

## **Conservation and sustainable use of genetic resources for food and agriculture: Summary report of the ABDC-10 parallel session<sup>1</sup>**

**Facilitator:** Dave Hoisington, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India

### **Panel Members:**

Tom Payne, International Maize and Wheat Improvement Center (CIMMYT), Mexico;  
William Roca, International Center for Tropical Agriculture (CIAT), Colombia;  
Arthur Mariante, Brazilian Agricultural Research Corporation (EMBRAPA), Brazil;  
Jean-Marcel Ribaut, Generation Challenge Programme (GCP), Mexico.

**Rapporteur:** Kay Simmons, United States Department of Agriculture (USDA), United States of America

**Participants:** approximately 45 from a number of countries

This session with around 45 participants was facilitated by Dave Hoisington, Deputy Director General, ICRISAT, Hyderabad, India. The session started by the facilitator noting that 2010 is the Year of Biodiversity and that safeguarding biodiversity is a recurring theme in the conference, but that it is even more important to better understand and use biodiversity. The first presenter noted that many plant genetic resources are conserved and now biotechnology is helping determine if a crop's gene pool is adequately conserved and how to better access that information. The second presenter on clonally propagated genetic resources reported that biotechnology is revealing new information on potato species diversity and strengthening efforts to conserve farmer (native) genebanks. The third presenter noted that animal genetic resources are under-conserved and diversity is being lost due to the cross-breeding nature of animals. Thus, more conservation of animal semen and in situ conservation of breed animals is needed. The fourth presenter described molecular methods to identify valuable subsets of genetic resources, to develop new diverse genetic resources using wide-hybridization and genomics and to improve the use of genetic resources in crop improvement.

From the presentations it was clear that biotechnology is revealing even more value in conserving genetic resources and providing new tools to use biodiversity. The need now is to build the capacity of scientists/breeders in developing countries to better conserve their unique biodiversity and better access all available genetic resources. Participants, especially from Mexico, reported significant progress in developing a new genebank and in situ conservation. Several recognized that national priorities need to be determined and valuable resources used to conserve unique biodiversity and that genetic resources are in danger of being lost. It was also mentioned that the strategy for conservation and management of those resources might be quite different depending on the purpose. The conservation of species that are in danger of extinction is not the same as the species that have strong potential for large distribution on a regular basis. Participants noted the need to conserve valuable genetic resources beyond plants including fish, animals, breeds, microbes and insects. A few participants suggested that a 'Genetic Treaty' for genetic resources such as fish and other animals is needed, to enhance the use and benefit sharing similar to plant genetic resources. Participants also recognized the need to pay attention to the management of

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<sup>1</sup> This is the summary report of the parallel session organized by the Consultative Group on International Agricultural Research (CGIAR) on the third 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>).

'novel' genetic stocks (e.g., new genetic material produce from wide-hybridization, TILLING [targeting induced local lesions in genomes] etc.). The modality on how best to conserve and distribute these novel genetic resources requires further investigation. Finally, the need for the more advanced genebanks to share methods and technology to better preserve genetic resources in developing country genebanks was noted and the importance of conserving unique biodiversity in all counties recognized.