



Country report

supporting the preparation of

The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture,

including sector-specific data contributing to

The State of the World's Biodiversity for Food and Agriculture

- 2013 -

Country: Cook Islands

I. EXECUTIVE SUMMARY

Please provide an executive summary (not more than two pages) that will allow national and international stakeholders to gain a quick overview of the content of the country report.

The executive summary should contain information on:

- key trends and driving forces affecting animal genetic resources management in your country;
- strengths, weaknesses and gaps in capacity to manage animal genetic resources in your country;
- key constraints and challenges with respect to animal genetic resources management in your country;
- priorities and strategic directions for future action (focusing particularly on the next ten years).

The Cook Island's Animal Genetic Resources are not severely affect and remains strong. There are indications of indigenous breeds on the decline and practical assessments tells us that this may accelerate if there is no plan to save them in the near Future. The population strongly agrees with the method of saving and proper management of these resources, however, we do not have the capabilities, as a small island state to do this. We need international support in order to save our genetic material.

Agriculture Census is the only survey that has been carried out during the past years that includes animal population but excluding animal breeds within each animal species. Overseas information is gathered on new breed performances and this information is used locally as guidelines on the economic performance of such animals when imported into the country. There is no National livestock information system capable of monitoring the status of breeds of each animal species. The only system for monitoring the status and trends in breeds is based on our livestock extension service farm visits.

There have been no comparative characterization studies (base-line breed surveys, genetic and molecular genetic characterization) being carried out to evaluate the 3 groups involved. But through experience most farmers have noticed differences amongst the 3 groups and they have adapted to the breeds more suited to their needs.

The Country's most important opportunity for improved use and increased genetic development of AnGR is for food security and import substitution. Currently there is no strategy or action plans put in place for improved use, increased genetic development of AnGR or for locally adapted breeds. This breed may be slowly fading out and there are no opportunities or plans to start monitoring them. Unless there are trainings and improvement of the country's Human Resources in management and conservation of AnGR, we risk losing our own genetic material. An opportunity to build infrastructure and facilities to help conserve these material needs to be looked at now or face extinction. There will be a change in the Agriculture act, where policy and legislation are to be included to guide the development of AnGR in the Cook Islands. This is the first time AnGR has been properly looked at, and there is a lot of work to be carried out in

properly identifying the priorities, opportunities and constraints to the improved use or genetic development of AnGR.

Currently there are no mechanisms in place to improve recognition and understanding of the various roles of men, women, and children in the utilization and conservation of AnGR. There are no links with other national and international biodiversity objectives, especially with the Convention on Biological Diversity. The Cook Islands have no bilateral or multilateral arrangements with other governments, research institutions or others related to research of AnGR. The primary institutions and organizations that are involved in AnGR are the Ministries of Agriculture, Education, Environment and Health. Priorities for overcoming the gaps in research capacity, education, and for enhancing training, policy development and other institutional capacity are funding and trained personnel. There are inadequate educational programmes in characterization utilization and conservation of AnGR and most students study overseas for much of their training on AnGR.

Currently there is no strategy for enhancing the information and communication systems capacity to support and promote the better management of AnGR, including indigenous knowledge, monitoring and reporting on the state of these resources, trends and threats. The Cook Islands would welcome outside assistance towards filling in these gaps.

II. DATA FOR UPDATING THE PARTS AND SECTIONS OF *THE STATE OF THE WORLD'S ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE*

FLOWS OF ANIMAL GENETIC RESOURCES

1. Studies of gene flow in animal genetic resources have generally concluded that most gene flow occurs either between developed countries or from developed countries to developing countries. Does this correspond to the pattern of gene flow into and out of your country?

For developed countries, exceptions to the usual pattern would include significant imports of genetic resources from developing countries. For developing countries, exceptions would include significant exports of genetic resources to developed countries, and/or significant imports and/or exports of genetic resources to/from other developing countries.

- yes
- no
- yes but with some significant exceptions

1.1. If you answer "no" or "yes but with some significant exceptions", please provide further details. Please include information on: which species are exceptions and which regions of the world are the sources and/or destinations of the respective genetic material.

The Cook Islands have ordered genetic resources from the country of Fiji in the past and are in the process of sourcing another Genetic material from the same Country.

2. Have there been any significant changes in patterns of geneflow in and out of your country in the last ten years?

- yes
- no

2.1. If yes, please indicate whether this view is based on quantified data (e.g. import and export statistics collected by the government).

- yes
- no

2.2. If yes, please provide references (preferably including web links) (if relevant, indicate which types of animal genetic resources are covered).

2.3. Please also describe the changes, indicating the species involved, the direction of the changes, and the regions of the world to and from which the patterns of imports and exports have changed.

The only change in the country's geneflow is the sourcing a different genetic material for goats. We used to improve our Goat breeds with genetic material from Fiji, however a few years ago, a Breeder decided to source new material from New Zealand.

The sourcing of genetic materials for goats are usually from within the South Pacific for all goat farmers. Except for this individual, he source his genetic material from a different area. He was specifically after a new breed. It should have been a Breeder, not a farmer, because the intention was to breed and distribute to the farmers.

3. Please describe how the patterns of geneflow described under Questions 1 and 2 affect animal genetic resources and their management in your country.

Note: Please answer this question even if the pattern of geneflow into and out of your country corresponds to the "usual" pattern described in the first sentence of Question 1 and/or has not changed significantly in the last ten years.

The continued sourcing of genetic material to improve our Goat breeds have always been our aim. But with the high speed of inbreeding and the dominance of the Fiji breed, It was decided to import from New Zealand and to bring in a totally new material. This added more dimension to our goat breed and improve the animal. As for other breeds, there is the usual avenue of sourcing and nothing has changed. However, it is encouraged that farmers keep injecting the local genetic material in due to it's ability to survive local conditions.

LIVESTOCK SECTOR TRENDS

4. Please indicate the extent to which the following trends or drivers of change have affected or are predicted to affect animal genetic resources and their management in your country and describe these effects.

Note: Relevant impacts on animal genetic resources and their management might include, for example, changes in the type of animal genetic resources kept (e.g. different breeds or species), changes in the uses to which animal genetic resources are put, changes in the geographical distribution of different types of animal genetic resources, increases or decreases in the number of breeds at risk of extinction, changes in the objectives of breeding programmes, changes in the number or type of conservation programmes being implemented, etc. In the text sections, please briefly describe the changes. If possible, provide some concrete examples of the challenges or opportunities presented by the respective drivers and the actions taken to address these challenges or opportunities. If relevant, you may also indicate why a given driver is not affecting animal genetic resources and their management in your country. For a general discussion of drivers of change, please see The State of the World's Animal Genetic Resources for Food and Agriculture (Part 2, Section A) (<http://www.fao.org/docrep/010/a1250e/a1250e00.htm>).

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Changing demand for livestock products (quantity)	medium	low	We expect more land usage and may loose some other genetic resources due to overcrowding.
Changing demand for livestock products (quality)	medium	low	There may not be much change because with WTO agreements, cheap meat products are appearing on market shelves which have caused a shift in the demand for meat. People are buying cheaper products.
Changes in marketing infrastructure and access	medium	low	The country being small, we do not anticipate any sophisticated measures in management of our resources in future. We rely more heavily on outside organizations to help us with the infrastructure and access.

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Changes in retailing	high	low	With our local resources being improved from imported genetic material, our products will improve and so will the selling power. There will always be room to improve our genetic material and sourcing of new material is always encouraged.
Changes in international trade in animal products (imports)	none	none	The country does not participate in international trade, but cheap meat products are finding their ways into the country and this may affected our local products but the management of our resources will always be there because of our cultural affiliations with animals.
Changes in international trade in animal products (exports)	none	none	The Cook Islands do not export.
Climatic changes	none	medium	Climate issues are now affecting the management of our Genetic Resources. Farmers have to learn to improvise on the management system in order to have good quality animals.
Degradation or improvement of grazing land	medium	medium	There is little effect on the degradation of our land from over grazing as we are subsistence/semi-commercial farmers. The managements of animals are more the tethering, fencing and the free roam type.
Loss of, or loss of access to, grazing land and other natural resources	low	high	In certain areas like the capital for example, access to land is being limited due to buildings. However, in the rural/outer islands, lands are freely available.
Economic, livelihood or lifestyle factors affecting the popularity of livestock keeping	high	low	In the rural/outer islands, being wealthy is based on the number of livestock your have and the ability to present this to community functions. However, in the capital, Keeping animals is solely for the purpose of supporting the family first and secondly to sell to make money. So the management systems are not the same as Economic system is based on enclosed pens, fencings, while the rural system is the free roaming type.
Replacement of livestock functions	low	low	There is not much that affects the management of livestock functions and it is believed it will still be as before. The functions of horses, however, have changed and machineries have taken over. There may be a possibility we may loose this genetic material. We need to protect these resources.
Changing cultural roles of livestock	low	high	There is not much change as livestock are still being used for cultural events. The management of such animal genetic resources has been the same as before, especially for cultural roles.
Changes in technology	low	low	Technology may be needed to help with preserving of the genetic resources that are eroding quickly.

Drivers of change	Impact on animal genetic resources and their management over last ten years	Future impact on animal genetic resources and their management (predicted for the next ten years)	Describe the effects on animal genetic resources and their management
Policy factors	low	high	Legislation and Policy are now being assessed to help with the management and protecting of the genetic material.
Disease epidemics	low	medium	Epidemic diseases is a major problem we will face, therefore, we need to have plans on how to save our genetic material. Our ecosystem is fragile and when the disease hits nation wide it would wipe out our Resources. It may be different if it hits sporadically or only in parts. We maybe able to save some. The country comprises of small islands with the sea/ocean as its natural protection.

OVERVIEW OF ANIMAL GENETIC RESOURCES

5. Please provide the number of locally adapted and exotic breeds kept in your country.

Data on the number of breeds is needed in order to calculate the percentage of breeds subject to the various management activities that are covered in this questionnaire. In line with the request of the Commission on Genetic Resources for Food and Agriculture at its Fourteenth Regular Session (CGRFA-14/13/Report, paragraph 31), FAO will implement the “locally adapted” vs. “exotic breed” classification system in the Domestic Animal Diversity Information System (DAD-IS). Once countries have fully updated their breed lists and classified all breeds in DAD-IS, it will be possible to use these data to obtain the numbers of breeds in each category.

Species	Locally adapted breeds	Exotic breeds
Cattle (specialized dairy)	0	0
Cattle (specialized beef)	1	0
Cattle (multipurpose)	0	0
Sheep	0	0
Goats	2	1
Pigs	4	3
Chickens	2	3
Muscovy ducks	2	0

CHARACTERIZATION

To provide further details of your country’s activities in the field of characterization, surveying and monitoring, please go to Strategic Priority Area 1 of the “Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013” (below).

6. Please provide an overview of the current state of characterization in your country by indicating the extent to which the activities shown in the following table have been carried out.

Note: Please focus on characterization studies that have been conducted within the last ten years (baseline surveys of population size may have been conducted in the more distant past). Recall that some types of characterization study on your country’s breeds may have been conducted outside your country. For the first two columns, please insert the number of breeds; for columns 3 to 8 please choose one of the following categories: none; low (approximately <33%); medium (approximately 33–67%); high (approximately >67%).

Species	Baseline survey of population size	Regular monitoring of population size	Phenotypic characterization	Molecular genetic diversity studies – within breed	Genetic diversity studies based on pedigree	Molecular genetic diversity studies – between breed	Genetic variance component estimation	Molecular genetic evaluation
Cattle (specialized dairy)	0	0	none	none	none	none	none	none
Cattle (specialized beef)	0	0	none	none	none	none	none	none
Cattle (multipurpose)	1	1	medium	none	low	none	low	none
Sheep	0	0	none	none	none	none	none	none
Goats	2	2	high	none	low	none	none	none
Pigs	1	1	high	none	low	none	none	none
Chickens	1	1	medium	none	low	none	none	none
Muscovy ducks	1	1	low	none	low	none	none	none

INSTITUTIONS AND STAKEHOLDERS

To provide further details of your country's activities in the field of institutions and stakeholders, please go to Strategic Priority Area 4 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

7. Please indicate the state of your country's capacities and provisions in the following areas of animal genetic resources management.

	Score
Education	low
Research	none
Knowledge	medium
Awareness	high
Infrastructure	none
Stakeholder participation	medium
Policies	low
Policy implementation	low
Laws	low
Implementation of laws	low

8. Please provide further information regarding your country's capacities in each of the above-mentioned areas of management. If relevant, please indicate what obstacles or constraints your country faces in each of these areas and what needs to be done to address these constraints. You may also provide information on any particular successes achieved in your country in any of these areas and on the reasons for these successes.

	Description
Education	There is limited or no capacity animal genetic resources. Training in this area is needed.
Research	Research capabilities are also non existence. With the size of the country it is therefore more realistic to rely heavily on New Zealand or the SPC organization to supply us data and research material, help and technical capacity.
Knowledge	The knowledge of the importance of AnGR with the country is very highly. This has been, due to teaching and nurturing attitude from the older generation and are passed on to the young. However, the knowledge of AnGR is so important that Governments should be involved in formulating plans for the conservation and keeping and guiding our genetic material for the years to come.
Awareness	There is also the need for farmers to be made aware on the importance of animal breeding and the maintenance of genetic material. Genetic resources, in the past have always been lost due to mismanagement and also the "don't care" attitude from farmers. Trainings on Conservation and proper management of breeds is essential and it must happen before the country loses more genetic material.
Infrastructure	There is no elected body or Committee with Government to organise some plan for this area. Government bodies like, Environment, Marines, etc. and some of the NGO's should be included and a body elected to run this work. Technical personnel elected to do more research and surveys to complete a comprehensive report on the state of Animal Genetic Resources in the Country. At the moment with the limited capacity and personnel, the Ministry of Agriculture is trying it's best to cater for this area. There is a need for all stakeholders to participate. Employment of SPC technical personnel to help is another area but with the small Ministry budget, there is not enough funds to cater for this area. Also, with the spread of small islands in the Country, it is very costly to travel to these outer islands to do surveys.
Stakeholder participation	As mentioned above, stakeholder participation is important. Working together but on areas of their own expertise makes things easier to do.
Policies	There are some policies in place but there is a need to expand these policies to capture all animal, bird etc.. These policies must reflect the conservation of our breeds and doing what we can to save the critically endangered ones. In the past, one of our local bird breeds nearly went extinct but for the efforts of a NGO. Therefore there is a need formulate policies and implement them.
Policy implementation	The implementation of Policies must make the public accountable for their own Genetic resources. The Policy must be in place to guide and lead the public in achieving their Goal. As mentioned there are some policies in place but they only cover some of the breeds, therefore there is a need to do a more comprehensive one which covers everything.
Laws	There is no law on the protection, conservation, management, etc of AnGr. The Ministry of Agriculture is reviewing it's Act and it has been my aim to introduce the AnGr act. This will help us in monitoring and our resources and make sure they are not abused. There is a need for a technical personnel, qualified in drafting laws to do this for us.
Implementation of laws	It is envisaged that this law may help in policing our Genetic material and prosecute those that abuse it.

9. What steps have been taken in your country to engage or empower the various stakeholders in animal genetic resources management (e.g. establishment of livestock keepers' organizations, development of biocultural community protocols)?

Note: Biocultural community protocol: a document that is developed after a community undertakes a consultative process to outline their core cultural and spiritual values and customary laws relating to their traditional knowledge and resources. For a discussion of the potential role of biocultural community protocols in the conservation of animal genetic resources, please see the guidelines In vivo conservation of animal genetic resources (<http://www.fao.org/docrep/018/i3327e/i3327e.pdf>).

There has been not engagement from Government stakeholders, however, each island has their own set of laws/ protocols on conservation and these includes plants, waterways etc. These are not written but is passed from generation to generation. The Island council however has taken this and incorporated it as a Island law and are always discussed, improved in the regular meetings. The Government calls this the "Blue Laws".

BREEDING PROGRAMMES

Note: Breeding programmes: systematic and structured programmes for changing the genetic composition of a population towards a defined breeding goal (objective) to realize genetic gain (response to selection), based on objective performance criteria. Breeding programmes typically contain the following elements: definition of breeding goal; identification of animals; performance testing; estimation of breeding values; selection; mating; genetic gain and transfer of genetic gain. Breeding programmes are usually operated either by a group of livestock breeders organized in a breeders' association, community-based entity or other collective body; by a large commercial breeding company; or by the government.

To provide further details of your country's activities in the field of breeding programmes, please go to Strategic Priority Area 2 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

10. Who operates breeding programmes in your country?

Note: the objective of this question is to identify which stakeholders lead or organize the breeding programmes that exist in your country. Stakeholder participation in the implementation of the various elements of breeding programmes is covered under Question 15. If you wish to provide further information on the activities of the various stakeholder groups (including collaborative activities on an international scale), please provide it in the text section of Question 15.

Species	Government	Livestock keepers organized at community level	Breeders' associations or cooperatives	National commercial companies	External commercial companies	Non-governmental organizations	Others
Cattle (specialized dairy)	yes	no	no	no	yes	no	no
Cattle (specialized beef)	yes	no	no	no	yes	no	no
Cattle (multipurpose)	no	yes	no	no	no	no	no
Sheep	no	no	no	no	no	no	no
Goats	yes	yes	no	no	yes	no	no
Pigs	yes	yes	no	no	yes	no	no
Chickens	yes	yes	no	no	yes	no	no
Muscovy ducks	yes	yes	no	no	yes	no	no

10.1. If you choose the option "others", please indicate what kind of operator(s) this refers to.

11. For how many breeds in your country are the following activities undertaken?

Note: Please do not include activities that are only undertaken for experimental purposes, i.e. include only activities that directly serve or involve livestock keepers. However, please include activities even if they do not at present form part of a breeding programme. The intention is to obtain an indication of whether the "building blocks" of a breeding programme are available or being developed in your country. Loc = Locally adapted breeds; Ex = Exotic breeds.

Species	Tools																
	Animal identification		Breeding goal defined		Performance recording		Pedigree recording		Genetic evaluation (classic approach)		Genetic evaluation including genomic information		Management of genetic variation (by maximizing effective population size or minimizing rate of inbreeding)		Artificial insemination		
	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	Loc	Ex	
Goats	1	1	1	1	1	1	1	0	0	0	0	0	0	1	1	0	0
Pigs	3	0	3	0	2	0	0	0	0	0	0	0	0	2	0	1	0

12. Please indicate how many of the breeds in your country are subject to breeding programmes applying the following breeding methods.

Note: Loc = Locally adapted breeds; Ex = Exotic breeds.

Species	Breeding method				
	Straight/pure-breeding only		Straight/pure-breeding and cross-breeding		
	Loc	Ex	Loc	Ex	
Goats		0	0	2	1
Pigs		0	0	1	3

13. Please indicate the state of research and training in the field of animal breeding in your country.

Species	Training	Research
Cattle (specialized dairy)	low	none
Cattle (specialized beef)	low	none
Cattle (multipurpose)	none	none
Sheep	none	none
Goats	high	low
Pigs	high	medium
Chickens	high	low

Species	Training	Research
Muscovy ducks	medium	none

14. Please indicate the extent to which livestock keepers in your country are organized for the purposes of animal breeding.

Species	Organization of livestock keepers
Cattle (specialized dairy)	none
Cattle (specialized beef)	low
Cattle (multipurpose)	none
Sheep	none
Goats	high
Pigs	high
Chickens	high
Muscovy ducks	medium

15. Please indicate the level of stakeholder involvement in the various elements of breeding programmes in your country.

Note: If your country has different types of breeding programme, the level of involvement of the various stakeholders may vary from one type of programme to another. In answering this question please try to indicate the overall degree of involvement of the various stakeholder groups.

Cattle (specialized beef)	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	high	none	none	high	none	low	none	none
Animal identification	high	none	medium	medium	low	medium	low	none
Recording	medium	high	none	low	none	high	none	none
Provision of artificial insemination services	medium	none	none	none	none	medium	none	none
Genetic evaluation	high	none	none	medium	none	high	none	none

Goats	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	high	none	none	medium	none	none	none	none
Animal identification	high	none	none	medium	low	high	low	none
Recording	high	none	none	low	none	high	none	none
Provision of artificial insemination services	high	none	none	none	none	high	none	none
Genetic evaluation	high	none	none	none	none	high	none	none

Pigs	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	high	none	none	medium	none	low	none	none
Animal identification	high	none	none	low	medium	high	none	none
Recording	high	none	none	low	none	high	none	none
Provision of artificial insemination services	high	none	none	none	none	medium	none	none
Genetic evaluation	low	none	none	none	none	high	none	none

Chickens	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	low	none	none	high	none	none	none	none
Animal identification	medium	none	high	high	high	medium	none	none
Recording	medium	none	medium	high	none	medium	none	none
Provision of artificial insemination services	none	none	none	none	none	low	none	none
Genetic evaluation	low	none	medium	high	none	medium	none	none

Muscovy ducks	Government	Research organizations	Breeders' associations or cooperatives	Individual breeders/livestock keepers	National commercial companies	External commercial companies	Non-governmental organizations	Others
Setting breeding goals	medium	none	none	high	none	none	none	none
Animal identification	medium	none	none	medium	none	none	none	none
Recording	low	none	none	low	none	none	none	none
Provision of artificial insemination services	none	none	none	none	none	none	none	none
Genetic evaluation	low	none	none	low	none	none	none	none

15.1. If you choose the option "others", please indicate what kind of operator(s) this refers to.

By way of a tourist visiting the country and offered his veterinary skills for artificial insemination. You may notice this only happened in the pigs section.

15.2. Please provide further information on the roles that the stakeholders identified in the table play in the implementation of the various activities. If relevant, please also provide further information on the organizational roles played by the stakeholders identified in Question 10.

With most of the Cook Islands breeds used for food security reason or self suitabilities, most of the implementation of the activities went back to the Government departments, with help from External companies and some private farmers and Cooperatives choosing the own breeds and other issues. Of course, with advise from Government and External Experts

16. Does your country implement any policies or programmes aimed at supporting breeding programmes or influencing their objectives?

Species	Policies or programmes
Cattle (specialized dairy)	no
Cattle (specialized beef)	no
Cattle (multipurpose)	no
Sheep	no
Goats	yes
Pigs	yes
Chickens	no
Muscovy ducks	no

16.1. Please describe these policies or programmes, indicating whether or not they include any measures specifically aimed at supporting breeding programmes for locally adapted breeds or any measures specifically aimed at supporting breeding programmes for exotic breeds (including breed-replacement programmes). Please indicate whether different types of programme are promoted in different production systems (and describe the differences).

Species	Description of policies or programmes
Cattle (specialized dairy)	No policies or programmes
Cattle (specialized beef)	No policies or programmes
Cattle (multipurpose)	No policies or programmes
Sheep	We have not imported sheep yet but it is in the plan.
Goats	There is no policies or programmes in place yet, but there are plans to implement these policies.
Pigs	A Breeding programme was drawn up and implemented years ago but, it is not being used now maybe due to being out of date. We will have to draw up another one.
Chickens	There is no policy on chicken and they are normally roaming around and seems to breed with imported layers and broiler breeds and the wild breeds.
Muscovy ducks	Muscovy ducks are used only for backyard farms and there are no plans to use it as a breeding venture. They are kept for home use to substitute the other breeds for consumption. Maybe this can be included in the breeding program in future.

17. Please describe the consequences of your country's breeding policies and programmes, or lack of breeding policies and programmes, for your country's animal genetic resources and their management.

Species	Description of consequences
Cattle (specialized dairy)	For the cattle breeds in the Cook Islands, due to not having a proper or a robust breeding programme and policies in place, there have been a lot of problems with our animals. Signs of stunt in growth, and other characteristics clearly shows that these happened due to. There are dairy cattle mixed with beef cattle. Hence our cattle industry is not working well. This comment includes the other Cattle breeds.
Cattle (specialized beef)	As above
Cattle (multipurpose)	as above
Sheep	
Goats	Another problem with the Goats breeding programme comes from farmers not following the instructions and policies. Training is another issue. There is a need for training in Breeding before new breeds should be introduced. Support the making of the Act and policies to back the Industry in trying to do a sustainable breeding program.
Pigs	The pigs are the same as the other animals above. Technical capacity and facilities need to be improved also to maintained a continued successful breeding programme.
Chickens	

18. Please describe the main constraints to the implementation of breeding programmes in your country and what needs to be done to address these constraints. You may also provide information on any particular successes achieved in your country with respect to the establishment and operation of breeding programmes and on the factors that have contributed to these successes.

As mentioned before, the Expertise of Technical personnel is one area of importance. The Cook Islands do not have the Capacity to run these programmes. There is also the issue of Infrastructure, Research capabilities and other issue. There was this breeding programme done by the Ministry of Agriculture, to spread the new breeds of Goats to the outer islands for improving their genetic resources. On the Ministry's side, the Programme was successful, whereas in the outer islands, the farmers did not follow the guidelines given them in order to prolong the breed. Maybe its because of the funding that the programme was successful in one end, however, a training should have been included to help the farmers manage the programme well. Another issue is, since the island countries in the Pacific are sparely scattered over the vast Pacific Ocean, and since we all possess more or less the same Genetic Resources, could it not be more productive to establish a Center where genetic resources can be kept there and most technical experts can work and help these smaller island states. An example is the Plant genetic Resources center in Fiji.

19. Please describe future objectives, priorities and plans for the establishment or further development of breeding programmes in your country.

Species	Description of future objectives, priorities and plans
Cattle (specialized dairy)	At the moment we are reviewing the Ministry of Agriculture Act. When we start working out on the new one, an Animal Genetic Resources clause will be added and submitted. We will then start working on the guidelines, policies, programmes on Animal production and development, included in that will be the breeding programmes. These programmes will differentiate the breeds and the type of roles they play.
Cattle (specialized beef)	as above
Cattle (multipurpose)	as above
Sheep	We have not imported sheep yet but it is included in the plan.
Goats	Training is most need to train staff on, not only breeding programmes but also maitaining and conserving these breeds. We must also remember our own breeds.They are the most adaptable breeds to our situation. Our other genetic resources we imported are only to improve the performance of the animal. Therefore, conservation is key. This applies to all other breeds in the country.

Species	Description of future objectives, priorities and plans
Pigs	The priority for the breeding programme of pigs are to draw up a priority list on how to work with the different island to establish a real breeding programme for the type of animal breed they need. Establish also a list of potential farmers that will keep to the programmes and help them keep the material. Develop an infrastructure that can be maintained and will benefit the breeding programme.
Chickens	The chickens and muscovy ducks are fine as they are for family consumption only. These breeds are also not threatened. Maybe in future when they are of economical importance to the country, breeding programmes can be formulated.
Muscovy ducks	

CONSERVATION

To provide further details of your country's activities in the field of conservation, please go to Strategic Priority Area 3 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources 2007–2013" (below).

20. Please provide an indication of the extent to which your country's breeds are covered by conservation programmes.

Please focus on at-risk breeds and breeds for which there are serious grounds for concern about their potential to fall into the at-risk category in the near future. Countries should not reduce their scores because of a lack of conservation programmes for breeds that are clearly not at risk. The main purpose of this question is to obtain an indication of the extent to which your country's conservation programmes meet the objective of protecting breeds from extinction. If your country has no official national criteria for classifying breed risk status or lacks the relevant data for identifying which breeds are at risk, please base your answers on estimations. Please also note that Question 8 of the "Progress report on the implementation of the Global Plan of Action for Animal Genetic Resources – 2007 to 2013" (below) requests countries to provide information on the criteria they use to assess the risk status of animal genetic resources.

Note: n/a = no programmes implemented because all breeds of this species present in the country are secure.

Species	In situ conservation	Ex situ in vivo conservation	Ex situ in vitro conservation
Cattle (specialized dairy)	medium	none	none
Cattle (specialized beef)	medium	none	none
Cattle (multipurpose)	medium	none	none
Sheep	none	none	none
Goats	high	none	none
Pigs	high	none	none
Chickens	high	none	none
Muscovy ducks	high	none	none

21. Does your country use formal approaches to prioritize breeds for conservation?

- yes
 no

21.1. If so, which of the following factors are considered?

Note: See Sections 2 and 3 of the FAO guidelines *In vivo conservation of animal genetic resources* (<http://www.fao.org/docrep/018/i3327e/i3327e.pdf>).

	Considered in formal prioritization approaches
Risk of extinction	yes
Genetic uniqueness	yes
Genetic variation within the breed	yes

	Considered in formal prioritization approaches
Production traits	yes
Non-production traits	no
Cultural or historical importance	yes
Probability of success	no

22. Please indicate which of the following methods are used as elements of in situ conservation programmes in your country and which operators are managing them.

Note: Operators: the sector(s) that initiate(s) and manage(s) the respective activities. If both sectors undertake the respective activity, please answer "yes" in both rows. Please answer "yes" if the respective sector only works with some of the species targeted. If necessary, details of which sector addresses which species can be provided in the textual response. Information on what kinds of public- or private-sector organizations undertake the activities can also be provided, if necessary, in the textual response. Species targeted: Please answer "yes" if there are any such activities targeting the respective species, whether they are undertaken by the public sector, private sector or both.

Operators / Species targeted	Promotion of niche marketing or other market differentiation	Community-based conservation programmes	Incentive or subsidy payment schemes for keeping at-risk breeds	Development of biocultural community protocols	Recognition/award programmes for breeders	Conservation breeding programmes	Selection programmes for increased production or productivity in at-risk breeds	Promotion of at-risk breeds as tourist attractions	Use of at-risk breeds in the management of wildlife habitats and landscapes	Promotion of breed-related cultural activities	Extension programmes to improve the management of at-risk breeds	Awareness-raising activities providing information on the potential of specific at-risk breeds
Public sector	yes	yes	no	no	no	no	no	no	no	yes	yes	no
Private sector	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Cattle (specialized dairy)	no	no	no	no	no	no	no	no	no	no	no	no
Cattle (specialized beef)	yes	no	no	no	no	no	no	no	no	no	no	no
Cattle (multipurpose)	no	no	no	no	no	no	no	no	no	no	no	no
Sheep	no	no	no	no	no	no	no	no	no	no	no	no
Goats	yes	no	no	yes	no	no	no	no	no	no	no	no
Pigs	yes	yes	no	no	no	no	no	no	no	no	yes	yes
Chickens	no	no	no	no	no	no	no	no	no	no	no	no

22.1. Please provide further details of the activities recorded in the table and any other in situ conservation activities or programmes being implemented in your country.

There was the activity done by a Private sector on saving the genetic resources of one of our wild, Iconic birds called the "The Fly Catcher". They had programmes set to eradicate rats, and a cultural protocol was put in place to stop people from entering in this land area. They were successful in bringing back this bird, from extinction. The population is increasing steadily. Our genetic resources, apart from Pigs are intact and is not threatened at the moment. But we must not sit around ideal, there is a need to survey and check other genetic material whether they are still healthy. Conserving our genetic material safeguards our environment.

23. Does your country have an operational in vitro gene bank for animal genetic resources?

In vitro gene bank: a collection of documented cryoconserved genetic material, primarily stored for the purpose of medium- to long-term conservation, with agreed protocols and procedures for acquisition and use of the genetic material.

- yes
- no

23.1. If your country has no in vitro gene bank for animal genetic resources, does it have plans to develop one?

- yes
- no

23.2. If yes, please describe the plans.

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24. If your country has an in vitro gene bank for animal genetic resources, please indicate what kind of material is stored there.

	Stored in national genebank
Semen	
Embryos	
Oocytes	
Somatic cells (tissue or cultured cells)	
Isolated DNA	

25. If your country has an in vitro gene bank for animal genetic resources, please complete the following table.

Species	Number of breeds for which material is stored	Number of breeds for which sufficient material is stored	Does the collection include material from not-at-risk breeds?	Have any extinct populations been reconstituted using material from the gene bank?	Have the gene bank collections been used to introduce genetic variability into an in situ population?	Have the gene bank collections been used to introduce genetic variability into an ex situ population?	Do livestock keepers or breeders' associations participate in the planning of the gene banking activities?
Cattle (specialized dairy)							
Cattle (specialized beef)							
Cattle (multipurpose)							
Sheep							
Goats							

Species	Number of breeds for which material is stored	Number of breeds for which sufficient material is stored	Does the collection include material from not-at-risk breeds?	Have any extinct populations been reconstituted using material from the gene bank?	Have the gene bank collections been used to introduce genetic variability into an in situ population?	Have the gene bank collections been used to introduce genetic variability into an ex situ population?	Do livestock keepers or breeders' associations participate in the planning of the gene banking activities?
Pigs							
Chickens							

25.1. Please provide further details of the activities recorded in the table (including any examples of the use of gene bank material to reconstitute populations or introduce genetic variability) and any other in vitro conservation activities or programmes being implemented in your country.

26. Does your country have plans to enter into collaboration with other countries to set up a regional or subregional in vitro gene bank for animal genetic resources?

- yes
- no

26.1. If yes, please describe the plans, including a list of the countries involved.

In one of the workshops organized by the SPC in Fiji, a resolution was passed in the report for small Island states to formulate a set up for a infrastructure for the safeguard of our Animal Genetic Resources. This idea came about after witnessing the Plant Genetic infrastructure in this country which looks after the South Pacific island countries' s Plant genetic resources. This infrastructure can be run by the SPC technical staff. If the Plants can do it, Why not the Animals? This will save a huge amount of fund, instead of building on each island state. This have not been taken up to Government level yet. However, we believe this is the only way for the South Pacific to acquire such a infrastructure. This point may need to be discussed further with parties involved to assess the viability.

27. If there have been any cases in your country in which breeds that were formerly classified as at risk of extinction have recovered to a position in which they are no longer at risk, please list the breeds and describe how the recovery was achieved.

As mentioned above, the breed is a bird called Flay Catcher (pomarea dimidiata). It was classified as almost extinct because there were only 20 or so left when they started the recovery programme. Today their numbers have more than tripled and they are flourishing. Since their recovery, they have been taken off the endangered list.

REPRODUCTIVE AND MOLECULAR BIOTECHNOLOGIES

28. Please indicate the level of availability of reproductive and molecular biotechnologies for use in livestock production in your country.

Note: low = at experimental level only; medium = available to livestock keepers in some locations or production systems; high = widely available to livestock keepers.

Species	Biotechnologies								
	Artificial insemination	Embryo transfer	Multiple ovulation and embryo transfer	Semen sexing	In vitro fertilization	Cloning	Genetic modification	Molecular genetic or genomic information	Transplantation of gonadal tissue
Cattle (specialized beef)	medium	none	none	none	none	none	none	none	none
Pigs	high	none	none	none	none	none	none	none	none

28.1. Please provide additional information on the use of these biotechnologies in your country.

There is no use of biotechnologies in my country. Artificial Insemination is done by an imported technician. Our genetic resources are imported via the animal depending on the breed.

29. If the reproductive and/or molecular technologies are available for use by livestock keepers in your country, please indicate which stakeholders are involved in providing the respective services to the livestock keepers.

	Stakeholders					
	Public sector	Breeders' associations or cooperatives	National non-governmental organizations	Donors and development agencies	National commercial companies	External commercial companies
Artificial insemination	yes	no	no	yes	no	yes
Embryo transfer	no	no	no	no	no	no

29.1. Please provide additional information on the roles that the providers identified in the table play in the provision of biotechnology services in your country.

Donor Agencies supply technicians and they are brought in through the Ministry of Agriculture to do Artificial inseminations to livestock. For sourcing other genetic material, the Ministry does this and imports live animals for breeding purposes.

30. Please indicate which biotechnologies your country is undertaking research on.

Biotechnologies	Public or private research at national level	Research undertaken as part of international collaboration
Artificial insemination	no	no
Embryo transfer or MOET	no	no
Semen sexing	no	no
<i>In vitro</i> fertilization	no	no
Cloning	no	no
Genetic modification	no	no
Use of molecular genetic or genomic information for estimation of genetic diversity	no	no
Use of molecular genetic or genomic information for prediction of breeding values	no	no
Research on adaptedness based on molecular genetic or genomic information	no	no

30.1. Please briefly describe the research.

For Artificial insemination, we rely on other donors or organizations to bring in Experts in this area. A training is more appropriate to train locals on this technique. However, we find that it is cheaper to bring in live animals than sperm capsules. Artificial insemination is an expensive process.

31. Please estimate the extent to which artificial insemination (using semen from exotic and/or locally adapted breeds) and/or natural mating is used in your country's various production systems.

Note: low = approximately <33% of matings; medium = approximately 33–67% of matings; high = approximately >67% of mating; n/a = production system not present in this country.

Cattle (multipurpose)	Ranching or similar grassland-based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	n/a	none	none	n/a	none
Artificial insemination using nationally produced semen from exotic breeds	n/a	n/a	n/a	n/a	none
Artificial insemination using imported semen from exotic breeds	n/a	medium	medium	n/a	low
Natural mating	n/a	high	high	n/a	high

Goats	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	n/a	n/a	none	n/a	n/a
Artificial insemination using nationally produced semen from exotic breeds	n/a	none	none	n/a	n/a
Artificial insemination using imported semen from exotic breeds	n/a	none	none	n/a	n/a
Natural mating	n/a	high	high	n/a	n/a
Pigs	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	n/a	none	none	n/a	n/a
Artificial insemination using nationally produced semen from exotic breeds	n/a	none	none	n/a	n/a
Artificial insemination using imported semen from exotic breeds	n/a	medium	medium	n/a	n/a
Natural mating	n/a	high	high	n/a	n/a

Chickens	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	n/a	none	none	n/a	n/a
Artificial insemination using nationally produced semen from exotic breeds	n/a	none	none	n/a	n/a
Artificial insemination using imported semen from exotic breeds	n/a	none	none	n/a	n/a
Natural mating	n/a	high	high	n/a	n/a
Muscovy ducks	Ranching or similar grassland -based production systems	Pastoralist systems	Mixed farming systems (rural areas)	Industrial systems	Small-scale urban or peri-urban systems
Artificial insemination using semen from locally adapted breeds	n/a	none	none	n/a	n/a
Artificial insemination using nationally produced semen from exotic breeds	n/a	none	none	n/a	n/a
Artificial insemination using imported semen from exotic breeds	n/a	none	none	n/a	n/a
Natural mating	n/a	high	high	n/a	n/a

32. Please provide further details on the use of reproductive and molecular biotechnologies in animal genetic resources management in your country. Please note any particular constraints to implementing these activities and any problems associated with their use. Please indicate what needs to be done to address these constraints and/or problems. You may also provide information on any particular successes achieved in your country in the use of biotechnologies in animal genetic resources management and on the factors that have contributed to these successes.

This is not applicable to the Cook Islands as we do not have the technologies.

III. DATA CONTRIBUTING TO THE PREPARATION OF *THE STATE OF THE WORLD'S BIODIVERSITY FOR FOOD AND AGRICULTURE*

INTEGRATION OF THE MANAGEMENT OF ANIMAL GENETIC RESOURCES WITH THE MANAGEMENT OF PLANT, FORESTRY AND AQUATIC GENETIC RESOURCES

1. Please indicate the extent to which the management of animal genetic resources in your country is integrated with the management of plant, forestry and aquatic genetic resources. Please describe the collaboration, including, if relevant, a description of the benefits gained by pursuing a collaborative approach.

	Extent of collaboration	Description
Development of joint national strategies or action plans	none	There is no collaboration between these agencies and yet they are all Government Ministries. Forestry, Plants and livestock are housed under the Ministry of Agriculture, Aquatic genetic resources is under Marine resources. We do talk at the Ministry of agriculture when our issues cross cut but in forming a group and working together it is a different thing altogether. Marines only collaborates with us, when they have issues that needs our attention. By not understanding the meaning and importance of a joint national action plans may have caused this break down.
Collaboration in the characterization, surveying or monitoring of genetic resources, production environments or ecosystems	none	There is no collaboration in this areas also. Environment does not give us information about biodiversity etc.. Other stakeholders are also unaware that such collaborations do exist. This needs to be explained to all involved.
Collaboration related to genetic improvement	limited	We do sometimes talk about the importance of genetic improvement and conservation and other issues concerning Gr.
Collaboration related to product development and/or marketing	limited	Again, one of the stakeholders do visit or request information from the Animal Genetic Resources or other animal issues, but do not produce the report they were working on to help with all involved.
Collaboration in conservation strategies, programmes or projects	limited	There is limited involvement of other stakeholders into strategies and programmes for sustainable and conservation of Genetic resources. We need to distribute our finding to help each other.
Collaboration in awareness-raising on the roles and values of genetic resources	limited	There are areas we do work together for awareness purposes and other roles of Genetic resources.
Training activities and/or educational curricula that address genetic resources in an integrated manner	none	This area needs to be brought into our educational programmes to start teaching children into taking charge and controlling and saving our genetic resources.
Collaboration in the mobilization of resources for the management of genetic resources	none	This area needs more work.

2. Please describe any other types of collaboration.

3. If relevant, please describe the benefits that could be achieved by strengthening collaboration in the management of genetic resources in the animal, plant, forest and aquatic sectors in your country. If specific plans to increase collaboration are in place, please describe them and the benefits foreseen

I foresee, in working together, the stakeholders will be able to save our genetic resources. Sharing resources, funds etc make the work much easier, especially, surveys, characterisation, collation, and report of such incidents.

4. Please describe any factors that facilitate or constrain collaborative approaches to the management of genetic resources in your country.

With the wide spread of our islands, doing such a work mentioned before will be difficult. Technical capacities is needed too.

5. If there are constraints, please indicate what needs to be done to overcome them.

Funding is required to formulate train and do such exercise.

ANIMAL GENETIC RESOURCES MANAGEMENT AND THE PROVISION OF REGULATING AND SUPPORTING ECOSYSTEM SERVICES

6. Do your country's policies, plans or strategies for animal genetic resources management include measures specifically addressing the roles of livestock in the provision of regulating ecosystem services and/or supporting ecosystem services?

Regulating ecosystem services: "Benefits obtained from the regulation of ecosystem processes" – Millennium Ecosystem Assessment. 2005. Ecosystems and human well-being: synthesis. Washington D.C., Island Press (available at <http://millenniumassessment.org/documents/document.356.aspx.pdf>), page 40. Supporting ecosystem services: "Services necessary for the production of all other ecosystem services" – Millennium Ecosystem Assessment. 2005. Ecosystems and human well-being: synthesis. Washington D.C., Island Press (available at <http://millenniumassessment.org/documents/document.356.aspx.pdf>), page 40.

yes

no

6.1. If yes, please describe these measures and indicate which supporting and/or regulating ecosystem services are targeted, and in which production systems.

Examples of supporting and regulatory ecosystem services provided by livestock might include the following: provision or maintenance of wildlife habitats (e.g. via grazing); seed dispersal (e.g. in dung or on animals' coats); promoting plant growth (e.g. stimulating growth via grazing or browsing); soil formation (e.g. via the supply of manure); soil nutrient cycling (e.g. via supply of manure); soil quality regulation (e.g. affecting soil structure and water-holding capacity via trampling or dunging); control of weeds and invasive species (e.g. via grazing or browsing invasive plants); climate regulation (e.g. by promoting carbon sequestration through dunging); enhancing pollination levels (e.g. by creating habitats for pollinators); fire control (e.g. by removal of biomass that may fuel fires); avalanche control (e.g. grazing to keep vegetation short to reduce the probability that snow will slide); erosion regulation (e.g. indirect via fire control services); maintenance of water quality and quantity (e.g. indirect effect via erosion control); management of crop residues (e.g. consumption of unwanted crop residues by animals); pest regulation (e.g. by destruction of pests or pest habitats); disease regulation (e.g. by destruction of disease vectors or their habitats); buffering of water quantities – flood regulation (e.g. indirect effect via fire and erosion control).

N/a

6.1.1 Please describe what the outcome of these measures has been in terms of the supply of the respective ecosystem services (including an indication of the scale on which these outcomes have been obtained).

n/a

6.1.2 Please describe what the outcome of these measures has been in terms of the state of animal genetic resources and their management (including an indication of the scale on which these outcomes have been obtained).

n/a

7. Do your country's policies, plans or strategies for animal genetic resources management include measures specifically addressing environmental problems associated with livestock production?

Examples might include choosing to use particular species or breeds because they are less environmentally damaging in a given ecosystem or adapting breeding goals to produce animals that have some characteristic that makes them more environmentally friendly.

- yes
 no

7.1. If yes, please describe these measures and indicate the environmental problems that are targeted, and in which production systems.

No policies in place.

7.1.1 Please describe what the outcome of these measures has been in terms of the reduction of the respective environmental problem (including an indication of the scale on which these outcomes have been obtained).

n/a

7.1.2 Please describe what the outcome of these measures has been in terms of the state of animal genetic resources and their management (including an indication of the scale on which these outcomes have been obtained).

n/a

8. Please describe any constraints or problems encountered or foreseen in the implementation of measures in your country aimed at promoting the provision of regulating and supporting ecosystem services or reducing environmental problems.

n/a

9. Please provide examples of cases in which the role of livestock or specific animal genetic resources is particularly important in the provision of regulating and/or supporting ecosystem services in your country. Please also describe any examples in which diverse animal genetic resources are important in terms of reducing the adverse environmental effects of livestock production.

n/a

10. Please describe the potential steps that could be taken in your country to further expand or strengthen positive links between animal genetic resources management and the provision of regulating and/or supporting ecosystem services or the reduction of environmental problems. If your country has specific plans to take further action in this field, please describe them.

n/a

11. Please provide any further information on the links between animal genetic resources management in your country and the provision of supporting and/or regulating ecosystem services and/or the reduction of environmental problems.

n/a

IV. PROGRESS REPORT ON THE IMPLEMENTATION OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES – 2007 TO 2013*

Note: Please provide further details in the text boxes below each question, including, if relevant, information on why no action has been taken.

STRATEGIC PRIORITY AREA 1: CHARACTERIZATION, INVENTORY AND MONITORING OF TRENDS AND ASSOCIATED RISKS

- The state of inventory and characterization of animal genetic resources
- The state of monitoring programmes and country-based early warning and response systems
- The state of international technical standards and protocols for characterization, inventory, and monitoring

1. Which of the following options best describes your country's progress in building an inventory of its animal genetic resources covering all livestock species of economic importance (SP 1, Action 1)?

Glossary: An inventory is a complete list of all the different breeds present in a country.

- a. Completed before the adoption of the GPA
- b. Completed after the adoption of the GPA
- c. Partially completed (further progress since the adoption of the GPA)
- d. Partially completed (no further progress since the adoption of the GPA)

Please provide further details:

We have an inventory of the different breeds but we still need to prove that our genetic material for pigs and other animals are in fact ours and not locally adapted breeds.

2. Which of the following options best describes your country's progress in implementing phenotypic characterization studies covering morphology, performance, location, production environments and specific features in all livestock species of economic importance (SP 1, Actions 1 and 2)?

- a. Comprehensive studies were undertaken before the adoption of the GPA
- b. Sufficient information has been generated because of progress made since the adoption of the GPA
- c. Some information has been generated (further progress since the adoption of the GPA)
- d. Some information has been generated (no further progress since the adoption of the GPA)
- e. None, but action is planned and funding identified
- f. None, but action is planned and funding is sought
- g. None

Please provide further details:

Characterization of our breeds in the outer islands is hard work and costly. We need technical expertise to help and funding is the major obstacle.

3. Which of the following options best describes your country's progress in molecular characterization of its animal genetic resources covering all livestock species of economic importance (SP 1)?

- a. Comprehensive studies were undertaken before the adoption of the GPA
- b. Sufficient information has been generated because of progress made since the adoption of the GPA
- c. Some information has been generated (further progress since the adoption of the GPA)

- d. Some information has been generated (no further progress since the adoption of the GPA)
- e. None, but action is planned and funding identified
- f. None, but action is planned and funding is sought
- g. None

Please provide further details:

As above.

4. Has your country conducted a baseline survey of the population status of its animal genetic resources for all livestock species of economic importance (SP 1, Action 1)?

Glossary: A baseline provides a reference point for monitoring population trends. Population status refers to the total size of a national breed population (ideally, also the proportion that is actively used for breeding and the number of male and female breeding animals).

- a. Yes, a baseline survey was undertaken before the adoption of the GPA
- b. Yes, a baseline survey has been undertaken or has commenced after the adoption of the GPA
- c. Yes, a baseline survey has been undertaken for some species (coverage increased since the adoption of the GPA)
- d. Yes, a baseline survey has been undertaken for some species (coverage not increased since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There is a need molecular characterization to provide proof of identity. There is also the need for further survey to incorporate all the breed population.

5. Have institutional responsibilities for monitoring the status of animal genetic resources in your country been established (SP 1, Action 3)?

Glossary: Monitoring is a systematic set of activities undertaken to document changes in the population size and structure of animal genetic resources over time.

- a. Yes, responsibilities established before the adoption of the GPA
- b. Yes, responsibilities established after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

We need to set all our goals in motion and the set up a Committee for monitor the status of our animal genetic resources.



6. Have protocols (details of schedules, objectives and methods) been established for a programme to monitor the status of animal genetic resources in your country (SP 2)?

- a. Yes, protocols established before the adoption of the GPA
- b. Yes, protocols established after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

7. Are the population status and trends of your country's animal genetic resources being monitored regularly for all livestock species of economic importance (SP 1, Action 2)?

- a. Yes, regular monitoring commenced before the adoption of the GPA
- b. Yes, regular monitoring commenced after the adoption of the GPA
- c. Yes, regular monitoring is being undertaken for some species (coverage increased since the adoption of the GPA)
- d. Yes, regular monitoring is being undertaken for some species (coverage not increased since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There is monitoring going on but there are no records provided to keep the information.

8. Which criteria does your country use for assessing the risk status of its animal genetic resources (SP 1, Action 7)?

Glossary: FAO has developed criteria that it uses to allocate breeds to risk-status categories based on the size and structure of their populations (<http://www.fao.org/docrep/010/a1250e/a1250e00.htm>).

- a. FAO criteria
- b. National criteria that differ from the FAO criteria
- c. Other criteria (e.g. defined by international body such as European Union)
- d. None

Please provide further details. If applicable, please describe (or provide a link to a web site that describes) your national criteria or those of the respective international body:

We are still in the early status of our Animal Genetic Resources yet. At the moment we just monitor the situation of each breed and when it starts dropping plans a put in place for a recovery phase. This has only happened to the birds in our case but not livestock of importance.

9. Has your country established an operational emergency response system (<http://www.fao.org/docrep/meeting/021/K3812e.pdf>) that provides for immediate action to safeguard breeds at risk in all important livestock species (SP 1, Action 7)?

- a. Yes, a comprehensive system was established before the adoption of the GPA
- b. Yes, a comprehensive system has been established since the adoption of the GPA
- c. For some species and breeds (coverage expanded since the adoption of the GPA)
- d. For some species and breeds (coverage not expanded since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

We have not reached this area yet.

10. Is your country conducting research to develop methods, technical standards or protocols for phenotypic or molecular characterization, or breed evaluation, valuation or comparison? (SP 2, Action 2)

- a. Yes, research commenced before the adoption of the GPA
- b. Yes, research commenced after the adoption of the GPA
- c. No, but action is planned and funding identified

- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

Due to lack of capacity, unfortunately this area cannot be achieved. We need to source technical capacity to do this work for us.

11. Has your country identified the major barriers and obstacles to enhancing its inventory, characterization and monitoring programmes?

- a. Yes
- b. No
- c. No major barriers and obstacles exist. Comprehensive inventory, characterization and monitoring programmes are in place.

Please provide further details. If barriers and obstacles have been identified, please list them:

Funding, Technical capacity, Trainings, Infrastructure etc.

12. If applicable, please list and describe the measures that need to be taken to address these barriers and obstacles and to enhance your country's inventory, characterization and monitoring programmes:

Funding: We need this to provide training, bring technical experts, and build infrastructure to do research and other etc.
 Technical Experts: To provide training to staff that will help them in doing the survey, characterization, reporting etc in the field.
 Infrastructure: To provide the service of identifying all specimens that needs to be done in laboratories.

13. Please provide further comments on your country's activities related to Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

We need help in this area. Financially, technically and infrastructure etc.

STRATEGIC PRIORITY AREA 2: SUSTAINABLE USE AND DEVELOPMENT

- The state of national sustainable use policies for animal genetic resources
- The state of national species and breed development strategies and programmes
- The state of efforts to promote agro-ecosystem approaches

14. Does your country have adequate national policies in place to promote the sustainable use of animal genetic resources (see also questions 46 and 54)?

- a. Yes, since before the adoption of the GPA
- b. Yes, policies put in place or updated after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details. If available, please provide the text of the policies or a web link to the text:

The overall sustainable use of Animal Genetic resources will be encapsulated into the new Agriculture Act, where Regulations, policies, etc. will be adopted to help with this area.

15. Do these policies address the integration of agro-ecosystem approaches into the management of animal genetic resources in your country (SP5) (see also questions 46 and 54)?

Glossary: The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way (for further information see <http://www.cbd.int/ecosystem/description.shtml>).

- a. Yes
- b. No, but a policy update is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

It will included all stakeholders involved, e.g. Environment, Ministry of Water works, Health etc., making sure this act does not overlap with the other ministries act but to work in union/parellel with the others

16. Do breeding programmes exist in your country for all major species and breeds, and are these programmes regularly reviewed, and if necessary revised, with the aim of meeting foreseeable economic and social needs and market demands (SP4, Action 2)?

- a. Yes, since before the adoption of the GPA
- b. Yes, put in place after the adoption of the GPA
- c. For some species and breeds (coverage has increased since the adoption of the GPA)
- d. For some species and breeds (coverage has not increased since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There are 2 species where we have been involved in regular cross breeding for improvement of genes. We are planning to introduce a new breed and will draw up a breeding programme to maintain this breed.

17. Is long-term sustainable use planning – including, if appropriate, strategic breeding programmes – in place for all major livestock species and breeds (SP4, Action 1)?

- a. Yes, since before the adoption of the GPA
- b. Yes, put in place after the adoption of the GPA
- c. For some species and breeds (further progress made since the adoption of the GPA)
- d. For some species and breeds (no further progress made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

To maintain the improvement of species and introduce new sustainable ones.

18. Have the major barriers and obstacles to enhancing the sustainable use and development of animal genetic resources in your country been identified?

- a. Yes
- b. No
- c. No major barriers and obstacles exist. Comprehensive sustainable use and development measures are in place.

Please provide further details. If barriers and obstacles have been identified, please list them:

These barriers are mainly:

1. Technical Capacity
2. Infrastructure
3. Cultural barriers
4. Funds
5. Commitment of the Government.

19. Have the long-term impacts of the use of exotic breeds on locally adapted breeds (e.g. economic, environmental or genetic impacts) and on food security been assessed in your country (SP4, Action 1)?

Glossary:

Exotic breeds are breeds that are maintained in a different area from the one in which they were developed. Exotic breeds comprise both recently introduced breeds and continually imported breeds.

Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

f. No

Please provide further details:

Assessment on this impacts have been done but monitoring have been on going especially by livestock farmers and there has been minimal negative impact but positive impacts have be identified due to the improvement of the breeds/ species.

20. Have recording systems and organizational structures for breeding programmes been established or strengthened (SP4, Action 3)?

- a. Yes, sufficient recording systems and organizational structures for breeding programmes have existed since before the adoption of the GPA
- b. Yes, sufficient recording systems and organizational structures for breeding programmes exist because of progress made since the adoption of the GPA
- c. Yes, recording systems and organizational structures for breeding programmes are partially in place (and were established or strengthened after the adoption of the GPA)
- d. Yes, recording systems and organizational structures for breeding programmes are partially in place (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

21. Are mechanisms in place in your country to facilitate interactions among stakeholders, scientific disciplines and sectors as part of sustainable use development planning (SP5, Action 3)?

- a. Yes, comprehensive mechanisms have existed since before the adoption of the GPA
- b. Yes, comprehensive mechanisms exist because of progress made since the adoption of the GPA
- c. Yes, mechanisms are partially in place (and were established or strengthened after the adoption of the GPA)
- d. Yes, mechanisms are partially in place (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

The intentions is to use organizations and countries who have the scientific capabilities for support while the country's livestock farmers stick to improvement of management and conservation.

22. Have measures been implemented in your country to provide farmers and livestock keepers with information that facilitates their access to animal genetic resources (SP 4, Action 7)?

- a. Yes, comprehensive measures have existed since before the adoption of the GPA
- b. Yes, comprehensive measures exist because of progress made since the adoption of the GPA
- c. Yes, measures partially implemented (and were established or strengthened after the adoption of the GPA)
- d. Yes, measures partially implemented (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

Policies/guidelines need to be written for obtaining this information and pass it on to farmers. We are confident once the law is in place these informations will be tabulated and distributed to the public. Meetings and awareness programs may also be used.

23. Has your country developed a national policy or entered specific contractual agreements for access to and the equitable sharing of benefits resulting from the use and development of animal genetic resources and associated traditional knowledge (SP3, Action 2)?

- a. Yes, sufficient measures (policy and/or agreements) have been in place since before the adoption of the GPA
- b. Yes, sufficient measures (policy and/or agreements) are in place because of progress made since the adoption of the GPA
- c. Yes, some measures (policy and/or agreements) are in place (progress has been made since the adoption of the GPA)
- d. Yes, some measures (policy and/or agreements) are in place (but no progress has been made since the adoption of the GPA)
- e. No, but a policy and/or agreements are in preparation
- f. No, but a policy and/or agreements are planned
- g. No

Please provide further details:

We may look further into this in future. There maybe issues of contractual agreements between the country and another country who agrees to give it's genetic material to us. This can and will be dealt with at the appropriate time. A policy can be written to accommodate such agreements.

24. Have training and technical support programmes for the breeding activities of livestock-keepers been established or strengthened in your country (SP 4, Action 1)?

- a. Yes, sufficient programmes have existed since before the adoption of the GPA
- b. Yes, sufficient programmes exist because of progress made since the adoption of the GPA
- c. Yes, some programmes exist (progress has been made since the adoption of the GPA)
- d. Yes, some programmes exist (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

Small trainings were done but we expect for our officers to take up vocational or University trainings to acquire the skills to train our own breeders.

25. Have priorities for future technical training and support programmes to enhance the use and development of animal genetic resources in your country been identified (SP 4, paragraph 42)?

- a. Yes, priorities have been identified or updated since the adoption of the GPA
- b. Yes, priorities were identified before the adaption of the GPA but have not been updated

- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

We are encouraging students to take up these trainings.

26. Have efforts been made in your country to assess and support indigenous or local production systems and associated traditional knowledge and practices related to animal genetic resources (SP 6, Action 1, 2)?

- a. Yes, sufficient measures have been in place since before the adoption of the GPA
- b. Yes, sufficient measures are in place because of progress made since the adoption of the GPA
- c. Yes, some measures are in place (and were established or strengthened after the adoption of the GPA)
- d. Yes, some measures are in place (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There is a need to document the traditional knowledge and practices related to AnGR. These knowledge and practices are still being used in the rural islands but are starting to fade as the new technologies come into play. Even the Environment services do use these knowledges as a guide to making their policies.

27. Have efforts been made in your country to promote products derived from indigenous and local species and locally adapted breeds, and facilitate access to markets (SP 6, Action 2, 4)?

- a. Yes, sufficient measures have been in place since before the adoption of the GPA
- b. Yes, sufficient measures are in place because of progress made since the adoption of the GPA
- c. Yes, some measures are in place (and were established or strengthened after the adoption of the GPA)
- d. Yes, some measures are in place (but no progress has been made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

Promoting of locally made products is always going on. There are some programs of promoting locally made products. The challenge is to change the mindset of the people. Some of these farmers in the rural areas are mostly guided by the local cultures and to try to change them to market their products is challenging.

28. If applicable, please list and describe priority requirements for enhancing the sustainable use and development of animal genetic resources in your country:

1. Training: Well trained staff in this discipline is important to help manage and conserve our AnGR.
2. Infrastructure: must be in place to cater for the plan set in managing these AnGR.
3. Funds are require to run most of the programs that come into play. Mostly with the promoting and creating awareness etc.
4. Commitment- from all stakeholders is need for a successful programme.

29. Please provide further comments on your country's activities related to Strategic Priority Area 2: Sustainable Use and Development (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

STRATEGIC PRIORITY AREA 3: CONSERVATION

- The state of national conservation policies
- The state of *in situ* and *ex situ* conservation programmes
- The state of regional and global long-term conservation strategies and agreement on technical standards for conservation

30. Does your country regularly assess factors leading to the erosion of its animal genetic resources (SP 7, Action 2)?

- a. Erosion not occurring
- b. Yes, regular assessments have been implemented since before the adoption of the GPA
- c. Yes, regular assessments have commenced since the adoption of the GPA
- d. No, but action is planned and funding identified
- e. No, but action is planned and funding is sought
- f. No

Please provide further details:

This has not been assessed and recorded however from observation there is a probability of this happening.

31. What factors or drivers are leading to the erosion of animal genetic resources? Please describe the factors specifying which breeds or species are affected:

As recorded earlier, the Indigenous breed is being overridden by the locally adapted breeds, due to the locally adapted being used more and being crossed simply to improve one's own breed.

32. Does your country have conservation policies and programmes in place to protect locally adapted breeds at risk in all important livestock species (SP 7, SP 8 and SP 9)?

Glossary: Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

- a. Country requires no policies and programmes because all locally adapted breeds are secure
- b. Yes, comprehensive policies and programmes have been in place since before the adoption of the GPA
- c. Yes, comprehensive policies and programmes exist because of progress made since the adoption of the GPA
- d. For some species and breeds (coverage expanded since the adoption of the GPA)
- e. For some species and breeds (coverage not expanded since the adoption of the GPA)
- f. No, but action is planned and funding identified
- g. No, but action is planned and funding is sought
- h. No

Please provide further details:

After the Act is passed in and regulations are in place this will give the Ministry of Agriculture to access these breeds and assess each and every one of them, without fear of reprisal from the landowners, livestock farmers etc.

33. If conservation policies and programmes are in place, are they regularly evaluated or reviewed (SP 7, Action 1; SP 8, Action 1; and SP 9, Action 1)?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

34. Does your country have in situ conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Locally adapted breeds are breeds that have been in the country for a sufficient time to be genetically adapted to one or more of traditional production systems or environments in the country. The phrase "sufficient time" refers to time present in one or more of the country's traditional production systems or environments. Taking cultural, social and genetic aspects into account, a period of 40 years and six generations of the respective species might be considered as a guiding value for "sufficient time", subject to specific national circumstances.

- a. Country requires no in situ conservation measures because all locally adapted breeds are secure
- b. Yes for all breeds
- c. For some breeds (coverage expanded since the adoption of the GPA)
- d. For some breeds (coverage not expanded since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

Our breeds are not at risk yet, but we will have to be prepared and plan, in the event it happens; E,g, as mentioned before there is the suspicion of one of our indigenous breeds showing signs of eroding

35. Does your country have ex situ in vivo conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Ex situ in vivo conservation - maintenance of live animal populations not kept under their normal management conditions - e.g. in zoological parks or governmental farms - and/or outside the area in which they evolved or are now normally found.

- a. Country requires no ex situ in vivo conservation measures because all locally adapted breeds are secure
- b. Yes for all breeds
- c. For some breeds (coverage expanded since the adoption of the GPA)
- d. For some breeds (coverage not expanded since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There is no facility and funds to build such facilities.

36. Does your country have ex situ in vitro conservation measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk (SP 8 and SP 9)?

Glossary: Ex situ in vitro - conservation, under cryogenic conditions including, inter alia, the cryoconservation of embryos, semen, oocytes, somatic cells or tissues having the potential to reconstitute live animals at a later date.

- a. Country requires no ex situ in vitro conservation measures because all locally adapted breeds are secure
- b. Yes for all breeds

- c. For some breeds (coverage expanded since the adoption of the GPA)
- d. For some breeds (coverage not expanded since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

No technical capacities, facilities etc.

37. Please describe the measures (indicating for each whether they were introduced before or after the adoption of the GPA) or provide a web link to a published document that provides further information:

38. If your country has not established any conservation programmes, is this a future priority?

- a. Yes
- b. No

Please provide further details:

At the moment it is not a priority, but, certainly we will establish one to safe guard our Resource

39. Has your country identified the major barriers and obstacles to enhancing the conservation of its animal genetic resources?

- a. Country requires no conservation programmes because all animal genetic resources are secure
- b. Yes
- c. No
- d. No major barriers and obstacles exist. Comprehensive conservation programmes are in place

Please provide further details. If barriers and obstacles have been identified, please list them:

40. If your country has existing ex situ collections of animal genetic resources, are there major gaps in these collections (SP 9, Action 5)?

- a. Yes
- b. No

If yes, have priorities for filling the gaps been established?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

No such facilities.

41. Are arrangements in place in your country to protect breeds and populations that are at risk from natural or human-induced disasters (SPA 3)?

- a. Yes, arrangements have been in place since before the adoption of the GPA
- b. Yes, arrangements put in place after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

The program used is if such incidents occur and there is lost of genetic resources the area concerned will be restocked with such breed from another different area.

42. Are arrangements in place in your country for extraction and use of conserved genetic material following loss of animal genetic resources (e.g. through disasters), including arrangements to enable restocking (SP 9, Action 3)?

- a. Yes, arrangements have been in place since before the adoption of the GPA
- b. Yes, arrangements put in place after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

As above.

43. Is your country conducting research to adapt existing, or develop new, methods and technologies for in situ and ex situ conservation of animal genetic resources (SP 11, Action 1)?

- a. Yes, research commenced before the adoption of the GPA
- b. Yes, research commenced since the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details. If yes, please briefly describe the research:

We do not have the capacity to do such research. We may stick to in situ conservation.

44. Does your country implement programmes to promote documentation and dissemination of knowledge, technologies and best practices for conservation (SP 11, Action 2)?

- a. Yes, programmes commenced before the adoption of the GPA
- b. Yes, programmes commenced since the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

An important area to look into.

45. What are your country's priority requirements for enhancing conservation measures for animal genetic resources? Please list and describe them:

We may not have the facilities to protect and conserve our AnGR but we have a strong border control law to help keep

our Genetic Material safe. The exotic breeds we bring in have been the same breeds that have adapted and they are cross breed to keep the gene going. The priority requirements that the Cook Islands wants are for help from outside in safeguarding our gene in Gene banks for future use.

46. Please provide further comments describing your country's activities related to Strategic Priority Area 3: Conservation (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

STRATEGIC PRIORITY AREA 4: POLICIES, INSTITUTIONS AND CAPACITY-BUILDING IMPLEMENTATION AND FINANCING OF THE GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES

- The state of national institutions for planning and implementing animal genetic resources measures
- The state of information sharing
- The state of educational and research facilities capacity for characterization, inventory, and monitoring, sustainable use, development, and conservation
- The state of awareness of the roles and values of animal genetic resources
- The state of policies and legal frameworks for animal genetic resources

47. Does your country have sufficient institutional capacity to support holistic planning of the livestock sector (SP 12, Action1)?

- a. Yes, sufficient capacity has been in place since before the adoption of the GPA
- b. Yes, sufficient capacity is in place because of progress made after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

We do not have this capacity. Apart from the Ministry of Agriculture, there is the Environment and maybe one or two other important stakeholders. Including of NGO organizations and other line ministries would be beneficial.

48. What is the current status of your country's national strategy and action plan for animal genetic resources (SP 20)?

Glossary: National strategy and action plan for animal genetic resources: a strategy and plan, agreed by stakeholders and preferably government-endorsed, that translates the internationally agreed Global Plan of Action for Animal Genetic Resources into national actions, with the aim of ensuring a strategic and comprehensive approach to the sustainable use, development and conservation of animal genetic resources for food and agriculture.

- a. Previously endorsed national strategy and action plan is being updated (or new version has been endorsed)
- b. Completed and government-endorsed
- c. Completed and agreed by stakeholders
- d. In preparation
- e. Preparation is planned and funding identified
- f. Future priority activity
- g. Not planned

Please provide further details. If available, please provide a copy of your country's national strategy and action plan as a separate document or as a web link:

The National plan will start when most line stake holders have their regulations and acts reviewed. These laws must be passed in order to support and protect the plan.

49. Are animal genetic resources addressed in your country's National Biodiversity Strategy and Action Plan (<http://www.cbd.int/nbsap/>)?

- a. Yes
- b. No, but they will be addressed in forthcoming plan
- c. No

Please provide further details:

Waiting for the updating of the Act.

50. Are animal genetic resources addressed in your country's national livestock sector strategy, plan or policy (or equivalent instrument)?

- a. Yes
- b. No, but they will be addressed in a forthcoming strategy, plan or policy
- c. No, animal genetic resources are not addressed
- d. No, the country does not have a national livestock sector strategy, plan or policy

Please provide further details. If available, please provide the text of the strategy, plan or policy or a web link to the text:

These will be included in the act .

51. Has your country established or strengthened a national database for animal genetic resources (independent from DAD-IS) (SP 15, Action 4)?

- a. Yes, a national database has been in place since before the adoption of the GPA
- b. Yes, a national database is in place because of progress made since the adoption of the GPA
- c. Yes, a national database is in place but still requires strengthening (progress since adoption of the GPA)
- d. Yes, a national database is in place but still requires strengthening (no progress since adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

There is plan in motion to set up a National database but resources are limited.

52. Have your country's national data on animal genetic resources been regularly updated in DAD-IS?

Note that the Commission on Genetic Resources for Food and Agriculture has requested FAO to produce global status and trends reports every two years.

- a. Yes, regular updates have been occurring since before the adoption of the GPA
- b. Yes, regular updates started after the adoption of the GPA
- c. No, but it is a future priority
- d. No

Please provide further details:

We regularly check our data and if it needs minor changes we do that.

53. Has your country established a National Advisory Committee for Animal Genetic Resources (SP 12, Action 3)?

- a. Yes, established before the adoption of the GPA
- b. Yes, established after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details. If a National Advisory Committee has been established, please list its main functions:

Another important issue to work on.

54. Is there strong coordination and interaction between the National Focal Point and stakeholders involved with animal genetic resources, such as the breeding industry, livestock keepers, government agencies, research institutes and civil society organizations (SP 12, Action 3)?

- a. Yes, strong coordination has been in place since before the adoption of the GPA
- b. Yes, strong coordination was established after the adoption of the GPA
- c. No, but action is planned and funding identified
- d. No, but action is planned and funding is sought
- e. No

Please provide further details:

The local Focal Point only interacts with livestock keepers, government agencies and civil society organizations (NGO's)

55. Does the National Focal Point (or other institutions) undertake activities to increase public awareness of the roles and values of animal genetic resources (SP 18)?

- a. Yes, activities commenced before the adoption of the GPA
- b. Yes, activities commenced after the adoption of the GPA
- c. No, but activities are planned and funding identified
- d. No, but activities are planned and funding is sought
- e. No

Please provide further details:

The Focal Point has been disseminating most of the information sent to him to all stakeholders, however future activities are planned to be included in the Education curriculum.

56. Does your country have national policies and legal frameworks for animal genetic resources management (SP 20)?

- a. Yes, comprehensive national policies and legal frameworks were in place before the adoption of the GPA and are kept up to date
- b. Yes, comprehensive and up-to-date national policies and legal frameworks in place because of progress made since the adoption of the GPA
- c. Yes, some national policies and legislation in place (strengthened since the adoption of the GPA)
- d. Yes, some national policies and legislation in place (not strengthened since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

These are being worked into the rewriting of the new Agriculture Act and Regulations.

57. Which of the following options best describes the state of training and technology transfer programmes in your country related to inventory, characterization, monitoring, sustainable use, development and conservation of animal genetic resources (SP14, Action 1)?

- a. Comprehensive programmes have been in place since before the adoption of the GPA
- b. Comprehensive programmes exist because of progress made since the adoption of the GPA
- c. Some programmes exist (further progress since the adoption of the GPA)
- d. Some programmes (no further progress since the adoption of the GPA)
- e. None, but action is planned and funding identified
- f. None, but action is planned and funding is sought
- g. None

Please provide further details:

There is no such training programmes happening in the country. Our terms of learning have always been through culture and the affiliations between animals, humans, land and the environment, to co-exist together.

58. Have organizations (including where relevant community-based organizations), networks and initiatives for sustainable use, breeding and conservation been established or strengthened (SP 14, Action 3)?

- a. Yes, comprehensive organizations, networks and initiatives have existed since before the adoption of the GPA
- b. Yes, comprehensive organizations, networks and initiatives exist because of progress made since the adoption of the GPA
- c. Yes, some organizations, networks and initiatives exist (established or strengthened since adoption of the GPA)
- d. Yes, some organizations, networks and initiatives exist (but no progress made since adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

The pacific islands small island states rely heavily on the SPC organisation to help on issues of this nature.

59. Are there any national NGOs active in your country in the fields of:

Characterization?

- a. Yes
- b. No

Sustainable use and development?

- c. Yes
- d. No

Conservation of breeds at risk?

- e. Yes
- f. No

If yes, please list the national NGOs and provide links to their web sites:

We only have an organization (Takitumu Conservation Services) that has been involved in conservation of wild birds. There is also an organization (Natural Heritage) who has documented the breeds of plants, birds, animals and other

species, both domesticated and wild, however, these documentations does not classify the genetic material.

60. Has your country established or strengthened research or educational institutions in the field of animal genetic resources management (SP 13, Action 3)?

- a. Yes, adequate research and education institutions have existed since before the adoption of the GPA
- b. Yes, adequate research and education institutions exist because of progress made since the adoption of the GPA
- c. Yes, research and education institutions exist but still require strengthening (progress made since the adoption of the GPA)
- d. Yes, research and education institutions exist but still require strengthening (no progress made since the adoption of the GPA)
- e. No, but action is planned and funding identified
- f. No, but action is planned and funding is sought
- g. No

Please provide further details:

We do not have the capacity to establish such institutions.

61. Please provide further comments describing your country's activities related to Strategic Priority Area 4: Policies, Institutions and Capacity-building (including regional and international cooperation)

Note: It is not necessary to duplicate information provided in previous sections. Where relevant, please provide cross-references.

The Ministry of Agriculture Act is being reviewed at the moment and will be updated. The inclusion of a AnGR into this act, has been discussed and approved. Legislation and polices will be put in place to help with the implementation of this area. We intend to legislate policies to make it more stronger and safe guard us against any objections to the work we do on field.

IMPLEMENTATION AND FINANCING OF THE *GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES*

- The state of international collaboration for planning and implementing animal genetic resources measures
- The state of financial resources for the conservation, sustainable use and development of animal genetic resources

62. Has your country established or strengthened international collaboration in (SP 16):

Characterization?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Sustainable use and development?

- e. Yes
- f. No, but action is planned and funding identified
- g. No, but action is planned and funding is sought
- h. No

Conservation of breeds at risk?

- i. Yes

- j. No, but action is planned and funding identified
- k. No, but action is planned and funding is sought
- l. No

Please provide further details:

There is always a limitation to what we can do and we rely heavily on the international communities to help in these areas.

63. Are there any international NGOs active in your country in the fields of:

Characterization?

- a. Yes
- b. No

Sustainable use and development?

- c. Yes
- d. No

Conservation of breeds at risk?

- e. Yes
- f. No

If yes, please list the international NGOs:

The Agriculture departments do carry out sustainable use and development however on Characterization, the ability to do such work is limited due to funds, capacity, etc.

64. Has national funding for animal genetic resources programmes increased since the adoption of the GPA?

- a. Yes
- b. No

Please provide further details:

No such fund exists in the Cook Islands

65. Has your country received external funding for implementation of the GPA?

- a. Yes
- b. No
- c. No, because country generally does not receive external funding

Please provide further details:

I believe the National Environment Services do have a GEF funding from the United Nations. They are used for Bio Diversity issues.

66. Has your country supported or participated in international research and education programmes assisting developing countries and countries with economies in transition to better manage animal genetic resources (SP 15 and 16)?

- a. Yes, support or participation in place before the adoption of the GPA and strengthened since
- b. Yes, support or participation in place before the adoption of the GPA but not strengthened since
- c. Yes, support or participation in place since the adoption of the GPA
- d. No, but action is planned and funding identified
- e. No, but action is planned and funding is sought

- f. No

Please provide further details:

We have always supported the programmes done to assist developing countries, however, we could not participate for lack of funds to contribute.

67. Has your country supported or participated in programmes aimed at assisting developing countries and countries with economies in transition to obtain training and technologies and to build their information systems (SP 15 and 16)?

- a. Yes, support or participation commenced before the adoption of the GPA and strengthened since
- b. Yes, support or participation commenced before the adoption of the GPA but not strengthened since
- c. Yes, support or participation commenced since the adoption of the GPA
- d. No, but action is planned and funding identified
- e. No, but action is planned and funding is sought
- f. No

Please provide further details:

n/a

68. Has your country provided funding to other countries for implementation of the Global Plan of Action?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No
- e. No, because country is generally not a donor country

Please provide further details. If relevant, specify whether funding was bilateral or multilateral; research cooperation or aid; and to whom and for what it was given:

n/a

69. Has your country contributed to international cooperative inventory, characterization and monitoring activities involving countries sharing transboundary breeds and similar production systems (SP 1, Action 5)?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

Yes, via the Dad-is prgrammes.

70. Has your country contributed to establishing or strengthening global or regional information systems or networks related to inventory, monitoring and characterization of animal genetic resources (SP 1, Action 6)?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought

- d. No

Please provide further details:

Funding and resources.

71. Has your country contributed to the development of international technical standards and protocols for characterization, inventory and monitoring of animal genetic resources (SP2)?

- a. Yes
 b. No, but action is planned and funding identified
 c. No, but action is planned and funding is sought
 d. No

Please provide further details:

No resources.

72. Has your country contributed to the development and implementation of regional in situ conservation programmes for breeds that are at risk (SP 8, Action 2; SP 10, Action 1)?

- a. Yes
 b. No, but action is planned and funding identified
 c. No, but action is planned and funding is sought
 d. No

Please provide further details:

No resources.

73. Has your country contributed to the development and implementation of regional ex situ conservation programmes for breeds that are at risk (SP 9, Action 2; SP 10, Action 3; SP 10, Action 4)?

- a. Yes
 b. No, but action is planned and funding identified
 c. No, but action is planned and funding is sought
 d. No

Please provide further details:

We cannot implement ex situ conservation due to capacity and capability.

74. Has your country contributed to the establishment of fair and equitable arrangements for the storage, access and use of genetic material stored in supra-national ex situ gene banks (SP9, Action 3)?

- a. Yes
 b. No, but action is planned and funding identified
 c. No, but action is planned and funding is sought
 d. No

Please provide further details:

We do not have the resources.

75. Has your country participated in regional or international campaigns to raise awareness of the status of animal genetic resources (SP19)?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

No funds.

76. Has your country participated in reviewing or developing international policies and regulatory frameworks relevant to animal genetic resources (SP 21)?

- a. Yes
- b. No, but action is planned and funding identified
- c. No, but action is planned and funding is sought
- d. No

Please provide further details:

Funding are being sourced.

EMERGING ISSUES

77. In view of the possibility that at some point countries may wish to update the GPA, please list any aspects of animal genetic resources management that are not addressed in the current GPA but will be important to address in the future (approximately the next ten years). Please also describe why these issues are important and indicate what needs to be done to address them.

Issues to be addressed in future

Issues to be addressed in future (next ten years)	Reasons	Actions required
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