



Capacity-building interventions in biosafety: Key practices of the ICGEB Biosafety Group

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Key messages

The ICGEB Biosafety Group implements project activities in an integrated, synergistic manner, resulting in greater impacts than the total of each individually. Emphasis is also given to continually updating capacity building efforts and support such that they remain pertinent and state-of-the-art.

Main ICGEB Biosafety Capacity-building activities

The International Centre for Genetic Engineering and Biotechnology (ICGEB) is an intergovernmental organization in the United Nations System. In 1997, ICGEB established its Biosafety Group to act as a scientific reference point for its Member States that have ratified the Convention on Biological Diversity and, in particular, the Cartagena Protocol on Biosafety concerning the transboundary movement of genetically modified organisms (GMOs).



"[...] The Group has achieved competence in African regulators through organizing and funding a wide spectrum of capacity-building programs [...] [which] have left a landmark of public trust and reliability on African regulators." Aligwekwe Blessing U. (BCH Focal Point, National Biosafety Management Agency, Nigeria).

"Overall, the experience provided by the ICGEB Biosafety Group helped me go to the next level in biosafety. My knowledge has expanded. I received bodies of information on new and upcoming biosafety developments [...]." Barry Innocent (Ministry of Agriculture, Food Production, Fisheries, Cooperatives and Rural Development, Saint Lucia).



"The provision of technical assistance by the ICGEB Biosafety Group to the Regional Biosafety Project [...] enabled us to make significant headway in the achievement of key project outputs [...]. This support [...] laid the groundwork for countries in the Caribbean to move one step closer to full implementation of the Cartagena Protocol on Biosafety." Michelle Johns (UNEP/GEF Biosafety Regional Project for Implementing National Biosafety Frameworks in the Caribbean sub-region).

"The ICGEB Biosafety Group has contributed quietly but enormously to capacity building in the field of GMO biosafety [...] whilst maintaining [sic] a strict scientific and non-partisan approach [...]." Martin Lema (Ministerio de Agroindustria, Argentina).

The role of the ICGEB Biosafety Group is principally to assist countries in their capacity to identify, regulate, manage and monitor products derived from modern biotechnology within their jurisdiction. Activities focus on directly supporting the establishment of national biosafety regulatory systems and offices, and assisting the development and execution of essential administrative and technical procedures. Examples of key capacity-building practices and feedback from Country partners are described below.

Exchanges in regulatory working experience

The Biosafety Group organises visits for Project countries, especially African and Caribbean biosafety regulators and scientific experts, to long-standing, highly experienced regulatory offices in order to gain on-site experience and learn directly from peers all aspects of GMO regulation.



"In-country visits by biosafety experts [...] in the premises of the National Biosafety Agency (ANB) in Ouagadougou have been very useful for training newly recruited staff. They also helped a lot in improving our expertise and confidence in the field of biosafety regulation by bridging both knowledge and procedural gaps." Oumar Traoré (Agence Nationale de Biosécurité, Burkina Faso).



Such opportunities have included regulatory placements in the GMO regulatory offices of Argentina, Australia, Canada and Uganda. Reciprocally, the Biosafety Group organises for experienced staff from some of these regulatory offices to be embedded for short periods at the institutions of their Project country colleagues in order to provide local assistance in improving regulatory effectiveness. During these latter visits, the current regulatory system is analysed, needs are identified and prioritised, and decision-making tools and processes developed in close partnership with the National Biosafety Regulatory Authorities.

Biosafety mentored fora



Regulators, National Competent Authorities, scientific advisors and inspectors in Project countries attend 3-5 day mentored fora, in order to enhance their capacity to effectively contribute to GMO decision-making. The well-established interactive format combines training with the empowerment of local officials so that they are able to design and implement key regulatory activities. Regulatory areas covered include: Drafting legislation and regulations, Regulatory Administrative Tool and Guidance Development, Containment and Confinement Management (incl. inspection and compliance), Risk Assessment approaches regarding the Environment and Health, Risk Communication, etc.

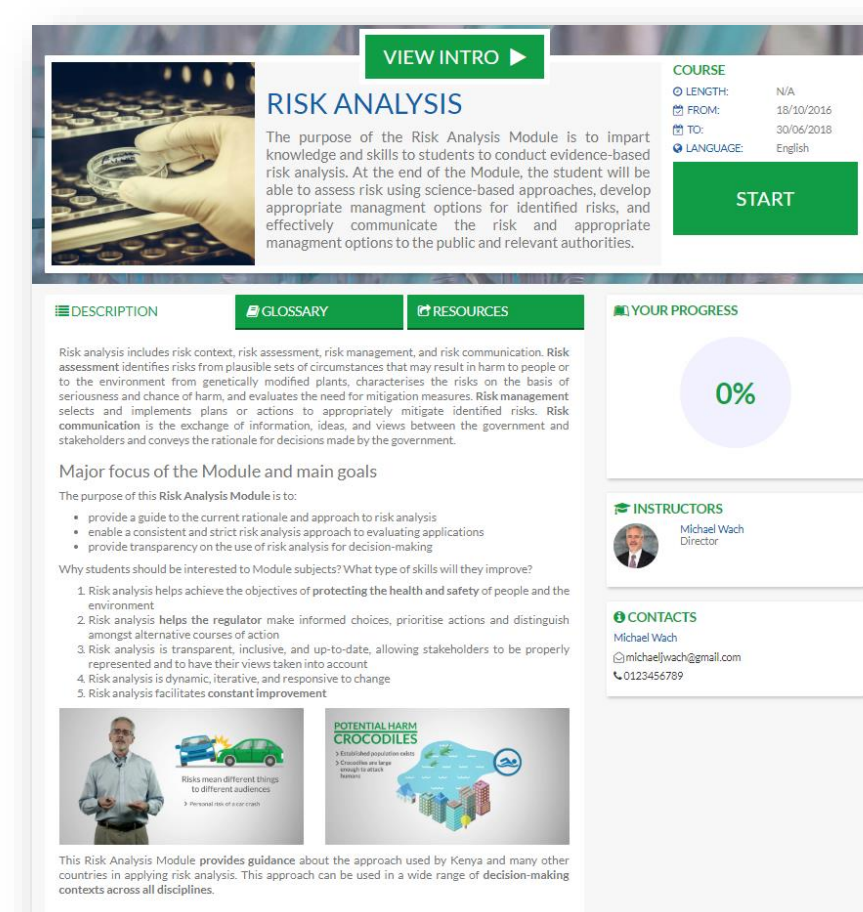
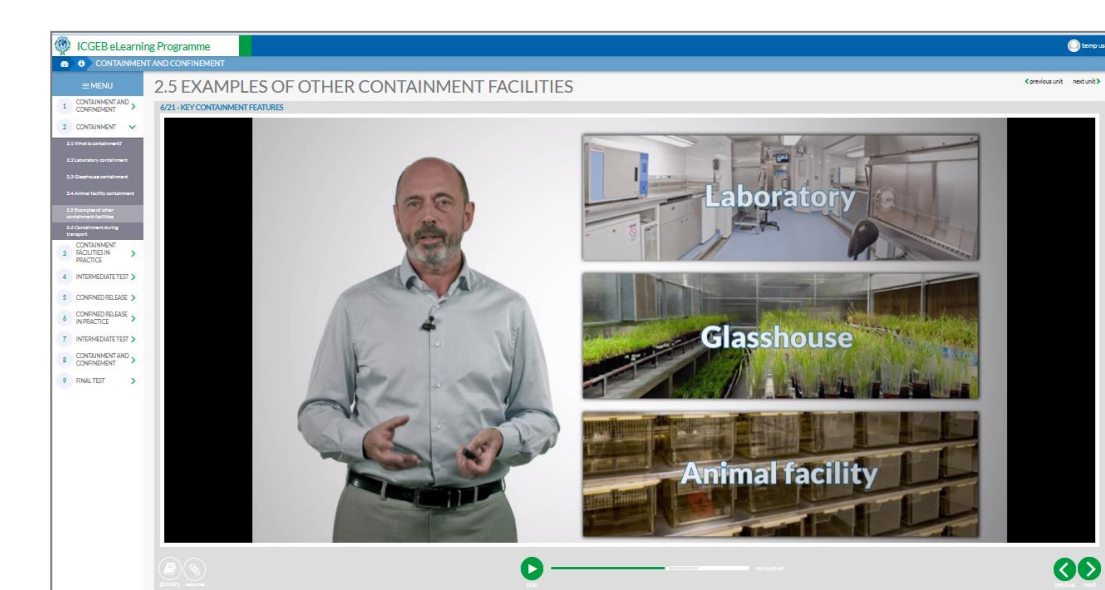
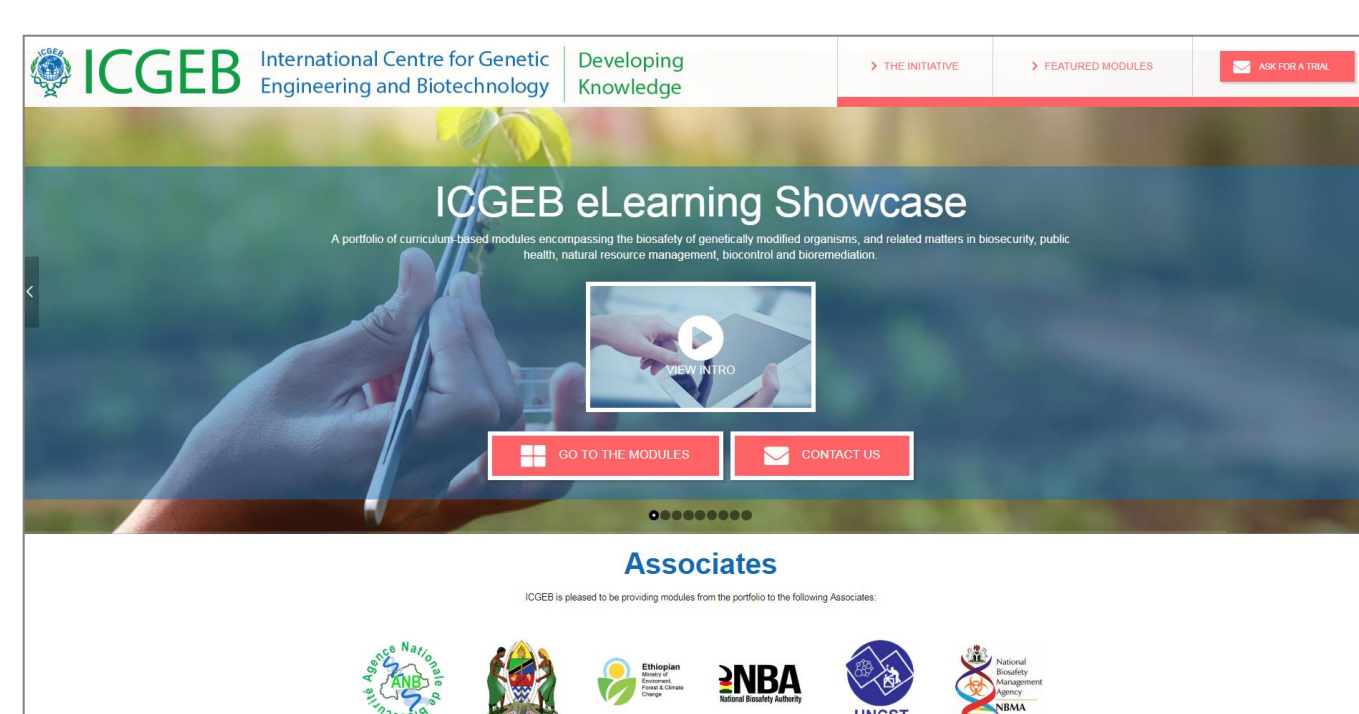
Other fora have focused on anticipating regulatory needs concerning applications of specific GM crops likely to be submitted to the regulatory authorities in the near future, and testing the degree of regulatory preparedness. In all of these activities, novice GMO regulators are trained in model approaches and tools in the regulation of GMOs, and are mentored in tailoring these to national circumstances.



Online eLearning portfolio

(<https://showcase-icgeb.elearning.it/>)

The Biosafety Group also offers a portfolio of online eLearning modules that is available for use by regulatory authorities and universities worldwide. The portfolio encompasses curriculum-based modules on topics related to biosafety of GMOs such as biosafety and biosecurity, biosafety regulatory frameworks, risk analysis, assessments of both environmental risk and food safety, containment and confinement, and socio economic considerations. In fact, the blended learning experience incorporates new teaching methods and approaches for technology-assisted education in the developing world.



"My regulatory exchange visit to CONABIA, Argentina, under the support of ICGEB empowered me, with the requisite knowledge in biosafety regulation, most profoundly, the risk analysis of GMOs. [...] Recently there was a launch of an online training course in biosafety with Uganda being one of the beneficiaries [...]." Musa Kwehangana (Uganda National Council for Science and Technology, Uganda).

The portfolio is hosted on the cloud and delivered online, globally, continuously, at low cost, and on an as-needed basis to multiple audiences. eLearning modules are peer-reviewed and endorsed by eminent biosafety and biotechnology stakeholders.