

BIO SAFETY



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From the Desk of Editor

With 41 Parties, the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress (the Supplementary Protocol) to the Cartagena Protocol on Biosafety entered into force on March 5, 2018. It represents a milestone in the history of the Cartagena Protocol on Biosafety. The Supplementary Protocol provides practical rules to respond to damage resulting from living modified organisms (LMOs) that find their origin in a transboundary movement and gives effect to the polluter pays principle. India is one of the Parties that have ratified the Supplementary Protocol. Capacity building initiatives are expected in future at global level for effective implementation of the Supplementary Protocol.

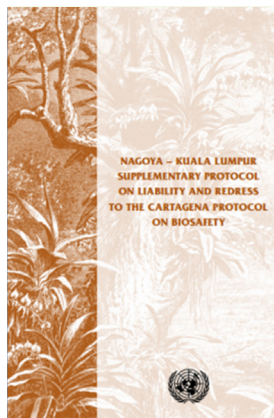


Continuing with the efforts towards outreach to stakeholders, under UNEP/GEF supported Phase II Capacity Building Project on Biosafety, a series of fifteen State level biosafety capacity building workshops have been organized at State Agricultural Universities in 15 States across the country. These workshops have been attended by more than 2000 scientists, agriculture officials, farmers and students. Two additional workshops were also organized for customs and quarantine officials at Goa and Visakhapatnam. Presentations by members of regulatory committees and scientists provided an excellent platform for informing the stakeholders about the current status of biosafety regulations and related issues. We hope these endeavours would lead to dissemination of factual information about biosafety aspects in the country.

Arun Kumar Mehta
Additional Secretary

Ministry of Environment, Forest and Climate Change

The Nagoya – Kuala Lumpur Supplementary Protocol to the Cartagena Protocol on Biosafety Enters into Force



The Nagoya – Kuala Lumpur Supplementary Protocol to the Cartagena Protocol on Biosafety (CPB) has entered into force on March 5, 2018, following the deposition of the 40th instrument of acceptance by Japan on December 5, 2017.

The entry into force of the Supplementary Protocol is a major milestone in the 25 years of the Biodiversity Convention, 15 years of the Biosafety Protocol and represents a major step towards achieving the objectives of the Strategic Plan for the Biosafety Protocol.

The Supplementary Protocol aims to contribute to the conservation and sustainable use of biodiversity by providing international rules and procedures in the field of liability and redress relating to LMOs. It provides essential elements for developing domestic legislations, administrative or judicial rules or procedures relevant to liability and redress. The Supplementary Protocol requires that response measures are taken in the event of damage resulting from living modified organisms or where there is sufficient likelihood that damage will result if timely response measures are not taken.

For more information, please visit bch.cbd.int/protocol/supplementary

Biosafety Capacity Building Workshops at State Agricultural Universities

A series of fifteen Biosafety Capacity Building Workshops at the State Agriculture Universities (SAUs) have been organised by the Ministry of Environment, Forest and Climate Change (MoEFCC), under the UNEP/GEF supported Phase II Capacity Building Project on Biosafety jointly with the SAUs and Biotech Consortium India Limited (BCIL). The fifteen States where the workshops have been organized include Assam, Andhra Pradesh, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

The workshops were aimed at enhancing biosafety

capacity building of the State level functionaries and information dissemination of various knowledge products and project outcomes developed under the Phase II Capacity Building Project on Biosafety. The workshops also provided an interactive platform for sharing of research and developmental activities in the area of agricultural biotechnology in the participating states and in clarifying issues/doubts related to biosafety. The project publications and outreach material were displayed at each workshop for creating awareness. Copies of the Biosafety Resource Kit and Resource Catalogue in English and regional languages have been distributed in each workshop

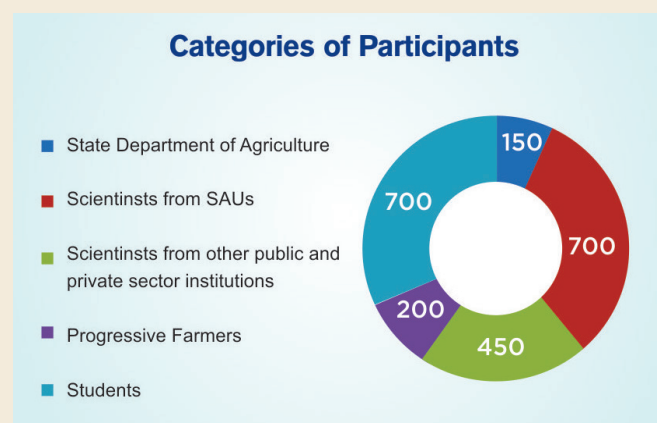
State	Collaborating SAUs	Venue	Date
Gujarat	Anand Agricultural University	Anand	July 13, 2017
Assam	Assam Agricultural University	Jorhat	February 10, 2018
Punjab	Punjab Agricultural University	Ludhiana	February 16, 2018
Karnataka	University of Agricultural Sciences	Dharwad	February 23, 2018
Himachal Pradesh	Dr Y S Parmar University of Horticulture and Forestry	Solan	March 6, 2018
Haryana	Chaudhary Charan Singh Haryana Agricultural University	Hisar	March 14, 2018
Orissa	Orissa University of Agriculture and Technology	Bhubaneswar	March 19, 2018
Tamil Nadu	Tamil Nadu Agriculture University	Coimbatore	March 23, 2018
Chhattisgarh	Indira Gandhi Krishi Vishwavidyalaya	Raipur	March 28, 2018
West Bengal	Bidhan Chandra Krishi Vishwavidyalaya	Kalyani	April 3, 2018
Uttar Pradesh	Narendra Dev University of Agriculture and Technology	Faizabad	April 10, 2018
Maharashtra	Mahatma Phule Krishi Vidyapeeth	Rahuri	April 13, 2018
Madhya Pradesh	Jawaharlal Nehru Krishi Vishwavidyalaya	Jabalpur	April 17, 2018
Andhra Pradesh	Acharya N G Ranga Agricultural University	Tirupati	April 23, 2018
Rajasthan	Maharana Pratap University of Agriculture and Technology	Udaipur	April 27, 2018





More than 2100 participants including officials from the State Department of Agriculture, Vice Chancellors, Deans, Directors, Head of Departments, Faculty members and scientists from the concerned departments such as agriculture biotechnology, plant breeding, genetics, seed science, entomology etc, from respective SAUs, staff from Regional Research Stations (RARS) and Krishi Vigyan Kendras (KVKs), concerned scientists from various other research universities/institutions, industry representatives, progressive farmers and students attended the workshops.

The program of the workshops consisted of two technical sessions followed by discussion in each session. While the first session focused on the biosafety regulatory framework, capacity building initiatives and detection of LMOs, the second session focused on sharing of research and developmental activities in agricultural biotechnology in the States. The demonstration on how to use lateral flow strips for detection of LMOs by



experts was greatly appreciated and also conducted by the participants themselves.

The key resource persons included scientists and experts having vast experience in the area of biosafety regulations and agricultural biotechnology.



Dr K. Veluthambi, Co-Chair, GEAC at Tamil Nadu Agriculture University, Coimbatore

- ### KEY RESOURCE PERSONS
- Chair/Members of apex regulatory committees viz., Review Committee of Genetic Manipulation (RCGM) and Genetic Engineering Appraisals Committee (GEAC);
 - Experts associated with biosafety assessments and capacity building;
 - Experts from GM detection laboratories;
 - Scientists from partnering SAUs of the fifteen states;
 - Representatives from other institutions/universities;
 - Officers from BCIL



Dr B. Sesikeran, Chairman, RCGM, Dr K. M. Bujarbaruah, VC and officials at Assam Agriculture University, Jorhat



Dr S. R. Bhat, Co-Chair (Agriculture), RCGM at Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur



Dr O. P. Govila, Member, GEAC chairing a session at Maharana Pratap University of Agriculture and Technology, Udaipur



Dr Murali Krishna Chimata, Member Secretary, GEAC, Dr Vibha Ahuja, Chief General Manager, BCIL at Regional Agriculture Research Station, Tirupati

List of participating institutions/universities that made presentation in the technical session - II

Bhartiar University, Coimbatore	Indian Institute of Vegetable Research, Varanasi
Bose Institute, Kolkata	Indian Institute of Wheat and Barley Research, Karnal
Central Salt & Marine Chemicals Research Institute, Bhavnagar	Indian Institute of Soybean Research, Indore
Central Potato Research Institute, Shimla	Indian Institute of Technology, Guwahati
CSK Himachal Pradesh Agri. University, Palampur	Indian Institute of Rice Research, Hyderabad
Directorate of Groundnut Research, Junagadh	Indira Gandhi Krishi Vishwavidyalaya, Raipur
Directorate of Weed Science Research, Jabalpur	National Research Institute, Cuttack
Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli	National Research Centre for Banana, Trichy
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola	National Botanical Research Institute, Lucknow
Guru Nanak Dev University, Amritsar	National Agri-Food Biotechnology Institute, Mohali
Junagadh Agricultural University	Rasi Seeds (Pvt.) Ltd, Coimbatore
Institute of Forest Genetics and Tree Breeding, Coimbatore	Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Indore
Indian Institute of Sugarcane Research, Lucknow	Sugarcane Breeding Institute, Coimbatore
Indian Institute of Pulses Research, Lucknow	



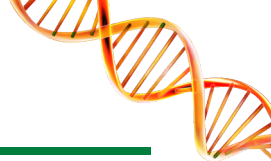
Dr B. Dinesh Kumar, Head of Department (Drug and Toxicology), National Institute of Nutrition and Dr Ajit Dua, Chief Executive Officer, PBTI at Dr Y.S. Parmar University of Horticulture and Forestry, Solan



L to R: Shri. Anup Kumar Srivastava (IFS), Secretary Dept, of Agri&Biotech, Govt of Chhattisgarh; Dr. (Col). Sanjay.K. Patil, VC, Shri Sunil Kumar Kujur, IAS, Additional Chief Secretary and Agriculture Production Commissioner, Govt. of Chhattisgarh. Dr S J Rahman, Member, RCGM, Dr K.C Bansal, Former Director, NBPGP and officials at Indira Gandhi Krishi Vishwavidyalaya, Raipur



Demonstration of lateral flow strips for detection of LMOs/ GMOs



Training Workshops on Strengthening Enforcement Capacities for Trans Boundary Movement of Living Modified Organisms

In continuation to the various training workshops for strengthening the enforcement capacities for trans boundary movement of living modified organisms (LMOs), two additional workshops have been organised at Goa and Visakhapatnam on April 12-13, 2018 and April 19-20, 2018 respectively. These workshops have been organised jointly by the Ministry of Environment, Forest and Climate Change and National Bureau of Plant Genetic Resources (NBPGR) with support from the UNEP/GEF supported Phase II Capacity Building Project on Biosafety. The two day workshops at Goa and Visakhapatnam have been organised by MoEFCC and NBPGR in association with the National Academy of Customs, Excise & Narcotics (NACEN), Mumbai and Customs House, Marmagao, Goa and the National Academy of Customs, Indirect Taxes & Narcotics (NACIN), Visakhapatnam respectively.

The training workshops apprised the participants about LMOs, National and International Framework on biosafety, role of customs officials in the implementation of Cartagena Protocol on Biosafety, National Plant Quarantine System, Documentation Requirements for transboundary movement of LMOs, Sampling Strategy for LMOs, use of Biosafety Clearing House and detection

techniques used for LMOs (immunodiagnosics and PCR-based). The live demonstration of detection of LMOs through use of a simple, efficient and accurate technique i.e, lateral flow strip test for detection of Cry1Ac in Bt cotton seeds was also given to the participants.

1. Training Workshop at Customs House, Marmagao, Goa

Shri R. Manohar, Commissioner, Customs House, Marmagao, Goa inaugurated the two day training workshop at Goa. It was attended by 39 officials including officials from customs and plant quarantine departments.

The workshop faculty included Dr. Murali Krishna, Joint Director, MoEFCC and Member Secretary, Genetic Engineering Appraisal Committee (GEAC) and team of scientists from NBPGR viz., Dr. S. C. Dubey, Principal Scientist & Head, Division of Plant Quarantine, Dr. G. J. Randhawa, Principal Scientist & OIC, Division of Genomic Resources, Dr. V. Celia Chalam, Principal Scientist and Dr. Shashi Bhalla, Former Principal Scientist. A visit to the Goa Port was also undertaken as part of the training workshop.



Faculty and Participants of Training Workshop at Training Workshop at Marmagao, Goa during April 12-13, 2018

2. Training Workshop at NACIN, Visakhapatnam, Andhra Pradesh

Shri. Y. S. Shahrawat, Chief Commissioner of Customs & Central Taxes, Visakhapatnam Zone inaugurated the two day training workshop at Visakhapatnam. Shri B.A.V. Srinivasa Rao, Additional Director General, NACIN, Visakhapatnam gave an address to the participants of the workshop in the inaugural. The training workshop was attended by 29 custom and plant quarantine officials.

The workshop faculty included Dr Murali Krishna, Joint Director, MoEFCC and Member Secretary, Genetic Engineering Appraisal Committee (GEAC), Dr. P. Jaya Krishna, DNA Fingerprinting and Transgenic Crops Monitoring Laboratory (DFTCM Lab), Guntur, Andhra Pradesh and team of scientists from NBPGR viz., Dr. S. C. Dubey, Principal Scientist & Head, Division of Plant Quarantine, Dr. G. J. Randhawa, Principal Scientist & OIC, Division of Genomic Resources, Dr. V. Celia Chalam, Principal Scientist and Dr. Shashi Bhalla, Former Principal Scientist. A visit to Visakhapatnam Port was also undertaken.



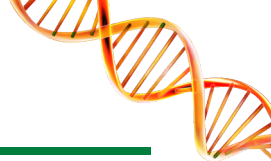
Faculty and Participants of Training Workshop at NACIN, Visakhapatnam on April 19-20, 2018



Training Workshop on Strengthening Capacities of Enforcement Agencies (Plant Quarantine and Customs Officials) for Transboundary Movement of LMOs on April 12-13, 2018 at Customs House, Marmagao, Goa



Training Workshop on Strengthening Capacities of Enforcement Agencies (Plant Quarantine and Customs Officials) for Transboundary Movement of LMOs on April 19-20, 2018 at NACIN, Visakhapatnam, A.P.



Meetings Related to the Convention on Biological Diversity and its Protocols

The fourteenth meeting of the Conference of Parties (COP 14) to the Convention on Biological Diversity (CBD), ninth meeting of the Conference of Parties serving as the meeting of Parties (COP-MOP9) to the Cartagena Protocol on Biosafety (CPB) and the third meeting of the Conference of Parties serving as the meeting of Parties (COP-MOP3) to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their utilization are scheduled to be held from November 17-29, 2018 at Sharm El Sheikh, Egypt.

The UN Biodiversity Conference is the governing body of the CBD and advances implementation of the CBD and its Protocols through decisions it takes during these periodic meetings of the COP and COP-MOPs. The theme of the UN Biodiversity Convention for 2018 is “Investing in Biodiversity for People and Planet”.



The provisional agenda and the annotations to the agenda of the three meetings viz., COP 14, COP-MOP 9 and COP-MOP 3 are now available at <https://www.cbd.int/conferences/2018>

Forthcoming Meetings By SCBD: Issues Related to Biosafety

The important meetings related to CBD and its protocols are scheduled in July 2018. These include 22nd meeting of Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) from July 2-7, 2018 and 2nd meeting of Subsidiary Body on Implementation from July 9-13, 2018 to be held at Montreal, Canada.

The SBSTTA is an open ended intergovernmental scientific advisory body established under the Article 25 of the CBD that provides scientific advice to CBD and facilitates its implementation. The recommendations made by the SBSTTA are generally endorsed by the governing body of the CBD at its meetings i.e. the meetings of the COP as it comprises of the government representatives competent in the relevant fields of expertise. Additionally, the SBSTTA also serves to the COP-MOPs of the both Protocols of CBD viz., the Cartagena Protocol on Biosafety and Nagoya Protocol on Access and Benefit Sharing as per the Article 30 and Article 27 respectively.

Accordingly, the SBSTTA at its 22nd meeting has included

two biosafety related issues i.e., risk assessment and risk management of LMOs and synthetic biology as its agenda items. The information needs and priorities for further guidance on specific topics of risk assessment of LMOs and the work of the Ad Hoc Technical Expert Group (AHTEG) on Synthetic biology would be considered.

Also the AHTEG on Review of Implementation of the CBD was replaced with a Subsidiary Body on Implementation (SBI) as per decision XII/25 taken at the COP 13 in 2016 to serve the CBD and its two Protocols. The 2nd meeting of the SBI includes cross cutting issues under the CBD and its protocols such as capacity building, financial mechanisms and resource mobilization towards enhancing integration related to biosafety.

Further details about meetings of the 22nd SBSTTA meeting and the 2nd SBI meeting can be accessed at <https://www.cbd.int/sbstta/preparation/default.shtml> and <https://www.cbd.int/meetings/SBI-02>

Release of Biosafety Documents on the International Biodiversity Day, 2018



The International Biodiversity Day (IBD) is celebrated annually on May 22nd. The theme of the IBD, 2018 was “Celebrating 25 years of action on biodiversity” to mark the 25th year of the CBD coming into force. The national level celebrations of the IBD, 2018 were held in Hyderabad, one of the cities that had the privilege of hosting eleventh Conference of Parties to the CBD and related meetings. The celebrations were organized by the Ministry of Environment, Forest and Climate Change, Government of India and National Biodiversity Authority (NBA) in association with UNDP and Telangana State Biodiversity Board.

The event was inaugurated by Andhra Pradesh and Telangana Governor Shri E.S.L. Narasimhan. Shri Jogu Ramanna, Minister of Environment, Telangana, senior officials from MoEFCC, NBA, Ministry of Agriculture, Telangana State Biodiversity Board and UNDP shared their views in the inaugural session. More than 1,000 participants including representatives of State Biodiversity Boards and Biodiversity Management Committees participated in the event and the concurrent exhibition.

Several publications related to the implementation of the CBD and its two protocols viz. Nagoya Protocol on Access and Benefit Sharing and Cartagena Protocol on Biosafety were released on International Biodiversity Day. The following publications related to biosafety were also released

1. **Implementation of the Cartagena Protocol on Biosafety:** Sharing India's Experience: The Cartagena Protocol on Biosafety requires Parties to report on status of their compliance through submission of national reports on regular intervals. India has so far submitted four such reports in 2005 (interim), 2007 (first), 2011 (second) and 2015 (third), in line with the requirements and formats

specified and prepared in consultation with relevant stakeholders such as policy makers, industries, scientists, researchers, etc. These reports are in questionnaire format. With a view to enhance ease in understanding, this document has been prepared to present the information contained in India's national reports in a narrative format for enhancing public awareness about these issues and international commitments.

2. **Biosafety Resource Kit:** Updated 2018: Biosafety Resource Kit consisting of five brochures on key issues related to genetically engineered (GE) plants was prepared in 2015 by MoEFCC in association with Biotech Consortium India Limited under the Phase II Capacity Building Project on Biosafety. The kit consists of five brochures to provide basic information on frequently asked questions, confined field trials, regulatory framework in India, Cartagena Protocol on Biosafety, and useful information/databases on safety assessment. The kit has been translated into eight languages viz. Hindi, Marathi, Gujarati, Punjabi, Bengali, Tamil, Telugu and Kannada and widely distributed across the country. An updated version of the Biosafety Resource Kit has been prepared for circulation among relevant stakeholders.
3. **Biosafety Capacity Building Workshops at State Agriculture Universities:** MoEFCC supported the organization 15 states level capacity building workshop in state agricultural universities (SAUs) under the Phase II Capacity Building Project. The workshops were organized during 2018 jointly by SAUs and BCIL. More than 2000 participants attended the events and appreciated the initiative. A brochure on the key features and outcomes of these workshops has been prepared for sharing information and enhancing public awareness.



Mainstreaming Biosafety: A New Course On Biodiversity E-Learning Platform

With the adoption of the Nagoya Kuala Lumpur Supplementary Protocol on Liability and Redress to the CPB, a new course on “Mainstreaming Biosafety”, has been made available on the Biodiversity E-learning platform that provides a one-stop access to e-modules and courses relating to the Convention on Biological Diversity, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-sharing.

The courses include presentations, case studies, exercises and evaluation through quiz's. On successful completion, participants can download a certificate of completion. The course has two modules on relevant topics.

1. Mainstreaming biosafety into NBSAPs and National Sectoral and cross sectoral legislation, policies and institutional frameworks includes the concept of biosafety mainstreaming and its application in practice. It introduces modern biotechnology and



BIODIVERSITY E-LEARNING PLATFORM

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CBD Website English (en) +

Welcome to the Biodiversity e-Learning Platform. The platform provides a one-stop access to e-modules and courses relating to the Convention on Biological Diversity, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access and Benefit-sharing.



Biosafety

View courses

biosafety and address issues such as why biosafety mainstreaming is important and how biosafety can be mainstreamed into national legislations, policies and institutional frameworks.

2. A toolkit on mainstreaming biosafety provides practical guidance for mainstreaming biosafety through introducing the concept of biosafety mainstreaming and its applications and guides.

The two modules are accessible at <http://scbd.unsccc.org/course/>

Program of Work on Public Awareness, Education and Participation Concerning LMOs: Online Discussion Forum

The Article 23 of Cartagena Protocol on Biosafety (CPB) requires Parties to promote and facilitate public awareness, education and participation concerning the safe transfer, handling and use of LMOs. A comprehensive Program of Work on Public Awareness, Education and Participation concerning LMOs was adopted at COP-MOP5 is under implementation. The CBD Secretariat has also now established an 'Online Forum' to facilitate exchange of information and experiences on the implementation of the program of work.

In this regard, an online forum has been scheduled from March 15 - April 5, 2018 by the CBD Secretariat with an objective to have discussion on the following themes related to “Biosafety Awareness”

Theme 1: Messages and communication channels for the celebration of the 15th anniversary of the entry into force of the Cartagena Protocol on Biosafety and beyond (March 15 to March 22, 2018)

Theme 2: Collaboration for the Future: Mobilizing partnerships and funding for awareness, and

Theme 3: Follow-up to the program of work on public



awareness, education and participation (March 23 to April 5, 2018)

The discussion are specifically expected to facilitate the implementation of the priority areas 2 and 4 on building joint initiatives and communicating biosafety to empower wider audience. The outcomes of the discussion will be made available at the tenth meeting of COP-MOP in November, 2018. The Online Forum is accessible at http://bch.cbd.int/onlineconferences/portal_art23/pa_forum.shtml



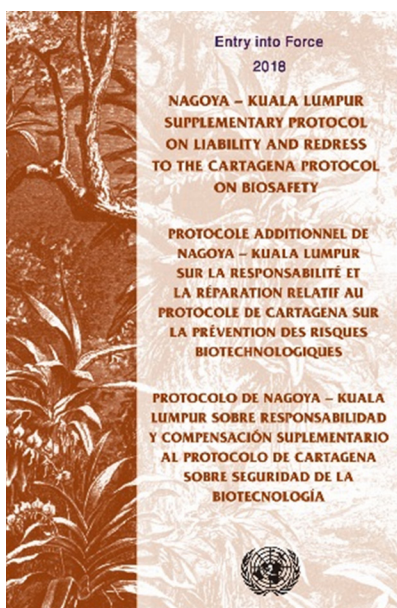
Resources on the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress

A number of resources are available on the Biosafety Clearing House (BCH) to create awareness about the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress. These

include presentations and documents prepared by the Secretariat for capacity building workshops, factsheet, poster and exercises.

Since 2011, CBD Secretariat have organized a series of workshops at regional level to raise awareness and understanding about the objective and provisions of the Supplementary Protocol and to identify needs and requirements by Parties to the CPB with a view to expedite implementation of the Supplementary Protocol. The workshop materials included presentations on key features of the Supplementary Protocol, basic concepts of liability and redress, strategic plan, national reporting and possible capacity building needs.

The Secretariat has also developed a poster and a fact sheet materials to support Parties in carrying out national activities towards ratification and implementation of the Supplementary Protocol. An e-module is under development. The five hypothetical cases have been developed to further understanding of the scope and provisions of the Supplementary Protocol. They have also been used for discussion in capacity-building workshops.



All the resources can be accessed at https://bch.cbd.int/protocol/supplementary/NKL_workshops.shtml#tab=1

The Nagoya—Kuala Lumpur Supplementary Protocol on Liability and Redress

What is the Supplementary Protocol?

During the negotiations of the Cartagena Protocol on Biosafety, the issue of liability and redress for damage resulting from transboundary movements of living modified organisms was key for a number of countries. As a result, Article 27 of the Protocol mandated the negotiation of rules and procedures on liability and redress, which led to the adoption of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress on 15 October 2010.

The Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress entered into force on 5 March 2018 as a legally-binding international instrument. Currently, there are 41 Parties to the Supplementary Protocol.

The Supplementary Protocol provides that Parties must require operators to take response measures in the event of damage resulting from living modified organisms which find their origin in a transboundary movement. Such measures must also be taken where there is a sufficient likelihood that damage will result if timely response measures are not taken. Parties may develop further civil liability rules in this regard.

Response measures are any reasonable actions to prevent, minimize, contain, mitigate or otherwise avoid damage or measures to restore biological diversity. The Supplementary Protocol defines damage as adverse effect on the conservation and sustainable use of biological diversity that is measurable or otherwise observable and significant, taking also into account risks to human health.

In addition to imposing a requirement for response measures, the Supplementary Protocol seeks that Parties continue to apply existing legislation on civil liability or develop specific legislation concerning liability and redress for material or personal damage associated with damage as defined in the Supplementary Protocol.

UN environment <http://bch.cbd.int/protocol/supplementary>

Why become a Party to the Supplementary Protocol?

The Supplementary Protocol allows Parties to respond in a practical way to damage resulting from living modified organisms. In the event of damage, or sufficient likelihood that damage will occur, Parties to the Supplementary Protocol can require the person in direct or indirect control of the living modified organism (the operator) to take response measures. Parties can also take such response measures through a competent authority and recover the expenses from the operator.

Becoming a Party to the Supplementary Protocol creates an enabling environment for addressing and preventing adverse effects of living modified organisms on biological diversity and human health while allowing Parties to derive maximum benefit from the potential that the technology has to offer.

Becoming a Party to the Supplementary Protocol also creates an incentive for operators to safely transfer, handle and use living modified organisms and thus contributes to the objective of the Cartagena Protocol.

The Supplementary Protocol can serve to give effect to the polluter pays principle, where States channel responsibility for response measures to those in control of the living modified organism that causes the damage.

Response measures foreseen under the Supplementary Protocol can be determined by an administrative authority and do not require the intervention of a judicial body. This administrative approach provides for flexibility, which may contribute to a larger practical effect at the national level.

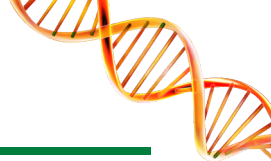
Fast Facts

The Nagoya—Kuala Lumpur Supplementary Protocol:	The Nagoya—Kuala Lumpur Supplementary Protocol:
Entered into force on 5 March 2018.	Takes its name from the city of Nagoya, where it was adopted, and from the city of Kuala Lumpur where several negotiation sessions were held.
Was adopted on 15 October 2010 by the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety, at its fifth meeting, in Nagoya, Japan.	Is the first international treaty that provides for a definition of 'damage' to biodiversity.

Learn More

Liability and Redress, <http://bch.cbd.int/protocol/supplementary/>
 The text of the Supplementary Protocol http://bch.cbd.int/protocol/NKL_text.shtml

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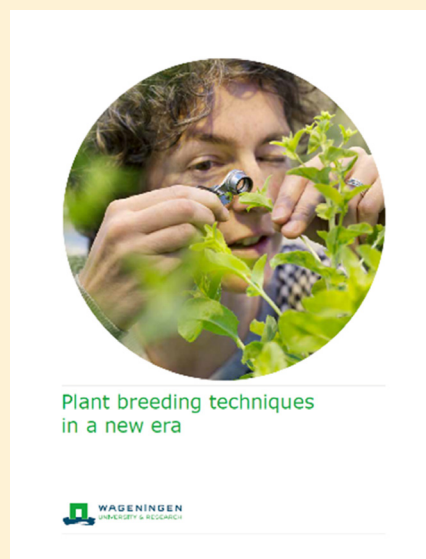


Plant Breeding Techniques in a New Era

A booklet titled “Plant Breeding Techniques in a New Era” has recently been released by the Wageningen University & Research, Netherlands. It is based on the outcomes of research work funded by the Dutch Ministry of Agriculture, Nature and Food Quality.

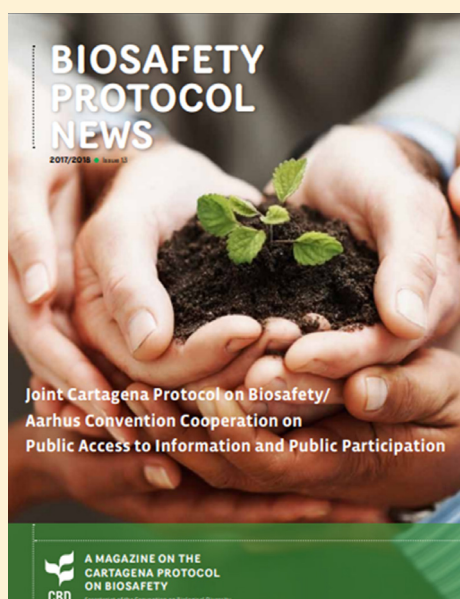
The booklet takes a look at the potential of new scientific developments being made using the new plant breeding techniques (NPBTs) to assist plant breeders for producing healthy and sustainable food. It specifically describes about three NPBTs, namely cisgenesis, induced early flowering and genome editing along with examples.

The books states that plants derived from NPBTs are expected to have a positive consumer perception as studies have shown that newer technologies that are more natural are perceived as less risky and have more market acceptability. Since NPBTs use genetic modification only as a tool during the breeding process and no foreign DNA is present in the new variety produced, it is similar to the natural crop except that the breeding period has been reduced.



Further information can be accessed at <https://www.wur.nl/en/newsarticle/Concise-booklet-on-new-plant-breeding-techniques-published.htm>

Biosafety Protocol Newsletter Issue 13 2017/2018



The 2017 – 2018 issue of the Biosafety Protocol News is focussed on joint activities under the Aarhus Convention and the Cartagena Protocol on Biosafety. It marks both the celebration of the twentieth anniversary of the adoption of the Aarhus Convention, hosted by the United Nations Economic Commission for Europe, and ten years of collaboration between the secretariats of the Aarhus Convention and the Convention on Biological Diversity.

The joint activities carried out under the Aarhus Convention and the Cartagena Protocol assist countries include conducting online fora and capacity-building meetings, and developing e-learning modules and guidance materials.

Biosafety Protocol News, 2017-2018 includes contributions prepared by focal points of both instruments confirming that the collaboration between the two instruments is essential for promoting transparency and public participation in decision-making processes regarding LMOs/GMOs

Upcoming Events

Title	Organized/hosted by	Date and Venue	Website
National			
Consortium meeting on breeding for resistance to tospovirus & begomoviruses in vegetable crops	ICAR- Indian Institute of Horticultural Research	June 26, 2018, Bangalore	
New Innovations in Improvement of Vegetable Crops	Dr. Y.S. Parmar University of Horticulture & Forestry	September 5-25, 2018, Nauni-Solan	http://www.yspuniversity.ac.in/trainings/Caft_Brochure_2018.pdf
5 th International Conference on Biotechnology Engineering (ICBioE)	Department of Biotechnology Engineering (BTE) and International Islamic University Malaysia (IIUM)	September 19-20, 2018, Kuala Lumpur	http://www.iium.edu.my/icbioe/2018/
13 th Asian Maize Conference and Expert Consultation on "Maize for Food, Feed, Nutrition and Environmental Security"	Indian Council of Agricultural Research	October 8-10, 2018, Ludhiana	https://www.icar.org.in/sites/default/files/SECOND%20CIRCULAR%20--%2013th%20Asian%20Maize%20Conference%20%28Oct%208-10%2C%202018%29.pdf
2 nd National Biotechnology Conclave	Confederation of Indian Industry (CII)	November 30, 2018, New Delhi	http://www.cii.in/Events.aspx
XIV Agricultural Science Congress – Innovation for Agricultural Transformation	National Academy of Agricultural Sciences and ICAR-Indian Agricultural Research Institute	February 20-23, 2019, New Delhi	http://www.14agricongress2019.in and http://www.iari.res.in/files/Latest-News/14ASCFirstCircular_19042018.pdf
International			
International Conference on Agriculture and Allied Sciences: The Productivity, Food Security and Ecology	Bidhan Chandra Krishi Viswavidyalaya	August 13-14, 2018, Kalyani	https://www.bckv.edu.in/announcement.php
The 3 rd International Agriculture Innovation Conference (IAIC 2018)	International Association for Agricultural Sustainability	October 12-13, 2018, Beijing, China	http://iaic2018.iaas.org.sg/
5 th International Rice Congress	International Rice Research Institute	October 14-17, 2018, Singapore	http://ricecongress2018.irri.org/
Ninth meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety (CP COP-MOP-9)	Convention on Biological Diversity	November 10 – 22, 2018, Sharm El-Sheikh, Egypt	http://bch.cbd.int/protocol/meetings/
Second International Conference on Nanobiotechnology for Agriculture	The Energy and Resources Institute	December 6-7, 2018, New Delhi	http://www.teriin.org/event/second-international-conference-nanobiotechnology-agriculture
13 th International Conference on Dryland Development "Converting Dryland Areas from Grey into Green"	International Dryland Development Commission (IDDC) Arid Zone Research of India, Jodhpur and Central Arid Zone Research Institute	February 11-14, 2019, Jodhpur	http://www.13icdd.com/

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Disclaimer: The information in this newsletter has been compiled from various sources and does not necessarily depict views of the Ministry of Environment, Forest and Climate Change, Government of India.