



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

Reports from international instruments and organizations

1. Contact information

Name and position of respondent

Dr. Alice Muchugi, Genetic Resources Unit Manager

Name of organization

World Agroforestry Centre (ICRAF)

E-mail of organization

G.ICRAF@cgiar.org

Geographical coverage of your organization

Global

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):

Current ICRAF Genebank collection has 5394 accessions of 192 tree species while the field genebanks have over 10,000 accessions of 42 species on 38 sites in 15 countries.

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:

In several developing countries within ICRAF working in Africa, Asia and Latin America; Population issues addressed depends on specific project objectives and coverage; Indigenous tree species of economic importance

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:

In several developing countries within ICRAF working regions in Africa, Asia and Latin America; Indigenous tree species of economic importance; ecosystem services depends on specific projects-ecosystem restoration, land reclamation, water tower protection, soil erosion and climate change mitigation etc

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:

In several developing countries within ICRAF working regions in Africa, Asia and Latin America; Indigenous tree species of economic importance

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:

A few cases e.g population size and diversity studies of a threatened species *Prunus africana* could not be undertaken in Ethiopia

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

Specific parties (countries) need to understand that even if they own genetic resources within their boundaries, these resources are of global relevance, and they should facilitate such studies. Also facilitate their use globally while following and respecting the governing international regulations.

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

As per the 2014 FAO State of the World Forest Genetic Resources, there is great danger of losing important tree genetic resources; however such loss is still an estimate and inferences of biodiversity loss; there is need for more funding for assessment and monitoring as well as implementing strategies to curb the loss.

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:

In several developing countries within ICRAF working in Africa, Asia and Latin America; conservation of indigenous tree species of economic importance; species diversity coverage in conservation still low and needs to be enhanced; research to facilitate use of the genetic resources is needed

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:

In several developing countries within ICRAF working in Africa, Asia and Latin America; conservation of indigenous tree species of economic importance

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

Current ICRAF Genebank collection has 5390 accessions of 192 tree species while the field genebanks have over 10,000 accessions of 42 species on 38 sites in 15 countries.

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:

There are major challenges associated with the conservation of tree species especially the recalcitrant seeded; ensuring the species diversity coverage in conservation; ICRAF do not own land and collaborate with national partners; maintaining the established conservation stands is costly; Countries fail to own and protect the conservations stands, some of which are international collections; Policy issues in use of international collections conserved in a field stand in one country.

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

Specific parties (countries) need to understand that even if they own genetic resources within their boundaries, these resources are of global relevance, and they should facilitate their use globally while following and respecting the governing international regulations.

Sustainable use

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

Note: For examples of such practices, please refer to Annexes 5 and 6 of <http://www.fao.org/nr/cgrfa/biodiversity/guidelines/en/>

Yes

No

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

In several developing countries within ICRAF working in Africa, Asia and Latin America; Practices depends on specific project objectives; major one is the domestication of important indigenous tree species of economic importance to avoid over-harvesting from the wild; sustainable harvesting of timber and non-timber products from the wild e.g sustainable harvesting of *Prunus africana* bark and other medicinal species

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:

In several developing countries within ICRAF working regions in Africa, Asia and Latin America; ecosystem approaches depends on projects objectives and may include ecosystem restoration, land reclamation, water tower protection, soil erosion and climate change mitigation etc

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:

This is engraved in ICRAF mission-to generate science-based knowledge about the diverse roles that trees play in agricultural landscapes, and to use its research to advance policies and practices, and their implementation that benefit the poor and the environment. Several projects endeavor to fulfill this mission.

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:

ICRAF works with local communities in the research on indigenous tree species, as they have wealth of untapped knowledge of these species. Such knowledge is documented while respecting the communities contribution in line with ICRAF IK Policy.

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:

There is great wealth of untapped tree genetic resources that can contribute to nutritional security (especially of hidden hunger resulting from lack of vitamin and micro-nutrients) but remain neglected especially in Africa; The biodiversity of these important tree species is threatened with continued forest cover losses; Significant research inputs is needed to improve desirable farming characteristics of these species; lack of awareness of the nutrition potential of the tree species; lack of awareness of impacts of harvesting/over-harvesting from the wild- e.g with collection of fruits especially for commercial markets, no seeds will remain in the wild for natural regeneration.

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

Creating awareness on potential role of the indigenous tree species in nutrition security; Creating awareness of over-harvesting from the wild; Support for research on under-utilized tree species of economic importance; Support for the conservation of these indigenous tree species diversity-diversity will be crucial in future improvement programs.

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:

Ensuring engagement of local partners in any Private Public Partnership projects on tree genetic resources of economic importance within their locality. ABS mechanisms are negotiated with the respective national partners in such projects by the private partners.

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:

Some host countries invite ICRAF to participate in the development of Agroforestry and forestry national policies; ICRAF has also participated in selecting priority species for conservation and promotion for sustainable use.

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

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

Some host countries invite ICRAF to participate.

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:

Most of the ICRAF tree GR research is participatory research.

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:

Domestication of indigenous tree species o economic importance involve creating awareness of their value

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:

Include: domestication workshops that were held every two years; training on tools to assess species diversity; tools on planting tree species selection

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

If yes, please provide details:

-Creating awareness on indigenous tree species value in nutritional security; training on advanced tools to improve indigenous tree genetic resources for farming; value chain and market development for the neglected indigenous tree species products; need for conservation strategies across the species diversity range

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

There is need to guide in the interpretation of the international legislations such the CBD, Nagoya Protocol and Treaty in facilitating use of genetic resources

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:

For projects implemented in many countries. ICRAF is a primary partner in the African Orphan Crop Consortium Initiative which aims to enhance research on neglected species.

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:

ICRAF is a primary partner in the African Orphan Crop Consortium Initiative which aims to enhance research on neglected species; Regional vegetation maps; East Africa, West Africa, SEA-identification of tree species richness etc

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

Considering the challenges related to tree genetic resources conservation, there is need for regional strategies in conservation of indigenous tree species

Submit by Email