

In addition to the core information above, the BCH also provides general information on the CPB, the use of the BCH and links to resources for the implementation of the CPB.

Who can register information?		
	NATIONAL RECORDS (decisions, law, risk assessment*, etc)	REFERENCE RECORDS (LMO, gene, organism, risk assessment**, etc)
National Focal Points	✓	✓
Registered users	✗	✓
* Risk assessment generated by regulatory process		
** Risk assessment generated by independent or non-regulatory process		

6. CATEGORIES OF INFORMATION IN THE BCH

Information that a Party needs to make available to the BCH is an ongoing process. The main categories of information that Parties must register in the BCH are described below:

6.1 National Contacts

The CPB requires each Party to designate National Focal Points and Competent National Authorities to fulfill its obligations as under:



i) National Focal Points

National Focal Points (NFPs) are the primary point of contact for all information about a particular issue within a country. Parties designate NFPs in accordance with various Articles of the CPB.

- **NFP to CPB:** Article 19 of the CPB requires each Party to designate one NFP to be responsible, on its behalf, for liaising with the CBD Secretariat. This section includes contact details of the NFPs of different Parties.
- **National point of contact for receiving notifications regarding unintentional transboundary movements of LMOs:** The point of contact for receiving notifications pertaining to unintentional transboundary movements of LMOs and emergency measures is included in the BCH as required by the Article 17 of the Protocol.
- **BCH-NFPs:** BCH NFPs are responsible for validation of national records for publication through the BCH and liaison with the Secretariat on technical issues related to the BCH as per Article 20 of the Protocol and subsequent decisions.

ii) Competent National Authorities (CNAs)

This section includes names and addresses of Competent National Authorities (CNAs) designated by each Party as required by the Article 19 of the Protocol. CNAs are responsible for performing the administrative functions required by the Protocol, including handling of notifications/applications and communicating to the notifier/applicant and to the BCH decisions regarding importation or release of LMOs.

Parties can designate one or more CNAs for various administrative functions. In such cases, the information provided through the BCH should, at a minimum, specify which competent national authority is responsible for which type of LMO.

Compiled list of all national contacts and competent national authorities is also available at <https://bch.cbd.int/database/compiled-national-contacts>.

iii) National Biosafety Websites and Databases

Many governments maintain National Websites and/or Databases that are relevant to the implementation of the CPB. This section includes links to such national websites and databases.



6.2 Laws and Regulations

i) National laws, regulations and guidelines

Any existing laws, regulations and guidelines for implementation of the CPB must be registered by each Party with BCH in accordance with Article 20.3(a). Copies of information required by Parties for the AIA procedure and that for import of LMOs intended for direct use as food or feed, or for processing (LMOs-FFP), if available should also be included.

ii) Bilateral, regional and multilateral agreements

Each Party is required to make available to the BCH any bilateral, regional, and multilateral agreements and arrangements for implementation of the Protocol (Article 20.3 (b)), including those that they entered into before or after the date of entry into force of the Protocol (Article 14.2).

6.3 National Reports

National reporting is a mandatory requirement under Article 33 of the Protocols and these reports are submitted by Parties on four yearly basis in accordance with decision taken in 2004. So far, four reports have been submitted by Parties i.e. interim report (2005), first national report (2007); second national report (2011) and third national report (2015). Copies of all the reports and their analysis are available on BCH.



6.4 Countries and other Communications

All final decisions regarding the import or release of LMOs are available on the BCH, as registered by the Parties. These include decisions taken under the AIA procedure for intentional release into the environment, decisions and declarations under Article 11 of the Protocol for LMOs-FFP and other decisions. The decisions can be categorized by their subjects in the following types:

- i. **Decisions on LMOs under AIA procedure:** This section contains decisions resulting from the implementation of the AIA procedure under CPB (Article 10), which applies to the first intentional transboundary movement of LMOs for intentional introduction into the environment of the Party of import



- ii. **Decisions for LMOs-FFP:** This section includes information related to final decisions taken by Parties regarding domestic use, including placing on the market, of an LMO-FFP that may be subject to transboundary movement. As per Article 11 of the Protocol, these decisions require that countries exchange information at an early stage through the BCH. Accordingly, each Party that makes such a decision must inform other Parties through the BCH within 15 days (Article 11.1). On the basis of such information, any Party may apply its domestic regulatory framework in taking a decision on the import of the LMO-FFP (Article 11.4). In the absence of such a framework, a developing country Party or a Party with an economy in transition may use the procedures described in the Protocol for the purpose of decision making. Such action, however, must be declared through the BCH prior to the first import of the LMO-FFP (Article 11.6).
- iii. **Other decisions & declarations:** This section includes information pertaining to other decisions and declarations that Parties have to make available to the BCH, which are not covered by the two categories outlined above, including:
- Decision under the Simplified Procedure (Article 13)
 - Decision on Pharmaceuticals (Article 5)
 - Decision on Transit of LMOs (Article 6.1)
 - Decision on Contained use of LMOs (Article 6.2)

The Protocol also requires registering in the BCH of country's notifications, declarations and other communications related with transboundary movements of LMOs or implementation of the Protocol including notifications of illegal or unintentional transboundary movement. The notifications and other communications can be categorized by their subjects in the following types:

- Notification that domestic regulations shall apply with respect to specific imports of LMOs (Article 14.4)
- Notification about the unintentional transboundary movement of LMOs (Article 17.1)
- Notification about illegal transboundary movements of LMOs (Article 25.3)
- Notification that a Party does not have access to the BCH (Article 11.1)
- Declaration that, in the absence of a domestic regulatory framework,
- Decisions on LMOs-FFPs will be taken according to Article 11.6
- Communication of information on 'Handling, Transport, Packaging and Identification' (Article 18).
- Declaration made upon ratification of or accession to the Protocol










Countries can also register in the BCH any other relevant decisions and communications related with LMOs or implementation of the Protocol that governments wish to make available through the BCH including decisions on import or release of LMOs taken before the Protocol has entered into force for the country. The COP-MOP 3 meeting also invited Parties to the Protocol and other Governments to make available to the BCH the following additional information:

- The transformation events that are commercially produced for each planting cycle in the exporting country
- The geographical area within the exporting country where each transformation event was cultivated

To facilitate easier understanding about results of queries involving decisions on LMOs, different icons have been used in the BCH. When highlighted these icons indicate the type of decisions used as for intentional release, direct use as food or feed or processing etc. (Table 3)

Table 3: Icons used for conveying information about decisions

Icon	Meaning
	Decision refers to an LMO for <i>Intentional introduction into the environment</i>
	The approval of an LMO for <i>Direct use as food</i>
	Decision refers to an LMO for <i>Direct use as feed</i>
	Decision refers to an LMO for <i>Processing</i>
	Decision refers to an LMO for <i>Confined Use</i>
	Decision refers to an LMO for <i>Pharmaceuticals</i>
	The approval of an LMO for <i>Transit</i>



iv. Risk Assessments

This section includes information on summaries of risk assessments or environmental reviews of LMOs generated by a regulatory process and carried out in accordance with Article 15 of CPB, including, where appropriate, relevant information regarding products thereof (namely, processed materials that are of LMO origin, containing detectable novel combinations of replicable genetic material obtained through the use of modern biotechnology), and made available to the BCH in accordance with the requirements of CPB (Article 20.3(c)). This information provides a useful resource for other Parties that may need to conduct their own risk assessment of the same LMO in the future.

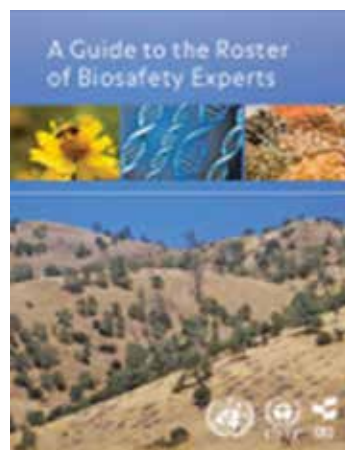
Risk assessment reports are mandatory for all decisions regarding the first import of LMOs for intentional introduction into the environment or regarding the domestic use of LMOs intended for direct use as food or feed, or for processing (LMOs-FFP) and should be consistent with Annex III of the CPB. Article 21 of the Protocol provides for protection of confidential information by Parties, however, it has been specified that the summary of the risk assessment of the effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health cannot be considered confidential information and should always be made available through the BCH when generated by regulatory processes.

6.5 Roster of Experts

The BCH provides access to a list of biosafety roster of experts, established to provide technical advice and other support, as appropriate and upon request, to developing country Parties and Parties with economies in transition, to conduct risk assessment, make informed decisions, develop national human resources and promote institutional strengthening, associated with the transboundary movements of LMOs.

The section on 'Roster of Experts' contains information on the experts as well as the guidelines for using the roster, including procedures for nominating experts and for updating information on the experts, the process of requesting and using experts from the roster, as well as information on the voluntary fund for the use of experts from the roster.

In accordance with the decision taken at the fourth meeting of governing body of the CPB, experts' records are maintained on the roster for a period of four years from the last update of their information, after which they are deleted unless renominated by Parties.





The Secretariat has also published “A Guide to the Roster of Biosafety Experts” to serve as a quick reference to the roster of experts and the Voluntary Fund for the roster. It describes the nature, role and operational procedures for the roster.

6.6 LMOs, Genes or Organisms

Databases of LMOs, genes and organisms are maintained on BCH and are referred to as registries. These include description of LMOs, different type of genetic elements that can be used in the creation of new LMOs and characteristics of recipient or donor organism (non-LMOs) from which genes used for genetic transformation processes come from.

- i. The **LMO-Unique Identifiers Registry (LMO-Ulds)** provides summary information of all LMOs registered in the BCH including transformation events, genetic modifications, and the unique identification code (if available) for each record. Links to all decisions that refer to these organisms are provided at the bottom of each LMO record accessible through the registry;

The unique identification classifications serve as a key to access records in the BCH, such as the OECD’s unique identifiers for transgenic plant lines for LMOs-FFP.

Box 1: OECDs Unique Identifiers

Documentation requirements for all categories of LMOs require reference to a unique identifier code. To date, only one unique identification system exists OECD Unique Identifiers for Transgenic Plants. OECD Unique Identifier is a simple alpha numerical code that is given to each LM plant that is approved for commercial use. Developers of transgenic plants are the ones to assign the unique identifier. 9 - digit code composed of 3 elements separated by dashes

- 2 or 3 alphanumeric digits to designate the applicant;
- 5 or 6 alphanumeric digits to designate the transformation event; and
- 1 numerical digit for verification Example: MON - 00810 - 6 Monsanto’s Yield Gard Maize

Unique identifier codes can be used to search BCH for information about specific LMOs.

- ii. The **Gene Registry**, provides summary information on gene inserts and characteristics of the genetic modifications of LMOs; and
- iii. The **Organism Registry**, provides summary information on parental, recipient or donor organisms related to the LMOs registered in the BCH.



6.7 Capacity Building

The BCH also contains important information about biosafety capacity building and other assistance towards implementing CPB as indicated below:

- i. **Capacity Building Opportunities**, which includes information on available or upcoming short-term capacity building opportunities, such as: funding grants, scholarships and fellowships, technical assistance, training workshops, internships/apprenticeships, study tours, partnerships, discussion forums and others,
- ii. **Capacity Building Projects**, contains information on project status and location, lead organization(s) and contacts, objectives and activities, lessons learned, a brief description of each project and web links for detailed information,
- iii. **Compendium of Academically Accredited Biosafety Courses**, which includes a listing of recurrent academically accredited biosafety education and training programs offered around the world.
- iv. **Capacity-Building Needs and Priorities**, which includes the capacity requirements of Parties for the implementation of the CPB as identified and categorized in line with the elements of the Capacity Building Action Plan of CPB.

6.8 Directory of International Organizations Involved in Biosafety Activities

Information about international organizations involved in activities relevant to implementation of the Biosafety Protocol with summaries of their activities and contact information is available at <https://bch.cbd.int/database/organizations/>.

6.9 BCH Virtual Library

Through its virtual library, the BCH provides access to different categories of information aimed to assist countries in capacity-building for implementation of the CPB. The two primary databases that make available biosafety information through the BCH Virtual Library are:

- i) **Biosafety Information Resource Centre (BIRC)**: The Biosafety Information Resource Centre (BIRC), a sub-section of BCH contains electronic catalogues of biosafety-related publications and information resources for policymakers, educators, researchers, and the general public.

BIRC records may be registered by all BCH account-holders. The BIRC contains news services, e-mail list servers, online databases and search engines; reports and case studies; journals, newsletters and teaching materials (manuals, toolkits and presentations). Its objective is to increase the accessibility and utilization of available biosafety information and resources for policymakers, educators, researchers, and the general public.



Information from BIRC can be retrieved using various search options by clicking on the “Search the Biosafety Information Resource Centre (BIRC)”.

Several search criteria boxes available on BIRC such as publication year, thematic area, type of record, language, date of record and keyword search. Using the search pages helps to learn about types of field and their operations.

The screenshot shows the 'Biosafety Cleaning-House' website. The header includes the logo and the text 'Convention on Biological Diversity'. Below the header, there is a navigation bar with links: Home, The BCH, The Protocol, Finding Information, Reporting & Compliance, Resources, and Help. A 'Country Profiles' dropdown menu is also visible. The main content area is titled 'Search the Biosafety Information Resource Centre (BIRC)'. It contains a search form with the following fields: Publication year, Thematic area, Type of record, Language, Date of record, and Keyword search. There are also buttons for 'Search' and 'Browse all records'. The footer includes contact information, a privacy policy, and logos for the United Nations and the environment.

- ii) **Scientific Bibliographic Database on Biosafety (Bibliosafety):** The Scientific Bibliographic Database on Biosafety provides access to a bibliographic collection of scientific studies relevant to biosafety and risk assessment of biotechnology featuring records from CAB ABSTRACT database and maintained by the International Centre for Genetic Engineering and Biotechnology (ICGEB). This searchable database is updated monthly and contains records of scientific articles (full reference + abstract) published in national and international scientific periodicals from 1990 onwards. Each record is vetted by ICGEB scientists for its contribution to the numerous scientific debates concerning Genetically Modified Organisms (GMOs).



Handbook On Biosafety Clearing House: An Information Sharing Platform

Biosafety Clearing-House Convention on Biological Diversity

Home | The BCH | The Protocol | Finding Information | Registering Information | Resources | Help

Finding Information:
 National Contacts
 Laws and Regulations
 Country's Decisions and other Communications
 Submissions
 Risk Assessments
 Roster of Experts
 DROs, Genes or Organisms
 National Reports
 Capacity-Building
 Organizations
 The BCH Virtual Library

Survey on Indicators (2014)
Compiled Information
 National Contacts
 UNO Registry
 Organism Registry
 Gene Registry

Go to record ID:

Home | Finding Information | Scientific Bibliographic Database

Search the Scientific Bibliographic Database on Biosafety

On this page you can search **BibBiosafety**, a bibliographic collection of scientific studies relevant to biosafety and risk assessment of biotechnology featuring records from CAB ABSTRACT database and maintained by the International Centre for Genetic Engineering and Biotechnology (ICGEB). This searchable database is updated monthly and contains records of scientific articles (full reference + abstract) published in national and international scientific periodicals from 1990 onwards. Each record is vetted by ICGEB scientists for its contribution to the numerous scientific debates concerning Genetically Modified Organisms (GMOs).

Choose fields as needed to narrow search results. If no category is selected to narrow the search for a particular field, a default value of "all" will be used.

Title

Author(s)

Publication year

Date of record

Keyword search Enter keywords. Separate words with AND or OR.

Contact us | Site Map | Linkages Policy | Privacy Policy | Disclaimer | © SCBD 2001-2016
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UN environment

iii) Access to Research4Life: It is the collective name for four public private partnerships that provide information focusing on health, agriculture and environment for free or at low cost online access to academic and professional peer-reviewed content. The 4 programmes are as follows:

- HINARI** which provides access to over 7000 peer reviewed journals covering medicine, nursing and related health and social sciences.
- AGORA** which provides access to over 1200 international journals covering agriculture, fisheries, food, nutrition, veterinary science and related biological, environmental and social sciences in public institutions across the world.
- OARE** which provides access to more than 3000 scientific journals in a wide range of disciplines contributing to an understanding of the natural environment.
- ARDI** which provides access to literature in technical fields, such as biotechnology, medical technology and computing.



7. FINDING INFORMATION ON THE BCH PORTAL

Information registered in the BCH can be accessed through the “**FINDING INFORMATION**”, link on the navigation bar of the BCH website.



Clicking on the ‘Finding Information’ Section, allows access to a wide category of information on scientific, technical, environmental, legal and capacity building information contained in the BCH databases. The categories of information registered in the BCH can be found to be listed on the Finding Information page. The main page of the **Finding Information** section contains a welcome message and list of the information grouped under National and Reference Records.



<https://bch.cbd.int/database/>

العربية | 中文 | english | español | français | gycokael

Sign Up for an Account | Sign In

Biosafety Clearing House

Convention on Biological Diversity

Home | The BCH | The Protocol | Finding Information | Registering Information | Resources | Help

Country Profiles...

Finding Information

Welcome to the **Finding Information** section of the BCH. Here a wide variety of scientific, technical, environmental, legal and capacity building information can be accessed. The information currently available is organized into different common formats (see [FAQ-17](#)) grouped in two categories:

- National Records** submitted by Governments as mandated by Article 20 of the Protocol;
- Reference Records** which are submitted by general BCH users. Included under the Reference records category are three registries regarding LMO information appearing in other BCH records.

Note: Some common formats could be part of both groups above (see [National OR Reference records](#) below) depending on the role of the user submitting the information: records submitted by NAU or BCH-NFP and validated by BCH-NFPs will be treated as **National records** while records submitted by other users and validated by the Secretariat will be treated as **Reference Records**.

National Records

National contacts
Follow this link to search for: (i) National Focal Points, (ii) Competent National Authorities and (iii) National Biosafety Websites and Databases

Laws and Regulations
Follow this link to search for: (i) National Laws, Regulations and (ii) Guidelines and Bilateral, Regional and Multilateral Agreements

National Reports
Follow this link to search for national reports and analyze them online

Country's Decisions and other Communications

Reference Records

LMOs, Genetic elements or Organisms
Follow this link to search for: (i) the LMO-UID Registry; (ii) Gene Registry and (iii) Organism Registry

Capacity-Building
Follow this link to search for: (i) Biosafety Capacity Building Projects; (ii) Capacity-Building Opportunities; (iii) Compendium of Academically-Accredited Biosafety Courses; and (iv) Capacity-Building Needs and Priorities

Directory of International Organizations involved in Biosafety Activities
Follow this link to access information about international organisations involved in activities

Specific information heads can be accessed from the left-hand menu, from the drop-down menu of the Finding Information link on the BCH navigation bar. After selecting the appropriate category, the searched item screen will appear. From this search screen, a search for a record can be conducted using free text terms, or by using the special controlled vocabularies (i.e. consistent terms that have been translated into different languages and are used to describe the content of the records). All search pages have a similar and consistent design.



For each category of information on BCH, search mechanisms have been provided for retrieval of information in a user friendly manner. The records of decisions, risk assessments, LMOs, donor and recipient organisms, and DNA sequences are cross referenced in a way that facilitates data retrieval.

The image displays two screenshots of the Biosafety Clearing-House (BCH) website, illustrating search mechanisms for different categories of information.

Top Screenshot: Search for LMOs, Genes or Organisms

This page allows users to search for records related to the LMO Register, the Gene Register, and the Organism Register. The search criteria include:

- Register:** A dropdown menu to select the specific register.
- Type of living modified organism:** A dropdown menu to filter by organism type.
- Type of gene:** A dropdown menu to filter by gene type.
- Type of organism:** A dropdown menu to filter by organism type.
- Date of record:** A dropdown menu to filter by the date of the record.
- Keyword search:** A text input field for entering keywords, with a note: "Enter keywords. Separate words with AND or OR."

Bottom Screenshot: Search for Risk Assessments

This page allows users to search for records related to risk assessments. The search criteria include:

- Country (s):** A dropdown menu to select the country or countries.
- Geographical region(s):** A dropdown menu to select the geographical region(s).
- Type of the risk assessment request:** A dropdown menu to filter by the type of request.
- Type of living modified organism:** A dropdown menu to filter by organism type.
- Scope of the risk assessment:** A dropdown menu to filter by the scope of the assessment.
- Date of record:** A dropdown menu to filter by the date of the record.
- Keyword search:** A text input field for entering keywords, with a note: "Enter keywords. Separate words with AND or OR."



8. COUNTRY PROFILES

Every BCH page provides a quick search facility to obtain country profiles. A drop down menu is provided on the right hand side of the horizontal navigation bar which allows the user to select a country and display a summary of all the records entered in the BCH by that country. The country profiles are divided into 2 sections as follows:

1. Profile information and status which sets out Country, Date of signature, Date of ratification, Date of entry into force, Profile revision, Profile status and Profile last updated on.
2. List of the type of documents registered with hyperlinks to access those records. The number of records for each type of document is indicated as well as the date of last update.

Country Profile

Profile information and status

Country	India
Date of signature	2001-01-23
Date of ratification	2003-03-17
Date of entry into force	2003-09-11
Profile revision	-
Profile status	Published
Profile last updated on	-

Documents

Type of document	Number of records	Date of last update
Biosafety Expert	13	2016-05-21
Capacity Building Needs and Priorities	0	-
Competent National Authority	1	2017-02-03
Country's Decision or any other Communication	5	2012-05-20
Law, Regulation or Guideline	8	2012-01-25
National Database or Website	3	2011-12-26
National Focal Point	2	2016-07-15
News	0	-
Report on Assignment	0	-
Risk Assessment	5	2012-03-20
Reports on Implementation of the Protocol	3	2015-11-10
Total number of records	40	

Notes
A zero value is provided in the column 'Number of records' because this information does not exist for the following



9. ACCESS TO ADDITIONAL INFORMATION

i) As registered user

A registered user account may be created as follows:

1. Click on the Sign Up for a BCH Account link in the top-right corner of any BCH page;
2. Complete the General User Account form; and
3. Click on the Submit request button at the bottom of the page.

The screenshot shows the 'General User Account' registration page on the Biosafety Clearing-House website. The page has a header with the BCH logo and navigation links. The main content area is titled 'General User Account' and contains a form with the following fields:

- Name: Title, First name, Last name
- Job Title
- Department
- Organization
- Address
- City
- Country
- State/Province
- Zip/Postal code
- Phone
- Fax
- Email address
- Time Zone
- Language
- Notes

Within 24 hours, an automatic welcome message containing a password will be received in order to log onto the Management Centre (at <http://bch.cbd.int/managementcentre/>) to create and manage information in the BCH.

General Users may submit all BCH Reference records subject to validation by the Secretariat prior to publication in the BCH.

BCH registered users can log onto the Training Site of the BCH with their regular email address and password.



ii) Training and capacity building materials

A series of BCH Modules comprising of a set of cohesive training subunits are available for learning more about BCH.

- i) An Introduction to the Cartagena Protocol on Biosafety
- ii) An Introduction to the Biosafety Clearing House
- iii) Surfing the BCH Central Portal
- iv) Finding information in the BCH Central Portal
- v) Registering Information in the BCH Central Portal
- vi) Information-sharing Obligations On Becoming a Party to the Protocol

The training subunits are self-contained and are available at http://bch.cbd.int/help/topics/en/webframe.html?Training_Materials.html.

iii) E-learning module on BCH

As part of capacity building project for effective participation in the BCH, UNEP has developed interactive e-learning modules on “Cartagena Protocol on Biosafety” and “Biosafety Clearing-House”. The interactive module on BCH addresses the purpose and functioning of the BCH the various categories of information available on the BCH, and what information Parties are required to post, and when they are required to make this information available on the BCH. The module can be downloaded from <http://bch.cbd.int>.





10. BENEFITS OF USING THE BCH

BCH provides a “one stop shop” where users can reachably access or contribute relevant biosafety related information. Some of the important benefits of using the BCH are:

- Information can be accessed about the national laws, regulations and guidelines of other Parties and information about the decisions and assessments of other countries relating to specific LMOs;
- Registering up-to-date information in the BCH, by parties ensures that all potential exporters of LMOs to their country, or those who wish to transport LMOs across their territory, are aware of their national regulatory requirements;
- Information about capacity-building and other assistance available to support implementation of the Protocol can be accessed.
- Relevant authorities in other countries can quickly find out who to inform in the event of an accidental movement of LMOs into their territory.
- Authentic information is available to all stakeholders at no cost.

Important Contacts:

NATIONAL PROJECT DIRECTOR

Dr Amita Prasad, Additional Secretary

NATIONAL PROJECT COORDINATOR

Shri Gyanesh Bharti, Joint Secretary

**Ministry of Environment, Forest and Climate Change**

Government of India

Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi 110003

Project Coordination Unit**Biotech Consortium India Limited**

Anuvrat Bhawan, 5th Floor, 210 Deen Dayal Upadhyaya Marg, New Delhi- 110002

For further information, please contact at biosafety-mef@nic.in