INTEGRATING INFORMATION ON BIODIVERSITY FOR FOOD AND AGRICULTURE: OPPORTUNITIES AND CHALLENGES

ASHLEY DUVAL
Biodiversity for Food and Agriculture: Taking Stock for the Future- 13 April 2013
VI.6 PREPARATION OF THE STATE OF THE WORLD’S BIODIVERSITY FOR FOOD AND AGRICULTURE

52. Through the adoption of its Multi-Year Programme of Work, the Commission, at its Eleventh Regular Session, agreed to consider the first *State of the World’s Biodiversity for Food and Agriculture* at its Sixteenth Regular Session. While the Commission did not specify in any detail the content of this report, *The State of the World’s Biodiversity for Food and Agriculture* might aim at reflecting as accurately as possible the overall status of biodiversity within agriculture and the role of agriculture within the wider environment. *The State of the World’s Biodiversity for Food and Agriculture* is therefore an essential long-term goal of the MYPOW.

53. The preparation of *The State of the World’s Biodiversity for Food and Agriculture* will be a unique opportunity to integrate the preparation of sectoral assessments foreseen in the MYPOW into a comprehensive process leading to one comprehensive report, as well as an opportunity to identify linkages, synergies and possible differences among the different sectors. *The State of the World’s Biodiversity for Food and Agriculture* could also address cross-sectoral issues, including the management of biodiversity in complex agricultural ecosystems and the ecosystem approach, the contribution of biodiversity to nutrition and ways to address climate change and agriculture, which are of relevance to each sector.
Key Issues of the SoWBFA

**STATUS** – Overall state of biodiversity for food and agriculture, including associated components;
- Use for food and nutrition security;
- Contribution of BFA to ecosystem function and services;
Key Issues of the SoWBFA

**STATUS** – Overall state of biodiversity for food and agriculture; including associated components; Use for food and nutrition security; Contribution of BFA to ecosystem function and services

**CHANGE** - Trends in conservation and use; Effects of major drivers;
Key Issues of the SoWBFA

**STATUS** – Overall state of biodiversity for food and agriculture, including associated components;
Contribution of BFA to ecosystem services;

**CHANGE** - Trends in conservation and use;
Effects of major drivers;

**USE** – Improving conservation and use;
Improving contributions to food and nutrition security;
Sustainability; and livelihoods;
Existing Information From SoTW Reports
Sources of Additional Information
RESULTS - STATUS AND TRENDS OF BFA

EXISTING INFORMATION

- State of genetic resources for food and agriculture
- Current status of use of BFA for food security and nutrition and rural poverty reduction

FIGURE 3.6
Types of accessions in ex situ germplasm collections in 1996 and 2009 (the size difference in the charts represents the growth in total numbers of accessions held ex situ between 1996 and 2009)

FIGURE 3.1
Geographic distribution of genebanks with holdings of >10,000 accessions (national and regional genebanks in blue; CGIAR centres genebanks in beige; SGSV in green)


Results - Status and Trends of BFA

EXISTING INFORMATION
- State of genetic resources for food and agriculture;

INFORMATION GAPS
- Synergies, inter-linkages, trade-offs
- Associated biodiversity
Results - Status and Trends of BFA

EXISTING INFORMATION

• State of genetic resources for food and agriculture;

INFORMATION GAPS

• Synergies, inter-linkages, trade-offs
• Associated biodiversity

EXAMPLES OF ADDITIONAL INFORMATION

- FAO Databases (WIEWS, DAD-IS, REFORGEN etc)
- CGIAR Databases and Resources (GENYSIS, etc)
- National Databases (listed in reports)
- FAO Reports: CGRFA-12/09/Inf.15: Main Functions and Services provided by Invertebrates relevant to Food and Agriculture;
- CGRFA-12/09/Inf.17: Main Functions and Services provided by Micro-Organisms relevant to Food and Agriculture;
- CGRFA-11/07/15.3: Biodiversity of micro-organisms and insects for food and agriculture: status and needs;
- CGRFA-13/11/17: Progress in the Review of Key Issues in Micro-Organisms and Invertebrates for Food and Agriculture;
Results - Drivers and Change

EXISTING INFORMATION

- Top causes of genetic erosion
- Regional and sectoral priorities
Results - Drivers and Change

**EXISTING INFORMATION**
- Top causes of genetic erosion
- Regional and sectoral priorities

**INFORMATION GAPS**
- Largely qualitative
- Anticipated or projected changes
- Associated components of BFA
- Major sector and regional differences

**EXAMPLES OF ADDITIONAL INFORMATION**
- CBD National Reports
- Thematic Reports (CBD Thematic report on Alien and Invasive Species; SOW Thematic Background Study Climate Change and its Effect on Conservation and Use of Plant Genetic Resources for Food and Agriculture and Associated Biodiversity for Food Security
The State of Use of BFA

EXISTING INFORMATION

- Sustainable use
- Food security
- Rural poverty alleviation
- Sustainable agricultural practices
The State of Use of BFA

EXISTING INFORMATION

- Sustainable use
- Food security
- Rural poverty alleviation
- Sustainable agricultural practices

INFORMATION GAPS

- Ecosystem Services
- Application of the Ecosystem Approach
- Specific sustainability characteristics
- Synergies, tradeoffs and interlinkages
- Largely anecdotal
- Differences in sector content
The State of Use of BFA

EXISTING INFORMATION

• Sustainable use
• Food security
• Rural poverty alleviation
• Sustainable agricultural practices

INFORMATION GAPS

• Ecosystem Services
• Application of the Ecosystem Approach
• Specific sustainability characteristics
• Synergies, tradeoffs and interlinkages
• Largely anecdotal
• Differences in sector content

ADDITIONAL INFORMATION

• CBD National Reports; Clearing House information and Thematic Reports (Mountain Ecosystems, Forest Ecosystems)
• FAO Reports: SOFA, SOLAW, CGRFA-11/07/15.4 Rev.1: The ecosystem approach applied to food and agriculture: status and needs
• SOW Thematic Background studies (Managing Plant Genetic Resources in the Agro-ecosystem: Global Change, Crop-associated Biodiversity and Ecosystem Services; The Contribution of Plant Genetic Resources to Health and Dietary Diversity [Report on Workshop on Food Security in D 8 countries]
The State of Actions and Interventions

EXISTING INFORMATION

• Collaborations and partnerships
• Initiatives on conservation and use
• Policies and legal frameworks
• Information management systems
The State of Actions and Interventions

EXISTING INFORMATION

- Collaborations and partnerships
- Initiatives on conservation and use
- Policies and legal frameworks
- Information management systems

INFORMATION GAPS

- Collaboration between sectors
- Cross cutting Initiatives
- Landscape or area based initiatives
- Associated biodiversity
The State of Actions and Interventions

**EXISTING INFORMATION**

- Collaborations and partnerships
- Initiatives on conservation and use
- Policies and legal frameworks
- Information management systems

**INFORMATION GAPS**

- Collaboration between sectors
- Cross cutting Initiatives
- Landscape or area based initiatives
- Associated biodiversity

**EXAMPLES OF ADDITIONAL INFORMATION**

- CBD NBSAPs, Thematic Report on Access and Benefit Sharing
- FAO reports (e.g. The Impact of National, Regional and Global Agricultural Policies and Agreements on Conservation and Use of Plant Genetic Resources for Food and Agriculture)
Challenges - Synthesizing

- Common indicators
- Differences in available sector content
- Information of interest not relevant to all sectors
- Risk of double counting
Corresponding Units of Analysis
## Differences in sector information

<table>
<thead>
<tr>
<th><strong>ANIMALS</strong></th>
<th><strong>PLANTS</strong></th>
<th><strong>FORESTS</strong></th>
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<tbody>
<tr>
<td>Use of BFA for food and nutrition security and rural poverty reduction</td>
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<td>Contribution of BFA to sustainable agricultural practices and sustainable intensification</td>
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<td>National targets and indicators for BFA</td>
<td>Knowledge gaps and research and technology needs</td>
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<td>Information management systems and data sharing mechanisms</td>
<td>Mechanisms that support or hinder collaboration between sectors</td>
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Overall state of biodiversity for food and agriculture, including associated biodiversity;
Contribution of BFA to ecosystem services;

CHANGE –
Trends in conservation and use;
Effects of major drivers;

USE –
Improving conservation and use;
Improving contributions to food and nutrition security; sustainability; and livelihoods;
What We Have And What We Need

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sustainability; and livelihoods;
Opportunities- Addressing the Gaps
More than the Sum of its Parts
Thank You for Your Time and Attention
Summary

Information Available

1. Integrated overview of sector analyses for status and trends of BFA;

Information Needed

- Associated components of BFA;
- Synergies, inter-linkages and trade-offs;
- Contribution to ecosystem function and ecosystem services
Summary

Information Available

1. Integrated overview of sector analyses for status and trends of BFA;

Information Needed

- Associated components of BFA;
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1. Measures to conserve, sustainably use and enhance the various components of BFA;

- State of the application of the ecosystem approach;
- Collaboration between sectors;
Summary

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1. Integrated overview of sector analyses for status and trends of BFA;
2. Measures to conserve, sustainably use and enhance the various components of BFA;
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## Summary

### Information Available

1. Integrated overview of sector analyses for status and trends of BFA;
2. Measures to conserve, sustainably use and enhance the various components of BFA;
3. Policies and legislation;
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- Associated components of BFA;
- Synergies, inter-linkages and trade-offs;
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## Information Available

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- Associated components of BFA;

- Synergies, inter-linkages and trade-offs;

- State of the application of the ecosystem approach;

- Collaboration between sectors;

- Policies to maintain or enhance ecosystem services for food and agriculture;

- Contribution to specific sustainability characteristics;

- Wild biodiversity and food and nutrition security

- **Global research gaps and needs**
Summary

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- Synergies, inter-linkages and trade-offs;
- State of the application of the ecosystem approach;
- Collaboration between sectors;
- Policies to maintain or enhance ecosystem services for food and agriculture;
- Contribution to specific sustainability characteristics;
- Wild biodiversity and food and nutrition security
- Global research gaps and needs
- Cross cutting approaches, associated BFA
Challenges - Synthesizing

- Common indicators
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