

BIO SAFETY



A Quarterly
Newsletter

Newsletter

From the Desk of Editor



It gives me immense pleasure to share that India has ratified the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress on December 19, 2014 becoming the 28th country to do so. We need 12 more ratification to achieve the magic figure of 40 for the Supplementary Protocol to enter into force. The Supplementary Protocol would further the objective of implementing the Cartagena Protocol on Biosafety in a balanced manner and to accrue benefits arising from sound application of biotechnology with minimal risk to the environment and human health.

At the heart of every developmental activity is a well communicated solid science that has the potential to bridge the gap between production of new knowledge and the application of that knowledge through practice or policy. Communication about GMOs/LMOs has been extremely challenging in view of the ongoing debates and concerns across the world. In an innovative and highly technical subject like genetic engineering, it has become imperative for the scientists and regulators to interact and provide factual information in a language that is easily understood by all stakeholders.

While many scientists/regulators may have communication skills appropriate to their own specialist areas, communicating effectively in high-concern or high-stress situations requires a different set of communication skills. In this respect two workshops have already been organized by MOEF&CC in association with International Food Information Council Foundation Indian Institute of Mass Communication and Biotech Consortium India Limited.

In terms of implementation, our capacity building initiatives have so far focused on technical areas like safety assessment, conduct of field trials, regulatory capacity building etc. However, I am pleased to note that relatively new areas, including risk communication are gaining momentum and have gained a strong focus in our activities. As part of the ongoing UNEP-GEF supported capacity building project on biosafety, MoEF&CC is actively engaging in development of communication strategies and training of scientists, regulators, media and other stakeholders.

Hem Pande

Additional Secretary

Ministry of Environment, Forests and Climate Change

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Report of the seventh meeting of the Conference of Parties serving as the Meeting of Parties (COP-MOP) to the Cartagena Protocol on Biosafety

The final report of the seventh meeting of COP-MOP 7 held in Pyeongchang, Republic of Korea from September 29 to October 3 is now available at the website <http://www.cbd.int/doc/meetings/bs/mop-07/official/mop-07-16-en.pdf>. Decisions adopted in the COP-MOP 7 are elaborated in the report.

The Secretariat has also provided a summary of decisions that call for direct action by Parties and other governments and dates for submission of information to the Secretariat during the intersessional period and prior to next COP-MOP at Los Cabos, Mexico in December 2016.

Format for the third National Report on implementation to be submitted six months prior to next COP-MOP may be viewed at

REGIONAL AND SUB-REGIONAL CAPACITY-BUILDING WORKSHOPS on Mainstreaming Biosafety into National Biodiversity Strategies and Action Plans and Resource Mobilization

Pursuant to decision taken at the "Special session on mainstreaming biosafety into National Biodiversity Strategies and Action Plans" during COPMOP7, the Secretariat of the Convention on Biological Diversity (SCBD) is organizing a series of regional and sub-regional capacity building workshops on Mainstreaming Biosafety into National Biodiversity Strategies and Action Plans and Resource Mobilization. So far four such meetings have been notified/organized by SCBD.

- Asia Region - Ulaanbaatar, Mongolia – 9-13 February 2015
- Caribbean Sub-region - Bridgetown, Barbados – 1-5 December 2014
- Latin America Sub-region - Montevideo, Uruguay – 8-12 December 2014
- West Asia and North Africa Sub-region - Dubai, United Arab Emirates, 16 – 20 November 2014

The goal of these workshops is to enhance the capacity of Parties to advance the implementation of the Cartagena Protocol on Biosafety and its Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress by effectively integrating biosafety into NBSAPs and national development plans, in line with the Strategic Plan for the Protocol and the relevant Aichi Biodiversity Targets. It also aims to increase the capacity of Parties to the identify and mobilize sufficient and predictable resources for the implementation of the Protocol and facilitate public awareness, education and participation concerning the safe transfer, handling and use of living modified organisms (LMOs). The workshops are also expected to enable participants to identify opportunities and means to foster regional cooperation.

Communication Workshops on Agricultural Biotechnology

The Ministry of Environment, Forests and Climate Change (MoEF&CC), Government of India in collaboration with the International Food Information Council (IFIC) Foundation, USA, Indian Institute of Mass Communication (IIMC) and Biotech Consortium India Limited (BCIL), New Delhi organized two communication workshopstitled "Communication on Agricultural Biotechnology" and "Invitational Media Workshop on Communicating Food Science and Agricultural Biotechnology" held on November 19 and 20, 2014 respectively.

The objective of these workshops was to improve public understanding of science based communications in agricultural biotechnology and addressed policy makers, members of the regulatory committees, scientists and media practitioners. The opening remarks were given

byShri Hem Pande, Additional Secretary, MoEF&CC who voiced his appreciation forthe joint efforts made by all the four agencies for organizing such workshops and highlighting the important topic of communication in agricultural biotechnology.

Presentations were given by the distinguished international/national faculty/speakers, Ms Kimberly Reed, Executive Director and Mr Andrew Benson, Vice President, IFIC Foundation; Dr Alan McHughen, Biotechnology Specialist Professor, Department of Botany and Plant Sciences, University of California and Dr Timothy Sellnow & Dr Deanne Sellnow, Professor, College of Communications & Information Studies, University of Kentuckyand Dr RabindraNathPadaria, Senior Scientist, Division of Agricultural Extension, Indian Agricultural Research Institute (IARI)on the following:

Topics of presentations made in the communication workshops

Workshop on Communication on Agricultural Biotechnology

- Current Status of Agricultural Biotechnology in Key Regions
- Measuring and Developing Public Understanding
- Key Misconceptions, Barriers and Opportunities comforting wider acceptance of Agricultural Biotechnology in India
- Impact Of Biotech Crops in Developing Countries
- Insights from experience with farmers in India
- About Consumer Attitudinal Research
- Using the Communicator's Guide to Improve Public Understanding

- Using the guide: Key messages, Key terminology and Key questions
- Working with Conventional Media and Social Media
- Involving Public and Private sector: Engaging Locally and Globally
- Optimizing Access to Credible On-line Resources

Invitational Media Workshop on Communicating Food Science and Agricultural Biotechnology

- Defining the Challenges of Communicating Food Science through Media
- How to Interpret Scientific Studies and Food Safety Evaluations



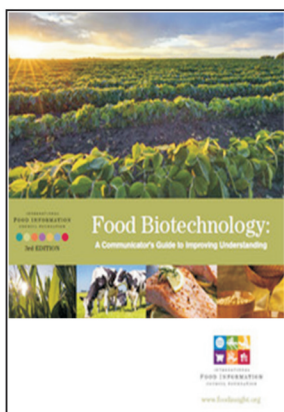
- Biotechnology Overview - Fact and Fiction: Whose View is Right
- Insights from experience with farmers in India
- Responding to the Interests and Concerns of the Public: the IDEA Model
- Value of Consumer Attitudinal Research
- Guidelines for Communicating Emerging Sciences on Food Safety Nutrition



The IFIC foundation also circulated guidance documents entitled "Food Biotechnology: A Communicator's Guide to Improving Understanding" to the participants of the communication workshop on November 19, 2014 and "Improving Public Understanding Guidelines: for Communicating Emerging Science on Nutrition, Food Safety and Health" to the participants of the Invitational Media Workshop on November 20, 2014.



Food Biotechnology: A Communicator's Guide to Improving Understanding

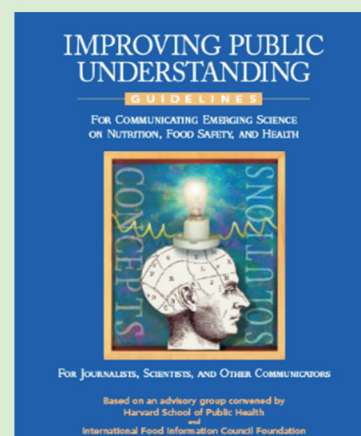


The 3rd edition of the comprehensive resource titled "Food Biotechnology: A Communicator's Guide to Improving Understanding", was first published by IFIC Foundation in 2013 and subsequently updated in October, 2014. The Communicator's guide provides key facts and resources on food biotechnology to help tailor messages that can be used by communicators in food,

agricultural, nutrition and health communities. It covers seven chapters on developing messages along with the supporting points for debate, examples of words to be used and words not to be used for potential impact on certain groups/stakeholders, preparation of presentations, media interviews and any other dialogue on food biotechnology. It also provides examples of presentation handouts such as facts about food biotechnology and illustrates examples of how to answer questions that are commonly asked with respect to environmental risks and health effects. The guide also contains a chapter on interacting with media towards improving public understanding. A copy of the above is available at the IFIC Foundation website at <http://www.foodinsight.org/>

Improving Public Understanding: Guidelines for Communicating Emerging Science on Nutrition, Food Safety and Health

'Improving Public Understanding: Guidelines for Communicating Emerging Sciences on Nutrition, Food Safety and Health' is based on an advisory group convened by Harvard School of Public Health and IFIC Foundation. As communication is one of the several key



variables needed to create an enabling environment for biotechnology, this publication provides separate detailed guidelines for all parties/stakeholders involved in the communication process viz. scientists, journal editors, journalists, industry representatives, consumers and also other interest groups. In addition it lists various publications, articles, newsletters and online resource links for further reading/reference. A copy of the above is available at IFIC Foundation website at <http://www.foodinsight.org/>

Technical Training at the Office of the Gene Technology Regulator (OGTR), Australia

As a part of the ongoing Phase II Capacity Building Project on Biosafety, a technical training program was organized from Dec 1-5, 2014 at the office of the Gene Technology Regulator (OGTR), Canberra, Australia. The agenda for the technical training program was designed to facilitate information exchange on the administrative and technical aspects and draw on the experiences of the Australian regulatory framework/system that is in place for over a decade. The programme was aimed at further strengthening the Indian regulatory framework/system as well as to facilitate better implementation of the activities under the thrust area "Risk Assessment and Risk Management", of the ongoing Phase II Capacity Building Project on Biosafety.

The core activities of the five day tour comprised of presentations and discussions on an array of topics including the Australian legislations, operation of national schemes, OGTR's role and operations, expert advisory committees supporting OGTR functioning, administrative systems for handling and processing applications for contained use, environmental release etc, risk analyses and decision making, risk communication methods/approaches, post authorization activities, monitoring and compliance. Other related Australian regulatory agencies including the Food Standard Australia New Zealand (FSANZ), Department of Agriculture Biosecurity Group actively participated in the training and presented on systems and procedures being followed by their agencies. The Indian delegation also visited the Australian Pesticides & Veterinary Medicines Authority (APVMA), Commonwealth

Scientific and Industrial Research Organization (CSIRO) and Therapeutic Goods Administration for a discussion and sharing of information. Additionally, in view of the interest expressed by the OGTR team, Dr Ranjini Warriar and Dr S R Rao presented on the Indian regulatory framework and approaches followed in safety assessment of GMOs in India.

The OGTR has a robust, independent and most transparent regulatory system for GMOs. Every year, the OGTR reviews several applications for field trials and commercial release and subsequently prepares and places for public review a risk assessment and risk management plan for each application. The consultation process is extensive, science based and permissions are granted with adequate inbuilt mechanisms for enforcement of conditions. For more specific information readers may like to view -----

---ADD WEBSITE

The team of regulators and policymakers that participated in the training programme consisted of Dr. S. R. Rao, Advisor, Department of Biotechnology, Dr. Pranjib Chakrabarty, Assistant Director General, Plant Protection (Biosafety Unit), Indian Council of Agriculture Research (ICAR), Mr. R K Mishra, Additional Commissioner (Seeds), Department of Agriculture & Cooperation, Dr. Surinder S Banga, ICAR, National Professor, Department of Plant Breeding & Genetics, -----, Dr Ranjini Warriar, Director, MoEF&CC and Member Secretary, GEAC and Dr B. Sesikeran, Chairman, RCGM and Former Director, National Institute of Nutrition,



To add picture of the delegation at OGTR

NEW RELEASES

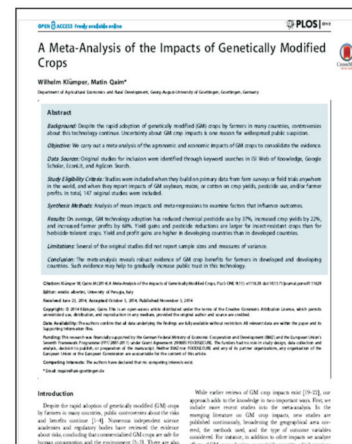
Meta Analysis of the Impacts of Genetically Modified Crops

A Meta-analysis of the agronomic and economic impacts of Genetically Modified (GM) crops was published in PLOS one by Wilhelm Kluemper and Martin Qaim from the Department of Agricultural Economics and Rural Development, Georg-August-University, Goettingen, Germany.. This study was financially supported by the German Federal Ministry of Economic Cooperation & Development and the European Union's Seventh Framework Program and chiefly analyzed various publications on GM from its commercial adoption in mid 1990's till date. The study summarizes findings from 157 original studies that have been published between 1995-2014 and includes the most important GM crops including herbicide tolerant soybean, maize and cotton as well as the insect resistant maize and cotton. The study analyzed several factors that influenced the outcomes, such as geographic location, modified crop trait and type of data and methods that have been used in the original studies.

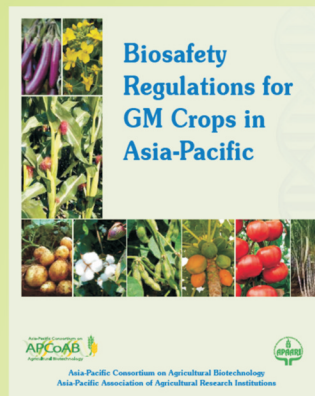
The report concludes that GM technology has reduced chemical pesticide usage by 37%, increased crop yields by

22% and increased farmer profits by 68%. The yield gains and pesticides reductions are larger for insect resistance crops than for the herbicide resistant crops. The farmer profit gains are found to be higher in developing countries than in developed countries. This study also reports that adoption of GM technology is especially helpful for small farmers in developing countries.

A copy of this study is available at <http://www.plosone.org/article/doi/10.1371/journal.pone.0111629> and <http://www.plosone.org/article/doi/10.1371/journal.pone.0111629>



Biosafety Regulations for GM Crops in Asia-Specific



The Asia-Pacific Association of Agricultural Research Institutions (APAARI) through its program on biotechnology namely, the Asia-Pacific Consortium of Agricultural Biotechnology (APCoAB), has been promoting better understanding and much needed confidence among all stakeholders for development of agriculture sector in the region. Expert meetings on biotechnology and biosafety held during the past several years have highlighted the need to compile information on biosafety regulations of all countries to have better understanding. Accordingly, APCoAB had brought out in 2008 a publication namely, "Biosafety Regulations of Asia-Pacific Countries", which included biosafety regulations of 39 countries. The document was widely appreciated for providing authentic information on biosafety regulatory systems and related aspects in different countries.

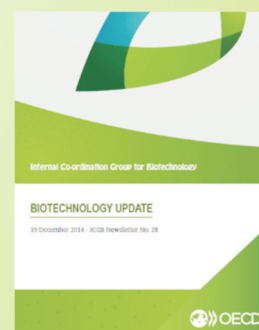
Over the past six years since its publication, new developments have taken place in a number of Asia-Pacific countries with respect to framing and implementation of biosafety regulations and other related areas. Besides, new scientific knowledge and tools have been developed that address some of the safety concerns related to GM products.

"Biosafety Regulations for GM Crops in Asia-Pacific", a revised, rewritten and updated version of the previous book lists and gives brief details of the regulatory instruments comprising laws/ acts/ decrees/ regulations/rules related to biosafety of products of biotechnology for agriculture and food existing in 48 countries of Asia and the Pacific. Original sources of country information have been included to enable access to more details, if desired. Besides, new chapters on risk analysis case studies and trade related issues have been added. Such information resources are expected to facilitate better understanding and efforts towards regional and sub-regional cooperation in GM technology application for product development and exchange

Biotechnology Update, ICGB Newsletter No. 28 has been released by Organisation for Economic Co-operation and Development (OECD) in December 2014. This issue of the newsletter has up-to-date information on ongoing activities and programmes related to biotechnology at the OECD.

These include:

- Harmonisation of Regulatory Oversight in Biotechnology
- Safety of Novel Foods and Feeds
- The OECD - World Bank - CERA Partnership for Biosafety Risk Assessment and Regulation
- Biotrack Online



Upcoming Events

Title	Organized/hosted by	Date & Venue	Website
National Events			
Second International Conference on Bio-Resource and Stress Management	Prof Jayashankar, Telangana State Agricultural University and Acharya N.G. Ranga Agricultural University	January 7-10, 2015 Hyderabad	http://www.angrau.ac.in/hlfiles/2014/oct/Brochure-ICBSM-2015_05092014_2100_with_RC.pdf
BioAsia 2015	Federation of Asian Biotech Associations, Pharmaceuticals Export Promotion Council of India and Government of Telangana	February 2-4, 2015 Hyderabad	www.2015.bioasia.in
Indian Seed Congress 2015	National Seed Association of India	February 13-15, 2015 Agra	http://nsai.co.in/isc/
5th International Conference on Next Generation Genomics and Integrated Breeding for Crop Improvement	ICRISAT	February 18-20, 2015 Patancheru	http://ceg.icrisat.org/v-nggibci/
International			
Asia Regional Capacity-Building Workshop on Mainstreaming Biosafety into National Biodiversity Strategies and Action Plans and Resource Mobilization	Convention on Biology Diversity	February 9-13, 2015 Ulaanbaatar, Mongolia	http://www.cbd.int/doc/notifications/2014/ntf-2014-139-bs-en.pdf?download
Theoretical and Practical Course "Molecular Plant Breeding for Crop Improvement"	Agricultural Genetic Engineering Research Institute - AGERI, Giza, Egypt	March 8 - 19, 2015 Giza, Egypt	http://www.icgeb.org/meetings-2015.html

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