

# **UNCCD CoP12 Side Event**

# The Contribution of Forests and Trees to Food Security in Drylands

Contribution of Forests and Tree-based Systems to Food Security & Nutrition with particular emphasis on drylands

Dr Bhaskar Vira, Director, University of Cambridge Conservation Research Institute & Chair, Global Forest Expert Panel on Forests & Food Security











# **GLOBAL FOREST EXPERT PANELS**

# Forests, Trees and Landscapes for Food Security and Nutrition

A Global Assessment Report (2015)

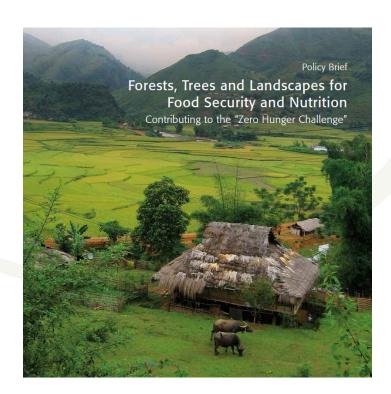
Forests, Trees and Landscapes for Food Security and Nutrition

A Global Assessment Report
Editors: Bhaskar Vira, Christoph Wildburger, Stephanie Mansourian





IUFRO)









Science - Policy Interface

Global Forest Expert Panels

Independent
Interdisciplinary
Peer-reviewed
Scientific
Assessments

UNFF, CBD UNCCD UNFCCC, UN-SDGs

International Policy Processes





# **GLOBAL FOREST EXPERT PANELS**

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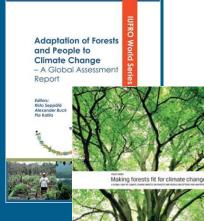








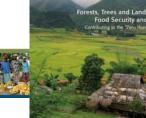
# **GLOBAL FOREST EXPERT PANELS**













Four scientific assessments published so far (climate adaptation, forest governance, REDD+ and biodiversity, forests & food security)

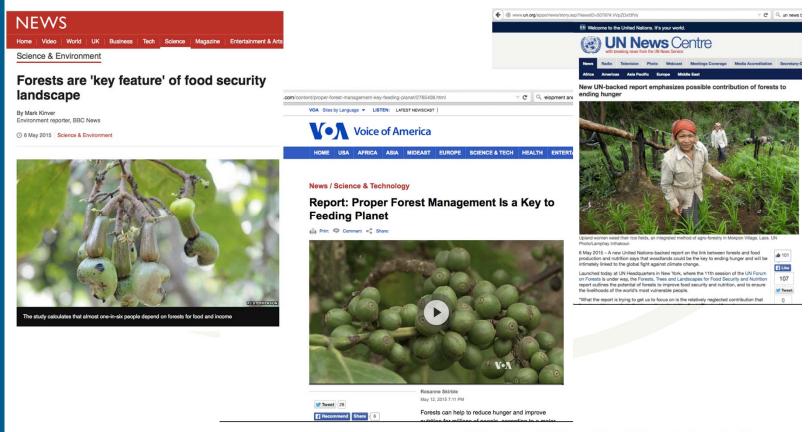
#### International Union of Forest Research Organizations

Union Internationale des Instituts de Recherches Forestières Unión Internacional de Organizaciones de Investigación Forestal Internationaler Verband Forstlicher Forschungsanstalten



# GFEP report on Forests and Food Security

 RELEASED AT THE UNITED NATIONS FORUM ON FORESTS, NEW YORK, 6 MAY 2015





Union Internationale des Instituts de Recherches Forestières

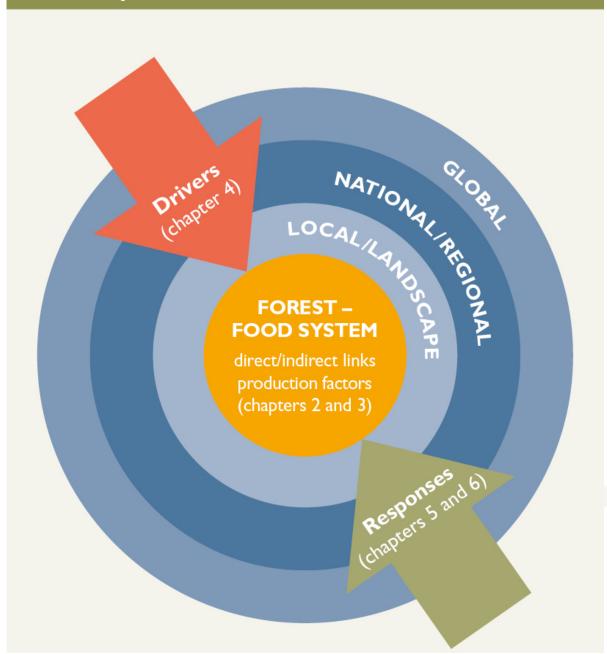
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- GFEP Expert Panel on Forests and Food Security commenced work in early 2014
- Around 60 scientists contributed to development of peer reviewed assessment report
- Assessment of direct and indirect roles of forests, agroforests and trees in food systems
- Role of food production systems across the forestagriculture continuum
- Analysis of environmental, social, economic, political drivers of the forest-food security systems
- Examination of response options across the landscape for food security & nutrition, natural resource conservation and sustainable livelihoods
- Assessment of macro scale response options in relation to drivers of change (role of markets, incentives, governance, public policy)

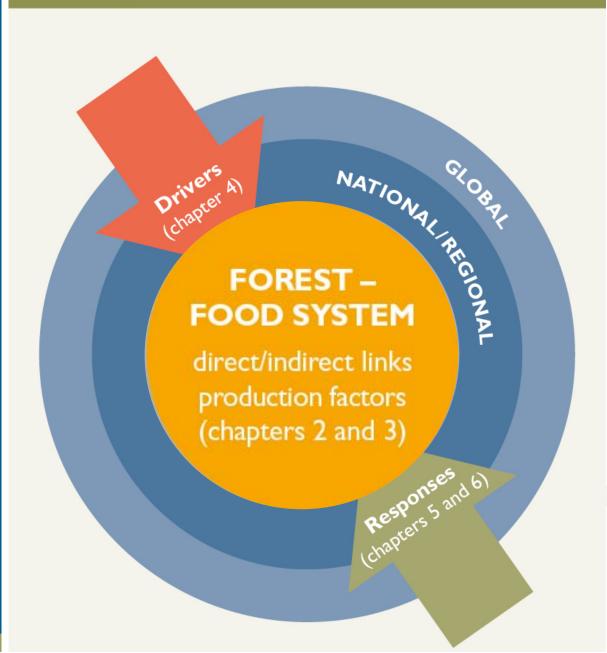






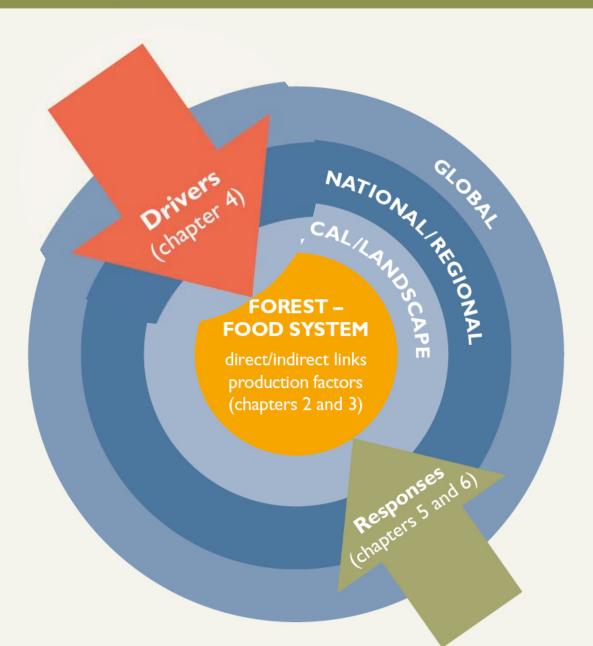






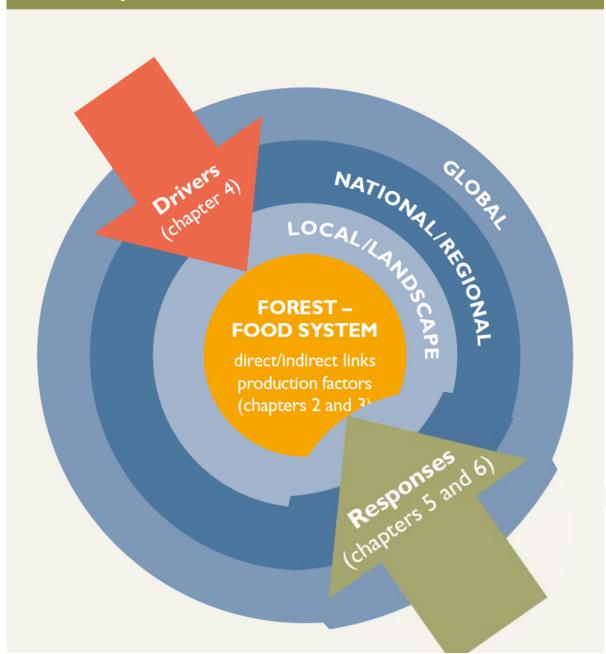






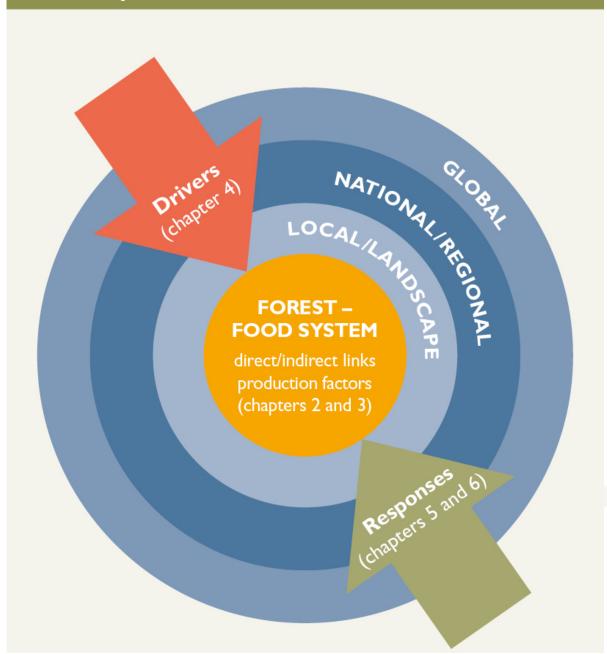
















#### FOREST-TREE-LANDSCAPE CONTINUUM

Managed forests

Shifting cultivation

Agroforestry

Single species tree crop production



#### **DIRECT ROLES**

#### Dietary diversity, quality & quantity

Food provisioning: Fruits, vegetables, nuts, mushrooms, fodder and forage, animal source foods (bushmeat, fish, insects)

#### Livelihood safety nets

Food in times of seasonal and other wood fuel for cooking

#### **INDIRECT ROLES**

#### Tree products for income generation

Tree crops, wood products, other NTFPs and AFTPs

#### **Ecosystem services**

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Provision of genetic resources, pollination, microclimatic regulation, habitat provisioning, water provisioning (quality and quantity), soil formation, erosion control, nutrient cycling, pest regulation





# Health & Disease Food Security & Seasonality Dietary Choice & Use Access Stability & Seasonality Availability

THE FOOD SYSTEM







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# THE FOOD SYSTEM Access Health & Disease Food Security & Nutrition Dietary choice & Use Sustainability Sustainability





# **KEY MESSAGES**

- Forests and trees matter for food security and nutrition
- Integrated governance is necessary for multi-functional landscapes
- Securing tenure and local control is essential for forests and food security
- There is a need to reimagine forests, food security and nutrition, to recognise the complementary role of production systems and conservation across landscapes





## **FOCUS ON DRYLAND SYSTEMS**

- Forests and tree-based systems are particularly critical for food security and nutrition for the poorest and the most vulnerable, including women
- Non-timber forest products and agroforestry tree products are important sources of revenue to local people
- Tree-based incomes offer a considerably more diversified livelihood portfolio and less risks than single commodity crops
- Forests and tree-based systems provide ecosystem services essential for staple crop production and a range of edible plants, e.g. pollinators
- Advantages over permanent (crop) agriculture: diversity of food products and adaptability to a broader range of environmental conditions (climate change) and changing socio-economic conditions





## FOCUS ON DRYLAND SYSTEMS

- Land Degradation Neutrality focus on long term rehabilitation and sustainable use
- Conservation and restoration in human dominated ecosystems must strengthen connections between agriculture and biodiversity - tree-based agriculture as an opportunity
- Develop optimal portfolios of species across agricultural-forestry landscapes (including agroforestry) that best support communities' nutrition needs year-round - cultivation of a wide range of foods, including tree fruits and vegetables
- Support and promote farmer managed natural regeneration (FMNR) providing benefits for staple crop production and forested landscapes
- Develop "nutrient-sensitive" production systems and value chains which deliver food & nutrition from enhanced productivity of land assets



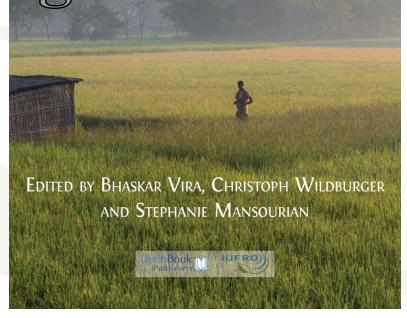
International Union of Forest Research Organizations



# Forests and Food

Addressing Hunger and Nutrition
Across Sustainable Landscapes

Forthcoming November 2015





http://www.iufro.org/science/gfep



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