



# CGRFA Bulletin

## Summary of the Special Event on Food Security and Genetic Diversity

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### THE COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE (CGRFA) SPECIAL EVENT: FOOD SECURITY AND GENETIC DIVERSITY: 16 JANUARY 2015

The Commission on Genetic Resources for Food and Agriculture (CGRFA) organized this event on Friday, 16 January 2015, ahead of its fifteenth session in Rome, Italy. Around 120 participants from government agencies, farmers, the private sector and civil society discussed the contribution of genetic diversity to meeting food security and nutrition objectives, and the global context for related policy making, including the ongoing negotiations of the post-2015 development agenda. They agreed on the need to promote awareness of the value of genetic diversity for food security, and explored implications for biodiversity conservation and sustainable use of genetic resources, which many said should be based on a multi-stakeholder approach that includes the participation of smallholders, small and medium enterprises (SMEs) and the scientific research community.

#### OPENING REMARKS

Moderator Kostas Stamoulis, Food and Agriculture Organization of the UN (FAO), welcomed participants and introduced the event.

Maria-Helena Semedo, FAO, said that while intensive agriculture has previously worked well, it has proven unsustainable. She stressed the need for a paradigm shift to ensure the continuing richness of genetic diversity as a key element in the human capacity to adapt and survive.

Stamoulis noted that 800 million people currently face food insecurity, and addressed the associated societal costs. He stressed that food security and nutrition needs to be part of a broader development strategy, and listed challenges and opportunities for action.

#### SESSION 1: FOOD SECURITY AND NUTRITION IN A GLOBAL CONTEXT

**Current status of genetic diversity and biodiversity considerations in the Sustainable Development Goals (SDGs):** Jomo Kwame Sundaram, FAO, outlined the post-2015 negotiating process, the proposed 17 SDGs and 169 targets. He said the process cannot feasibly monitor all of the currently proposed indicators, recalling that the Millennium Development Goals (MDGs) process had only been able to meaningfully monitor around half of its 40 indicators. Sundaram expressed concern that discussions to take place at the Financing For Development (FFD) summit in Addis Ababa in July 2015 may focus solely on finance and neglect other elements of means of implementation (MOI), such as trade and technology. He urged participants to sustain their efforts toward a sustainable development agenda that will include recognition of genetic resources as necessary to food security and nutrition.

**Food security and nutrition in a multi-stakeholder framework:** Amb. Gerda Verburg, the Netherlands, described the work of the Committee on World Food Security (CFS), which she chairs. She addressed inclusiveness and scientific

evidence as the two pillars of all CFS actions, drawing attention to CFS' orientation toward investing in smallholders, as well as its Principles for Responsible Investment in Agriculture and Food Systems that refer explicitly to genetic resources. She concluded that while debate has often been polarized, it is essential to include all stakeholders in identifying problems, building trust and finding solutions.

**Discussion:** Participants highlighted the role of farmers in conserving and developing genetic resources, noting there are long-standing centers of indigenous diversity, such as in Mali for sorghum and millet. A participant expressed concern that new rules in Bangladesh restrict farmers from playing this role with regard to rice, wheat, potato and jute. Participants discussed Africa's reliance on non-indigenous crops of wheat, maize and rice and the change in consumer tastes favoring these, despite the availability of many indigenous sources of carbohydrates.

#### SESSION 2: GENETIC RESOURCES AND FOOD SECURITY

**CGRFA presentation:** Linda Collette, on behalf of CGRFA Chair Amar Tahiri, presented an overview of the Commission's work, addressing, *inter alia*: the State of the World Reports on Genetic Resources, Global Plans of Action, the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), and the preparation of the first State of the World's Biodiversity for Food and Agriculture report. She highlighted the CGRFA's main challenges as: raising awareness of the value of genetic resources for food and agriculture (GRFA); promoting a two-way integration between GRFA and food security; promoting inter-sectoral dialogue; and fostering implementation of GRFA instruments supporting food security.

**Convention on Biological Diversity (CBD) presentation:** Braulio Dias, Executive Secretary, CBD, stressed that the CBD is "a sustainable development convention" that includes conservation, sustainable use, and benefit-sharing aims. Noting that rules on access and benefit-sharing (ABS) have been controversial, he highlighted the role of the Nagoya Protocol in providing capacity building for all countries to put legal and governance frameworks in place, while other protocols and processes deal with specific areas, such as intellectual property and genetic resources for vaccine development.

On biodiversity and health, he highlighted the CBD's partnership with the WHO on a joint State of the World assessment of the inter-linkages between biodiversity and human health, including nutrition. He stated that genetic diversity should be seen as "the best insurance" for food security.

**Sectoral aspects:** On plant genetic resources for food and agriculture (PGRFA), Stefano Diulgheroff, FAO, underscored that out of 7000 plant species used as food, only 150 have commercial importance. He recommended that *ex situ* collections should represent existing plant diversity to the largest possible extent, and PGRFA diversity should be maintained through direct on-farm utilization as well as breeding programmes.

On animal genetic resources, Irene Hoffmann, FAO, noted that while five domestic animals – cattle, pig, sheep, goat and chicken – present the highest commercial interest, many more

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contribute to food production worldwide. Hoffmann contrasted locally-adapted breeds to high-input introduced species, concluding that there is no simple answer to achieving stability over time in the livestock sector.

On forest genetic resources (FGR), Albert Nikiema, FAO, noted that over 1500 tree species are managed worldwide for food production, and that forests simultaneously enhance and protect ecosystems and landscapes. He highlighted that FGR are essential for the implementation of sustainable agriculture and thus, production options should include an FGR conservation dimension, taking into account their unique environmental services.

On aquatic genetic resources, Devin Bartley, FAO, presented trade-offs inherent in promoting aquaculture, including the reduced nutritional value of consuming farmed fish fillets instead of whole wild-caught fish, and the greater financial and environmental costs of aquaculture. He called for maintaining inland fisheries habitat to ensure genetic diversity and an economic safety net in hard times.

On genetic resources and nutrition, Ruth Charrondiere, FAO, recommended including nutritional objectives in agricultural production and breeding, mentioning indigenous banana varieties that provide up to 200% of the recommended daily allowance of vitamin A, compared with the common Cavendish banana that has almost none.

**Discussion:** A participant questioned whether a narrative that links food security to genetic resources is sufficient, or if it should include trade considerations. Other participants addressed, *inter alia*: the need to harmonize existing treaties and protocols; the role of the private sector in conservation and sustainable use; current polarization of the debate, and the need for evidence-based discussion; the need for greater participation of the poor and marginalized in all debates on food security and agriculture; and the need to address food security from a nutrition perspective.

Dias responded that a common cross-sectoral narrative is necessary, noting the need to work step-by-step with different forums. He underscored that the post-2015 development agenda offers the opportunity to enhance public policy to promote sustainability and also engage the private sector. Noting that some business are sympathetic, but will only act when given the correct policy signals, he highlighted possibilities for awareness raising, starting with topics that make sense for the private sector.

### SESSION 3: SHARING EXPERIENCES

**National perspectives:** Amb. Mary Mubi, Zimbabwe, presented the work of the food and nutrition cluster under ZIM Asset, a national economic plan jointly governed and implemented through a multi-stakeholder process. She noted recent interest in promoting indigenous crops as part of “food baskets” to ensure livelihoods, thus encouraging conservation through utilization.

Shahidur Rashid Bhuiyan, Sher-e-Bangla Agricultural University, Bangladesh, described the cultivation of modern rice varieties that has caused reduction in the variety of indigenous landraces; development of saline-tolerant rice drawing on local landraces containing zinc; a 40% increase in milk, meat and egg production based on introduced varieties; and efforts to promote the black Bengal goat, a hardy indigenous species.

Ibrahim El-Dukheri, Director-General, Agricultural Research Corporation, Sudan, focused on the status of genetic diversity and its relation to food security in his country, as well as on the policy, legal and regulatory frameworks.

Filipe Quissangue, Secretary of State for Food Security, Ministry of Agriculture and Rural Development, Guinea-Bissau, noted that while agriculture in his country is mainly associated with food production, it also includes processing, storage and marketing activities. He highlighted the importance of high-quality seed for combating poverty and food insecurity, adding that farmers with little access to social services and markets often fall into a vicious cycle of poverty and debt.

**Discussion:** A participant proposed exploring the implications of bio-fortification and the role of genetically modified organisms (GMOs) for genetic diversity. Mubi said that coherence and coordination are of paramount importance in fully exploiting available genetic resources. Bhuiyan highlighted that new varieties in Bangladesh have been developed through traditional breeding practices.

**Stakeholder perspectives:** Marciano da Silva, Via Campesina, Brazil, described small farmers as “stewards” of the seed heritage, saying they have been able to rescue some varieties from extinction, and that technical support is needed for further improving varieties and avoiding contamination by transgenic varieties.

Daniel Gad, World Farmers’ Organization, Ethiopia, highlighted current efforts in the on-farm conservation and development of teff, including a ban on seed exports so as to maintain control of this genetic resource.

Frank van Ooijen, FrieslandCampina Institute for Dairy Nutrition, said that “the new business reality” for farmers now includes broader issues of maintaining soil biodiversity and the natural farm environment as the foundation for their business models.

**Discussion:** Participants discussed whether biodiversity conservation measures hurt farmers’ competitiveness in the market. Van Ooijen said large businesses now need to add value to societies where they operate, such as through paying taxes, bringing in knowledge, and investing in local education. Gad noted that Ethiopian farmers and SMEs, including women-owned SMEs, will benefit from the export of teff products, such as teff powder, mixes and baked goods. Silva noted that many traditional foods have sufficient vitamins and minerals, and do not require bio-fortification. He said genetic resource policies should link to related issues, such as deforestation and rural-urban youth migration.

### SESSION 4: THE WAY FORWARD

**Panelists:** Speakers Mubi, Verburg, Dias and Collette all highlighted the importance of introducing a clear, evidence-based narrative. Verburg highlighted the value of the multi-stakeholder approach. Mubi called for a balanced view of all the issues, including as many actors as possible. Dias called for further developing tools, guidelines, indicators, and nutrition content tables, engaging different sectors, stakeholders, processes and forums to better promote the genetic resources agenda. Collette underscored the complexity of the issues and called for an interdisciplinary approach that will help stakeholders better understand each other’s jargon.

Mubi lamented that the silo mentality is still prevalent, and called for practical strategies to incorporate all the issues, placing the individual at the center. Dias highlighted the value of both *ex situ* and *in situ* conservation approaches that have been promoted by the agricultural and the environmental communities respectively.

**Discussion:** Participants discussed elements of a strong narrative on the value of genetic diversity in food security. Mubi encouraged working with those most directly affected.

A participant said farming must be understood as being no longer “an isolated hermit’s mandate,” but rather an integrated business opportunity connected to a large network of participants.

Stamoulis stressed the genetic diversity narrative should be enriched with evidence and stakeholder views.

### CLOSING REMARKS

Semedo summarized the discussion, noting the challenges of a growing world population and increased urbanization. She highlighted the importance of genetic resources for sustainable development, post-2015. She noted the awareness raising challenge and the need for partnerships between the agriculture sector and those involved in maintaining ecosystem services. She called for effective governance systems that will encourage agricultural diversification and promote shared responsibilities among government, farmers and industry.

Semedo closed the special event at 6.30 p.m., extending thanks to the organizers and all participants for their contributions.