Policies, programmes and activities related to biodiversity for food and agriculture

Reports from international instruments and organizations

1. Contact information

<table>
<thead>
<tr>
<th>Name and position of respondent</th>
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<tbody>
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<tr>
<td>Geographical coverage of your organization</td>
<td>Global</td>
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2. Components of biodiversity for food and agriculture covered by your organization

Note: For a complete definition refer to Annex 1 of: http://www.fao.org/nr/cgrfa/biodiversity/guidelines/en/

**Sectoral genetic resources for food and agriculture**
- Animal genetic resources
- Aquatic genetic resources
- Forest genetic resources
- Plant genetic resources ✓

**Associated biodiversity of relevance to food and agriculture**
- Micro-organisms (including bacteria, viruses, protists and fungi) ✓
- Invertebrates (including insects, spiders, worms) ✓
- Vertebrates (including amphibians, reptiles and non-domesticated birds and mammals) ✓
- Wild and cultivated terrestrial and aquatic plants other than crop wild relatives ✓
Please provide details on the components of biodiversity for food and agriculture involved (species, breeds, varieties):

Primary focus on rice. 127,000 accessions of rice conserved ex situ. Studies on associated biodiversity include both favourable (e.g. for IPM, Azolla as bio-N fertilizer) and unfavourable (vertebrate and invertebrate pests, diseases, weeds) organisms

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**PRIORITY AREA 1: ASSESSMENT AND MONITORING**

1. Does your organization implement or support the implementation of projects or programmes that contribute to the assessment of the status of biodiversity for food and agriculture?

   Yes  

   No  

If yes, please provide details on the countries and species involved and indicate whether the population trends of these species are monitored:

Ad hoc projects vary in time and country, to meet priorities of our partner countries. The species are mainly rice and its associated biodiversity. Population trends are not usually monitored. The Sustainable Rice Platform (SRP) is developing biodiversity indicators of sustainability in rice: on-going in Vietnam, Philippines, Thailand

2. Is your organization involved in surveying and monitoring population sizes of and/or threats to associated biodiversity species that are known to contribute to regulating or supporting ecosystem services in and around agricultural and food production systems?

   Yes  

   No  

If yes, please provide details on the countries and species and ecosystem services involved:

Determining biodiversity indicators of sustainability in rice - and related to regulatory services: on-going in Vietnam, Philippines, Thailand with range of species associated with rice. Post graduate studies on use of amphibians as indicators - NAS & University of Arizona

3. Is your organization involved in surveying and monitoring population sizes of and/or threats to wild food species?

   Yes  

   No  

If yes, please provide details on the countries and species involved:

As above with biodiversity indicators
4. Has your organization identified major obstacles to assessing and monitoring components of biodiversity for food and agriculture that are part of its mandate?

Yes  

No  

If yes, please list these obstacles, being as specific as possible regarding the species involved:

Research resources, lack of agreed protocols

5. What are the priority measures that need to be taken to address these obstacles?

Prioritize investments

6. Please describe any additional activities relevant to the implementation of Priority area 1: Assessment and monitoring

Training related to biodiversity

**PRIORITY AREA 2: CONSERVATION AND SUSTAINABLE USE**

**Conservation**

1. Does your organization take or support actions to protect components of biodiversity for food and agriculture that are at risk from climate change, invasive alien species and natural or human-induced disasters?

Yes  

No  

If yes, please provide details on the countries and species involved, the actions taken, the impacts and the lessons learned:

Extensive investment on mitigation of and adaptation to climate change in many rice producing developing countries. Biodiversity features as one component. Assessments made of impacts of climate events on rodent populations; limited assessments made in relation to weeds and pathogens. Breeding for adaptation to climate change. For wild relatives of rice, which are themselves invasive species, special actions are taken to conserve wild rice safely, in compliance with national legislation on invasive species.

2. Does your organization implement or support the implementation of conservation measures for associated biodiversity and/or wild food species?

*In situ*

Yes  

No  

*Ex situ*

Yes  

No

If yes, please provide details on the countries, measures and species involved:

Ad hoc projects vary in time and country, to meet priorities of our partner countries, mainly rice-producing developing countries. Current projects include Heritage rice project (Philippines), community seed bank projects (Philippines), wild food plant as community resource (Thailand)

3. If your organization maintains *ex situ* collections of biodiversity for food and agriculture components could you please provide further information on these collections?

The main ex situ collection is of rice: 127,000 accessions of two cultivated species and their wild relatives. An ex situ Azolla collection is at risk because of lack of funding and use. A non-living collection of insects is maintained.

4. Has your organization identified major obstacles to enhancing the conservation of biodiversity for food and agriculture, and in particular of associated biodiversity and wild foods?

Yes

No

If yes, please provide details:

(1) lack of funding (2) lack of appreciation of the contribution to ecosystem services, or the difficulty of expressing the benefits of ecosystem services in terms of food security, poverty alleviation and nutritional enhancement (3) Wild food plants affected by intensification and use of herbicides (4) aquatic resources affected by pesticides

5. What are the priority measures that need to be taken to address these obstacles?

Further studies and awareness building on how biodiversity contributes to food security, poverty alleviation and human health. Priorities are set by consultation with our national partners, particularly government agencies in rice growing countries

*Sustainable use*

6. Does your organization promote management practices that support the maintenance and use of biodiversity for food and agriculture?

Yes

No

If yes, please provide details on the countries and practices involved:

All rice producing countries, especially developing countries. Ecological engineering, ecological intensification, Site Specific Nutrient Management (SSNM), Integrated Pest Management (IPM), Landscape management, soil management, conserving host plants of predators of rice pests, conservation agriculture, water management, the “three Rs” (reduced fertilizer, reduced pesticides, reduced seed density), diversification …
7. Does your organization promote the application of ecosystem, landscape and/or seascape approaches?

Yes [ ]

No [ ]

If yes, please provide details on the countries and approaches involved:

Key developing rice producing countries. An ecosystem approach is essential for rice. Efforts to promote landscape approaches and "small farmer large fields" in Vietnam. Various similar efforts elsewhere in SE Asia

8. Does your organization implement or support the implementation of projects or programmes on the use of biodiversity for food and agriculture to cope with climate change, invasive alien species, or natural or human-made disasters?

Yes [ ]

No [ ]

If yes, please provide details:

Ongoing use of biodiversity and the diversification of rice-based systems is a core element of adaptation of rice-based farming systems to climate change and to improve resilience. We have helped restore biodiversity in numerous cases following natural (e.g. tsunami) or human-made (e.g. war) disasters

9. Does your organization implement or support the implementation of projects or programmes on the maintenance and use of traditional knowledge of associated biodiversity and wild foods?

Yes [ ]

No [ ]

If yes, please provide details:

Limited. The focus is on working with farmers to understand their needs and constraints and hence provide improved products that build on rather than override their own knowledge. Two examples: Distribution, diversity and use of wild food plants in rice ecosystems (Thailand). Heirloom Rice project (Philippines)

10. Has your organization identified any major obstacles to improving the sustainable use of biodiversity for food and agriculture, and in particular of associated biodiversity and wild foods?

Yes [ ]

No [ ]

If yes, please list and describe them:

(1) lack of funding (2) lack of appreciation of the contribution to ecosystem services, or the difficulty of expressing the benefits of ecosystem services in terms of food security, poverty alleviation and nutritional enhancement (3) Wild food plants affected by intensification and use of herbicides, aquatic resources affected by pesticides
11. What are the priority measures that need to be taken to address these obstacles?

Further studies and awareness building on how biodiversity contributes to food security, poverty alleviation and human health

**Access and benefit-sharing**

12. Does your organization contribute to the development of mechanisms to improve access to and ensure the fair and equitable sharing of benefits arising from the utilization of biodiversity for food and agriculture?

Yes  

No  

If yes, please provide details on the countries, mechanisms and species involved:

Build capacity both within the organization and among partners to understand and comply with the Plant Treaty’s multilateral system of access and benefit sharing. Actively developing information systems to facilitate compliance. Engage in policy discussions and negotiations on measures to ensure fair and equitable sharing of benefits, through the Nagoya Protocol or the Plant Treaty as appropriate. For non-monetary benefit-sharing mechanisms of the Plant Treaty are core to the whole work programme ((1) providing access to genetic resources (2) sharing information about it (3) providing access to technology to use it (4) capacity building). Also ensure that partners are aware of monetary sharing obligations.

13. Please describe any additional activities relevant to the implementation of Priority area 2: Conservation and sustainable use.

**PRIORITY AREA 3: POLICIES, INSTITUTIONS AND CAPACITY**

1. Does your organization support countries in developing, reviewing and adjusting their national policies affecting the conservation and sustainable use of biodiversity for food and agriculture, and in particular of associated biodiversity and wild foods?

   Yes  

   No  

If yes, please provide details and specify the countries involved:

Developing rice producing countries. We provide technical support and advice where requested, without lobbying for a particular policy, especially on the Plant Treaty, the Global Plan of Action, on the Convention on Biological Diversity, Biodiversity Action Plans, and on the Nagoya Protocol

2. Does your organization contribute to the development of regulatory frameworks or legislation for biodiversity for food and agriculture, and in particular for associated biodiversity, wild foods and ecosystem services?

   Yes  

   No
No  

If yes, please provide details and specify the countries or regions involved:

|
| Developing rice producing countries. We provide technical support and advice where requested, without lobbying for a particular policy |

3. Does your organization collaborate with other stakeholders involved in the management of biodiversity for food and agriculture (e.g. farmers, fisher folk, forest dwellers, the breeding industry, government agencies, research institutes and civil society organizations)?

Yes  
No  

If yes, please provide details:

|
| Collaborate with farmers, breeding industry, government agencies, research institutes and civil society organizations. A few of many examples include project activities with Worldfish in Myanmar, collaboration with EU institutes in Legato project, post graduate field studies e.g. amphibians as indicators University of Arizona |

4. Does your organization implement or support the implementation of programmes to increase public awareness on the roles and values of associated biodiversity and ecosystem services in and around food and agriculture production systems?

Yes  
No  

If yes, please provide details:

|
| Our web site and social media and publications regularly feature promotion of public awareness, as part of institutional efforts to raise awareness re research findings/ activities |

5. Does your organization implement or support the implementation of training or capacity-building programmes for the management of associated biodiversity and ecosystem services in and around food and agriculture production systems?

Yes  
No  

If yes, please provide details and specify countries involved:

|
| Many rice-producing developing countries. Training includes ex situ conservation and use, as well as building capacity for community seed banks. Also includes training as part of Sustainable Rice Platform activities / post-graduate research studies/ sustainability components of rice production courses |

6. Has your organization identified priorities for future capacity-building and education on associated biodiversity and ecosystem services in and around food and agriculture production systems?

Yes  
No  

Many rice-producing developing countries. Training includes ex situ conservation and use, as well as building capacity for community seed banks. Also includes training as part of Sustainable Rice Platform activities / post-graduate research studies/ sustainability components of rice production courses
If yes, please provide details:

Use and application of biodiversity indicators as "proxies" for sustainability

7. Please describe any additional activities relevant to the implementation of Priority area 3: Policies, institutions and capacity.

PRIORITY AREA 4: REGIONAL AND INTERNATIONAL COOPERATION

1. Has your organization contributed to the establishment or strengthening of regional and international research and/or education programmes to assist countries to better manage biodiversity for food and agriculture?

Yes ☐

No ☐

Please provide details:

Rice producing developing countries developing national biodiversity action plans; managing biodiversity for food and agriculture is a core component of the Sustainable Rice Platform

2. Has your organization contributed to the establishment or strengthening of regional and international programmes to assist countries to obtain training and technologies or develop information systems related to biodiversity for food and agriculture and related ecosystem services?

Yes ☐

No ☐

Please provide details:

Numerous collaborative projects and training programmes in various aspects of upstream and downstream information systems. Downstream we have the rice knowledge bank available in local languages in several Asian countries, the rice doctor, mobile apps to assist farmers. Upstream we have regional and international collaboration on collection, management and use of DNA and phenotypic data. We collaborate with the International Plant Treaty on developing the Global Information System of the Treaty.

3. Please describe any additional activities relevant to the implementation of Priority area 4: Regional and international cooperation