



**CONNECTING THE DOTS**  
**The Importance of Global Science Collaboration**

**ICF National Conference, Oxford, 11 April 2019**

# Overview

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- About IUFRO
- Science-policy interface
- Examples of global science collaboration in support of SD
- Conclusions

*"All life is problem solving"*

*Sir Karl Popper (1902-1994)*

# About IUFRO



- IUFRO is the only **network with a global scope** for cooperation in forest science.
- The IUFRO network unites **15,000-20,000 scientists** in about **650 Member Organizations** in **127 countries**.
- IUFRO is open to **all** individuals and organizations dedicated to **research related to forests** and forest products.
- IUFRO was **founded in 1892** and is based in Vienna, Austria. It is a member of the International Science Council, ISC.

# IUFRO and the United Kingdom



- Long history of collaboration with institutions and scientists in the United Kingdom:
  - 9 Member Organizations
  - 21 scientists serving as IUFRO officeholders across a broad range of thematic IUFRO units
  - Two British Presidents (Prof. James MacDonald and Prof. Jeffery Burley)

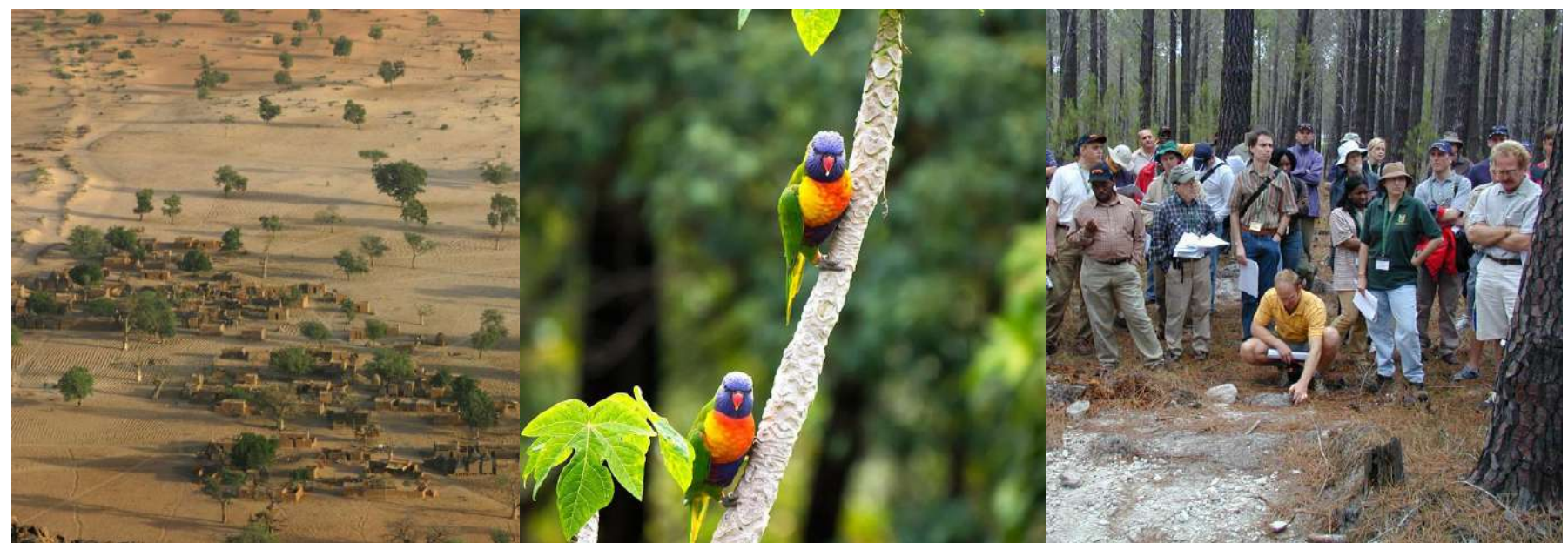




# IUFRO's Mission

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IUFRO advances **research excellence** and **knowledge sharing**, and fosters development of **science-based solutions** to forest-related challenges for the benefit of forests and people worldwide.



# How does IUFRO work?

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- IUFRO provides a **global structure** for voluntary science collaboration related to forests and trees, consisting of more than **280 scientific units**.
- This structure covers a broad range of issues of international importance and allows IUFRO to **draw from expertise of a global network** in a **flexible** manner.
- IUFRO places particular emphasis on advancing **inter-disciplinary collaboration** and on **knowledge sharing**.

# Priority Themes



Biodiversity,  
Ecosystem  
Services  
and  
Biological  
Invasions





# Science-Policy Interface



- **Effectively identify** and respond to **knowledge requirements** of decision makers and stakeholders, and
- As “honest broker”, provide them with **robust scientific evidence and options for effective action**





# Sustainable Development Goals



<b>1</b> NO POVERTY 	<b>2</b> ZERO HUNGER 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	

# Understanding Links between Forests and SDGs

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- All 17 SDGs can be **linked directly or indirectly** to goods and **services provided by forests**
- Few, if any, other fields have focused on process of SD in such a holistic, interdisciplinary way
- **Need to systematically address inter-linkages** and trade-offs and synergies among the SDGs from perspective of forests
- This requires a wide range of tools and **science-based analysis** to support more **coherent decision-making** and effective **monitoring** of progress

# Global Forest Expert Panels

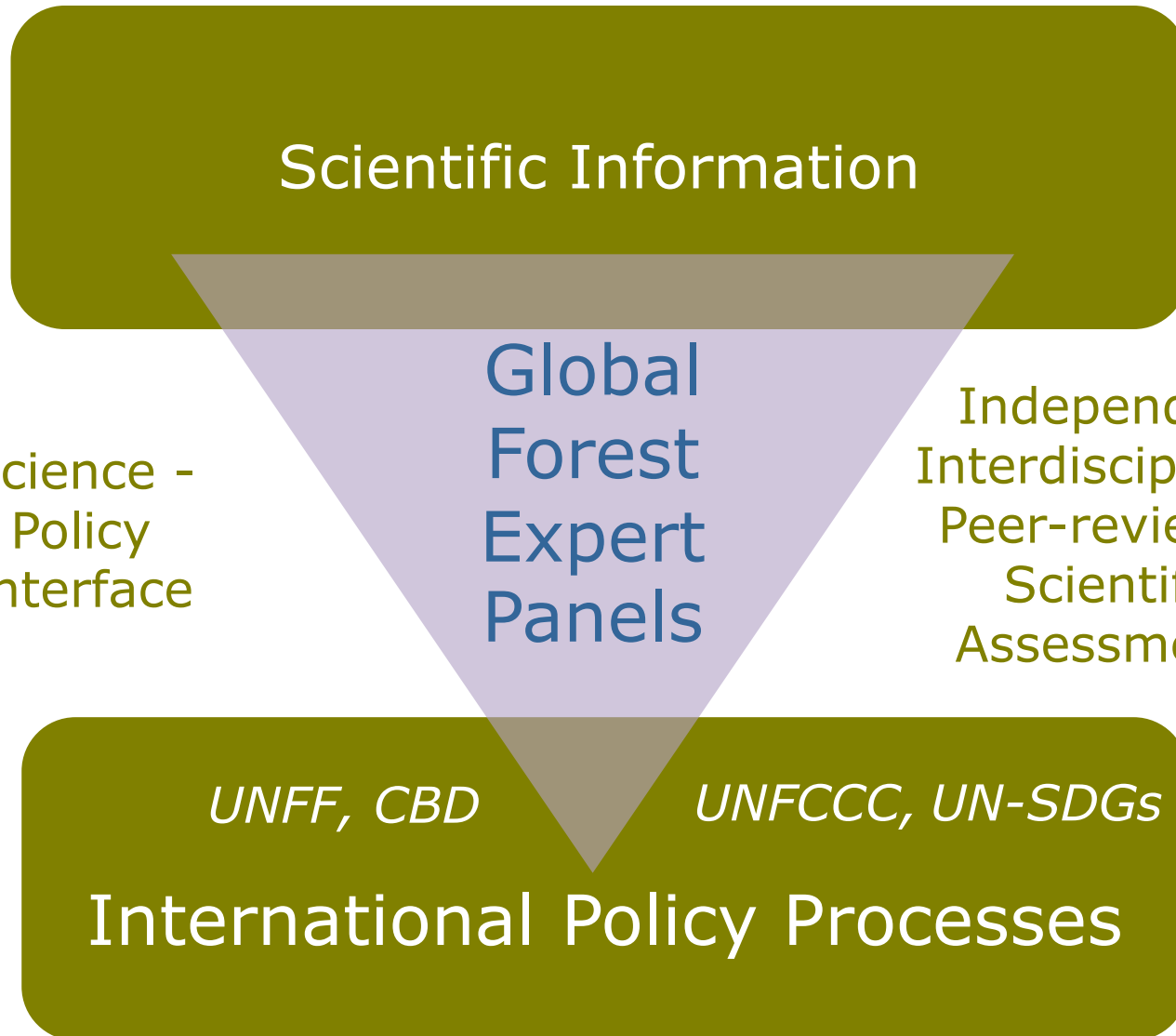
IUFRO-led initiative of the Collaborative Partnership on Forests (CPF) since 2006.

Supports forest-related intergovernmental processes by producing assessment reports on emerging global issues of high concern.



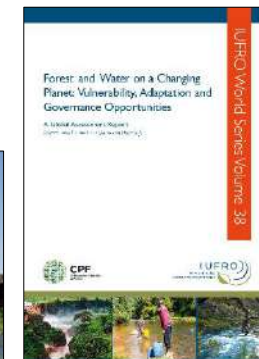
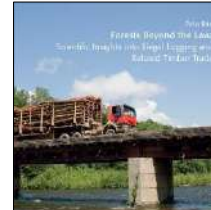
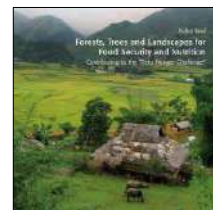
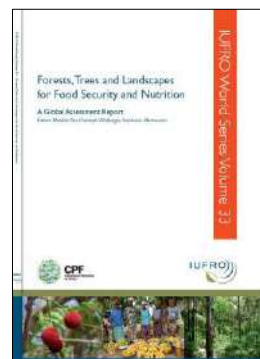
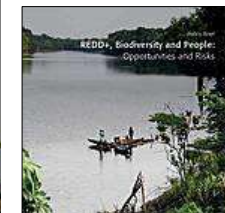
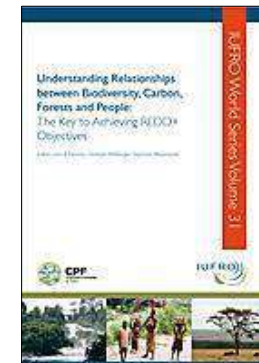
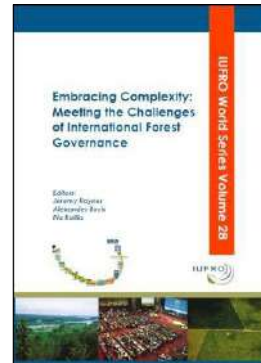
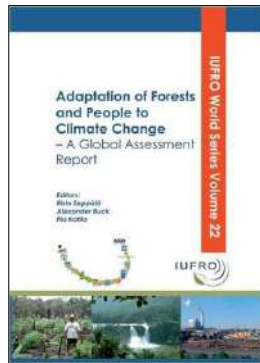
## CPF members:



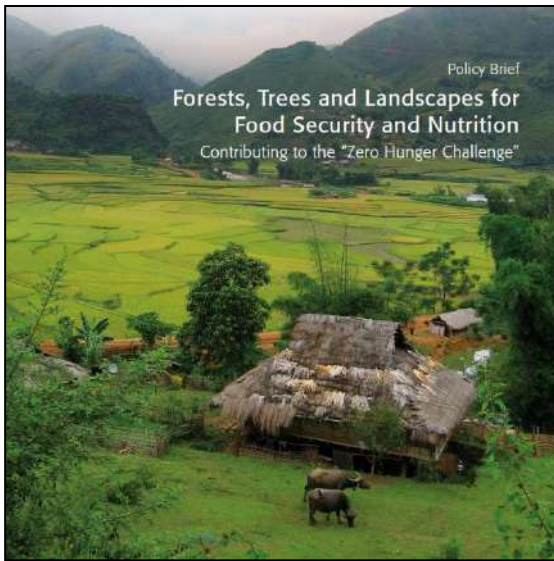




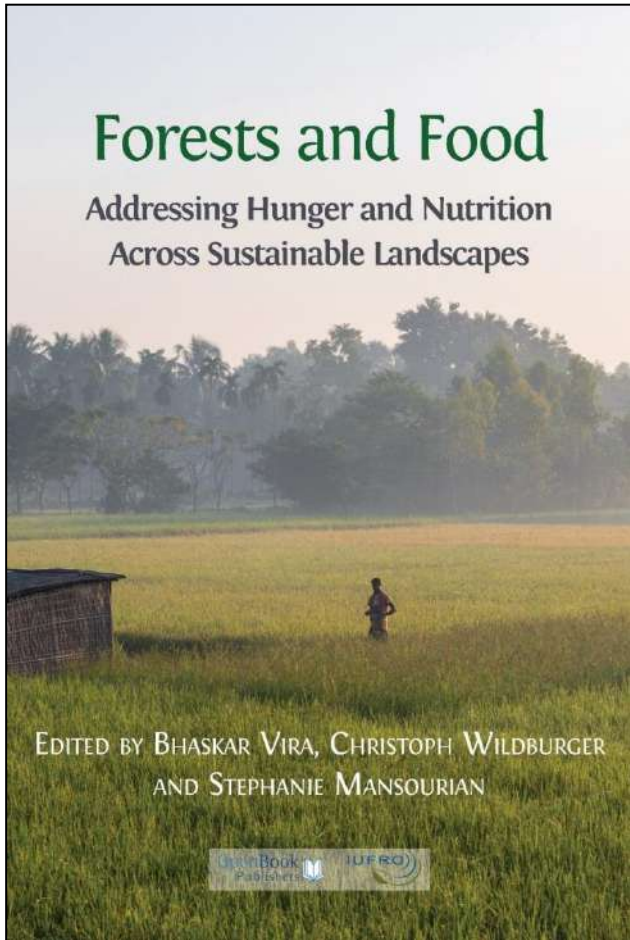
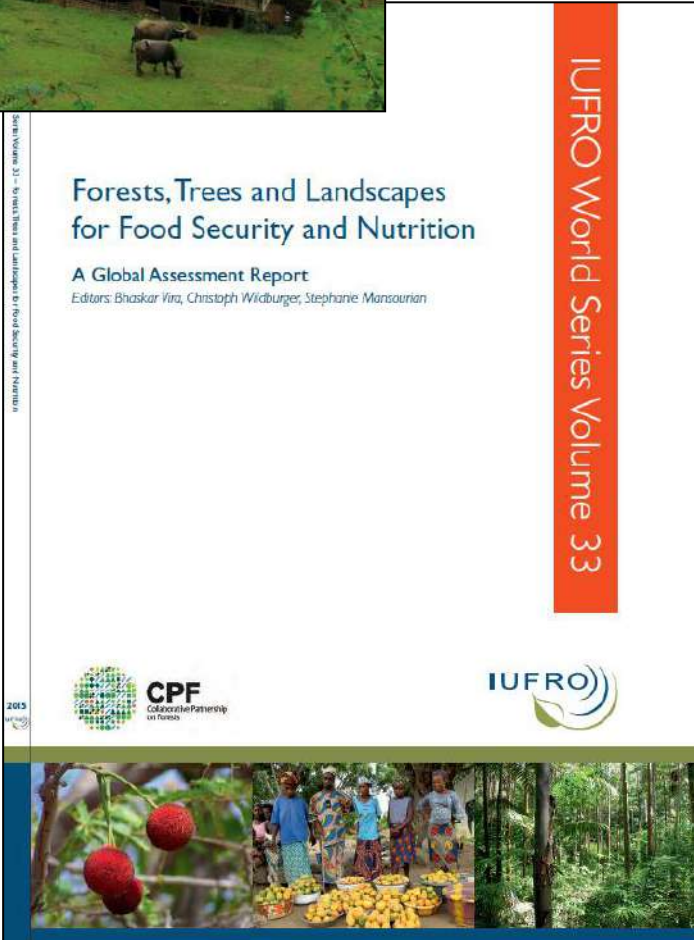
# GFEP assessments - completed



All available for download at: [www.iufro.org/science/gfep/](http://www.iufro.org/science/gfep/)

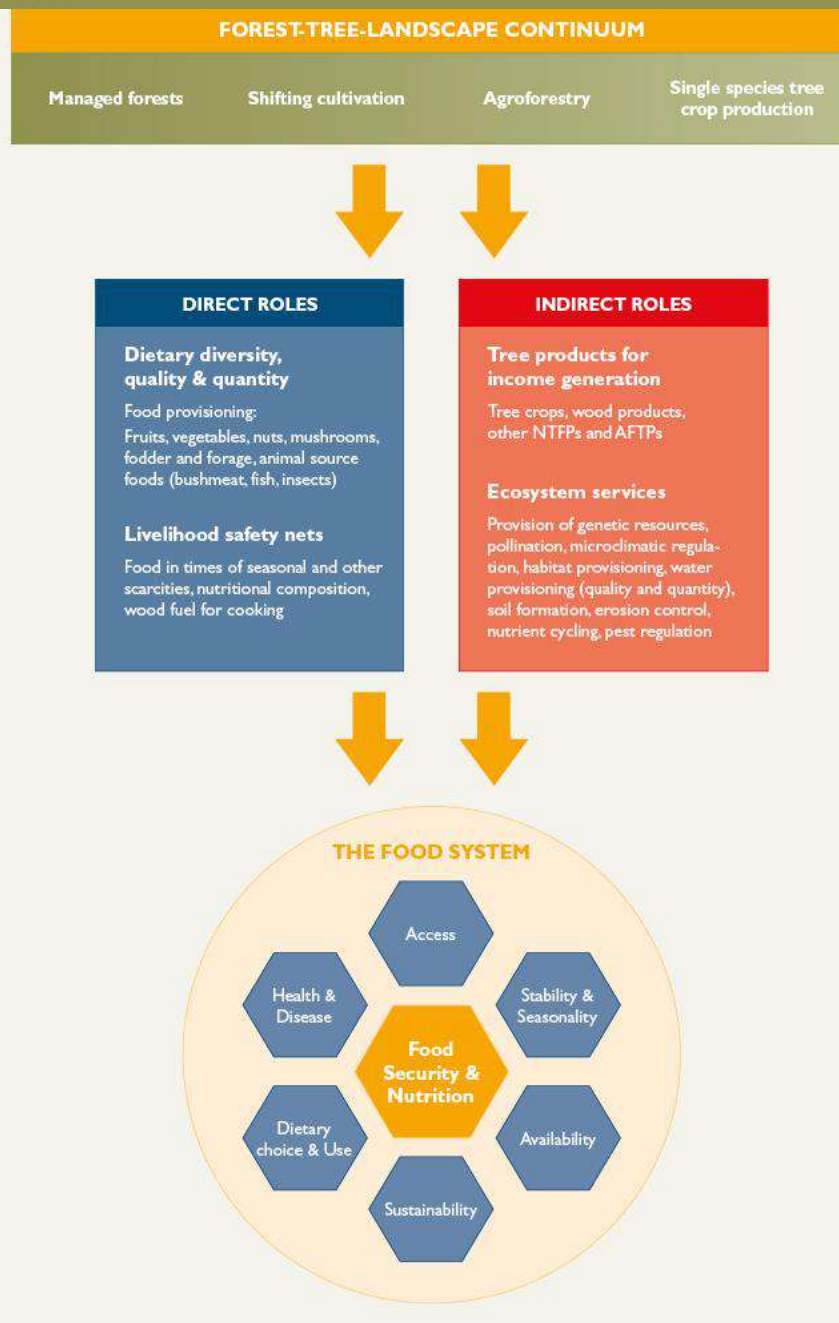


# Global Forest Expert Panel on Forest and Food Security (2015)



# The direct and indirect roles of forests and tree-based systems for food security and nutrition

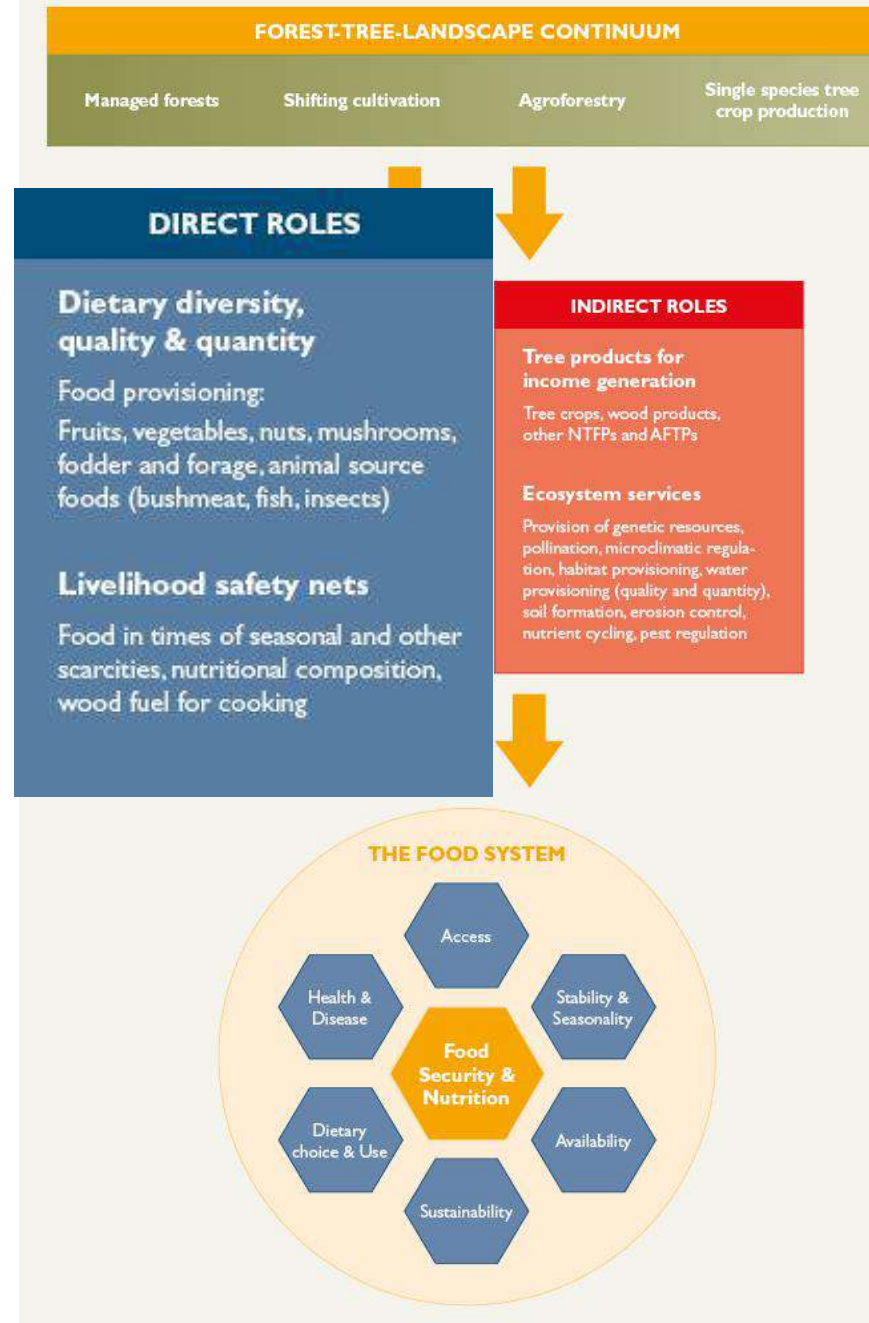
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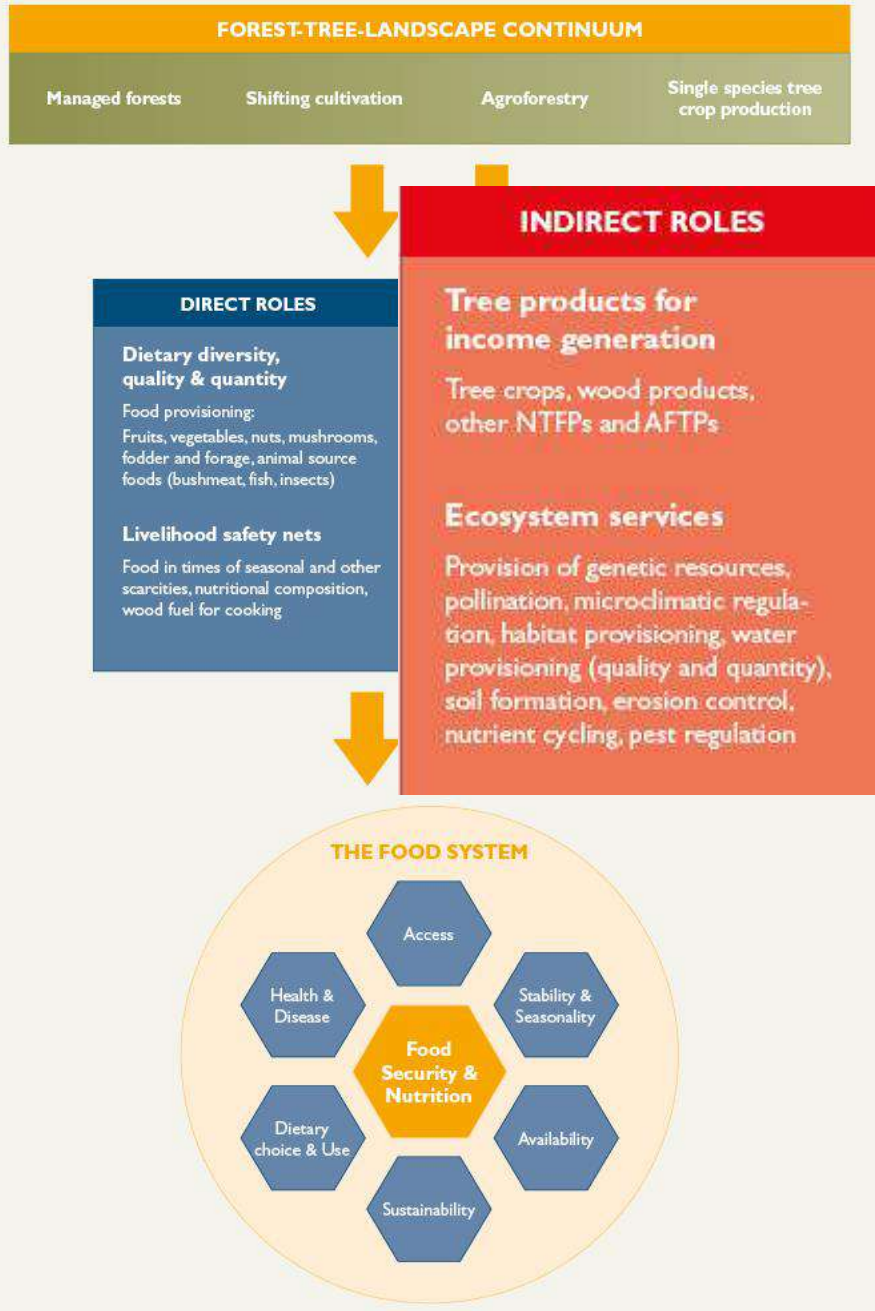


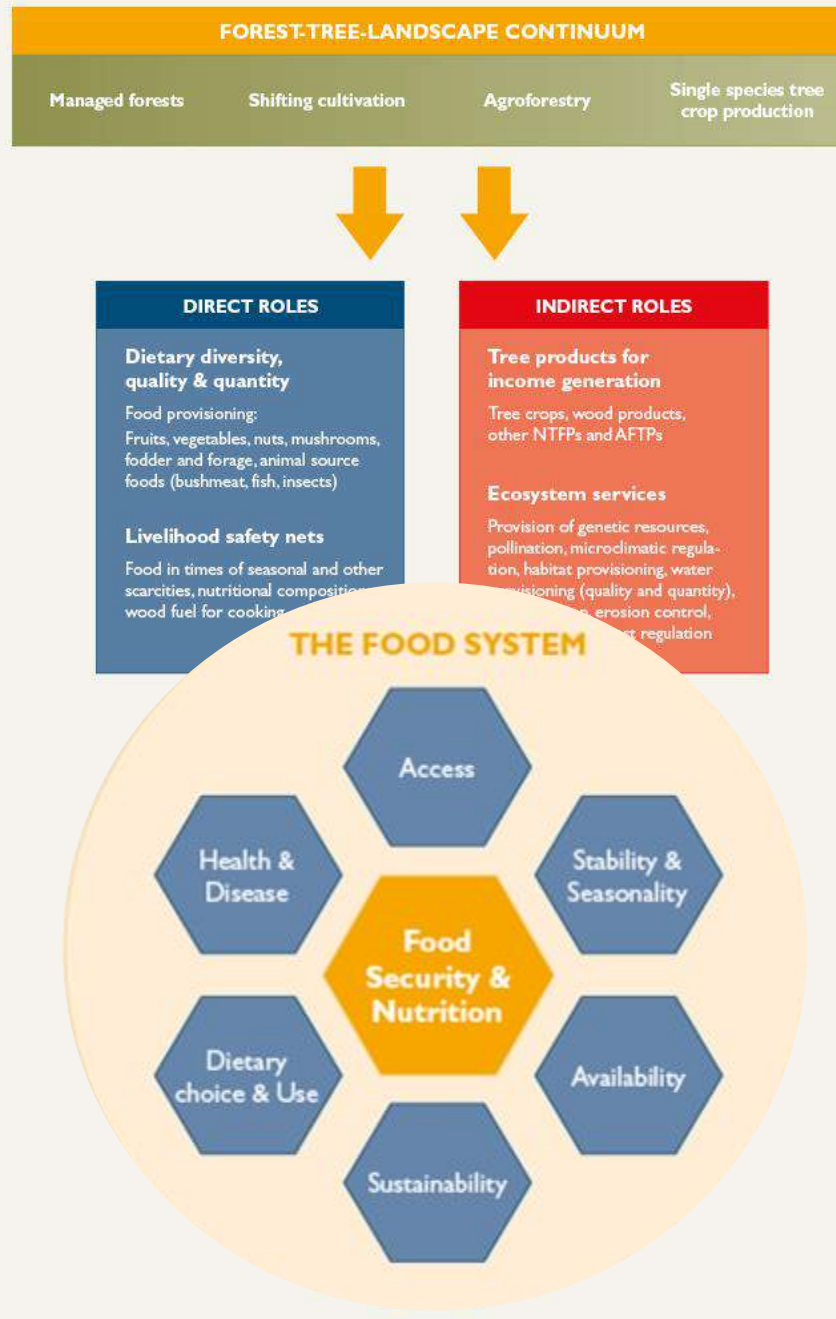
















Cocoa fruits, Costa Rica  
Photo: M. Kleine



Cashew tree, Mamiraua Sustainable Development Reserve, Brazil  
Photo: P.J. Stephenson





Carrying bushmeat in Vietnam  
Photo: T. Sunderland

# Selected key messages

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- **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**



# From Global Forest Expert Panel ... to High Level Panel of Experts on Food Security and Nutrition (Committee on World Food Security)



HLPE - High Level Panel of Experts on Food Security and Nutrition

HLPE REPORTS

*Sustainable  
forestry  
for  
food security  
and nutrition*

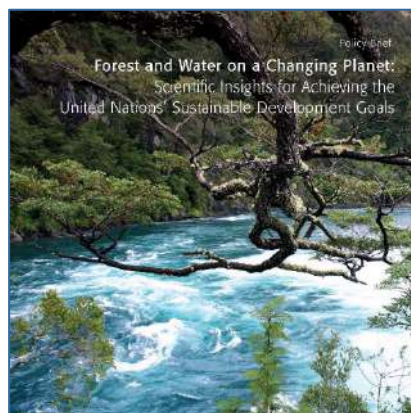
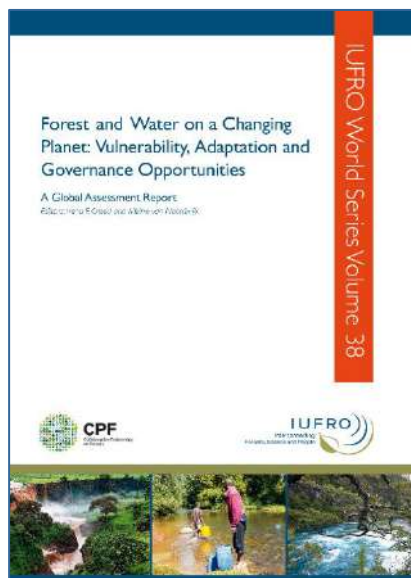


Food and Agriculture  
Organization of the  
United Nations



World Food  
Programme





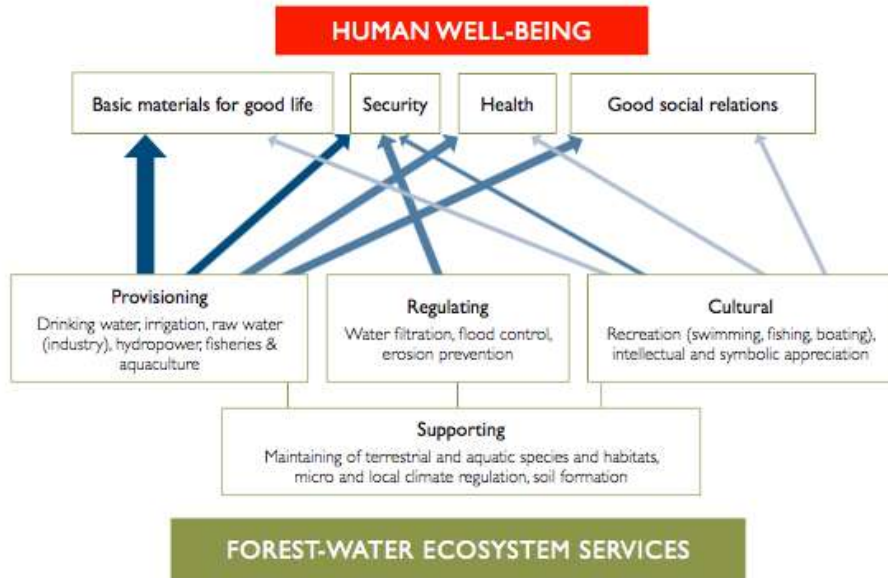
- As the world's population grows **water** is expected to become an **even more scarce resource** in the future
- Forests contribute to the **resilience of water supply** for humans in the face of **global change**
- Link between forests and climate is regularly considered in decision-making, whereas that between **forests and water remains under-represented**

# Ecosystem services related to forests and water

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- **Provisioning** – e.g. drinking water, irrigation, raw water (industry), hydropower, fisheries and aquaculture
- **Regulating** – e.g. water filtration, flood/drought control, erosion prevention, coastal protection
- **Supporting** – e.g. maintaining of terrestrial and aquatic species and habitats, micro and local climate regulation (including effects on air humidity, temperature, air quality and rainfall generation), soil formation and stability
- **Cultural** – e.g. recreation, intellectual and symbolic appreciation

# Forest-water ecosystem services are important for society.

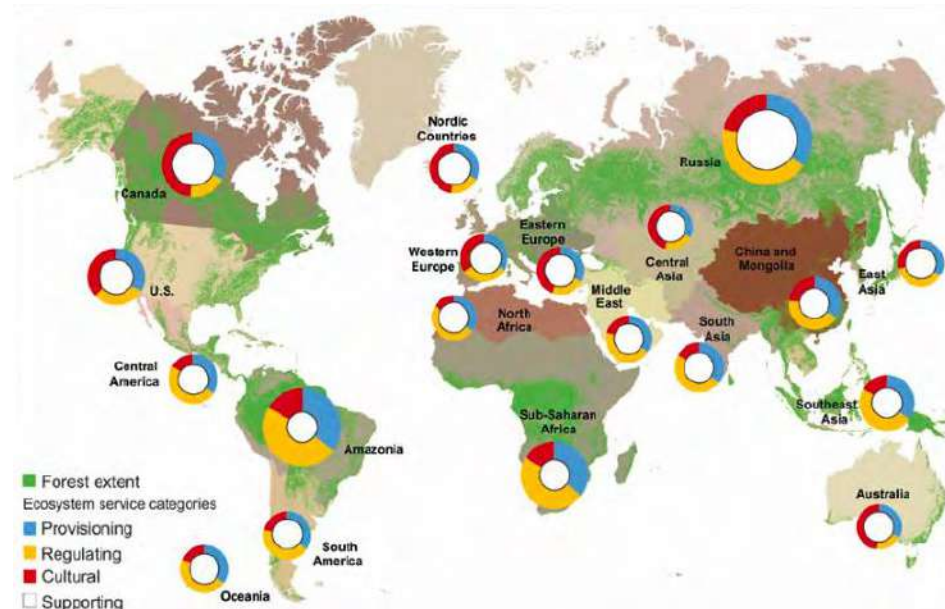


Potential mediation between socioeconomic and environmental factors

Low Medium Strong

Intensity of the linkage between ecosystem services and human well-being

Low Medium Strong



**Magnitude = relative size of the circles.**

**Portfolio = relative size of each segment.**

# Launch at HLPF-2018

## Side-event during United Nations High-Level Political Forum on Sustainable Development



The press releases and the study were picked up by many international news portals and media (few examples):





# Selected key messages

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- **Climate, forests, water and people** are **inextricably inter-connected** and must be managed as a system
- Forests influence water security, both “**upstream**” as a source of water in streams and “**upwind**” as a source of rainfall, and should be managed accordingly
- Governance frameworks must **focus on the role of forests for water** (and water for forests), not just forests for carbon.

Report and policy brief available for download at:  
[www.iufro.org/science/gfep/](http://www.iufro.org/science/gfep/)

# Towards a Comprehensive Analysis of Impacts of SDGs on Forests

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- IUFRO Special Project “**World Forests, Society and Environment**”
- Comprehensive **multi-disciplinary assessment** of impacts of different SDGs on forests and forest-related livelihoods and development
- Focus on **contextual conditions** that influence how SDGs are implemented, and how these conditions influence impacts on forests
- Systematic analysis of potential or anticipated **trade-offs and synergies**
- Publication to be launched at **IUFRO World Congress 2019**

# Conclusions

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- **Forests and trees provide key global goods and services** required for sustainable development
- **International, inter-disciplinary science collaboration is essential** for understanding and demonstrating these contributions of forests and trees to the SDGs
- **IUFRO provides an effective structure** for mobilizing required scientific expertise and for supporting more effective and coherent decision making at the global level
- Scientists and institutions from the UK participate actively in IUFRO's related efforts

# XXV IUFRO World Congress

International Union of Forest Research Organizations



**iufro**2019

Curitiba • Brazil

**29 SEPT - 5 OCT**

International Host



Brazilian Hosts

