International Organization Progress Report on the implementation
of the Global Plan of Action for Animal Genetic Resources

1. Contact information and mandate

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<tr>
<th>Name and position of respondent</th>
<th>Barbara Rischkowsky</th>
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<td>Name of organization</td>
<td>ICARDA</td>
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<td>E-mail of organization</td>
<td><a href="mailto:B.Rischkowsky@cgiar.org">B.Rischkowsky@cgiar.org</a></td>
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<tr>
<td>Geographical coverage of your organization</td>
<td>non-tropical dry areas of the world</td>
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2. Animal species coverage of your organization

- General livestock-related mandate
- Large ruminants
- Small ruminants
- Pigs
- Poultry
- Rabbits & micro livestock
- Camelidae
- Equines
1. Does your organization implement or support the implementation of projects or programmes on phenotypic characterization of animal genetic resources?

Yes ☐
No ☐

If yes, please provide details and specify the countries and species involved and whether you include characterization of production environments:

Country-wide survey (2010/2011) of sheep and goat populations in Libya not yet completed due to project interruption (we produced a field guide for phenotypic characterization of sheep and goats in Arabic and English (http://www.icarda.org/ManualsFieldGuide.htm).
Production Environment descriptors for local sheep and goat sheep breeds in Egypt, Morocco, Iran and Turkey. FAO Project Report, 2011.

2. Does your organization implement or support the implementation of projects or programmes on molecular characterization of animal genetic resources?

Yes ☐
No ☐

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

Goat breeds in Syria (Jabali, Baladi and Shami) to be published in 2012.

3. Does your organization implement or support the implementation of projects or programmes for surveying the size and/or structure of animal genetic resources populations and monitoring population trends?

Yes ☐
No ☐
4. Does your organization implement or support the implementation of projects or programmes for identifying and monitoring threats to animal genetic resources?

Yes [ ]

No [ ]

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

The inventory of small ruminant breeds in Central Asia and Caucasus by Iñiguez and Mueller includes an assessment of the risk status of the breeds described based on expert opinion.

5. Does your organization support countries in the development of early warning and response systems for animal genetic resources?

Yes [ ]

No [ ]

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

6. Is your organization involved in research and development on methods, technical standards or protocols for phenotypic or molecular characterization, surveying and monitoring of population size or threats to animal genetic resources, or breed evaluation, valuation and comparison?

Phenotypic characterization

Yes [ ]

No [ ]

Molecular characterization

Yes [ ]

No [ ]

Surveying and monitoring

Yes [ ]

No [ ]

If yes, participatory monitoring

Yes [ ]

No [ ]
7. Has your organization identified major obstacles to inventory, characterization and monitoring of animal genetic resources in all or part of your mandate area or species coverage?

Yes  ☐

No  ☐

If yes, please list them being as specific as possible regarding geographical area / species:

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

No obstacles.

9. Please describe any additional activities relevant to the implementation of Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks.

No additional activities.

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Strategic Priority Area 2: Sustainable Use and Development

1. Does your organization support countries in developing, reviewing or adjusting their national policies affecting the sustainable use of animal genetic resources?

Yes  ☐

No  ☐

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

Only one case: in the ARC Libya/ICARDA collaborative programme a national workshop to develop a national breeding programme for sheep and goats is planned.
2. Does your organization promote agro-ecosystem approaches?

Yes ☐

No ☐

If yes, please provide details:

ICARDA's mandate is agricultural research in non-tropical dry areas; our NRM research is based on an agro-ecosystems approach, and we promoted this approach in the new CGIAR Research Programs (CRP) on Agricultural Systems for the Poor and Vulnerable in Drylands (CRP 1.1).

3. Does your organization contribute to the planning or implementation of strategic breeding programmes?

Mainstream breeds

Yes ☐

No ☐

Under-utilized breeds

Yes ☐

No ☐

If yes, please provide details (including the breeds involved) being as specific as possible:

Mohair goats in Northern Tajikistan (improve fibre fineness) - Tajik Cashgora mixed type in South East Tajikistan (improve Cashgora yield and quality) - Raeini Cashmere goats in Iran (improve fibre fineness) and for Afar, Horro, Menz, Bonga sheep in Ethiopia (improve growth and fertility, and for Afar milk production) - Kyrgyz Merino (improve fibre fineness and homogeneity).

4. Does your organization contribute to the development of recording systems or organizational structures for breeding programmes?

Yes ☐

No ☐

If yes, please provide details (including the breeds involved) being as specific as possible:

Embrapa-ICARDA is working on a web-based Data Recording and Management System for sheep and goats (DREMS) based on an existing Embrapa system.

5. If the projects and programmes that your organization implements or supports involve the use of exotic breeds, have any assessments been made of the long-term impacts of the use of exotic breeds on animal genetic resource diversity, livelihoods and/or food security in the affected countries and production systems?

Yes ☐

No ☐

No projects or programmes involving exotic breeds ☐
6. Has your organization implemented or supported the implementation of animal genetic resources-related projects that aim at achieving sustainable intensification of production?

Yes [ ]
No [ ]

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

- Intensification of Awassi dairy sheep in Syria through introduction of Turkish Awassi (selected for milk production) and intensified feeding and management.
- Improving Mohair quality (fibre fineness, reduction of kemp) of Tajik Angora through AI with Texas Angora goats (which is one of the ancestors of the Tajik goats) to allow processing of luxury fibre products.

7. Does your organization contribute to the development of mechanisms for facilitating interactions among stakeholders, scientific disciplines and sectors as part of planning for sustainable use development of animal genetic resources?

Yes [ ]
No [ ]

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

8. Do your organization’s activities contribute to improving farmers’ and livestock keepers’ knowledge of animal genetic resources from various sources?

Yes [ ]
No [ ]

If yes, please provide details and specify the countries and types of animal genetic resources involved:


9. Do your organization’s activities contribute to improving farmers’ and livestock keepers’ access to animal genetic resources from various sources?

Yes [ ]
No [ ]

If yes, please provide details and specify the countries and types of animal genetic resources involved:

- In Kyrgyzstan Aikol rams (synthetic breed from Gissar and local coarse wool sheep) were introduced to farmers in a pilot programme to improve the local coarse wool sheep.
- In Central Tajikistan households keeping Gissar sheep were brought into contact with larger farmers keeping much higher-quality Gissar sheep in order to improve their genetic material.
Kyrgyz farmers in Naryn were provided with high-quality Tian Shian rams (to improve semi-fine wool quality, growth rate, homogeneity of smallholder flocks).

10. Does your organization contribute to the development of agreements for equitable sharing of benefits arising from access to and use and development of, animal genetic resources?

   Yes [ ]
   No [ ]

   If yes, please provide details:

11. Does your organization contribute to efforts to preserve and respect indigenous or local production systems and associated traditional knowledge and practices related to animal genetic resources?

   Yes [ ]
   No [ ]

   If yes, please provide details:

   We are working with farmers on their local sheep and goat genetic resources and help them in utilizing their animals in a more sustainable way through low-cost feeding, rangeland rehabilitation and value addition - in our view this helps to preserve local production systems.

12. Does your organization implement or support the implementation of projects that aim to promote the marketing of products from local breeds or local production systems?

   Yes [ ]
   No [ ]

   If yes, please provide details and specify the breeds and production systems involved:

   Fibre products: Mohair and Cashgora processing (yarn, knitted and woven products) in Tajikistan; felting products from Kyrgyz Merino wool in Kyrgyzstan; Cashmere processing in Iran (under testing).

13. Has your organization identified obstacles to enhancing the sustainable use and development of animal genetic resources?

   Yes [ ]
   No [ ]

   If yes, please provide details:

   Traditional institutions in the rangeland areas have been weakened - difficult to sustain pastoral systems; farmers' associations are non-existent in CWANA and are difficult to introduce because of bad experiences with cooperatives in the past.

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

   Introduce village community-based control to access where feasible (successful example in Tunisia); work with NGOs and development projects on new models to develop functional associations - learn from success stories (ANOC in Morocco).
15. Does your organization provide, or support the provision of, training or technical support programmes for animal breeding activities in pastoralist and farming communities?

Yes ☐

No ☐

If yes, please provide details:

See technical support programmes for community based breeding listed under 3.

16. Has your organization identified priorities for future training or support programmes to enhance the use and development of available animal genetic resources?

Yes ☐

No ☐

If yes, please provide details of the priority activities, being as specific as possible:

Yes, training on developing breeding programmes for smallholders; ICARDA developed guidelines for CBBP (Aynalem Haile, Maria Wurzinger, Joaquin Mueller, Tadele Mirkena, Gemeda Duguma, Okeyo Mwai, Johann Sölkner and Barbara Rischkowsky, 2011. Guidelines for Setting up Community-based Sheep Breeding Programs in Ethiopia. ICARDA - tools and guidelines No.1. Aleppo, Syria, ICARDA.

17. Please describe any additional activities relevant to the implementation of Strategic Priority Area 2: Sustainable use and development.

No additional activities.

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**Strategic Priority Area 3: Conservation**

1. Is erosion of animal genetic resources occurring in any of the countries or regions in which your organization is active?

Yes ☐

No ☐

Do not know ☐

If yes, please describe. Please be as specific as possible and indicate which factors or drivers affect which species in which countries or regions:

In nearly all WANA countries, local cattle breeds have disappeared as cattle are mostly kept for milk production in the more favourable agricultural zones (higher rainfall), under these conditions local cattle breeds cannot compete in milk production with HF composites or pure HF.
2. Does your organization support the establishment of emergency response systems that provide for immediate action to maintain threatened breeds?

Yes [ ]

No [ ]

If yes, please provide details:

3. Does your organization take or support actions to protect breeds and populations that are at risk from natural or human-induced disasters?

Yes [ ]

No [ ]

If yes, please provide details:


4. From your organizational point of view, how would you judge the state of conservation policies for animal genetic resources in the countries and regions in which you operate?

Mostly non-existent, maybe governmental herds (*in situ*) of local cattle in some countries, e.g. in Syria; but for small ruminants, so far there is no need.

5. What types of conservation measures for animal genetic resources does your organization implement or support the implementation of?

None [ ]

*In situ* [ ]

*Ex situ – in vivo* [ ]

*Ex situ – in vitro* [ ]

Please provide details, and specify the countries and animal genetic resources involved:

6. If your organization maintains *ex situ* collections of animal genetic resources, could you please provide further information on these collections?

7. Is your organization conducting research to further develop methods and technologies for *in situ* or *ex situ* conservation of animal genetic resources?

Yes [ ]
8. Has your organization identified major obstacles to enhancing the conservation of animal genetic resources?

Yes ☐  
No ☐

If yes, please provide details:

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

No priorities identified.

10. From your organizational point of view, what are the priority requirements for enhancing conservation measures for animal genetic resources in the countries and regions in which you operate? Please list the requirements, being as specific as possible:

Establishment of national cryoconservation facilities (genebanks) for most threatened livestock breeds; regional genebanks would be preferable, but it is doubtful if it is possible to convince the countries to work together - by the time this is achieved it may be too late (e.g. local cattle breeds in WANA). A global DNA bank at ILRI should be supported as it could at least help to store information on genetic diversity and help to identify the genetic base for adaptive traits.

11. Please describe any additional activities relevant to the implementation of Strategic Priority Area 3: Conservation.

No additional activities.

Strategic Priority Area 4: Policies, Institutions and Capacity-building

1. Does your organization support or facilitate the establishment of institutional frameworks for planning and implementing animal genetic resources programmes?

Yes ☐  
No ☐

If yes, please provide details and specify the countries or regions involved:
2. Does your organization support countries in formulating or implementing national strategies and action plans for animal genetic resources?

Yes ☐

No ☐

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

Only one case and still not implemented (developing a national breeding programme for sheep and goat breeds in Libya).

3. Does your organization contribute to the development of regulatory frameworks or legislation for animal genetic resources?

Yes ☐

No ☐

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

4. Does your organization have a database or information system for animal genetic resources-related data?

Yes ☐

No ☐

If yes, please describe the purpose and contents of the system and, if relevant, how frequently data are updated:

5. Does your organization have collaborative links to other stakeholders involved in the management of animal genetic resources (e.g. the breeding industry, livestock keepers, government agencies, research institutes and civil society organizations)?

Yes ☐

No ☐

If yes, please provide details:

With FAO, ILRI and NARS on characterization and sustainable use of AnGR.

6. Does your organization cooperate with breeders’ organizations?

Yes ☐

No ☐

If yes, please provide details:
7. Has your organization supported the establishment or strengthening of community-based organizations, networks or initiatives for sustainable use, breeding or conservation?

Yes ☐

No ☐

If yes, please provide details:

Community-based breeding programmes in Ethiopia, Tajikistan and Iran.

8. Does your organization implement or support the implementation of training or capacity-building programmes for animal genetic resources management?

Yes ☐

No ☐

If yes, please provide details and specify countries involved:

ICARDA supported FAO training courses on recording and traceability for WANA in March 2009 at ICARDA, Syria; cryoconservation and genebanks in April 2009 in Tunisia; own training programme for NARS scientists (Iraq, Libya, Ethiopia).

9. Has your organization identified priorities for future animal genetic resources-related capacity-building and education?

Yes ☐

No ☐

If yes, please provide details:

10. Does your organization implement or support the implementation of programmes to increase public awareness of the roles and values of animal genetic resources?

Yes ☐

No ☐

If yes, please provide details:

11. Please describe any additional activities relevant to the implementation of Strategic Priority Area 4: Policies, institutions and capacity-building.

No additional activities.
1. Has your organization’s budget for activities supporting the implementation of the Global Plan of Action and animal genetic resources programmes increased since the plan’s adoption in September 2007?

Yes ○
No ○

Please provide details:

2. Has your organization contributed to the establishment or strengthening of international research and/or education programmes to assist developing countries or countries with economies in transition to better manage animal genetic resources?

Yes ○
No ○

If yes, please provide details:

See our activities under the thematic areas characterization and sustainable utilization.

3. Has your organization contributed to the establishment or strengthening of international programmes to assist developing countries or countries with economies in transition to obtain training and technologies or develop information systems related to animal genetic resources?

Yes ○
No ○

If yes, please provide details:

4. Has your organization provided funding to countries for the implementation of the Global Plan of Action for Animal Genetic Resources?

Yes ○
No ○

If yes, please provide details and specify the countries involved:
5. Has your organization contributed to establishing or strengthening international collaboration with regard to:

Characterization of animal genetic resources

Yes [Circle]

No [Circle]

Use and development of animal genetic resources

Yes [Circle]

No [Circle]

Conservation of transboundary breeds

Yes [Circle]

No [Circle]

Please provide details and specify the countries involved:

See activities under other thematic areas.

6. Does your organization collaborate with national or international non-governmental organizations (NGOs) in the fields of:

Characterization

Yes [Circle]

No [Circle]

Sustainable intensification

Yes [Circle]

No [Circle]

Conservation of breeds at risk

Yes [Circle]

No [Circle]

Please provide details and specify the countries involved:

Aga Khan Foundation in Tajikistan and Syria; NAU in Tajikistan; CACSA-kg in Kyrgyzstan.

7. Please describe any additional activities relevant to the implementation and financing of the Global Plan of Action for Animal Genetic Resources:

No additional activities.