

## CONCLUSIONS AND THE WAY FORWARD

**Overall, the projects have achieved their objectives. Enhanced skills have enabled the regulatory agencies to be of greater technical and advisory assistance to national biosafety committees and other competent authorities, and foster more effective collaboration on biosafety among the relevant authorities, including ministries with different perspectives and competencies on biotechnology applications. This was mainly achieved through the involvement of relevant stakeholders from different areas and disciplines in project preparation and execution and facilitation of dialogue.**

**T**he projects have also created strong and purposeful links between regulatory agencies and advanced biotechnology laboratories in universities and regional centres of excellence, as well as consolidated biotechnology networks at national, regional and international level. Networks and information platforms are considered crucial to enable SSC among regulatory agencies, and to promote self-sustained efforts in biosafety activities in the future.

The following conclusions can be drawn from the experience gained so far:

- FAO's commitment to biosafety and biosecurity has to be seen within its wider mandate to eradicate hunger and reduce poverty in developing countries and economies in transition. Such a mandate is not thematic, but requires a coordinated



approach among and within different sectors of activity, as well as intergovernmental and interagency collaboration. With recent statistics showing an increase in the number of a worldwide hungry population, currently estimated at 1 020 million, FAO is actively committed to promoting the sustainable intensification of agriculture to revert such a trend, helping to raise levels of nutrition by regular access to sufficient high-quality food, modernizing and increasing agricultural productivity through simple, sustainable tools and techniques, improving lives of rural populations and contributing to the growth of the world economy.

- Biosecurity covers three main sectors: food safety; plant life and health; animal life and health. The *biosafety within biosecurity approach*, encompassing all policy and regulatory frameworks to manage biological risks associated with food and agriculture (including relevant environmental risks), is necessary to protect: 1) agricultural production systems, agricultural producers and their associated interests; 2) human health and consumer confidence in agricultural products; and 3) the environment.
- With a view to conserving crop genetic diversity for long-term food security and ensuring access to quality products which are safe, useful and relevant, FAO has increasingly integrated environmental considerations into agricultural issues.

Among others, FAO has fully integrated the ecosystem approach to management of land, water and living resources at local, national and regional levels into its action and planning. "There are already sectors and governments that have developed guidelines that are partially consistent, complementary or even equivalent to the ecosystem approach – an example of which is the 'Code for Responsible Fisheries.'<sup>16</sup>

<sup>16</sup> Beginners' Guide to using the Ecosystem Approach, <http://www.cbd.int/ecosystem/sourcebook/beginner-guide.shtml>

- FAO's efforts have been concentrated on specific technical issues of relevance to biosafety as it relates to food and agriculture. In this respect, the Organization uses its comparative advantages to complement other agencies' work in:
  - providing specialized scientific and technical training and assistance in many areas associated with biosafety, including those associated with new biotechnologies, nanotechnologies and new applications in organisms, such as aquatic organisms, insects and other animals; and
  - providing appropriate information material, facilitating efforts to develop best management practices for production of GM and non-GM seed, especially for use by the national seed production agencies.
- With an eye towards the future, FAO will not only make use of its technical in-house expertise to meet capacity building needs; in order to mobilize action and respond to country needs, the Organization intends to enhance its role of exchange node to activate and coordinate existing networks of technical expertise.
- FAO only provides capacity building support upon request from Member Governments. These needs depend on country specific conditions and countries are encouraged to identify their own needs, priorities and development objectives. In this respect, biosafety mainstreaming into national development plans and involvement of relevant stakeholders at national level are crucial to the success of any assistance intervention. Currently, at a stage when many countries are moving from drafting to implementing their biosafety frameworks, FAO responds to an increasing number of requests for intensifying efforts and focusing on aspects related to risk analysis (risk assessment, management and communication), GMO detection and post-release monitoring, as well as communication and socio-economic considerations. Specific training tools have been fine-tuned and are in use. Attention will continue to be addressed to creation of on-the-ground capacity.



- National biosafety capacity building needs are increasingly linked to the regional dimension because of shared environmental, human health, animal health and socio-economic issues, as well as political realities. Issues related to safety of modern biotechnology products often go beyond the control of single countries, so that a strong regional, as well as international, collaboration among countries is assuming increasing importance. In this respect, FAO intends to play a leading role in clarifying, elaborating and communicating the scientific basis for regional approaches (both among and within countries) towards biosafety risk analysis. For example, there could be several aspects of the characterization of the transgenic genotypes that might be possibly standardized through regional approaches. Within the environmental context any possible standardization would need to be specific to the type of risk and take into account the environment and the agro-ecosystems present in a region. Such efforts should be treated initially on a purely scientific level, and the geopolitical realities should be considered in time.
- Despite being an active partner of the Biosafety Capacity Building Coordination Mechanism, information on FAO's biosafety/biosecurity activities was fragmented and insufficiently disseminated. The Organization intends to pay more attention to outreach activities and information at different operational levels. This is also necessary to highlight achievements and progress of actions, as well as enhance opportunities for synergies and collaboration among different initiatives.
- FAO is progressively strengthening its collaboration with the GEF based on its comparative advantages. FAO's competitive advantages have been recognized in biodiversity, climate change (bioenergy and adaptation), international waters, land degradation and persistent organic pollutants, and in the cross-cutting themes of sustainable forest management and

integrated chemicals management (GEF Council Meeting, December 2006<sup>17</sup>). The close causal linkages among hunger, poverty and environmental degradation underscore the need for multidimensional approaches towards their reduction and have been important considerations in the development of FAO's strategic and programmatic priorities.

- FAO has mainly relied on its own financial resources to fund biosafety capacity building activities. Other funding sources will be approached, including GEF, and partnering with other agencies further enhanced.
- To date, FAO is engaging in long-term alliances for the benefit of agriculture and the environment with UNEP, the World Bank (WB), the United Nations Development Programme (UNDP), Convention on Biological Diversity (CBD), Asian Development Bank (ADB), as well as with other stakeholders, including NGOs.
- The Expert Consultation held in 2006 also recommended that FAO collaborates with the Organisation for Economic Co-operation and Development (OECD), the International Network of Food Data Systems (INFOODS) and other relevant entities in the development of an international database on the compositional characteristics of food crops for use in a comparative evaluation/risk assessment of GM food crops. Arrangements are being made along these lines.
- The FAO policy to contract preferably experts from FAO's partnership programmes (i.e. TCDC/TCCT<sup>18</sup>) as trainers has proved to be very effective in promoting SSC, expanding biosafety networks among developing countries and countries in transition, and better serving the biosafety technical assistance needs in complex and fragile social, economic and

<sup>17</sup> (GEF/C.31/5 rev.1, 2007, Annex L, [http://thegef.org/uploadedFiles/Projects/Templates\\_and\\_Guidelines/GEF-C-31-5%20rev%201-June%2018-2007.pdf](http://thegef.org/uploadedFiles/Projects/Templates_and_Guidelines/GEF-C-31-5%20rev%201-June%2018-2007.pdf))

<sup>18</sup> Please refer to footnote 8 on page 17



environmental contexts. The biosafety activities will continue to follow this approach.

- FAO is committed to ensure gender balance in any capacity building initiative, including biosafety. This ensures coherence with and commitment to the development cooperation objectives set out in the mandate of the Organization, and the UN in general.
- The Joint FAO/World Health Organization Codex Alimentarius Commission adopted in 2003 texts of direct relevance to biosafety, namely:
  - Principles for the Risk Analysis of Foods Derived from Modern Biotechnology (CAC/GL 44-2003).
  - Guideline for the Conduct of Food Safety Assessment<sup>19</sup> of Foods Derived from Recombinant DNA Plants (CAC/GL 45-2003).
  - Guideline for the Conduct of Food Safety Assessment of Foods Produced using Recombinant-DNA Microorganisms (CAC/GL 46-2003).

Since September 2005, further work has resumed on the elaboration of a guideline for the conduct of food safety assessment of foods derived from recombinant-DNA animals; and on an annex to the Codex Guideline for the Conduct of Food Safety Assessment of Foods Derived from Recombinant-DNA Plants [Codex Alimentarius Commission/Guidelines [CAC/GL 45-2003]] regarding food safety assessment of foods derived from recombinant-DNA plants modified for nutritional or health benefits.

The Codex texts provide guidance for conducting science-based safety assessment of foods derived from biotechnology, which should be consistent with the risk assessment requirements

<sup>19</sup> In the case of the safety of foods and animal feeds derived from biotechnology, most assessments are "safety assessments" rather than risk assessments. This recognizes that the conventional food or feedstuff may have potential risks associated with its consumption, for example phyto-estrogens in plants or residual heavy metal contamination in liver. The outcome of the assessment is to determine whether the food derived from biotechnology is "as safe as" the conventional counterpart. This approach may not be appropriate to foods that have been modified with the intent of making significant changes to the foods' composition.

of the Cartagena Biosafety Protocol, the Application of Sanitary and Phytosanitary Measures (SPS) and the Technical Barriers to Trade (TBT) Agreements. Based on the biosafety within biosecurity approach, FAO encourages that food safety considerations be fully integrated.

