



Monday, 12 December 2016 Vol. 200 No. 35

HIGHLIGHTS: 10 DECEMBER 2016

On Saturday, 10 December, the Rio Conventions Pavilion (RCP) convened under two themes. The first theme, Sustainable Food Systems for Biodiversity, Nutrition and Health, was organized by the CBD, International Union of Nutritional Sciences (IUNS), and The Economics of Ecosystems and Biodiversity (TEEB). FAO, UN Environment (UNEP), United Nations University-Institute for the Advanced Study of Sustainability (UNU-IAS) were contributing organizers. Participants explored co-benefits for the environment, biodiversity and health aimed at promoting sustainable and healthy food systems and diets. They discussed successful strategies and made recommendations on the transition towards sustainable and healthy food systems.

The second theme, Linking Public Health and Ecosystem Management: A One Health approach, was organized by EcoHealth Alliance, Group on Earth Observations Biodiversity Observations Network (GEO BON), Future Earth, World Health Organization (WHO), IUCN, and Concordia University. This segment focused on exploring the links between forests and health, including risk factors, planning approaches and preventive measures, and identifying priorities for knowledge products that can be developed under the 2030 Development Agenda.

SUSTAINABLE FOOD SYSTEMS FOR BIODIVERSITY, NUTRITION, AND HEALTH

BIODIVERSITY FOR ACHIEVING CLIMATE SMART FOOD SYSTEMS, NUTRITION, AND HUMAN HEALTH: Cristina Romanelli, CBD, moderated this session.



David Cooper, Deputy Executive Secretary, CBD



Cristina Romanelli, CBD Secretariat

David Cooper, Deputy Executive Secretary, CBD, emphasized that the objectives of the three Rio Conventions and the 2030 Development Agenda cannot be achieved without addressing food and agriculture. Observing that reports from the CBD, IPCC and FAO tell us what needs to be done at the global level, he said the challenge for policy leaders is deciding how to do it. He proposed bottom up implementation in order to protect the rights of people on the ground, and to tap into the creativity of farmers and consumers.

Irene Hoffmann, FAO, discussed the work of the FAO Commission on Genetic Resources for Food and Agriculture, including action plans, indicators that feed into the Aichi Targets and the SDGs, and guidelines on climate change and nutrition. She noted that the first draft of the report 'State of the World's Biodiversity for Food and Agriculture' will be presented in January 2017, and will include new information on wild foods.

Cristina Tirado, IUNS, discussed linkages between biodiversity, food and agricultural systems, nutrition and health. She pointed out that six of the top 11 risk factors driving the global burden of disease are related to diet, and most of these are linked to food systems that promote monoculture and diets rich in energy but poor in nutrients. She discussed the environmental impacts of meat production and linkages with non-communicable diseases. She also noted a push for global dietary indicators for the SDGs.

Salman Hussain, UNEP, highlighted the 'TEEB for Agriculture & Food' (TEEBAgriFood) study, which brings together stakeholders in order to undertake a broad range of

**Salman Hussain, TEEB**

economic evaluation of agricultural systems, practices, products, or policy scenarios against a comprehensive range of impacts and dependencies across the value chain. He noted the need for discourse on health and on the impact of producing food, as part of this analysis.

Balakrishna Piuspati, UNEP, reflected on integrating food, health, and nutrition at the local level in the context of sustainable development. He emphasized that a critical element is minimizing pressure on all systems so that the delivery of food at the local level is more resilient. He added that when discussing food, health, and nutrition, it is important to consider the socioeconomic context influencing behavior on the ground, otherwise, promoting health and food security will be a challenge.

In the ensuing discussion, participants discussed transformational changes, noting they need to go beyond sectors and disciplines; the need to build on experiences and failures observed in high diversity production systems; and the power of social institutions when considering how to prevent nutritional problems. On a question on how to change mindsets related to consumption patterns, Balakrishna noted the need for not only

**Cristina Tirado, International Union of Nutritional Sciences**

scientific evidence but also knowledge and lessons from local communities.

Responding to a question on the coherence of climate change and biodiversity-related policies, Hoffmann underscored that the tradeoff is difficult, noting that the type of foods eaten impacts differently on biodiversity and GHG emissions.

LINKING PUBLIC HEALTH AND ECOSYSTEM MANAGEMENT: A ONE HEALTH APPROACH

Cristina Romanelli, CBD, and Daniel Hougendobler, World Health Organization (WHO), moderated this session. In his introductory remarks, Hougendobler drew attention to the report 'Connecting Global Priorities, Biodiversity and Human Health, Summary of the State of Knowledge Review' and noted how land use changes, particularly deforestation, can lead to the spread of communicable diseases such as malaria and the Zika virus.

Laetitia Navarro, Executive Director, GEO BON, discussed knowledge gaps in biodiversity monitoring, such as the lack of data points in developing countries where biodiversity changes are expected to occur most, absence of reliable data prior to the 1980s, and incomplete information on invertebrate and plant species. She explained the evolution of GEO BON and its core

**Balakrishna Piuspati, UN Environment****Laetitia Navarro, Executive Director, GEO BON**



Carlos Zambrana-Torrelío, EcoHealth Alliance/IUCN

focus on: developing a standard and flexible framework for biodiversity observations, including the development of essential biodiversity variables (EBVs); support for the development of national and thematic BONs; and producing policy-relevant outputs. She stressed the need for solid information on species and their ecosystems in order to produce useful projections on disease vector distribution.

Carlos Zambrana-Torrelío, EcoHealth Alliance/IUCN, presented on tools and initiatives for assessing ecosystem health, noting that land use changes, such as deforestation, are the most important drivers of infectious diseases. On the role of forests, he explained that the prevalence of diseases such as malaria could be attributed to deforestation. He drew attention to the Red List of Ecosystems, developed with IUCN, aimed at assessing the status of global ecosystems.

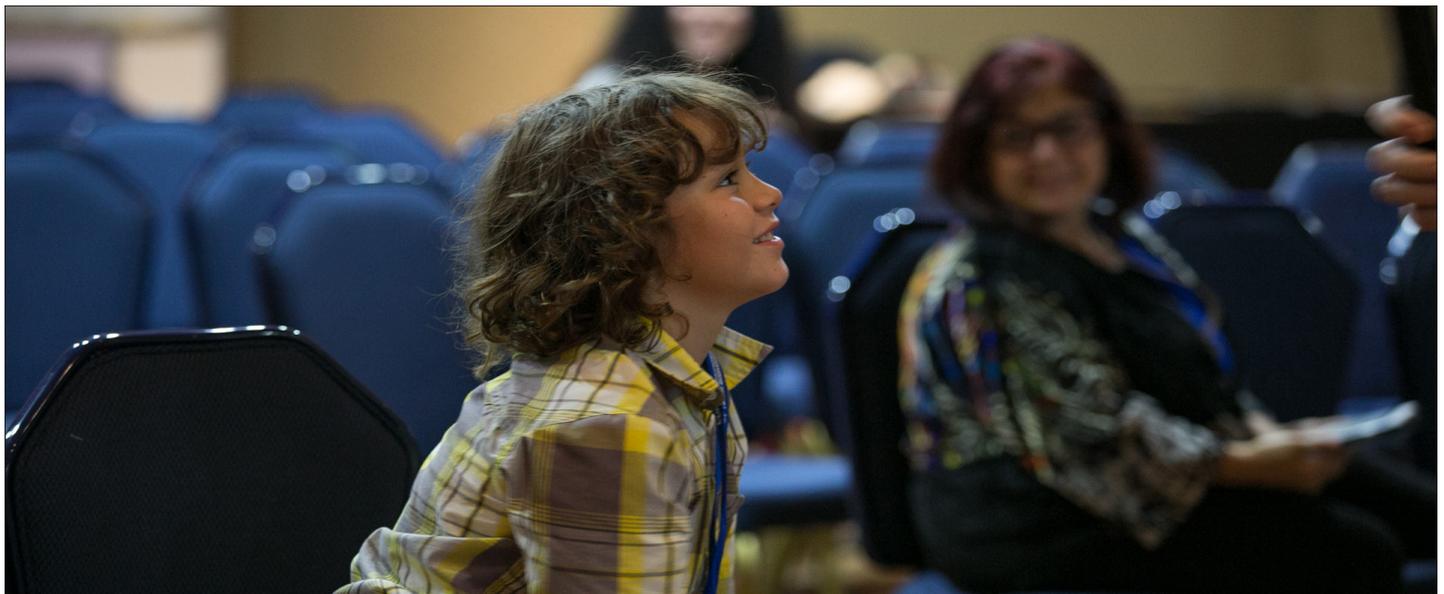
Peter Stoett, Concordia University, Canada, presented on global governance of invasive species, highlighting the impact of invasive alien species, pathogens, illegal and legal wildlife trade, tourism, plastic pollution and the impact of conflicts on



Catherine Machalaba, EcoHealth Alliance

wildlife, ecosystems and human health. He demonstrated how the pine beetle, an invasive species, is destroying forests in British Columbia and Washington State, which is consequently increasing carbon emissions and forest fires, leading to elevated emissions of volatile compounds, which contributes to smog and exacerbates cardiovascular problems. He also underscored the growing problem of pathogens attached to plastic debris in the oceans and impacts on human and wildlife. On solutions, he stressed, *inter alia*, monitoring, encouraging citizen science and improving border controls, in a cross-sectoral and cross-border effort.

Catherine Machalaba, EcoHealth Alliance, Future Earth and IUCN Species Survival Commission, underscored the need to work with all relevant sectors when addressing synergies between biodiversity, climate and health. Amongst other things, she recommended engaging the private sector through the Livestock Global Alliance, which is committed to safer, fairer and more sustainable livestock production.



The youngest participant engages in the discussion