Enhancing human capacities, training and education: Summary report of the ABDC-10 parallel session[1]

- This parallel session, which was organized by the International Centre for Genetic Engineering and Biotechnology (ICGEB), was attended by close to 70 participants and was aimed at addressing some of the most urgent needs for building capacities in agricultural biotechnologies in developing countries, taking stock from past experience and looking into a new perspective determined by a number of scientific, socio-economic and cultural changes that have deeply affected the scientific environment.
- **Dr. Roger Beachy**, National Institute of Food and Agriculture, Department of Agriculture, U.S.A., acted as the facilitator of the session and opened it by providing the audience with some of the issues that in his opinion needed to be addressed, such as the need to educate more young scientists using, wherever feasible, the best tools available. He also emphasized that in the case of the developing world, it is essential that scientists apply the knowledge they acquire to solve the problems affecting their countries and that in the case of agriculture there must be a direct relationship between discovery and its relevant application in the field.
- **Prof. Godelieve Gheysen**, Ghent University, Belgium, provided the audience with a description of the training activities implemented by the Institute of Plant Biology for the Developing World (IPBO), and in particular the e-biosafety training, which was developed in conjunction with the UN Industrial Development Organization (UNIDO). This programme is proving to be very successful, although it now needs some revision to maintain its full attractivity and overcome some challenges faced in the first years of operation.
- **Prof. Idah Sithole-Niang**, University of Zimbabwe, presented the MSc course in biotechnology developed in the last 20 years in her University, as well as the biosafety training activities implemented in collaboration with other regional and international entities, and in particular those developed in partnership with the Program for Biosafety Systems (PBS), with the mission of empowering countries for science-based biosafety.
- **Prof. Jorge Allende**, Universidad de Chile, made a short introduction on the training programmes of his University, and then elaborated on some aspects relevant to the three major changes that, in his opinion, are influencing training of biotechnologists in the second decade of the XXI Century, and namely: a drastic paradigm shift in the science of biology; an important geopolitical change among developing countries; and the increased need in the interaction of science with society.
- **Prof. Sudhir Sopory**, ICGEB, described the training activities being undertaken by the Centre, as well as some of the forefront research being implemented in the ICGEB laboratories, upon which the same training activities are based. He then proposed some models to enable training programmes to tackle the changes, described abroad, at the level of new generations of agricultural biologists and for mid-career scientists, respectively.

[1] This is the summary report of the double parallel session organized by the International Centre for Genetic Engineering and Biotechnology (ICGEB) on the second day of the FAO international technical conference on Agricultural Biotechnologies in Developing Countries (ABDC-10) that took place in Guadalajara, Mexico on 1-4 March 2010 (http://www.fao.org/biotech/abdc/parallel/en).

- The lively discussion that followed the presentations, provided a wide spectrum of considerations and suggestions for future enhancement of capacity building activities and the following were those that were considered as much relevant for future action by national Governments, the FAO and other international and regional organizations:

1. In parallel with the Biosafety Clearing House established by the Convention on Biological Diversity (CBD) secretariat, the FAO should set-up a coordination mechanism that would allow all institutions providing educational training and capacity building in agricultural biotechnology to share their experiences and, possibly, define synergies for future actions (that could also include sharing success stories of governmental programmes aimed at stimulating the enrolment of young students in scientific faculties);
2. In order to respond to society needs, universities and other training institutions should develop educational curricula that would allow future biotechnologists to be conversant on issues that are not directly related to their science, such as entrepreneurship, technology transfer, intellectual property rights, etc, keeping in mind, however, the need of maintaining different specialization, as a scientist needs to remain a scientist. The use of the e-learning methodologies would also prove an asset in this respect.
3. Enhance South-South cooperation initiatives, such as those implemented by some of the “strongest” developing countries, or by the ICGEB, in collaboration with the Academy of Sciences for the Developing World (TWAS) and the UN Educational, Scientific and Cultural Organization (UNESCO), and other potential partners such as the UN Food and Agriculture Organization (FAO), the Consultative Group on International Agricultural Research (CGIAR), as well as regional centers, such as the Inter-American Institute for Cooperation on Agriculture (IICA), to ensure that the collaboration among more proficient countries and scientifically lagging countries will eventually benefit the building of capacities in the latter.