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COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Item 4.1 of the Provisional Agenda

INTERGOVERNMENTAL TECHNICAL WORKING GROUP ON ANIMAL GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Eighth Session

Rome, 26-28 November 2014

SYNTHESIS PROGRESS REPORT ON THE IMPLEMENTATION OF THE GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES - 2014

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I. Executive summary

This report presents an analysis of progress made in the implementation of the Global Plan of Action for Animal Genetic Resources since its adoption in 2007.[1] It updates the information presented in the *Synthesis progress report on the implementation of the Global Plan of Action for Animal Genetic Resources – 2012*.[2]

The report is based on data collected via a reporting process agreed by the Commission on Genetic Resources for Food and Agriculture at its Fourteenth Regular Session in 2013. This data collection formed part of the reporting process for the preparation of *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture*. Countries, regional focal points and networks for animal genetic resources, and relevant international organizations were invited to complete questionnaires on their implementation of activities relevant to the implementation of the Global Plan of Action.

The analysis of country-level implementation presented in this report is based on the set of indicators that were used in the preparation of the 2012 synthesis progress report and were agreed upon by the Commission at its Fourteenth Regular Session. Indicator scores were calculated for individual countries, and at subregional, regional and global levels. The impact of the Global Plan of Action was assessed on the basis of the proportion of countries reporting progress in the various elements of the Global Plan of Action since its adoption in 2007.

One hundred and twenty-nine countries submitted country reports in 2014; 128 of these were submitted in the correct format for inclusion in the global analysis. Reports were received from four regional focal points or networks and from fifteen international organizations. All reports will be made available on the FAO web site.[3]

The country reports reveal that many countries have continued to strengthen their activities in the various strategic priority areas of the Global Plan of Action. However, the level of implementation and the extent to which progress has been made since the adoption of the Global Plan of Action varies greatly among both countries and regions. Implementation is generally reported to be at a high level in Europe and the Caucasus and North America, at a medium level in Asia, and at a low level in other regions. Some caution is, however, needed in interpreting these regional differences, because of gaps in the country coverage. Individual countries from all developing regions have high indicator scores for some of the strategic priorities of the Global Plan of Action. Likewise, some countries in developed regions have low indicator scores for some strategic priorities. For the world as a whole, Strategic Priority Area 3 (conservation) has a lower indicator score than the other three strategic priority areas. In all regions, the indicators for the state of collaboration and for the state of funding indicate lower levels of implementation than those for the strategic priority areas themselves.

The regional progress reports indicate varying degrees of progress since the first round of reporting. The European Regional Focal Point, the longest established regional focal point, continues to undertake activities in all strategic priority areas. Fewer activities are reported by the Regional Focal Point for Latin America and the Caribbean and the Animal Genetic Resources Network – Southwest Pacific. The Asian Animal Genetic Resources Network, launched only in 2013, has established regional priorities for action. The Sub-Regional Focal Point for West and Central Africa did not contribute to this second round of reporting.

A number of international organizations continue to make important contributions to the implementation of the Global Plan of Action, often via innovative, efficient and participatory programmes and projects. The activities of these organizations span the four strategic priority areas of the Global Plan of Action.

Overall, despite the ongoing impact of the Global Plan of Action, the task of improving the

[1] ftp://ftp.fao.org/docrep/fao/010/a1404e/a1404e00.pdf
[2] CGRFA/WG-AnGR-7/12/Inf.3 at http://www.fao.org/docrep/meeting/026/me636e.pdf
[3] http://www.fao.org/Ag/AGAInfo/programmes/en/genetics/Second_state.html

management of the world's animal genetic resources remains far from complete. Lack of sufficient financial resources is the factor most frequently mentioned by countries as a constraint to more comprehensive implementation. However, low levels of international collaboration, a lack of established policies and legal frameworks, and a lack of institutional and human capacity also inhibit progress.

Decision-makers are encouraged to use the country-level indicators presented in this report as a means of identifying strategic priority areas and strategic priorities where action is particularly required in their respective countries and regions.

II. Introduction

In September 2007, the International Technical Conference on Animal Genetic Resources for Food and Agriculture, held in Interlaken, Switzerland, adopted the Global Plan of Action for Animal Genetic Resources and the Interlaken Declaration on Animal Genetic Resources (Global Plan of Action). [4] The Global Plan of Action and the Interlaken Declaration were subsequently endorsed by the Thirty-fourth Session of the FAO Conference.[5] The main responsibility for implementing the Global Plan of Action lies with national governments.[6] However, some strategic priorities are particularly relevant to implementation at regional or international level. Table 1 illustrates the main levels of implementation (national, regional or international) for each strategic priority.

The Commission on Genetic Resources for Food and Agriculture (Commission), at its Eleventh Regular Session in 2007, agreed that follow-up to the International Technical Conference should be part of the Commission's Multi-Year Programme of Work and that the Commission should oversee the implementation of the Global Plan of Action.[7] The Commission also requested the development of modalities for evaluating progress in the implementation of the Global Plan of Action.[8]

At its Twelfth Regular Session in 2009, the Commission adopted a schedule for reporting on the implementation of the Global Plan of Action, which involves the preparation of country progress reports by individual countries, as well as reports from regional focal points for animal genetic resources and relevant international organizations. The Commission endorsed the flexible use of a questionnaire[9] prepared by FAO to assist countries in the preparation of their country progress reports, and requested FAO to enable countries to report electronically.[10] The first round of reporting led to the preparation of the *Synthesis progress report on the implementation of the Global Plan of Action for Animal Genetic Resources – 2012.*[11]

[4] ITC-AnGR/07/REP; http://www.fao.org/ag/againfo/programmes/en/genetics/ITC_docs.html
[5] CGRFA/WG-AnGR-5/09/Inf. 9; http://www.fao.org/docrep/meeting/021/am222e.pdf
[6] Global Plan of Action for Animal Genetic Resources, paragraph 56; http://www.fao.org/docrep/010/a1404e/a1404e00.htm.
[7] CGRFA-11/07/Report, paragraph 17; ftp://ftp.fao.org/docrep/fao/meeting/014/k0385e.pdf
[8] CGRFA-11/07/Report, paragraph 23; ftp://ftp.fao.org/docrep/fao/meeting/014/k0385e.pdf
[9] CGRFA-12/09/Inf.9.; ftp://ftp.fao.org/docrep/fao/meeting/017/ak225e.pdf
[10] CGRFA-12/09/Report, paragraph 38; ftp://ftp.fao.org/docrep/fao/meeting/017/k6536e.pdf
[11] CGRFA/WG-AnGR-7/12/Inf.3 at http://www.fao.org/docrep/meeting/026/me636e.pdf

Table 1. Priority levels of implementation (national, regional or international) of the strategic priorities of the Global Plan of Action for Animal Genetic Resources

GLOBAL PLAN OF ACTION FOR ANIMAL GENETIC RESOURCES	STRATEGIC PRIORITY AREA 1 CHARACTERIZATION, INVENTORY AND MONITORING OF TRENDS AND ASSOCIATED RISKS	STRATEGIC PRIORITY AREA 2 SUSTAINABLE USE AND DEVELOPMENT	STRATEGIC PRIORITY AREA 3 CONSERVATION	STRATEGIC PRIORITY AREA 4 POLICIES, INSTITUTIONS AND CAPACITY BUILDING
NATIONAL	**SP 1** Inventory and characterize AnGR, monitor trends and risks associated with them, and establish country-based early-warning and response systems	**SP 3** Establish and strengthen national sustainable use policies **SP 4** Establish national species and breed development strategies and programmes **SP 5** Promote agro-ecosystems approaches to the management of AnGR **SP 6** Support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of AnGR	**SP 7** Establish national conservation policies **SP 8** Establish or strengthen in situ conservation programmes **SP 9** Establish or strengthen ex situ conservation programmes	**SP 12** Establish or strengthen national institutions, including national focal points, for planning and implementing AnGR measures, for livestock sector development **SP 13** Establish or strengthen national educational and research facilities **SP 14** Strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for sustainable use and development, and for conservation **SP 18** Raise national awareness of the roles & values of AnGR **SP 20** Review and develop national policies and legal frameworks for AnGR
REGIONAL			**SP 10** Develop and implement regional and global long-term conservation strategies	**SP 17** Establish Regional Focal Points and strengthen international networks
INTERNATIONAL	**SP 2** Develop international technical standards and protocols for characterization, inventory, and monitoring of trends and associated risks		**SP 11** Develop approaches and technical standards for conservation	**SP 15** Establish or strengthen international information sharing, research and education **SP 16** Strengthen international cooperation to build capacities in developing countries and countries with economies in transition, **SP 19** Raise regional and international awareness of the roles and values of AnGR **SP 21** Review and develop international policies and regulatory frameworks relevant to AnGR **SP 22** Coordinate the Commission's efforts on AnGR policy with other international forums **SP 23** Strengthen efforts to mobilize resources, including financial resources, for the conservation, sustainable use and development of AnGR

III. Progress in the implementation of the Global Plan of Action at country level

Data collection

Following the above-described first round of reporting, countries were invited to provide comments on the country progress report questionnaire and to propose any improvements that might facilitate reporting. Ten countries provided comments.[12] Based on these contributions, a revised country progress report questionnaire was drafted by FAO. The updated draft included additional text boxes, in which countries could insert descriptions of their activities or clarifications of their answers to multiple-choice questions, and nine additional questions. A number of questions were also slightly rephrased to improve their clarity.

At its Fourteenth Session in April 2013, the Commission requested FAO to prepare *The Second Report on the State of the World's Animal Genetic Resources for Food and Agriculture* (Second Report) for presentation to the Commission's Fifteenth Regular Session in 2015.[13] The Commission endorsed a questionnaire, referred to as the "country report questionnaire", for use in collecting data to support the preparation of the Second Report. The revised country progress report questionnaire was incorporated within the country report questionnaire (as its Part IV). After countries had been given a further opportunity to provide comments, the questionnaire was finalized by the Bureau of the Intergovernmental Technical Working Group on Animal Genetic Resources for Food and Agriculture and converted into electronic form.

In August 2013, FAO invited all countries to prepare country reports using the electronic questionnaire, which was made available on the web site of FAO's Animal Production and Health Division.[14] Countries were requested to submit their reports by 31 January 2014 and were informed that use of the electronic questionnaire was compulsory, as this would enable FAO to transfer the data to a database for analysis.

Data analysis

Status of implementation of the Global Plan of Action

Prior to the preparation of the first synthesis progress report, a set of indicators was developed for use in summarizing the information reported in the country progress reports: six indicators at strategic priority area level (one for each of the four strategic priority areas, one for the state of collaboration and one for the state of funding – the latter two relating to Part 3 of the Global Plan of Action "Implementation and financing …"); and 14 indicators at strategic priority level (addressing the 13 strategic priorities intended for implementation mainly at national level – one indicator per strategic priority, except for Strategic Priority 1, for which two indicators were established). Targets were formulated for each of the indicators. The use of these targets and indicators to monitor progress in the implementation of the Global Plan of Action was agreed upon by the Commission at its Fourteenth Regular Session.[15] Each indicator is based on one or more of the multiple-choice questions in the country progress report questionnaire. The relationships between the questions and the indicators are shown in Annex 1. It should be noted that, because of the concise nature of the questionnaire agreed upon by the Commission, in some cases, the set of questions associated with a given indicator does not fully cover all aspects of the respective strategic priority or strategic priority area.

The indicator scores are calculated as follows: the answers to the multiple-choice questions are classified into three categories**:** low level of implementation (no action undertaken yet); medium level

[12]Brazil, China, Germany, Norway, Peru, Poland, South Africa, Senegal, Togo, United States of America.
[13] CGRFA-14/13/Report, paragraph 71.
[14]The questionnaire was prepared using Adobe LiveCycle. This provided respondents with full control over the electronic file. Respondents required Adobe Reader to open and complete the questionnaire. Respondents were advised to save the questionnaire locally on their own computers, before completing it and submitting it to FAO. The invitation, questionnaire, instructions and reports received are published at:
http://www.fao.org/Ag/AGAInfo/programmes/en/genetics/Second_state.html
[15] CGRFA-14/13/Report, paragraph 28.

of implementation (some action undertaken, but more required); and high level of implementation (action completed either prior to the adoption of the Global Plan of Action or after). Each of these levels of implementation are assigned a score (0 = low level of implementation; 1 = medium level of implementation; 2 = high level of implementation). An overall score for each indicator is obtained by calculating the arithmetic mean of the scores for all the questions assigned to the respective indicator. Scores are calculated at national, subregional, regional and global levels.

Classification of countries into regions and subregions is based on the classification system used in *The State of the World's Animal Genetic Resources for Food and Agriculture*[16] (see Figure 1). Because, in the present round or reporting, the only country report received from North America was from the United States of America, references in this report to the North America region relate solely to this one country.

For presentation purposes, indicator scores are divided into eight classes, evenly distributed between the minimum score of 0 and the maximum score of 2. The eight classes are represented by eight colours – three shades of green (representing high levels of implementation), two of yellow (representing medium levels of implementation) and three of red (representing low levels of implementation). The colours and their respective scores and levels are shown in Table 2.

Table 2. Colour scale used to express the indicators

Scores for colour class*	Indicator colour	Indicator level
0.00 – 0.25		Low
0.25 – 0.50		Low
0.50 – 0.75		Low
0.75 – 1.00		Medium
1.00 – 1.25		Medium
1.25 – 1.50		High
1.50 – 1.75		High
1.75 – 2.00		High

*Border values are included in lower category.

Impact of the Global Plan of Action

In addition to presenting the above-described indicators of the current state of implementation of the various elements of the Global Plan of Action, this synthesis progress report includes an analysis of the extent to which the implementation of Global Plan of Action has led to changes in the targeted fields of activity.[17] Many of the multiple-choice questions in the country progress report questionnaire allow countries to indicate whether the reported level of implementation is a result of progress made since the adoption of the Global Plan of Action. The potential answers fall into three categories:

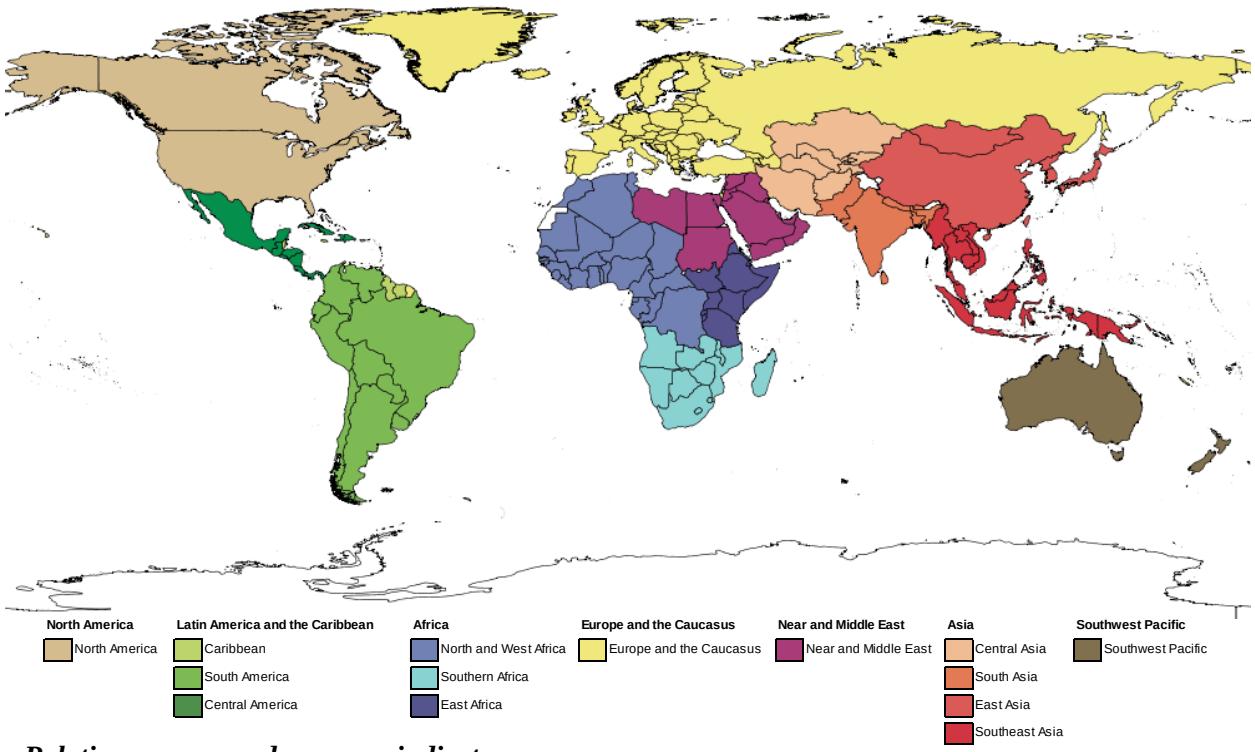
- the respective action was fully implemented prior to the adoption of the Global Plan of Action in 2007 (such answers were classified as "completed before");
- progress has been made since the adoption of the Global Plan of Action, with the respective action now either fully or partially completed (such answers were classified as "progress"); and
- the respective action has not yet been fully implemented (or has not been implemented at all) and no progress has been made since the adoption of the Global Plan of Action (such answers were classified as "no progress").

For each strategic priority area, the total number of responses falling into each of the three categories was counted and the results presented as relative frequencies (percentages).

[16] http://www.fao.org/docrep/010/a1250e/a1250e00.htm

[17] For the purpose of the analysis, any relevant activity undertaken after the adoption of the Global Plan of Action was considered to constitute implementation of the Global Plan of Action. No attempt was made to distinguish activities that might have occurred even if there had been no Global Plan of Action.

Figure 1. Assignment of countries to regions and subregions



Relating process and resource indicators

In addition to agreeing to the use of above-described targets and indicators for monitoring progress in the implementation of the Global Plan of Action (process indicators), the Commission, at its Fourteenth Regular Session, agreed to the use of a set of indicators for monitoring the status and trends of animal genetic resources (resource indicators).[18][19] A graphical method of relating resource indicators to process indicators has been developed for Strategic Priority Area 1 (results are presented in Annex 2). For each region, the percentage of local breeds (excluding extinct breeds) with unknown risk status is plotted against the subregional process indicator score for Strategic Priority Area 1. Relationships between process and resource indicators in other strategic priority areas have not been explored, because the data for the relevant resource indicators is insufficiently complete.

Results

Of the 129 country reports received, 128 were analysed. The country report from Morocco did not follow the questionnaire template. Eighty-three reports were received in English, 20 in French and 15 in Spanish. Country reports will be published on FAO's web site.[20] The regional distribution of the country reports is shown in Table 3. In terms of the proportion of countries that submitted country reports, coverage is more complete in Africa than in any other region. Coverage is illustrated in the form of a map in Figure 2. It can be seen that, in geographical terms, the proportion of the world covered by the analysis is reduced by the absence of country reports from several large countries. Figure 2 also shows which countries have an officially nominated National Coordinator for the Management of Animal Genetic Resources (172 countries according to FAO's records as of July 2014).[21]

[18] CGRFA-14/13/Report, paragraph 28.
[19] CGRFA-14/13/4.2
[20] http://www.fao.org/Ag/AGAInfo/programmes/en/genetics/Second_state.html
[21] http://dad.fao.org/cgi-bin/EfabisWeb.cgi?sid=-1,contacts

Figure 2. Map showing which countries have a National Coordinator for the Management of Animal Genetic Resources (as of July 2014) and which submitted country reports

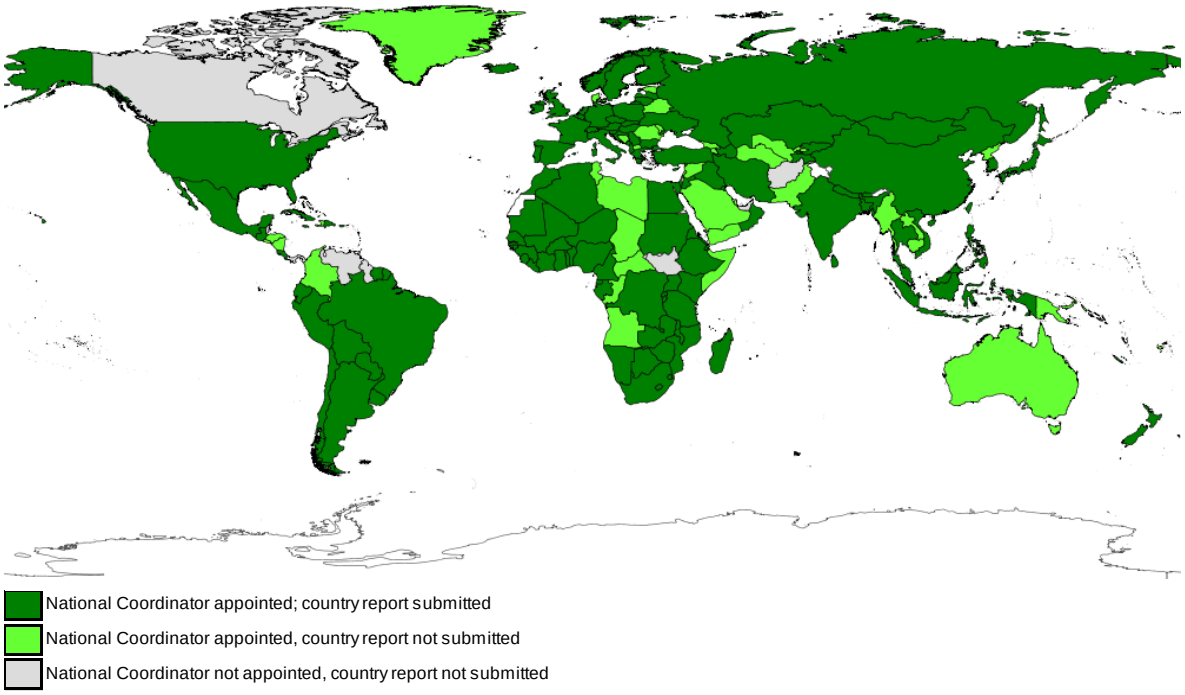


Table 3. Overview of the regional distribution of the reports analysed in 2012 and 2014

Regions	**Number of reporting countries in 2014**	**Number of countries in the region**	**Coverage 2012**[22]	**Coverage 2014**
Africa	40	52	39%	77%
Asia	20	31	26%	65%
Europe and the Caucasus	35	49	61%	71%
Latin America and the Caribbean	18	33	39%	55%
Near and Middle East	7	14	29%	50%
North America	1	2	100%	50%
Southwest Pacific	7	15	20%	47%
World	**128**	**196**	**41%**	**65%**

The following paragraphs present an analysis of the answers to the individual questions in Part IV of the country report questionnaire. Results are presented graphically in Figures 3 to 71. Questions are discussed in order of strategic priority area. Within each strategic priority area, the questions are grouped according to the strategic priority level indicator to which they contribute. Questions that contribute to the respective strategic priority area level indicator, but not to a specific strategic priority indicator, follow at the end each subsection. The questions from the questionnaire are used as the figure titles, and for ease of reference, the question numbers used in the questionnaire are also shown. In the figures, the multiple-choice answers from the questionnaire are shortened for ease of presentation. Responses to each question are broken down by region. The number of reporting countries (n) in each region is presented on the right side of each figure.

[22]The following reports were received after the deadline and could thus not be included in the first synthesis progress report: Australia, Azerbaijan, Bangladesh, Italy, Jamaica, Lithuania, Sri Lanka, Viet Nam.

Strategic priority areas, collaboration and funding

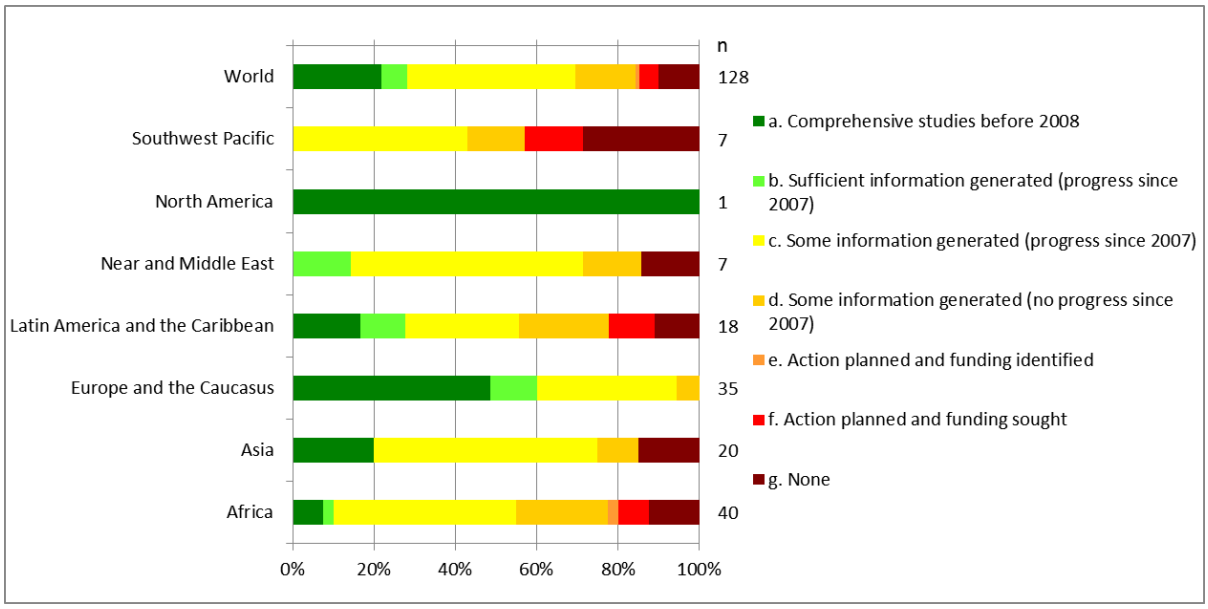
Strategic Priority Area 1: Characterization, inventory and monitoring of trends and associated risks

Long-term goal: Improved understanding of the status, trends and associated risks, and characteristics of all aspects and components of animal genetic resources, to facilitate and enable decision-making for their sustainable use, development and conservation.

SP1: Inventory and characterize animal genetic resources, monitor trends and risks associated with them, and establish country-based early-warning and response systems

Indicator SP1a: The completeness of characterization.

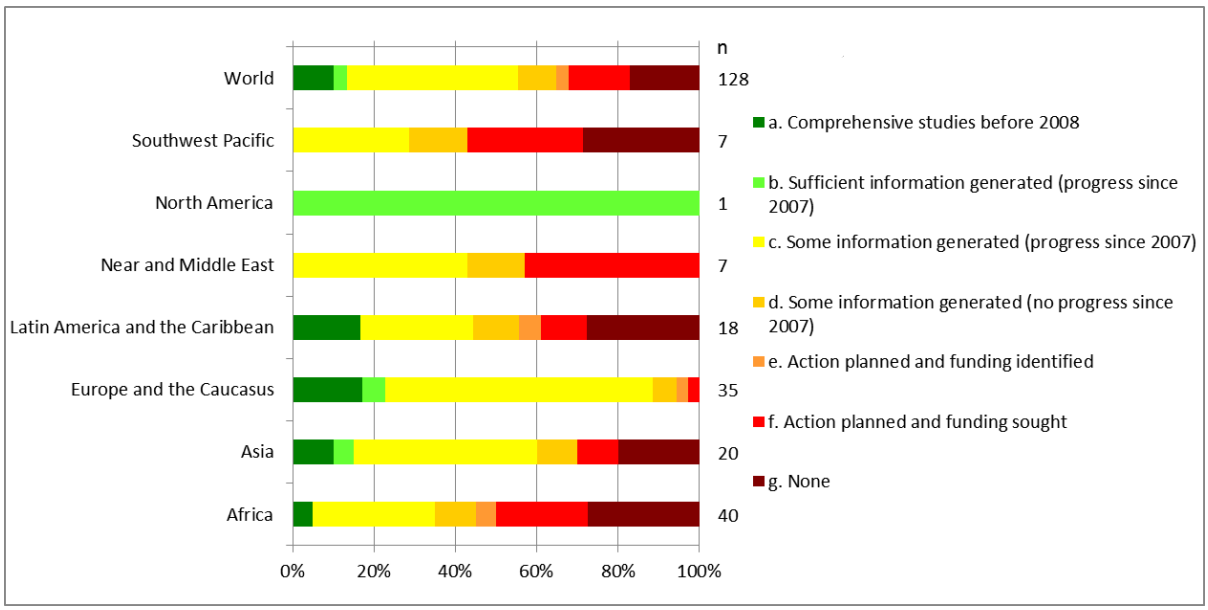
Figure 3. Q2 – Which of the following options best describes your country's progress in implementing phenotypic characterization studies covering morphology, performance, location, production environments and specific features in all livestock species of economic importance?



Over 80 percent of reporting countries have undertaken at least some phenotypic characterization studies. Almost 30 percent of countries report either that comprehensive studies (covering morphology, performance, location, production environments) had been undertaken before 2008 or that by now the information generated is considered sufficient Additional studies are, however, required in the majority of countries, particularly in the Southwest Pacific and Africa. Even where information is currently considered sufficient, if significant changes to production environments occur, further studies are likely to be necessary in the future.

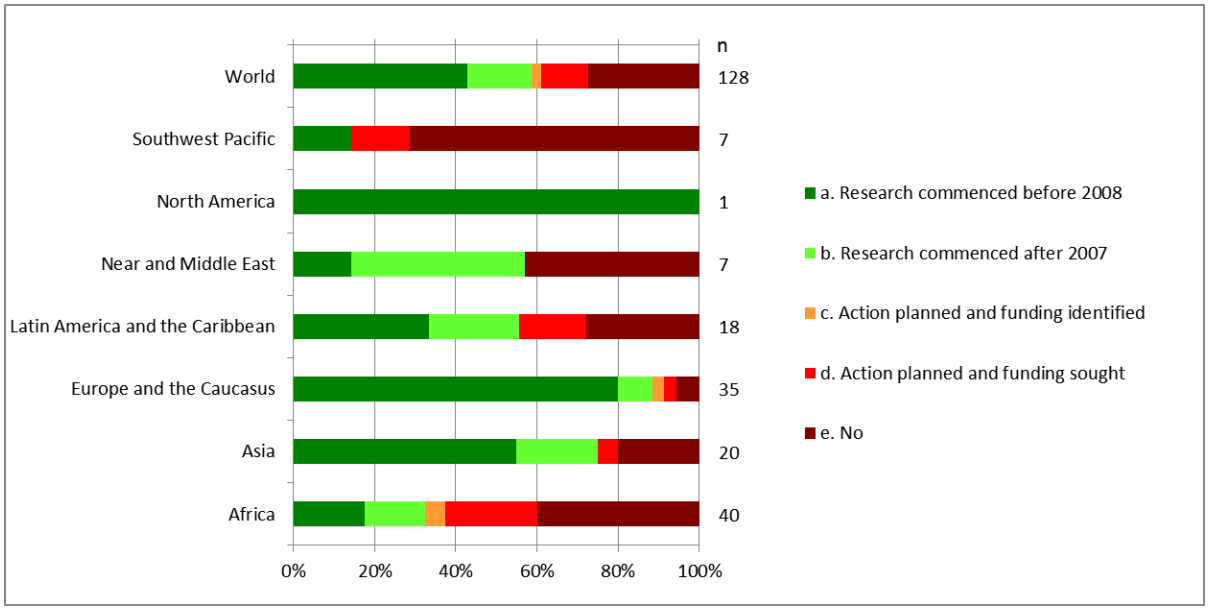
Countries in various regions – developed and less developed – report that phenotypic characterization work is undertaken by breeding organizations and non-governmental organizations (NGOs) for the particular breeds for which they take responsibility or by individual research organizations. Almost 50 percent of countries have made progress in phenotypic characterization studies since the adoption of the Global Plan of Action (in addition to the 20 percent of countries that report comprehensive studies completed before 2008).

Figure 4. Q3 – 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?



Approximately 10 percent of reporting countries had undertaken comprehensive molecular characterization studies before the Global Plan of Action was adopted. Over 40 percent have undertaken some molecular studies. In all developing regions, a substantial proportion of countries report that they have undertaken no molecular characterization studies: about 65 percent in Africa; 45 percent in the Near and Middle East 40 percent in Asia and 25 percent in the Southwest Pacific Overall, more than 55 percent of countries have generated some information from molecular studies since 2007. A number of countries note that a lack of expertise and funding constraint their capacities to undertake molecular characterization studies.

Figure 5. Q10 – Is your country conducting research to develop methods, technical standards or protocols for phenotypic or molecular characterization, or breed evaluation, valuation or comparison?

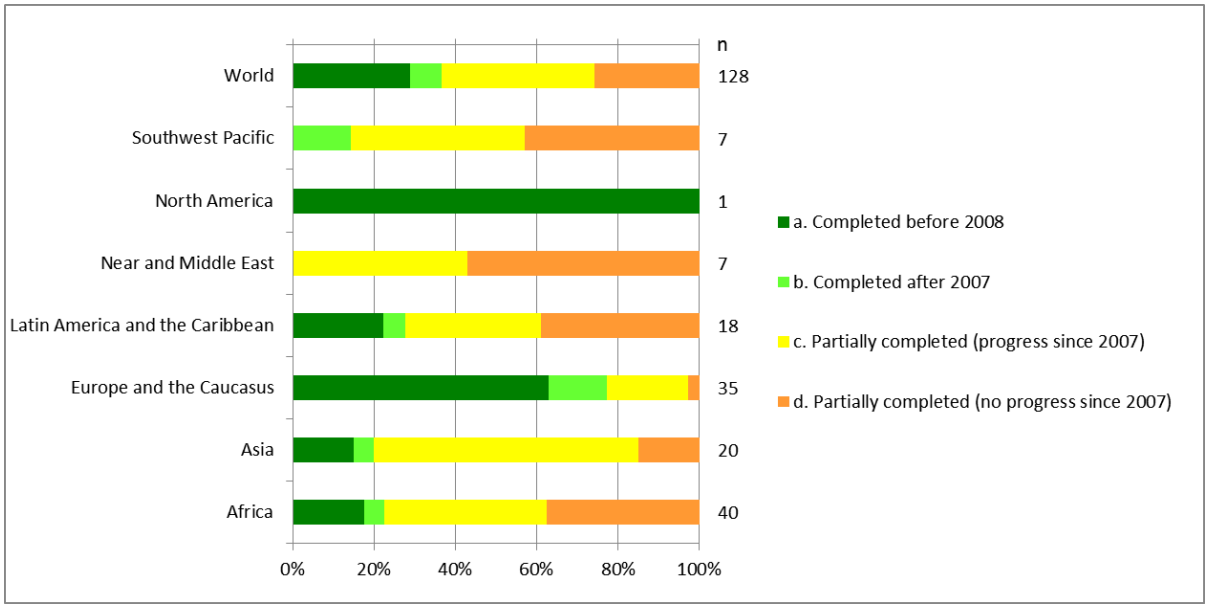


Almost 60 percent of reporting countries indicate that they have undertaken research on methods and standards for breed characterization, evaluation, valuation or comparison. Over 40 percent of

countries commenced these studies before the adoption of the Global Plan of Action, while about 15 percent commenced studies after 2007. Research activities in this field are most widespread in North America, Europe and the Caucasus, and Asia.

Indicator SP1b: The completeness of inventory and the regularity of monitoring of trends and associated risks

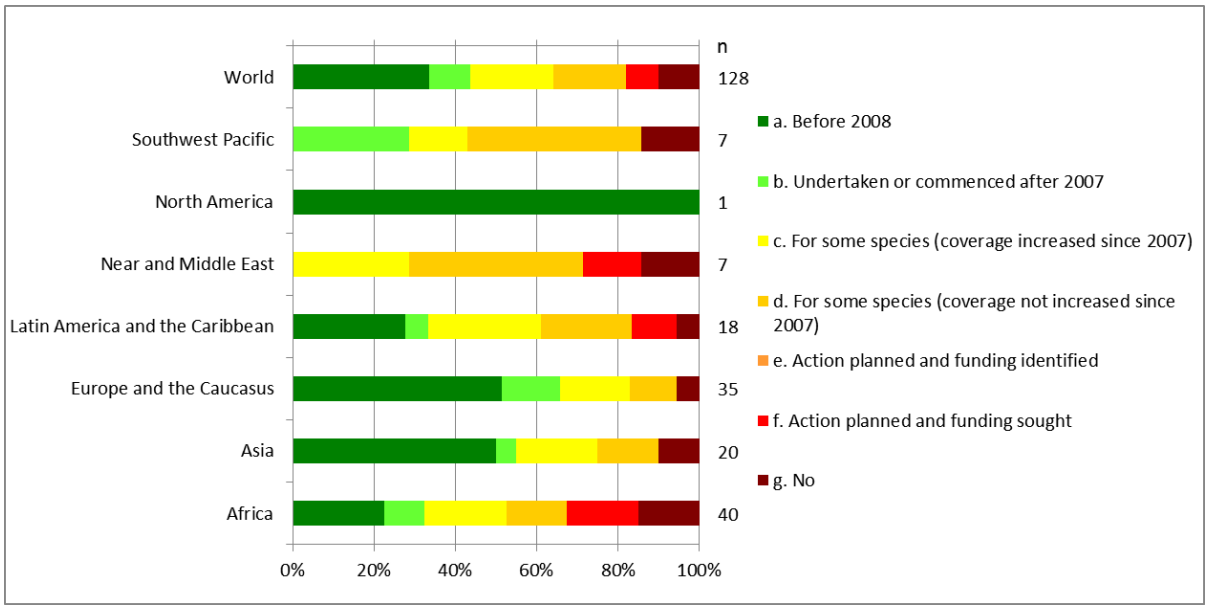
Figure 6. Q1 – Which of the following options best describes your country's progress in building an inventory of its animal genetic resources covering all livestock species of economic importance?



Just below 30 percent of reporting countries had built an inventory of their animal genetic resources covering all livestock species of economic importance before the adoption of the Global Plan of Action. Among the remaining countries, the majority have either completed or made progress towards completing their inventories since 2007. However, over 80 percent of the reporting countries from the Southwest Pacific and 100 percent from the Near and Middle East have only partially completed their inventories with over 20 percent and nearly 40 percent, respectively, indicating progress since 2007.

A number of countries report that they prepared inventories many years ago, or as part of the first State of the World's Animal Genetic Resources for Food and Agriculture process. In many cases, countries note that existing inventories require updating to account for recent importations of exotic breeds or new information on breed identities. Countries that report no further progress since the adoption of the Global Plan of Action cite a lack of resources (mainly funding) as the primary barrier.

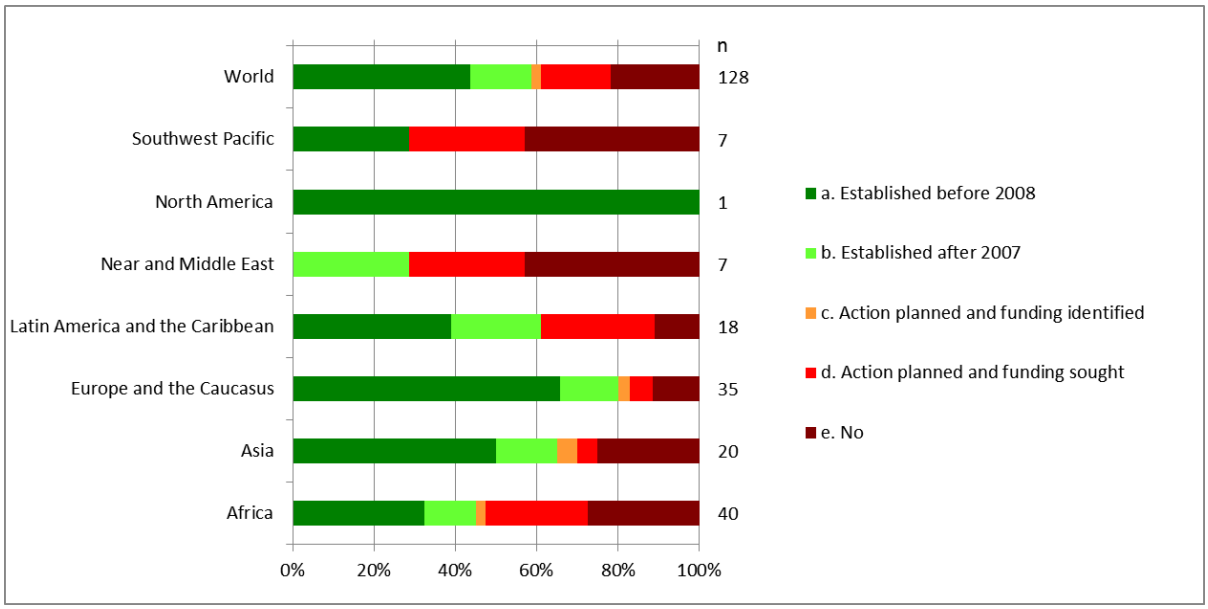
Figure 7. Q4 – Has your country conducted a baseline survey of the population status of its animal genetic resources for all livestock species of economic importance?



Over 40 percent of reporting countries have conducted a baseline survey of the population status of their animal genetic resources for all livestock species of economic importance. With the exception of the Southwest Pacific region, very few countries have undertaken or commenced baseline surveys after 2007.

Generally, for all regions except Europe and the Caucasus and North America, there is a need for substantial further efforts to complete baselines surveys. This shortfall is reflected in the many gaps that still exist in the population data entered by countries into the Domestic Animal Diversity Information System (DAD-IS)[23]. For further information, see *Status and trends of animal genetic resources – 2014*[24]. A number of countries note that that surveying activities are constrained by a lack of funds.

Figure 8. Q5 – Have institutional responsibilities for monitoring the status of animal genetic resources in your country been established?

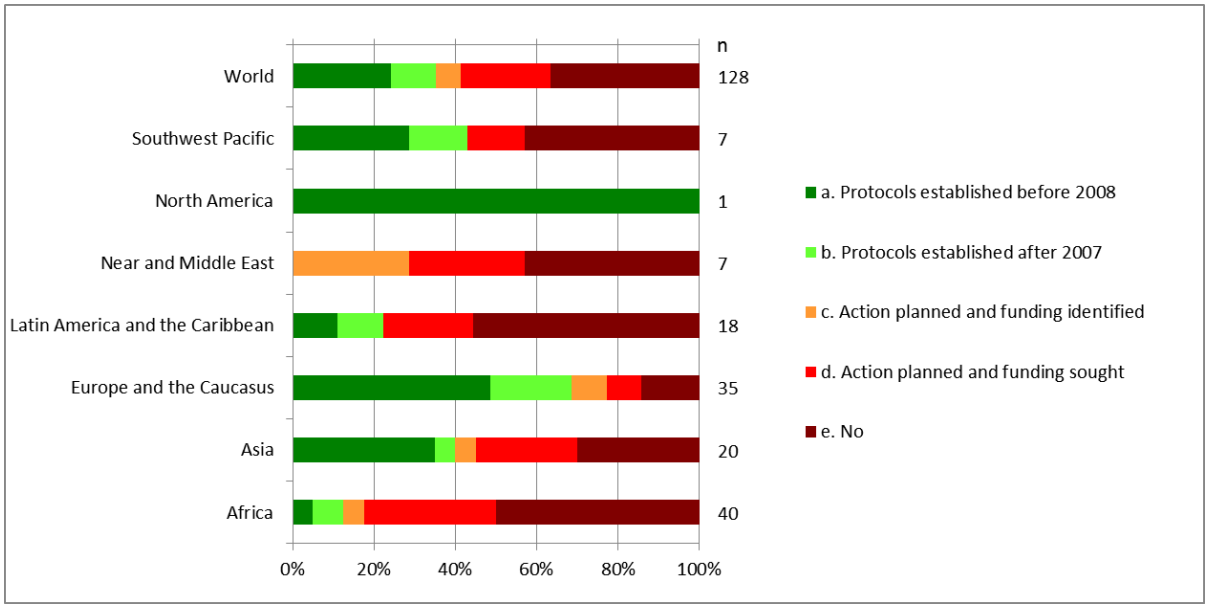


[23] http://www.fao.org/dad-is/
[24] CGRFA/WG-AnGR-8/14/Inf.4

Almost 60 percent of reporting countries have established institutional responsibilities for monitoring the status of their animal genetic resources. However, in the Near and Middle East and the Southwest Pacific, the majority of countries have not yet established institutional responsibilities for monitoring.

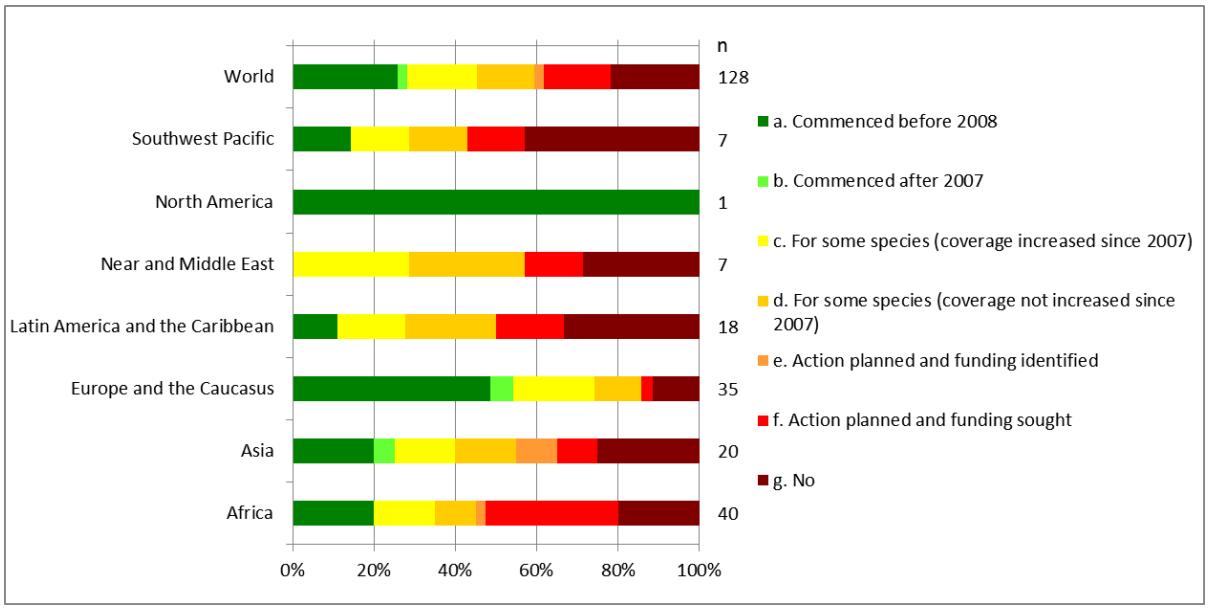
A number of different national and institutional arrangements are reported. For example, responsibility may be given to government agencies, research institutions, breeding organizations or NGOs. In many countries, different stakeholders are responsible for monitoring different species or breeds of animals. Some countries note that although responsibilities have been established, monitoring does not take place because of a shortage of funds. In other cases, organizations participate in monitoring activities without having been allocated responsibility in a formal sense.

Figure 9. Q6 – Have protocols (details of schedules, objectives and methods) been established for a programme to monitor the status of animal genetic resources in your country?



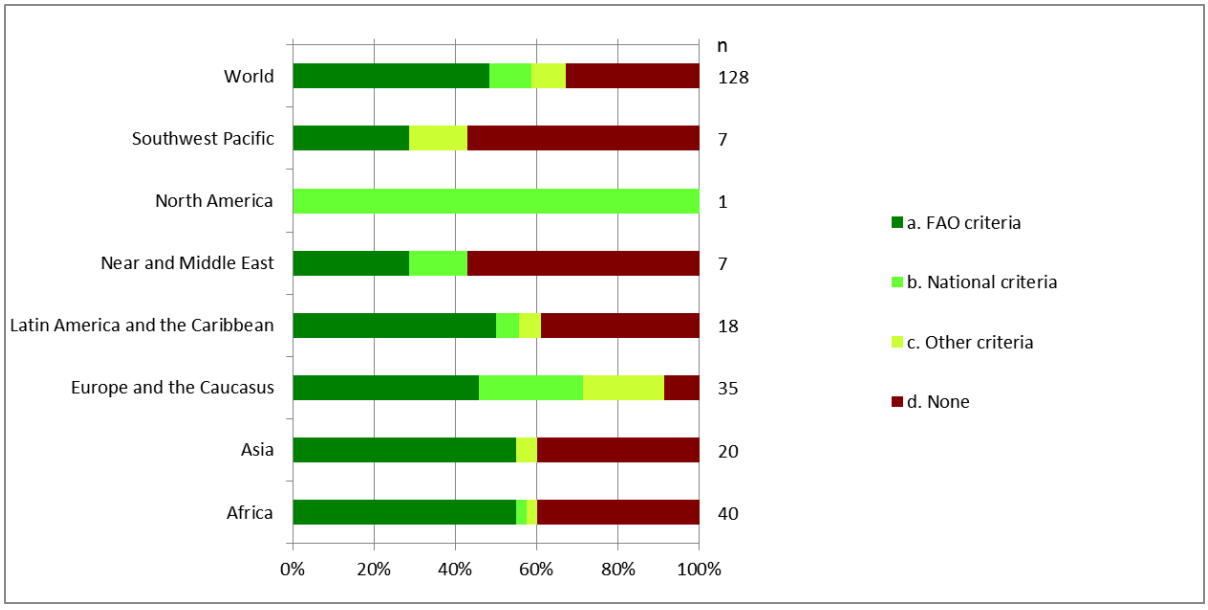
Over 35 percent of reporting countries have established protocols (details of schedules, objectives and methods) for programmes to monitor the status of their animal genetic resources. Over one third of these countries had established their protocols before the adoption of the Global Plan of Action. Protocols for monitoring are particularly lacking in Africa, Latin America and the Caribbean, and the Near and Middle East. Moreover, some countries that report such protocols also note that they are not fully developed or require further elaboration.

Figure 10. Q7 – Are the population status and trends of your country's animal genetic resources being monitored regularly for all livestock species of economic importance?



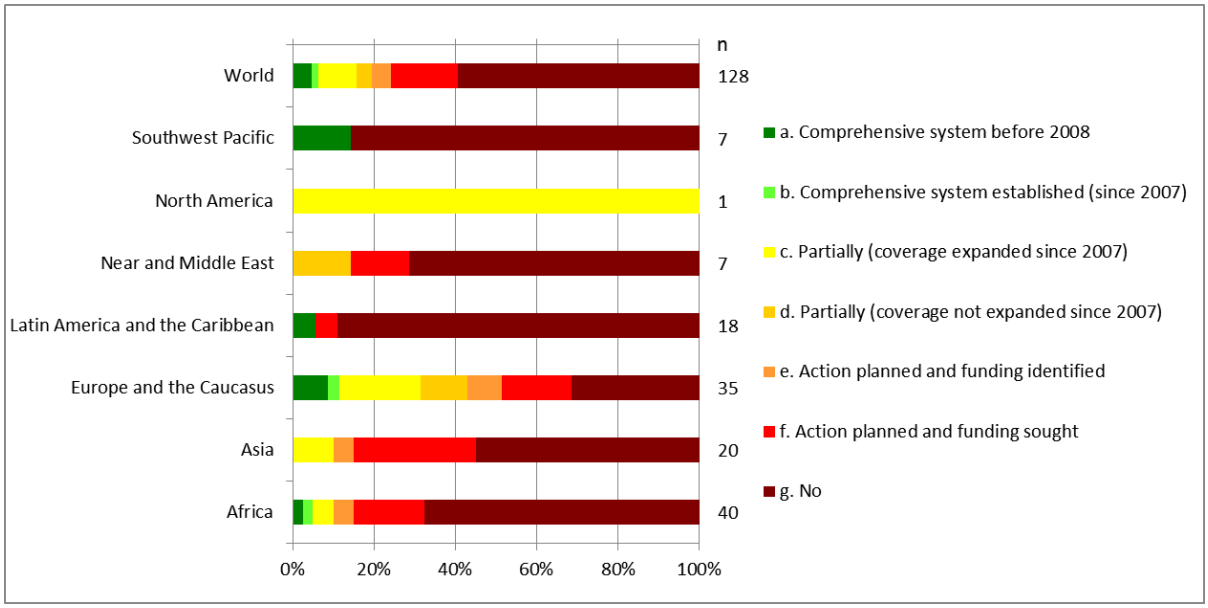
Less than 30 percent of reporting countries have commenced regular monitoring of the population status and trends of their animal genetic resources in all livestock species of economic importance. More progress has been made in Europe and the Caucasus, and North America than in other regions. Action is particularly required in the countries of the Near and Middle East, Southwest Pacific, Africa and Latin American and the Caribbean.

Figure 11. Q8 – Which criteria does your country use for assessing the risk status of its animal genetic resources?



Almost 70 percent of reporting countries have criteria for assessing the risk status of their animal genetic resources. FAO criteria are the most widely used. However, nearly 60 percent of the countries of the Near and Middle East and 40 percent of the countries in both Asia and Africa do not use any criteria to assess the risk status of their animal genetic resources. A number of countries from Africa note the need for further advice on how to assess risk status.

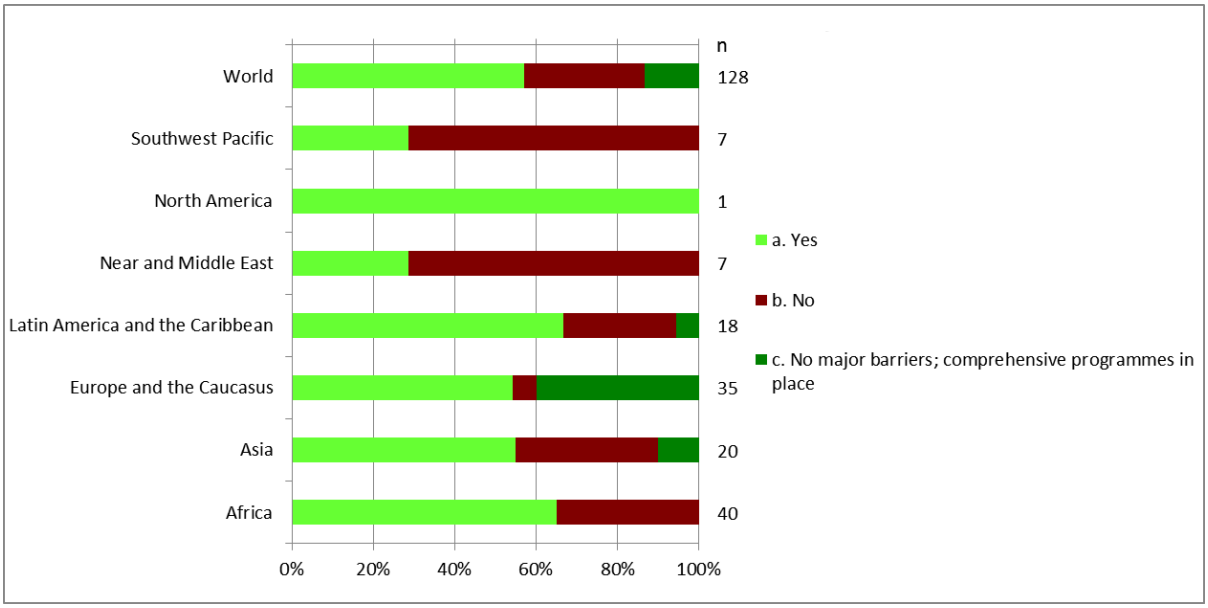
Figure 12. Q9 – Has your country established an operational emergency response system[25] that provides for immediate action to safeguard breeds at risk in all important livestock species?



Less than 10 percent of reporting countries have established an operational emergency response system that provides for immediate action to safeguard breeds at risk in all important livestock species. None of these countries are in the Near and Middle East or Asia. A small number of countries describe organized links between monitoring programmes and actions to protect breeds that are identified as being at risk. Others describe specific measures to counter specific threats such as disease outbreaks. Substantial further action is required in all regions.

Additional questions contributing to Indicator SPA1

Figure 13. Q11 – Has your country identified the major barriers and obstacles to enhancing its inventory, characterization and monitoring programmes?



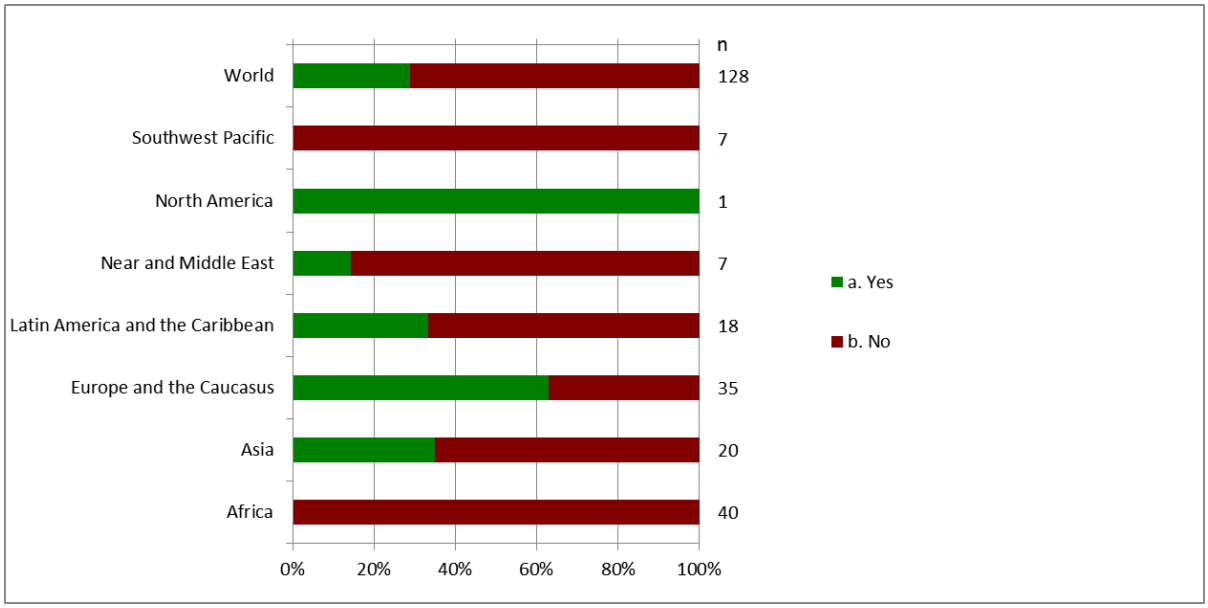
Approximately 15 percent of countries report that no major barriers or obstacles have been identified because comprehensive characterization and monitoring programmes are already in place. In just under 60 percent of countries, barriers have been identified. However, about 25 percent of countries have not yet identified any barriers. This lack of information and analysis is particularly prevalent in

[25]CGRFA/WG-AnGR-5/09/4; http://www.fao.org/docrep/meeting/021/K3812e.pdf

the countries of the Southwest Pacific and the Near and Middle East.

The most frequently reported barriers and obstacles, in order of prevalence, are lack of financial support, lack of technical capacity and lack of human capability. These problems are particularly prevalent in Africa and Asia.

Figure 14. Q59.1 – Are there any national NGOs active in your country in the field of characterization?



Just under 30 percent of reporting countries indicate that national NGOs are active in the field of characterization. NGOs engaged in characterization work are relatively common in Europe and the Caucasus (just over 60 percent of the countries). In contrast, not one African or Southwest Pacific country reports that it has any national NGOs active in the field of characterization.

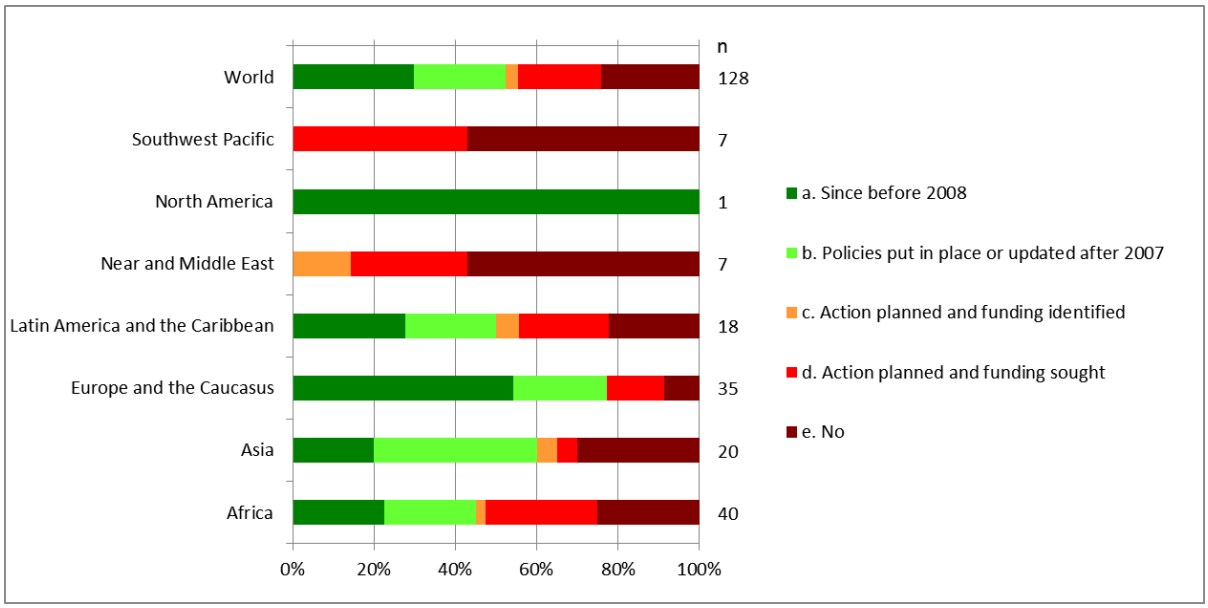
Strategic Priority Area 2: Sustainable use and development

Long-term goal: Enhanced sustainable use and development of animal genetic resources in all relevant production systems, as a key contribution to achieving sustainable development, poverty eradication and adaptation to the effects of climate change.

SP3: Establish and strengthen national sustainable use policies

Indicator SP3: The state of national sustainable use policies

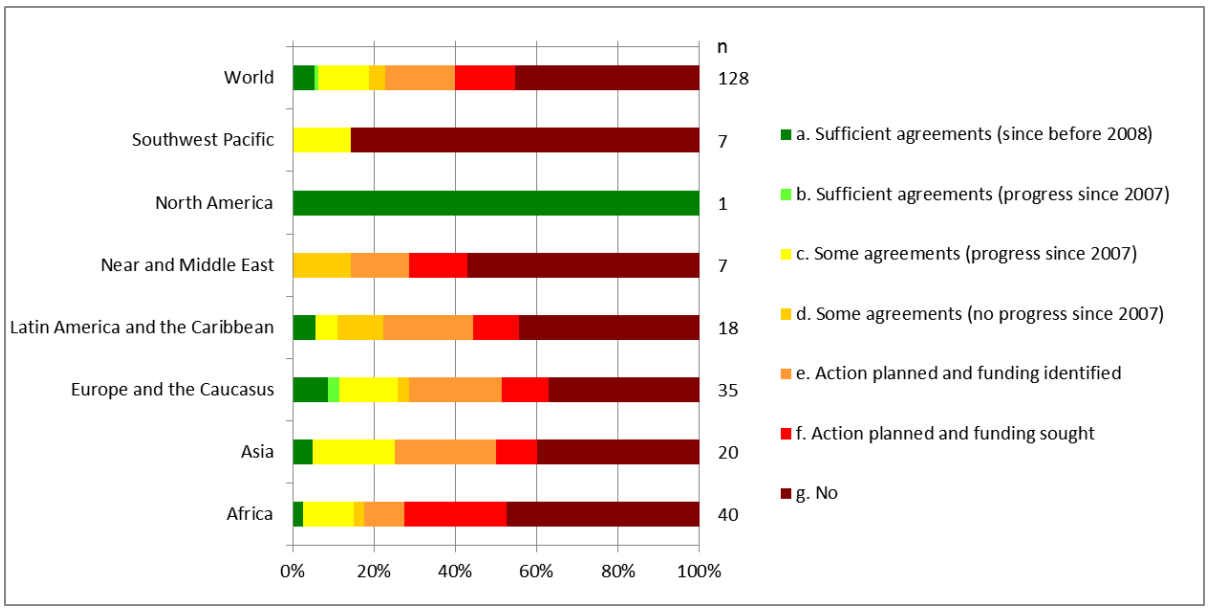
Figure 15. Q14 – Does your country have adequate national policies in place to promote the sustainable use of animal genetic resources[26]?



Over 50 percent of reporting countries state that they have adequate national policies in place to promote the sustainable use of their animal genetic resources. Almost half of these report that this level of capacity has been established since the adoption of the Global Plan of Action. Many countries, however, still need establish or strengthen their policies. This is particularly the case in the Southwest Pacific and the Near and Middle East.

[26] See also questions 46 and 54.

Figure 16. Q23 – 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?

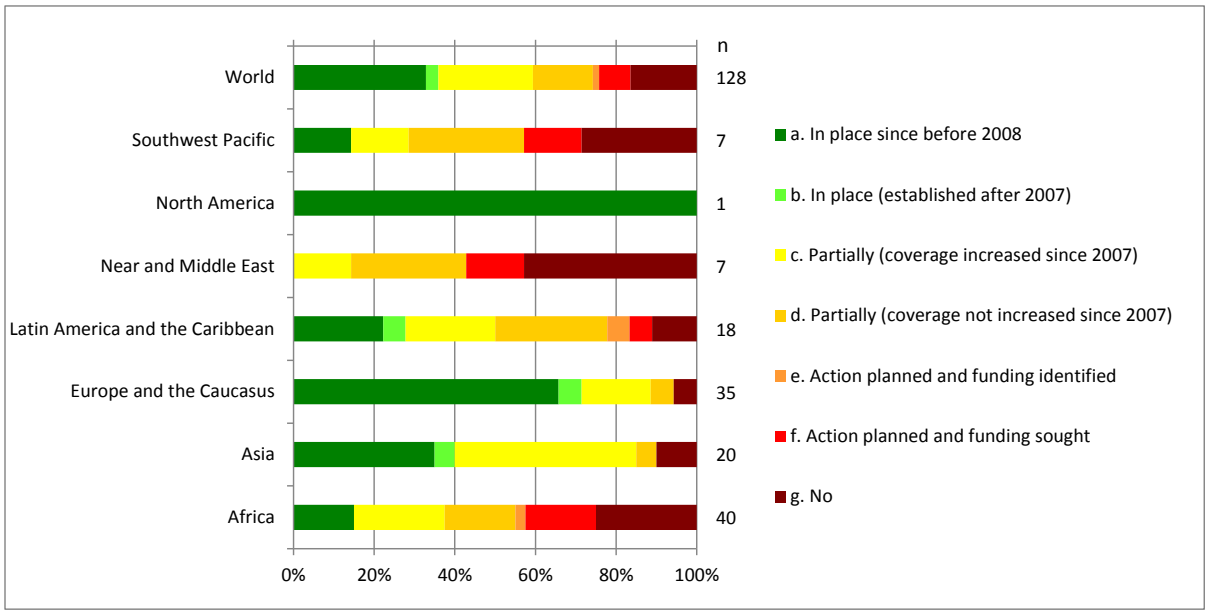


Across the world as a whole, the percentage of reporting countries that have developed any agreements for equitable sharing of benefits resulting from access to and use and development of animal genetic resources and associated traditional knowledge is quite low (under 20 percent). Even fewer countries (approximately 5 percent) regard these policies or agreements as sufficient. Some countries, however, note in their reports that they consider the issue to be sufficiently addressed by private arrangements between buyer and seller, and hence that no specific policy or legal measures are required.

SP4: Establish national species and breed development strategies and programmes

Indicator SP4: The state of national species and breed development strategies and programmes

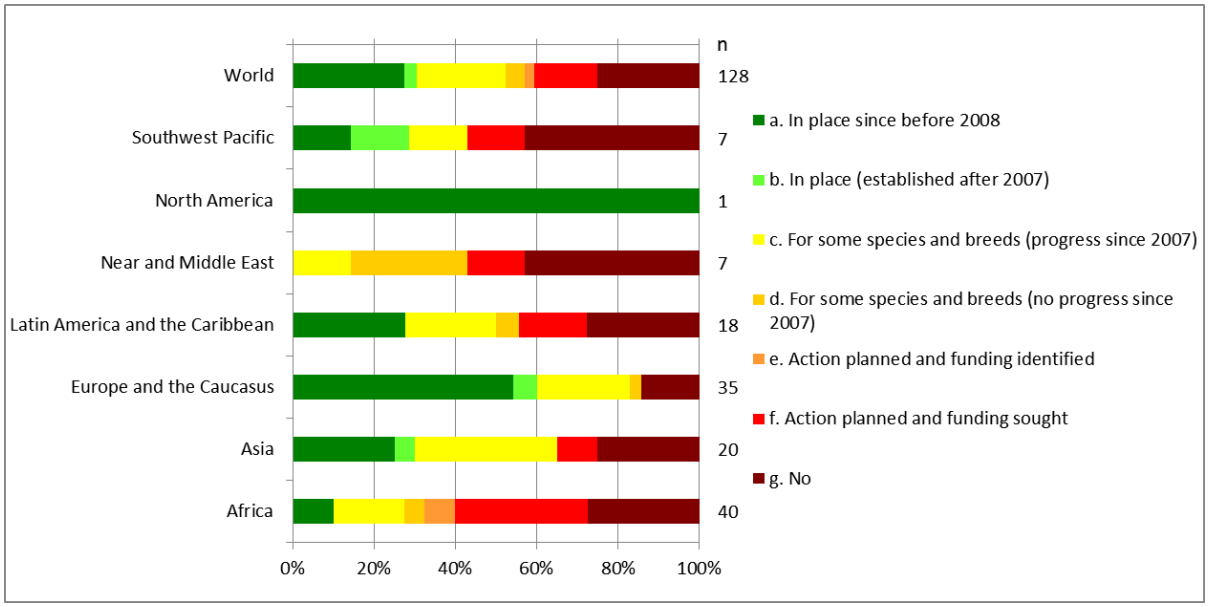
Figure 17. Q16 – Do breeding programmes exist in your country for all major species and breeds, and are these programmes regularly reviewed, and if necessary revised, with the aim of meeting foreseeable economic and social needs and market demands?



Almost 40 percent of reporting countries have breeding programmes in place for all major species and

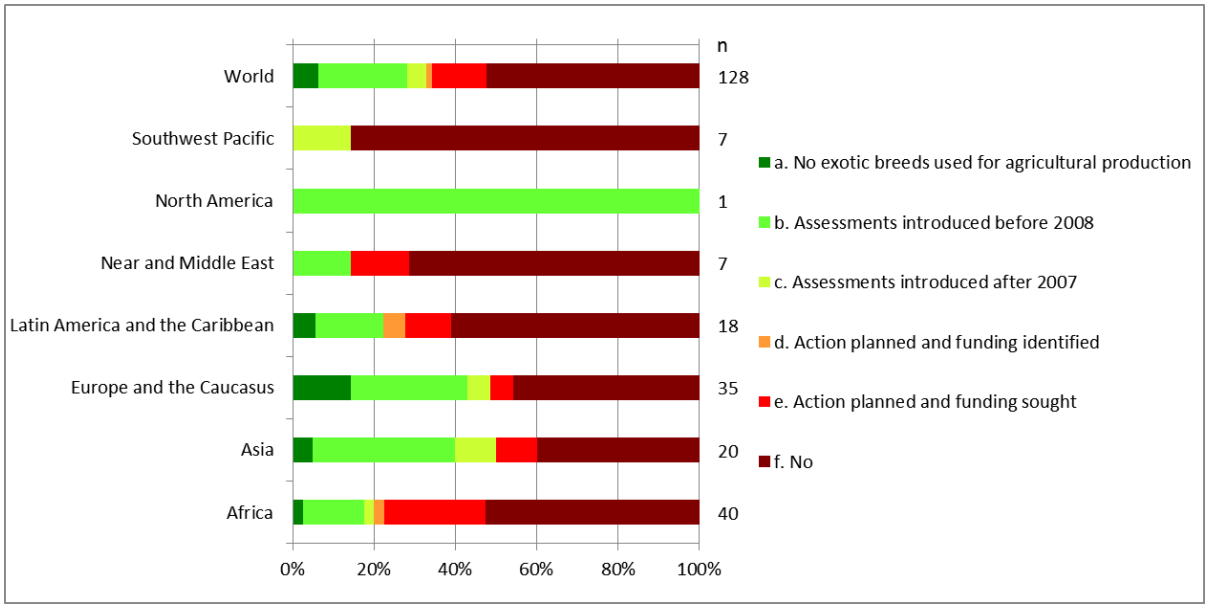
breeds. The majority of these countries had achieved this before the adoption of the Global Plan of Action. More than 70 percent of countries report that they have some breeding programmes in place. Among these, a majority have increased their coverage since 2007. Nonetheless, coverage needs to be increased in all regions, especially the Southwest Pacific and the Near and Middle East. Across the world, breeders' organizations are the most frequently mentioned stakeholders in the development, revision and implementation of breeding programmes.

Figure 18. Q17 – Is long-term sustainable use planning – including, if appropriate, strategic breeding programmes – in place for all major livestock species and breeds?



Long-term sustainable use planning is in place for all major livestock species and breeds in approximately 35 percent of reporting countries. A slightly smaller proportion of countries have planning of this type in place for some species. Significant progress since 2007 is reported in some regions, particularly Asia and Europe and the Caucasus. However, a substantial number of countries report that they have no such plans in place for any species and no action is planned to address this Issue.

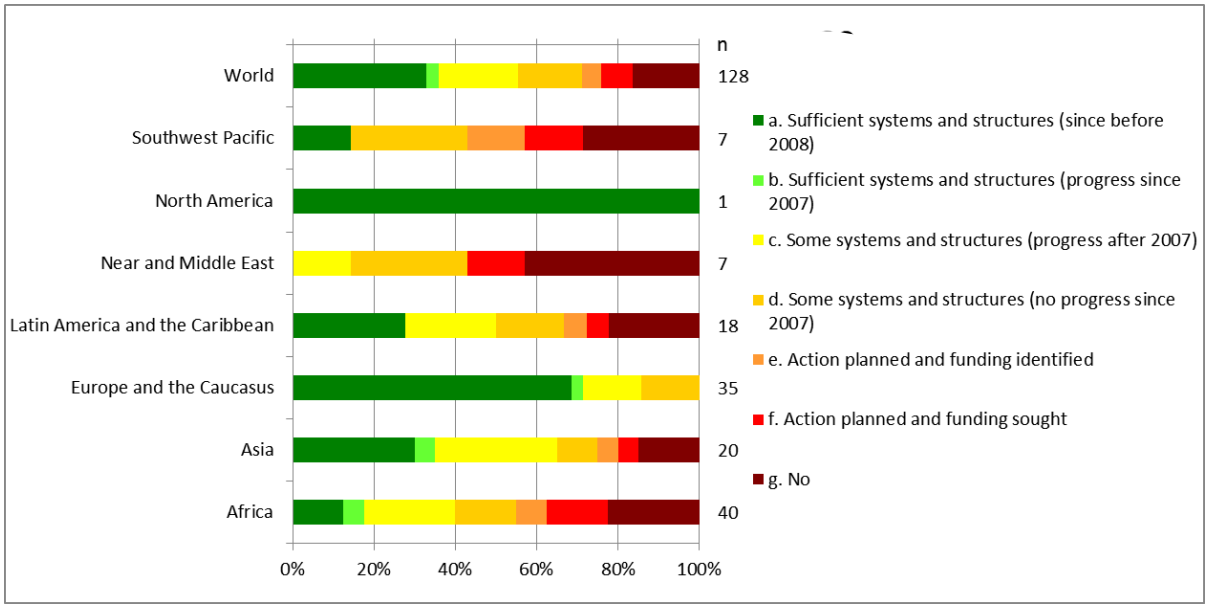
Figure 19. Q19 – Have the long-term impacts of the use of exotic breeds on locally adapted breeds (e.g. economic, environmental or genetic impacts) and on food security been assessed in your country?



Assessments of the impact of introducing exotic breeds have been undertaken in over 30 percent of reporting countries. Such assessments are particularly lacking in Africa, the Southwest Pacific and the Near and Middle East. A few countries describe structured arrangements for assessing the potential impact of exotic genetic resources prior to their importation.

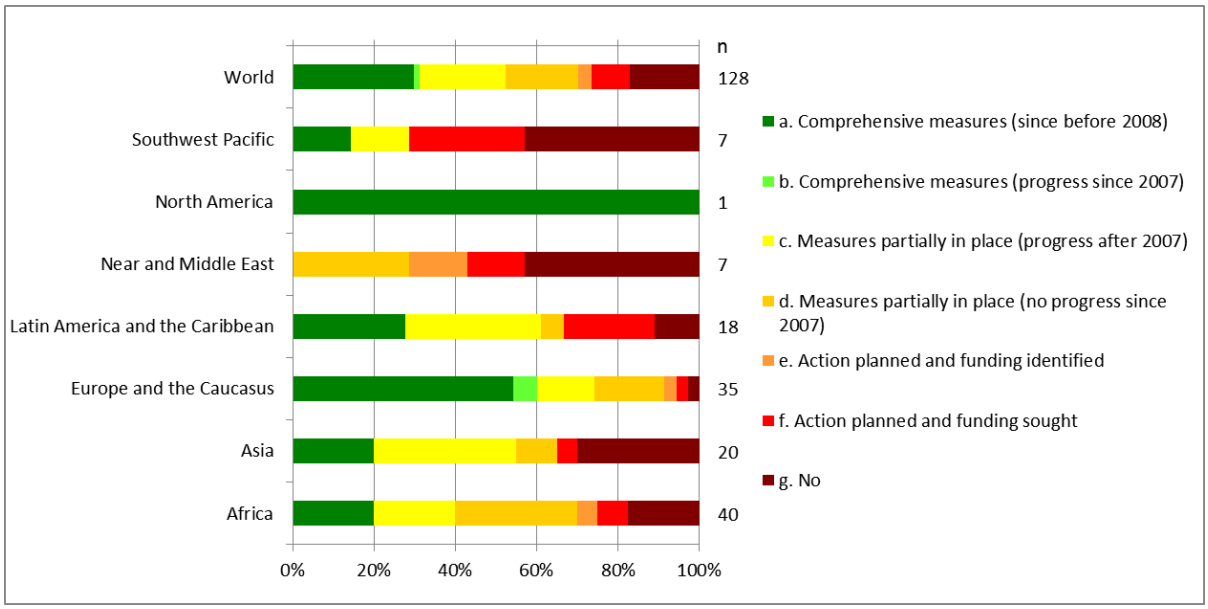
Several countries note adverse effects on genetic diversity due to the introduction of exotic breeds. Several countries mention cases in which breed importations were unsuccessful because the animals were not sufficiently well adapted to local conditions.

Figure 20. Q20 – Have recording systems and organizational structures for breeding programmes been established or strengthened?



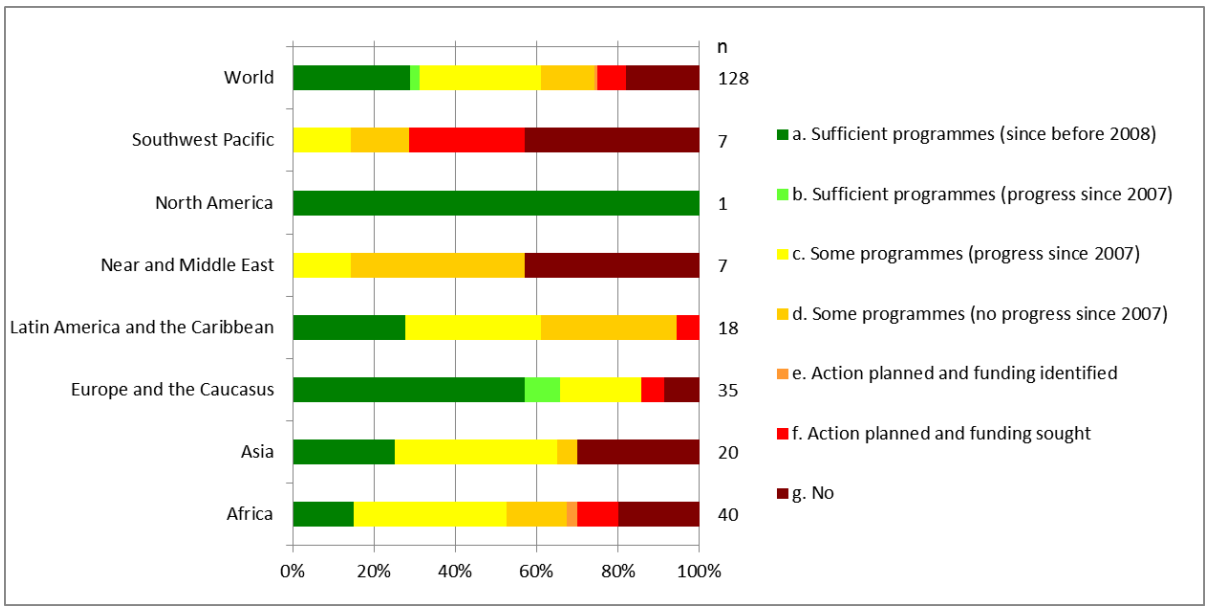
Almost 40 percent of reporting countries consider that they have sufficient recording systems and organizational structures in place for their breeding programmes. However, further progress is required in the majority of countries outside Europe and the Caucasus and North America. In the regions where the least progress has been made (the Near and Middle East and the Southwest Pacific) little evidence of funding being identified is reported (under 10 percent in the Southwest Pacific and none in the Near and Middle East), indicating that progress will be limited until funding can be identified.

Figure 21. Q22 – Have measures been implemented in your country to provide farmers and livestock keepers with information that facilitates their access to animal genetic resources?



About 30 percent of reporting countries have comprehensive measures in place for providing farmers and livestock keepers with information that facilitates their access to genetic resources. However, approximately 30 percent of countries, and over 70 percent of those in the Near and Middle East and Southwest Pacific, report that they have no such measures in place. More than 20 percent of countries report that they have made progress in the introduction of such measures since 2007.

Figure 22. Q24 – Have training and technical support programmes for the breeding activities of livestock-keeping communities been established or strengthened in your country?

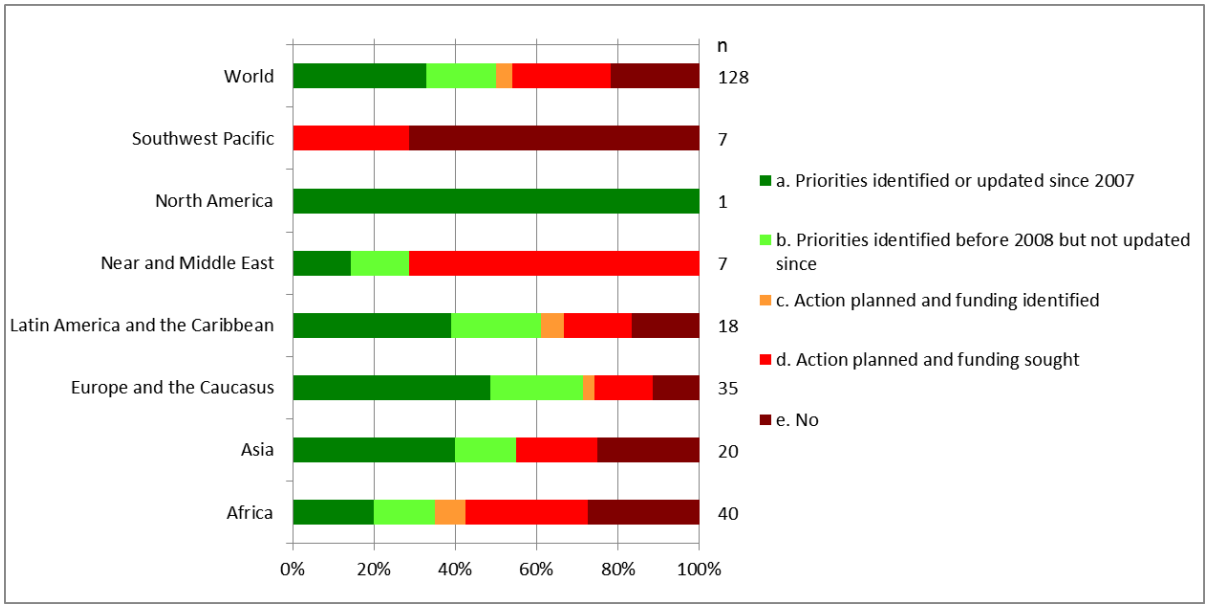


About 30 percent of reporting countries indicate that they have sufficient training and technical support programmes for the breeding activities of livestock-keeping communities in place. Over 70 percent have some programmes of this type.

Although coverage is uneven, countries across all regions indicate interest in the implementation and development of training programmes. For example, Kenya has rolled out training for livestock keepers on various breeding activities including animal recording and artificial insemination. The Ministry of Livestock in Cameroon, in partnership with Heifer International, have provided similar training. Progress, nonetheless remains slow in some regions, particularly the Near and Middle East and the

Southwest Pacific.

Figure 23. Q25 – Have priorities for future technical training and support programmes to enhance the use and development of animal genetic resources in your country been identified?

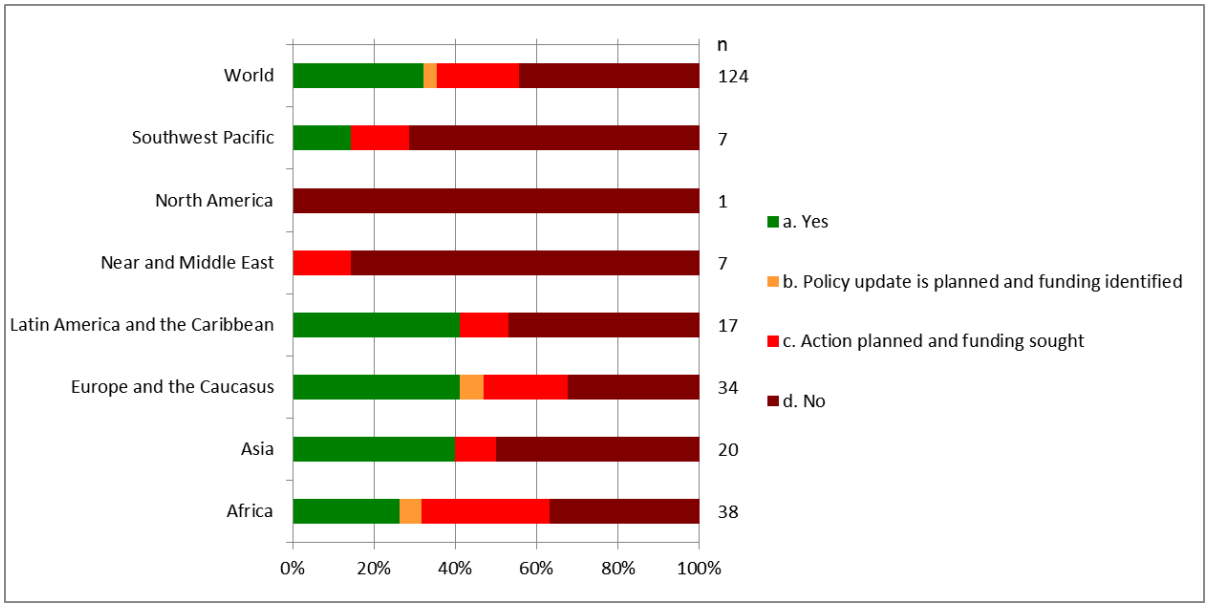


Approximately 50 percent of reporting countries have identified priorities for training and support programmes to enhance the use and development of animal genetic resources. This world average has been affected by strong moves in some regions towards identifying priorities (Europe and the Caucasus and the United States of America), and little movement in the Near and Middle East.

SP5: Promote agro-ecosystems approaches to the management of animal genetic resources

Indicator SP5: The state of efforts to promote agro-ecosystems approaches to the management of animal genetic resources

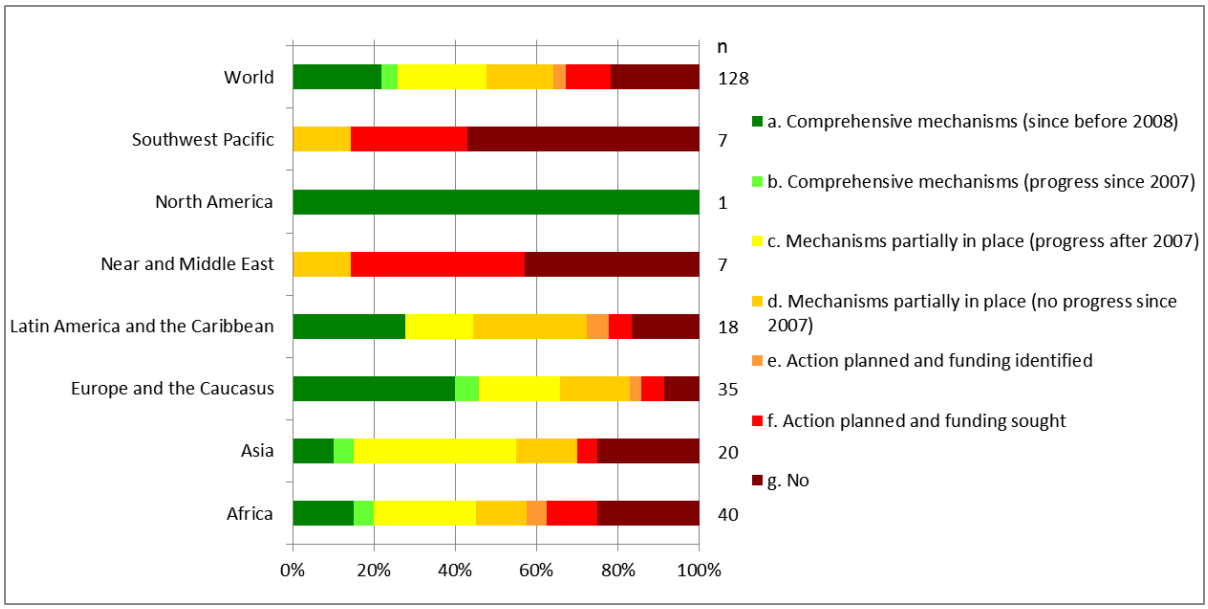
Figure 24. Q15 – Do these policies[27] address the integration of agro-ecosystem approaches into the management of animal genetic resources in your country[28]?



[27] See Question 14: adequate national policies in place to promote the sustainable use of animal genetic resources.
[28] See also Questions 46 and 54.

Just over 30 percent of reporting countries have policies that address the integration of the agro-ecosystem approach into the management of their animal genetic resources. The majority of reporting countries have no plans to integrate agro-ecosystem approaches into their policies.

Figure 25. Q21 – Are mechanisms in place in your country to facilitate interactions among stakeholders, scientific disciplines and sectors as part of sustainable use development planning?

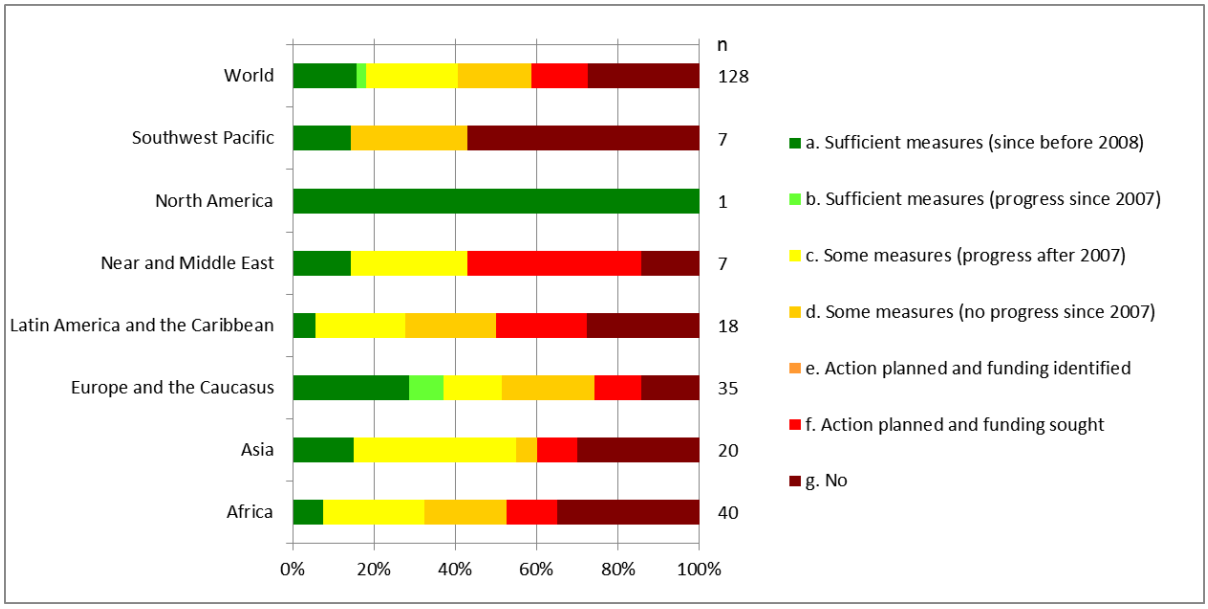


Approximately 25 percent of reporting countries have comprehensive mechanisms in place to facilitate interactions among stakeholders as part of sustainable use planning for animal genetic resources; a further 20 percent, approximately, have at least some such mechanisms in place. However, in both the Southwest Pacific and the Near and Middle East almost 90 percent of countries report that they have no such mechanisms in place.

SP6: Support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources

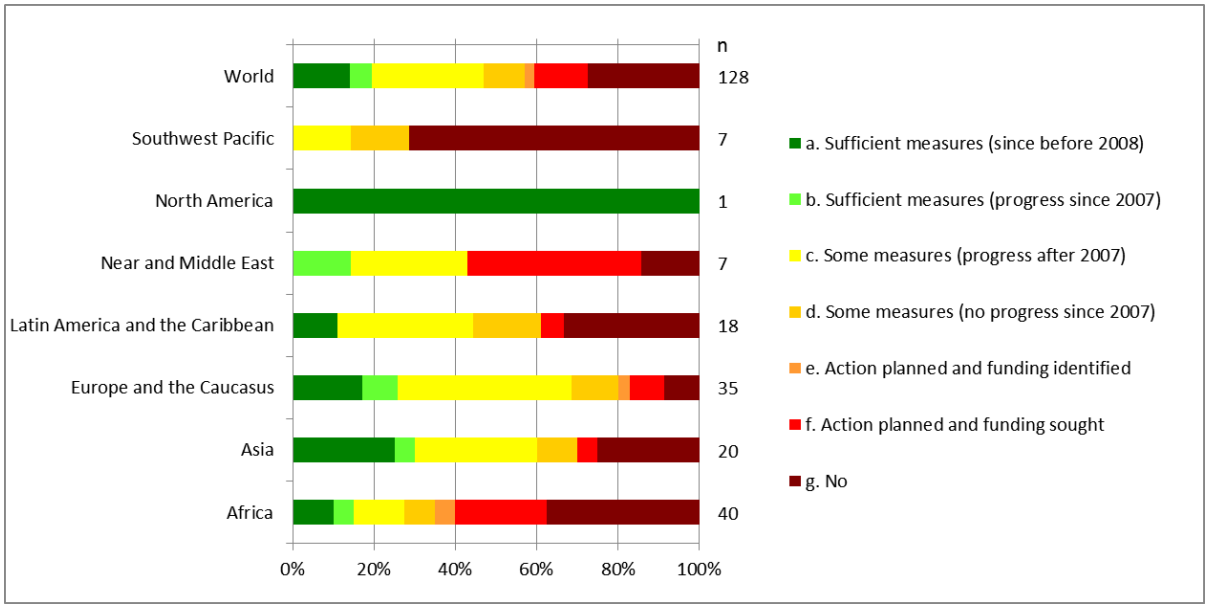
Indicator SP6: The state of efforts to support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources

Figure 26. Q26 – 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?



Less than 20 percent of reporting countries consider that they have put sufficient measures in place to assess and support indigenous or local production systems and associated traditional knowledge and practices related to animal genetic resources. Approximately a further 40 percent, have some measures in place. The regions with the largest shortfalls in this field are the Southwest Pacific, the Near and Middle East, and Africa.

Figure 27. Q27 – Have efforts been made in your country to promote products derived from indigenous and local species and breeds, and facilitate access to markets?



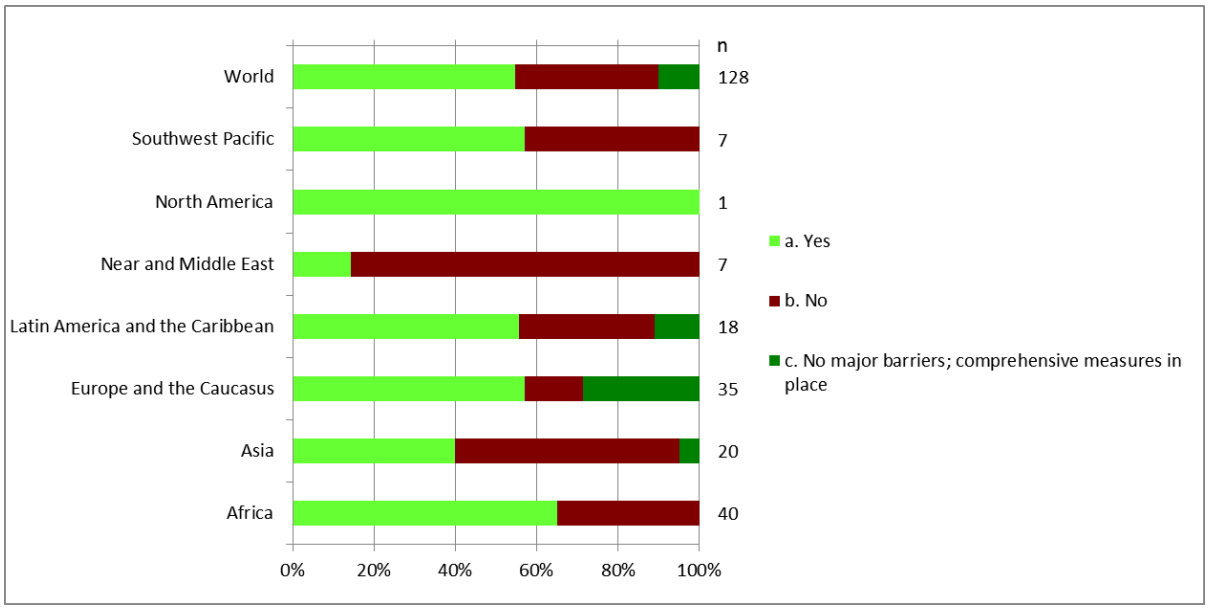
Less than 20 percent of reporting countries consider that their measures to promote products derived from indigenous and local species and breeds and promote access to markets are sufficient.

Approximately 40 percent of countries have implemented some measures of this type. Regions reporting a lack of widespread measures include the Southwest Pacific, the Near and Middle East and Africa. Just over 30 percent of countries report progress since 2007. All regions report progress since the adoption of the Global Plan of Action with the exception of the Southwest Pacific (and North America, where sufficient measures were already in place).

Countries providing details of niche marketing programmes include Finland, where niche products from the native Finncattle (e.g. cheese, raw milk and meat) are available in limited amounts. Cheese brands made from the milk of the Landrace goat are available in some shops, as are meat and wool from Finnsheep. Funding has been sought to study the quality of Landrace chicken eggs and meat. In Latvia, successful efforts have been made to promote the meat of the local Latvian White pig on the grounds of its superior taste quality. In Peru, there are programmes focusing on the promotion of alpaca products and traditional cheeses.

Additional questions contributing to Indicator SPA2

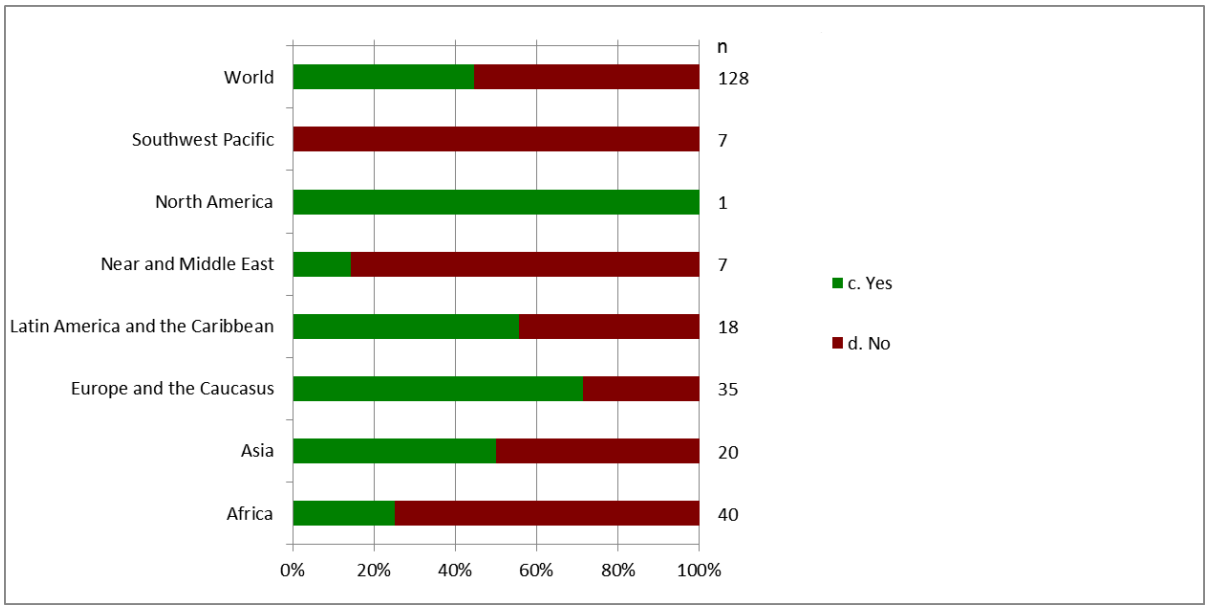
Figure 28. Q18 – Have the major barriers and obstacles to enhancing the sustainable use and development of animal genetic resources in your country been identified?



Over 50 percent of reporting countries have identified the major barriers and obstacles to enhancing the sustainable use and development of their animal genetic resources. The regions with the largest proportions of countries not having undertaken such assessments are the Near and Middle East, and Asia.

The most frequently mentioned constraint is insufficient financial resources, specifically government funding. Many countries mention the absence of coordinated national policies or plans for animal genetic resources management. Lack of the necessary technical and human resources is also cited relatively frequently. More specific issues associated with animal genetic resources management and livestock production are also reported. For example, the report from the Plurinational State of Bolivia notes that diesel subsidies decrease the competitiveness of livestock production relative to agro-industry, loss of grazing land to uncontrolled urbanization, high input costs and complexities in the marketing chain for livestock products.

Figure 29. Q59.2 – Are there any national NGOs active in your country in the field of sustainable use and development?



Over 40 percent of reporting countries have national NGOs that are active in the field of sustainable use and development of animal genetic resources. However, regions such as Africa, the Near and Middle East and especially the Southwest Pacific, have little or no national NGOs active in this field. In Asia, centres such as the Thai Buffalo Conservation and Development Centre[29] in Thailand exemplify the benefits of such NGO's being in place.

[29] http://www.thaibuffaloconservation.com/book.html

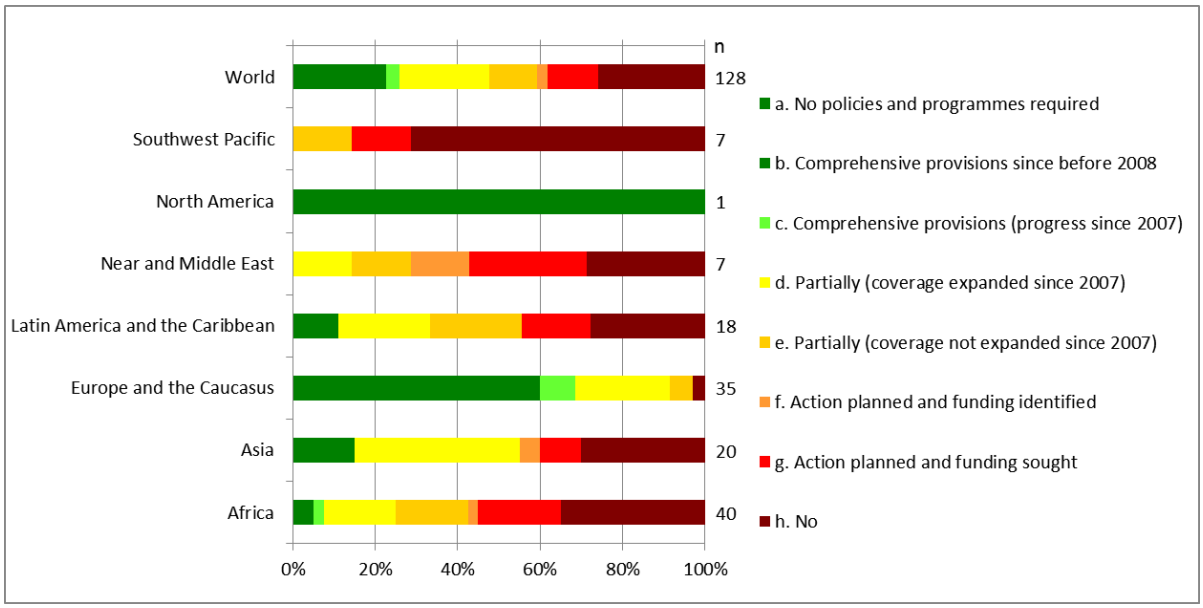
Strategic Priority Area 3: Conservation

Long-term goal: Secure the diversity and integrity of the genetic base of animal genetic resources by better implementing and harmonizing measures to conserve these resources, both *in situ* and *ex situ*, including in the context of emergencies and disasters.

SP7: Establish national conservation policies

Indicator SP7: The state of national conservation policies

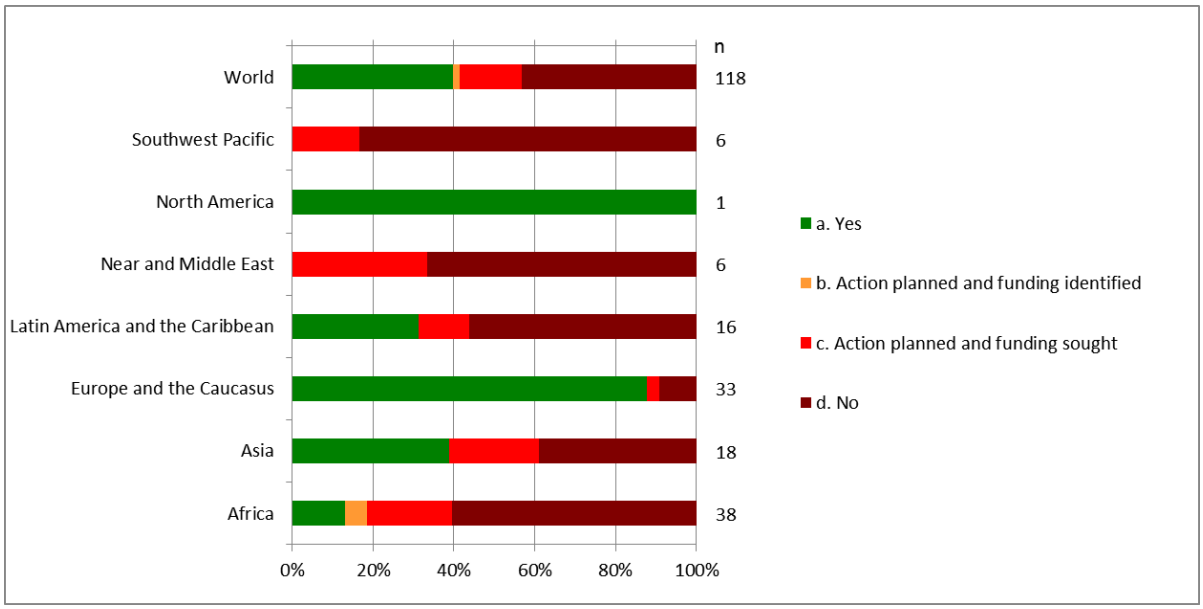
Figure 30. Q32 – Does your country have conservation policies and programmes in place to protect locally adapted breeds at risk in all important livestock species?



Note: answers a and b are represented by the same colour in the legend because they are both considered to represent the highest level of implementation (all breeds secure). However, no countries in fact chose answer a.

For the questions related to conservation policies and programmes, countries had the option of indicating that they have no such provisions in place because all their locally adapted breeds are secure (and hence conservation measures are unnecessary). None of the reporting countries chose this option in response to this question. Over 20 percent of reporting countries consider that they have comprehensive conservation policies and programmes in place to protect breeds at risk in all important livestock species. Partial coverage is reported by approximately 30 percent of countries. The level of coverage, however, varies from region to region. In the Southwest Pacific, Latin America and the Caribbean, the Near and Middle East, and Africa, a large proportion of countries have no provisions in place. Progress since the adoption of the Global Plan of Action is most frequently reported by the countries of Asia, and Europe and the Caucasus (in the latter region adding to an already high level of provision). Progress has been particularly limited in the Southwest Pacific and in the Near and Middle East.

Figure 31. Q33 – If conservation policies and programmes are in place, are they regularly evaluated or reviewed?

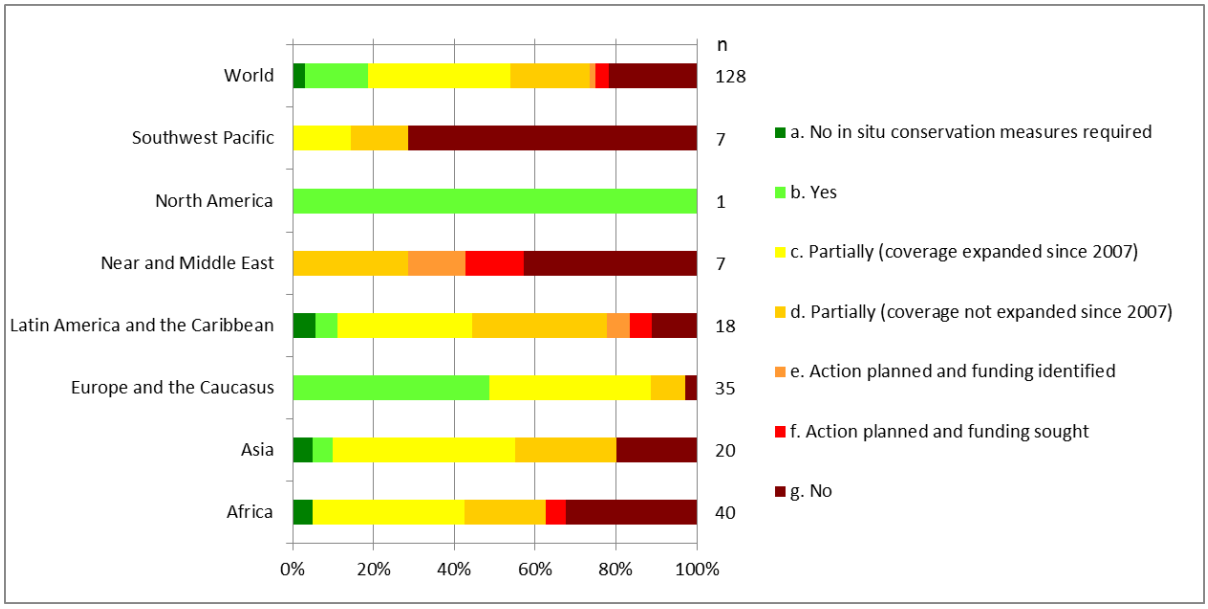


This question is not considered in the calculation of the indicator because it was only addressed to the subset of countries responding positively to question 32. In approximately 40 percent of reporting countries that have conservation programmes, the programmes are evaluated or reviewed regularly. Regular evaluations and revisions are, however, rare in a number of regions, particularly the Near and Middle East and the Southwest Pacific.

SP8: Establish or strengthen in situ conservation programmes

Indicator SP8: The state of in situ conservation programmes

Figure 32. Q34 – Does your country have in situ measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk?



More than 70 percent of reporting countries have *in situ* conservation measures for animal genetic resources in place. However, less than 20 percent consider their measures to be comprehensive. A majority of countries in the Near and Middle East and the Southwest Pacific have no measures of this type in place.

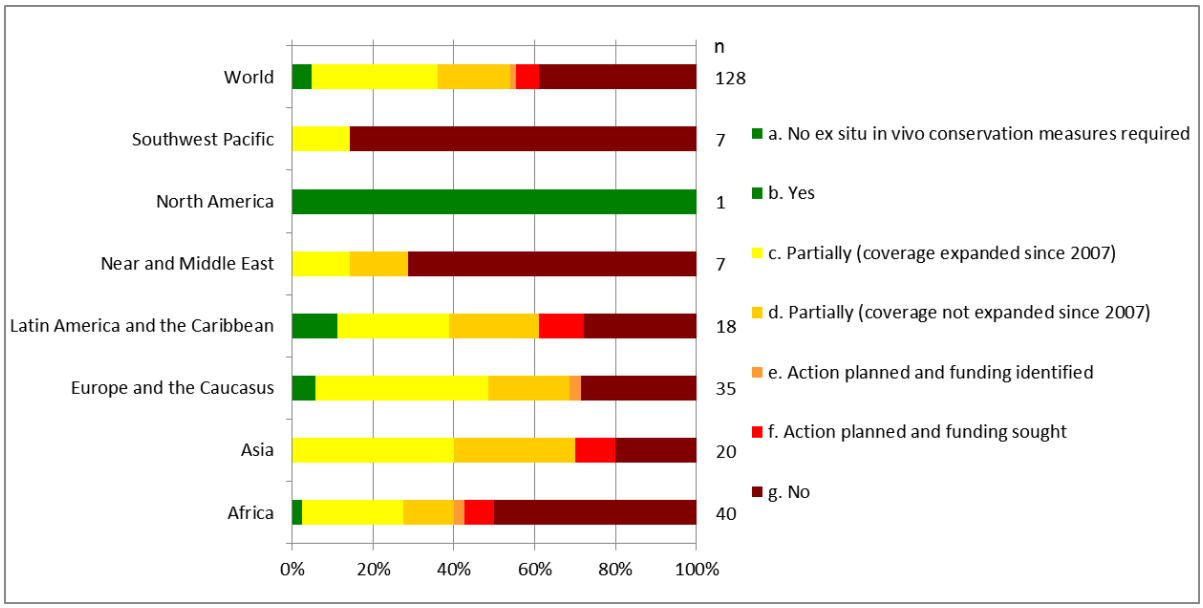
In situ conservation measures are most widespread in Europe and the Caucasus and the United States

of America. Many countries from the former region report that financial support is provided to keepers of breeds at risk. Other conservation measures mentioned by countries from various regions include support for marketing or breeding programmes, and various measures to support the sustainability of livestock production systems.

SP9: Establish or strengthen ex situ conservation programmes

Indicator SP9: The state of ex situ conservation programmes

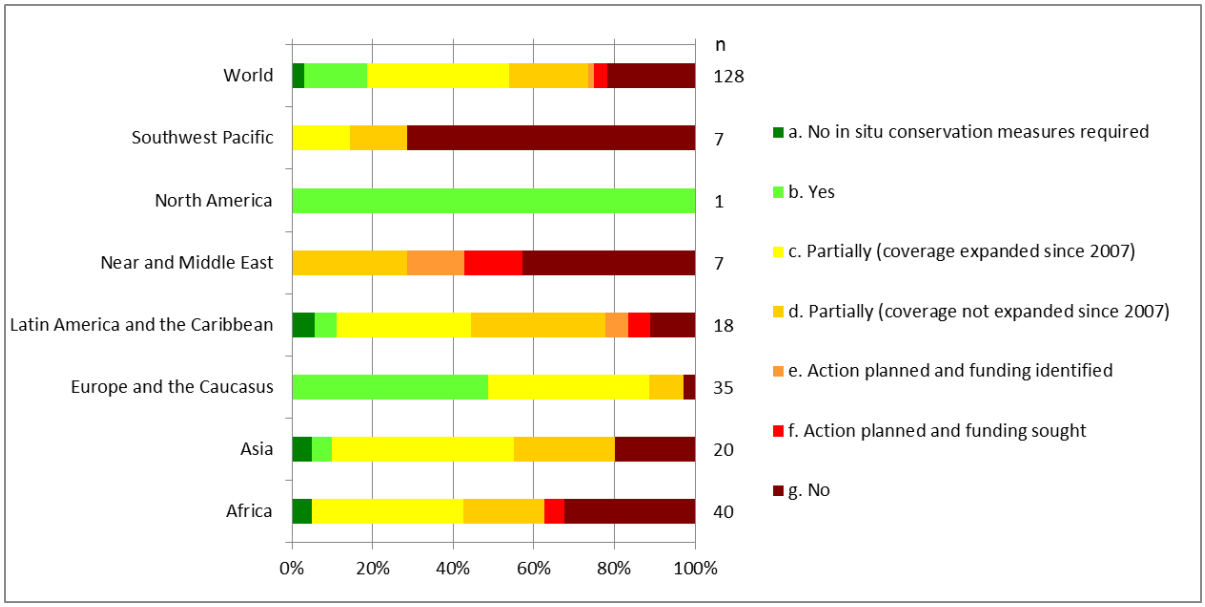
Figure 33. Q35 – Does your country have ex situ in vivo measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk?



Ex situ in vivo measures for animal genetic resources are in place or partially in place in almost half of reporting countries. A majority of countries in Africa, the Southwest Pacific and the Near and Middle East have no such conservation measures in place.

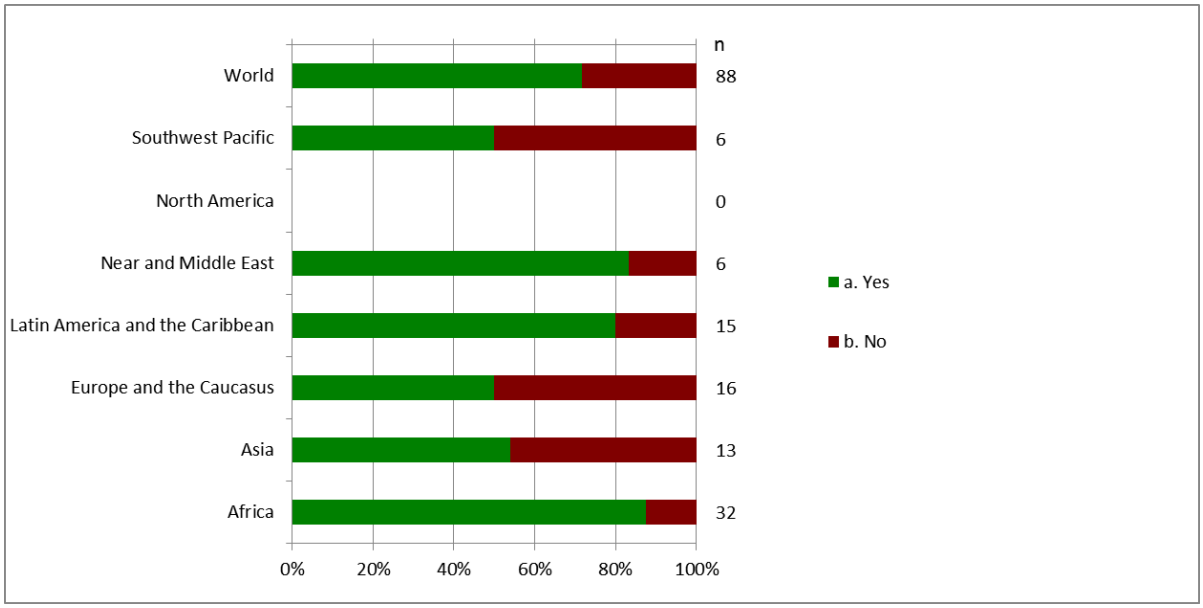
Various types of *ex situ in vivo* conservation are mentioned in the country reports, including zoos, breeding farms and national parks. In Ireland, for example, native and rare breeds are kept as tourist attractions by some local government authorities and private businesses in the country's National Parks.

Figure 34. Q36 – Does your country have ex situ in vitro measures in place for locally adapted breeds at risk of extinction and to prevent breeds from becoming at risk?



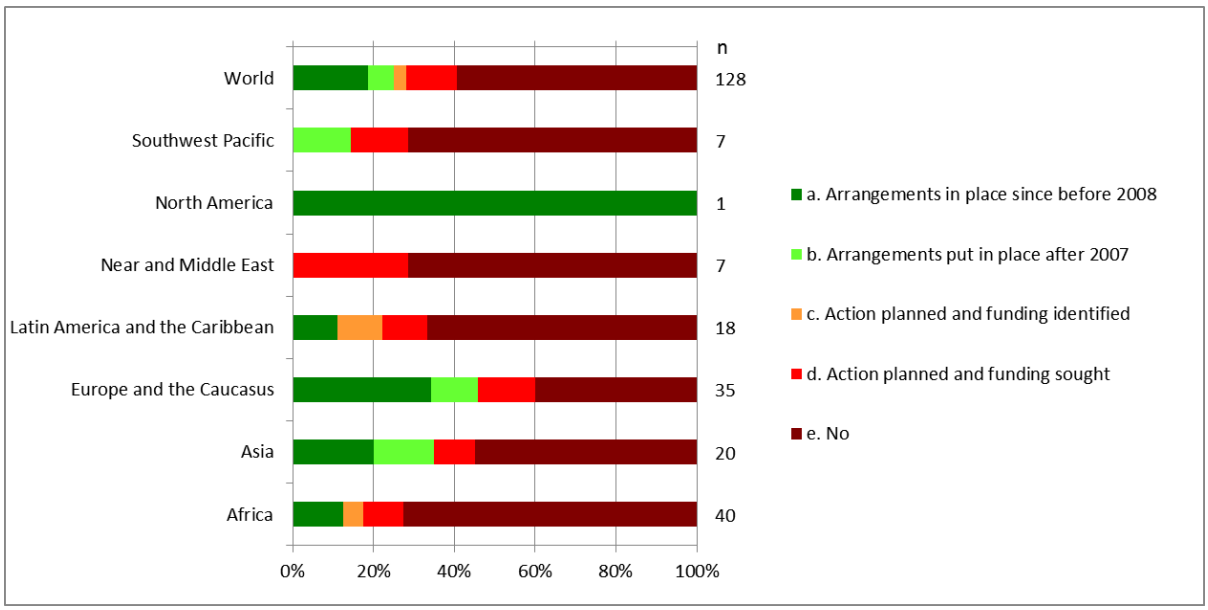
Approximately 50 percent of reporting countries have *ex situ in vitro* conservation measures in place or partially in place for animal genetic resources. Less than 10 percent consider that their measures are comprehensive. The extent of coverage varies greatly from region to region. Very few *ex situ in vitro* measures are reported from the Southwest Pacific, the Near and Middle East or Africa. Across all regions, many countries report that such measures were in place, or partially in place, in the past, but that because of lack of funds and infrastructure, progress was halted or even reversed.

Figure 35. Q38 – If your country has not established any conservation programmes, is this a future priority?



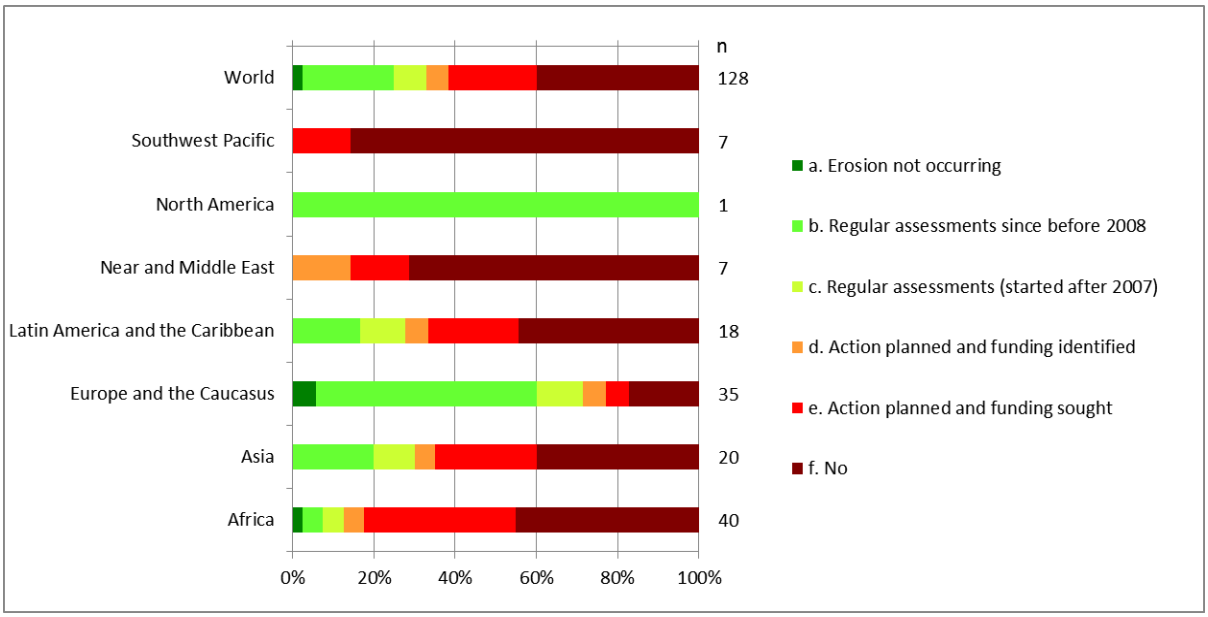
The following question is not considered in the calculation of the indicator because it was only addressed to the subset of countries responding positively to prior questions. The majority of countries that have not yet established conservation programmes report that this is a priority for the future.

Figure 36. Q42 – 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?



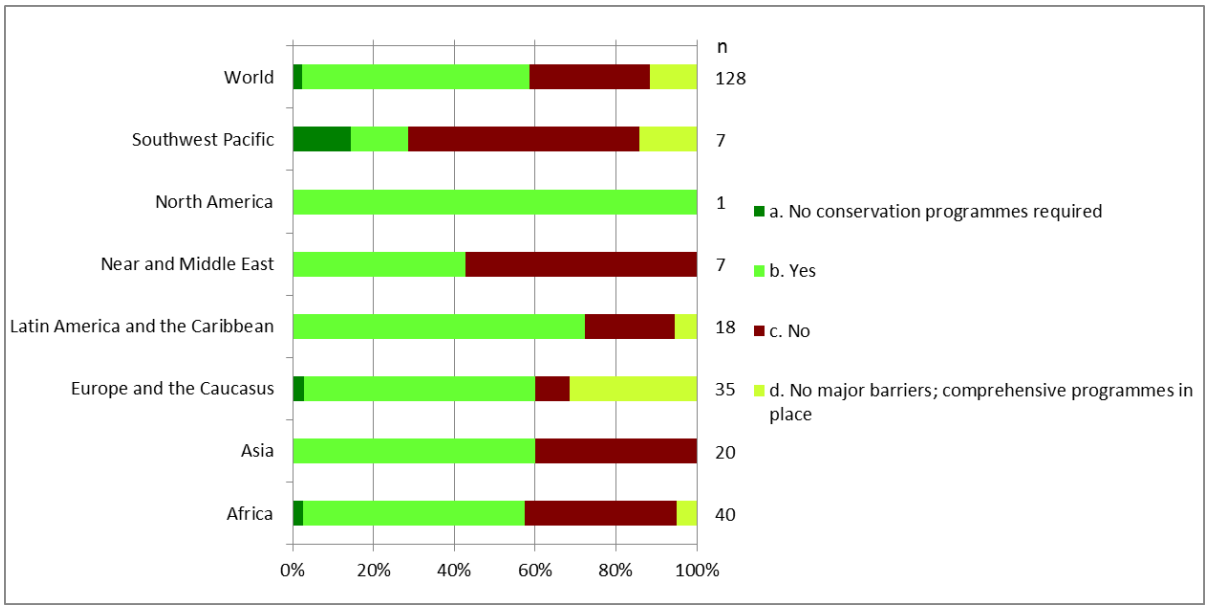
Less than 25 percent of reporting countries have arrangements in place for the extraction and use of conserved genetic material following loss of animal genetic resources through events such as disasters (including arrangements to enable restocking). In all regions except North America, less than 50 percent of countries do not have arrangements of this kind in place. Coverage is particularly low in the Near and Middle East, Africa and the Southwest Pacific. Less than 10 percent of countries report that such measures have been put in place since 2007. Some reporting countries with no arrangements noted that they do not believe there is a need for such measures.

Figure 37. Q30 – Does your country regularly assess factors leading to the erosion of its animal genetic resources?



Over 30 percent of reporting countries regularly assess factors leading to the erosion of their animal genetic resources. No such assessments are reported from the Southwest Pacific or from the Near and Middle East, and few from Latin America and the Caribbean, Asia or Africa.

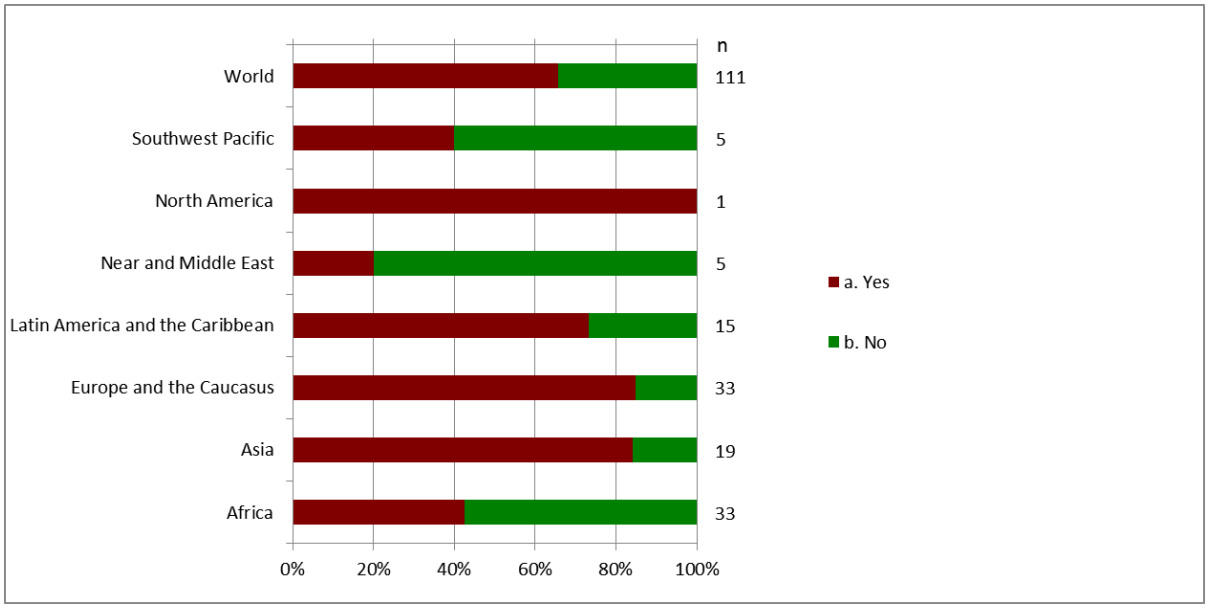
Figure 38. Q39 – Has your country identified the major barriers and obstacles to enhancing the conservation of its animal genetic resources?



The majority of reporting countries have identified the major barriers and obstacles to enhancing the conservation of their animal genetic resources. However, approximately half of countries in the Southwest Pacific and 40 percent in Africa report that they have not identified barriers and obstacles.

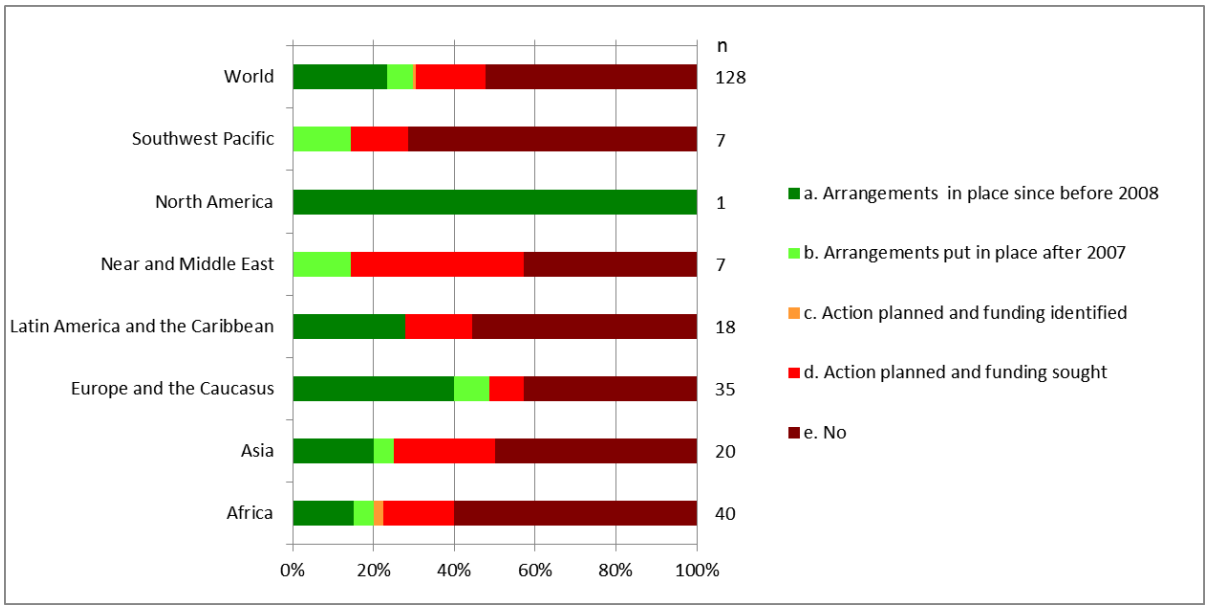
The predominant obstacle reported is a lack of financial resources. Other frequently mentioned obstacles include lack of skilled personnel, lack of technical capacity, lack of information on animal genetic resources, lack of national policies and legal frameworks, and insufficient coordination among stakeholders.

Figure 39. Q40 – If your country has existing ex situ collections of animal genetic resources, are there major gaps in these collections? If yes, have priorities for filling the gaps been established?



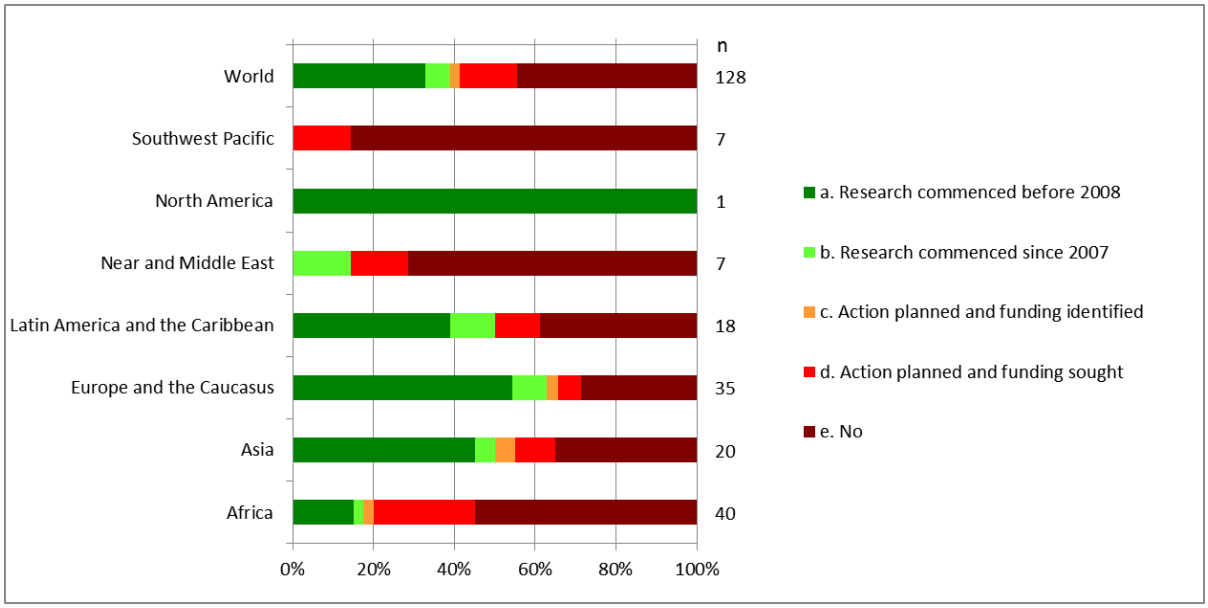
Question 40.1 is not considered in the calculation of the indicator because it was only addressed to the subset of countries responding positively to prior questions. Over 65 percent of the countries that reported existing *ex situ* collections of animal genetic resources indicate that there are major gaps in their collections.

Figure 40. Q41 – Are arrangements in place in your country to protect breeds and populations that are at risk from natural or human induced disasters?



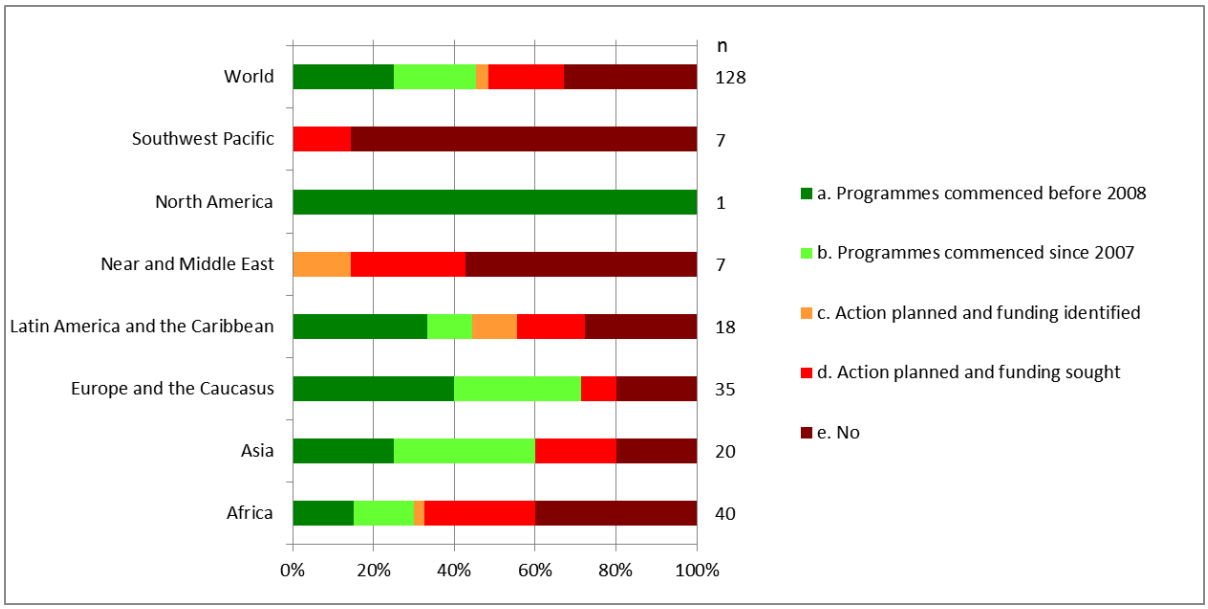
Approximately 30 percent of reporting countries have arrangements in place to protect their breeds and populations from natural or human-induced disasters. The most comprehensive coverage is reported from Europe and the Caucasus. The regions with the largest deficits in this respect are the Southwest Pacific and the Near and Middle East. Apart from a handful of countries in Africa, no other reporting countries have managed to identify funding for planned actions, indicating mitigation against such risk is a low priority in most regions.

Figure 41. Q43 – 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?



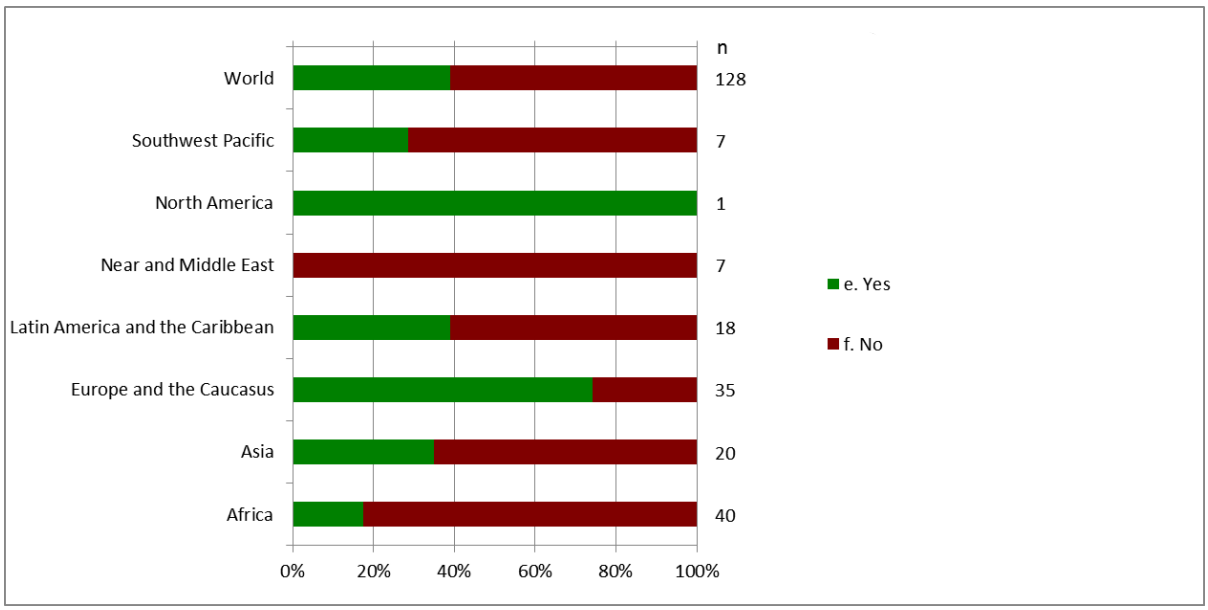
Almost 40 percent of reporting countries indicate that they are undertaking research on conservation methods for animal genetic resources. However, there is significant regional variation. No countries in the Southwest Pacific and very few in the Near and Middle East report activity. In Africa, very few countries are undertaking research on conservation methods. Less than 10 percent of countries report that they commenced such research after 2007.

Figure 42. Q44 – Does your country implement programmes to promote documentation and dissemination of knowledge, technologies and best practices for conservation?



Almost half the reporting countries indicate that they implement programmes to promote documentation and dissemination of knowledge, technologies and best practices for conservation. Such programmes are relatively uncommon in Africa, and none are reported from the Southwest Pacific or the Near and Middle East. Almost 20 percent of countries commenced programmes of this type after 2007.

Figure 43. Q59.3 – Are there any national NGOs active in your country in the field of conservation of breeds at risk?



Almost 40 percent of reporting countries indicate that they have national NGOs active in the field of conservation. Such NGOs are widespread in North America, and Europe and the Caucasus, but rare elsewhere. No countries from the Near and Middle East report any national NGOs involved in conservation.

Q31: What factors or drivers are leading to the erosion of animal genetic resources?

This was an open-ended rather than multiple-choice question, and did not contribute to any of the indicators. The most frequently mentioned cause of genetic erosion is indiscriminate cross breeding. This problem is reported particularly frequently by countries from Africa. Other frequently mentioned causes of erosion include replacement of locally adapted breeds by exotic breeds, poor or absent animal genetic management policies and programmes, lack of competitiveness of locally adapted breeds, intensification of production or the decline of traditional or small-scale production systems, disease and disease management, and loss of grazing land.

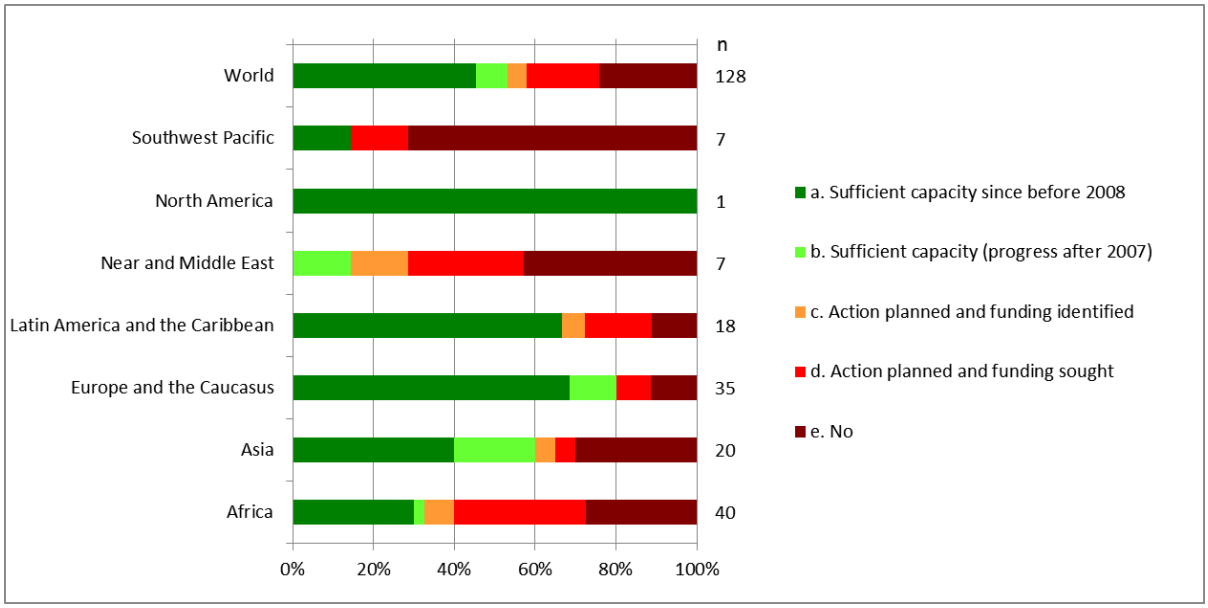
Strategic Priority Area 4: Policies, institutions and capacity-building

Long-term goal: Established cross-cutting policies and legal frameworks, and strong institutional and human capacities to achieve successful medium- and long-term planning for livestock sector development, and the implementation of national programmes for the long-term.

SP12: Establish or strengthen national institutions, including national focal points, for planning and implementing animal genetic resources measures, for livestock sector development

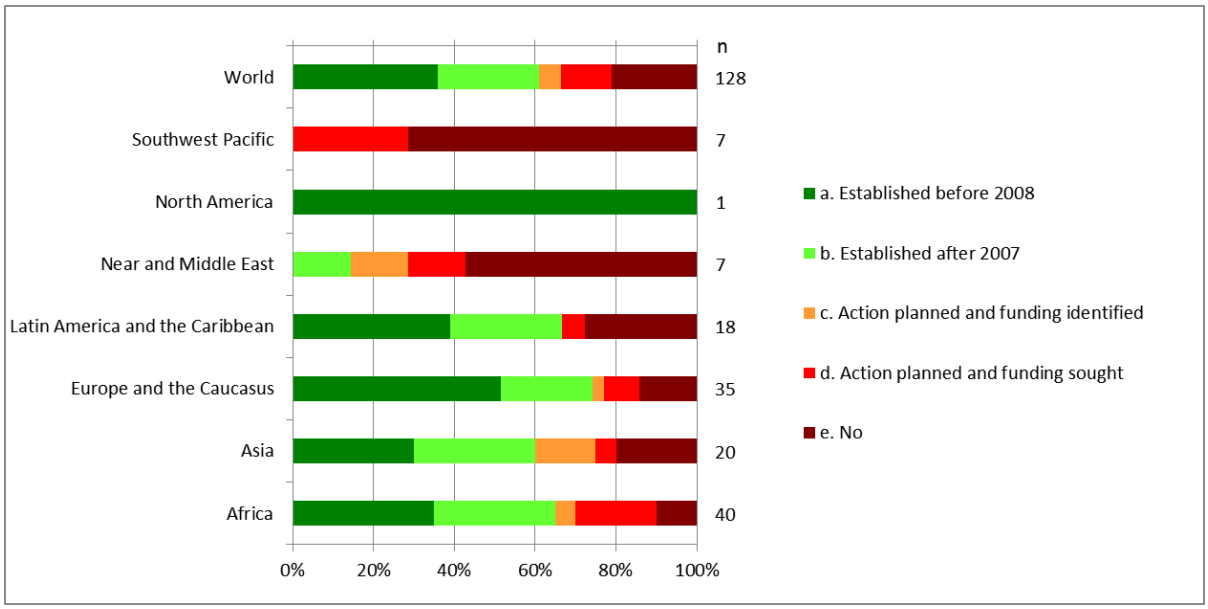
Indicator SP12: The state of efforts to strengthen national institutions for planning and implementing animal genetic resources measures

Figure 44. Q47 – Does your country have sufficient institutional capacity to support holistic planning of the livestock sector?



Over 50 percent of reporting countries indicate that their national institutional capacity to support holistic planning of the livestock sector is sufficient. The regions with the lowest proportions of countries reporting that their capacity is sufficient are the Near and Middle East and the Southwest Pacific.

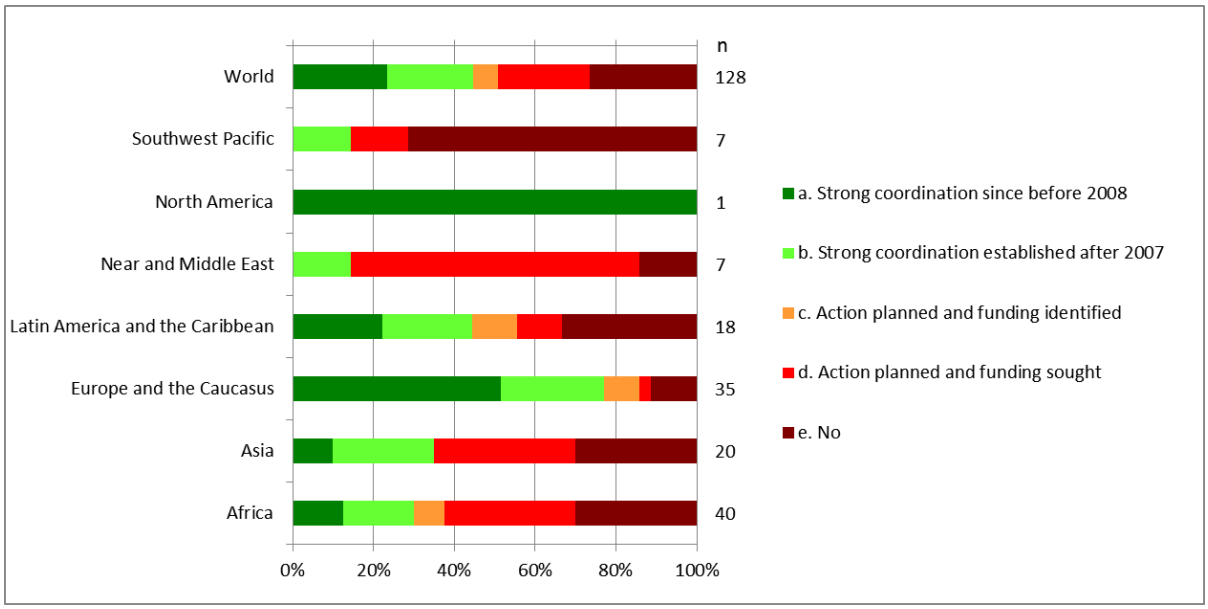
Figure 45. Q53 – Has your country established a national advisory committee for animal genetic resources?



Over 60 percent of reporting countries have established a national advisory committee for animal genetic resources. Such committees are relatively rare in the Near and Middle East and the Southwest Pacific. More than 25 percent of countries report that their committees were established after 2007.

Generally, the committees play an advisory and consultative role on a range of animal genetic resources management issues at national level. Some countries mention that their committees contribute to mobilizing resources, raising public awareness or promoting linkages and exchange of information among stakeholders. A few countries report that, although they have a committee, it has not been very active since before the adoption of the Global Plan of Action or that it has recently been re-established for the State of World reporting process.

Figure 46. Q54 – 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?



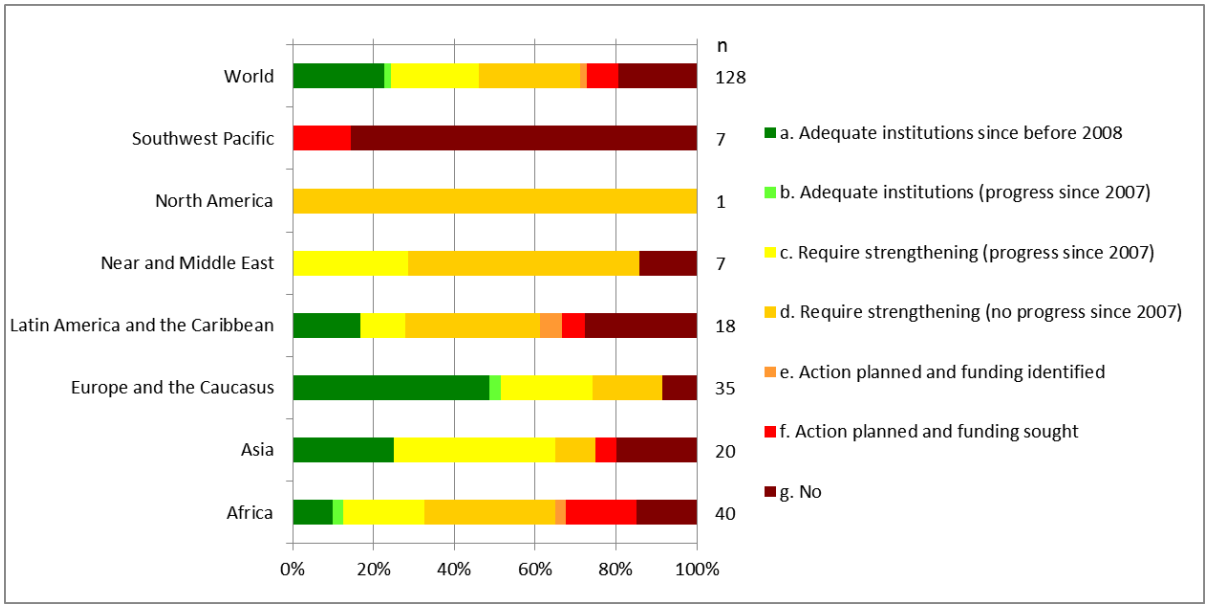
Over 40 percent of reporting countries indicate that strong coordination exists between their National Focal Points for Animal Genetic Resources and other stakeholders in the sector. The weakest regions

in this respect are the Near and Middle East and the Southwest Pacific. More than 20 percent of countries report that strong coordination exists because of progress made after 2007.

SP13: Establish or strengthen national educational and research facilities

Indicator SP13: The state of efforts to strengthen national educational and research facilities

Figure 47. Q60 – Has your country established or strengthened research or educational institutions in the field of animal genetic resources management?

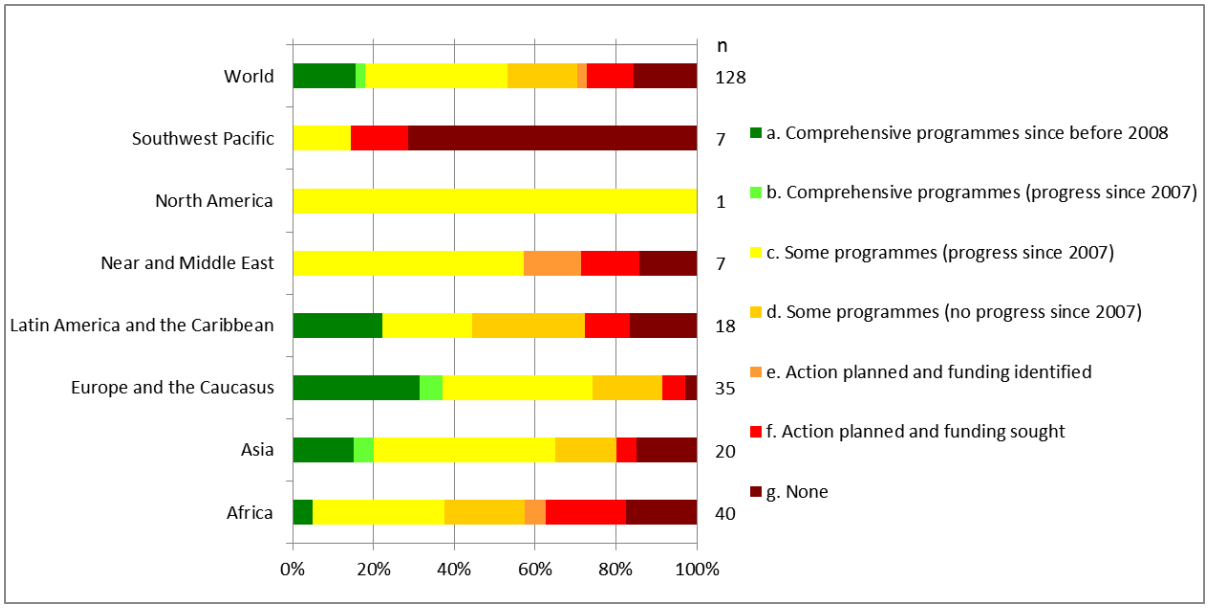


About 25 percent of reporting countries indicate that they consider their existing research and education programmes to in the field of animal genetic resources management to be adequate.A further 45 percent, approximately, report that they have some measures in place, but that these require strengthening.

SP13: Establish or strengthen national educational and research facilities

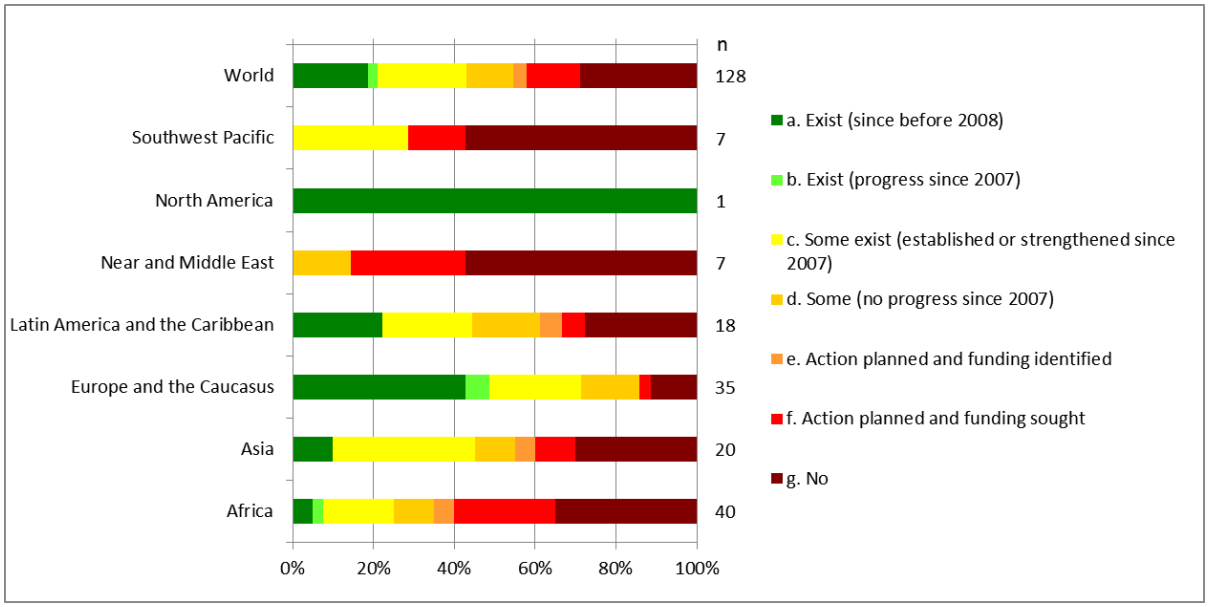
Indicator SP13: The state of efforts to strengthen national educational and research facilities

Figure 48. Q57 – 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?



Under 20 percent of countries indicate the presence of comprehensive training and technology transfer programmes related to inventory, characterization, monitoring, sustainable use, development and conservation of animal genetic resources. However, a majority of countries in all regions except the Southwest Pacific report that they have some measures in place in this field, and about 40 percent of countries report that they have made progress since 2007.

Figure 49. Q58 – Have organizations (including where relevant community-based organizations), networks and initiatives for sustainable use, breeding and conservation been established or strengthened?

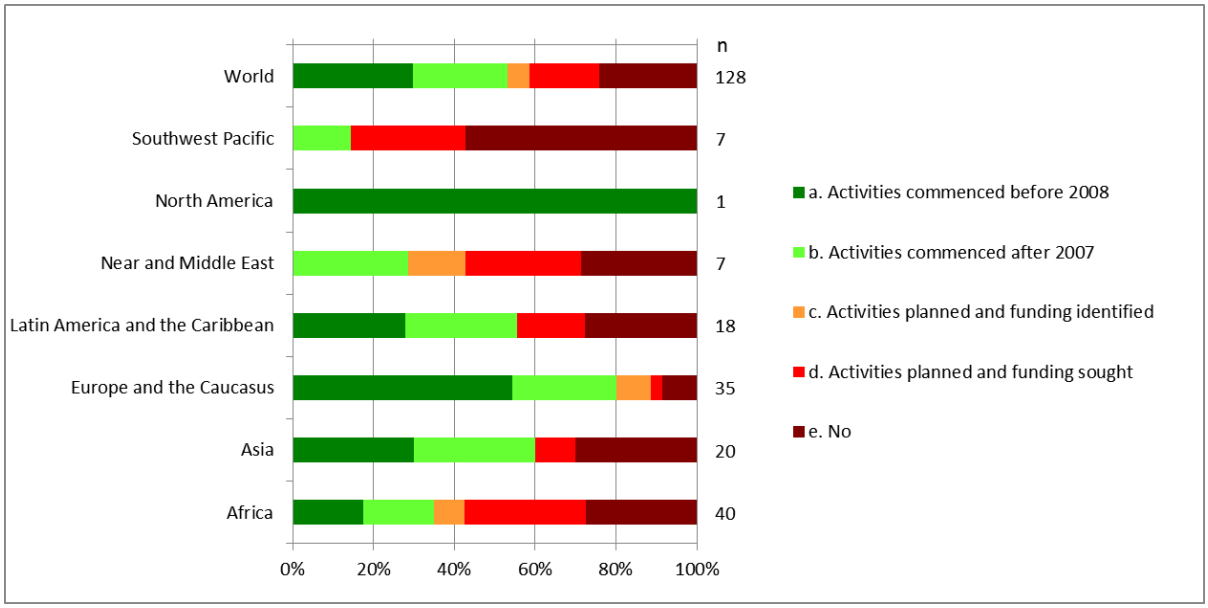


Organizations (including where relevant community-based organizations), networks and initiatives for sustainable use, breeding and conservation exist in over 50 percent of reporting countries. Organizations, networks and initiatives of this type are less frequently reported by countries from the Near and Middle East and the Southwest Pacific than by those from other parts of the world.

SP18: Raise national awareness of the roles and values of animal genetic resources

Indicator SP18: The state of efforts to raise national awareness of the roles and values of animal genetic resources

Figure 50. Q55 - Does the National Focal Point (or other institutions) undertake activities to increase public awareness of the roles and values of animal genetic resources?

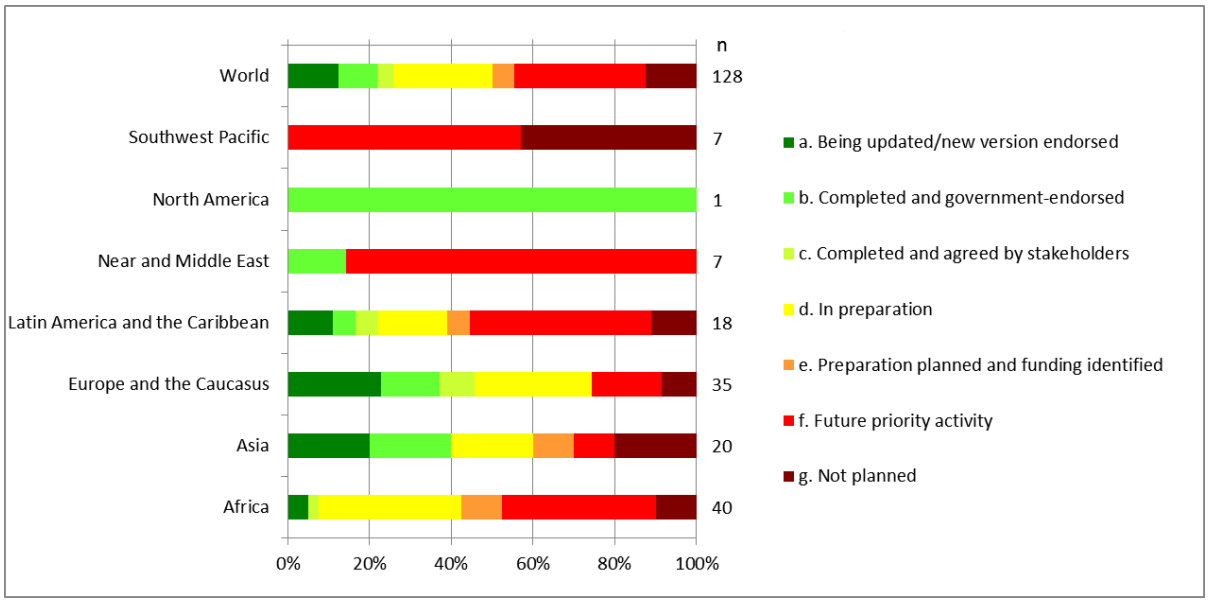


Over 50 percent of reporting countries indicate that their National Focal Points undertake activities to increase public awareness of the roles and values of animal genetic resources. Such activities are relatively uncommon in the Near and Middle East and the Southwest Pacific, where they are reported, respectively, by only about 25 percent and 15 percent of countries. About 20 percent of National Focal Points commenced their public awareness-raising activities after 2007.

SP20: Review and develop national policies and legal frameworks for animal genetic resources

Indicator SP20: The state of national policies and legal frameworks for animal genetic resources

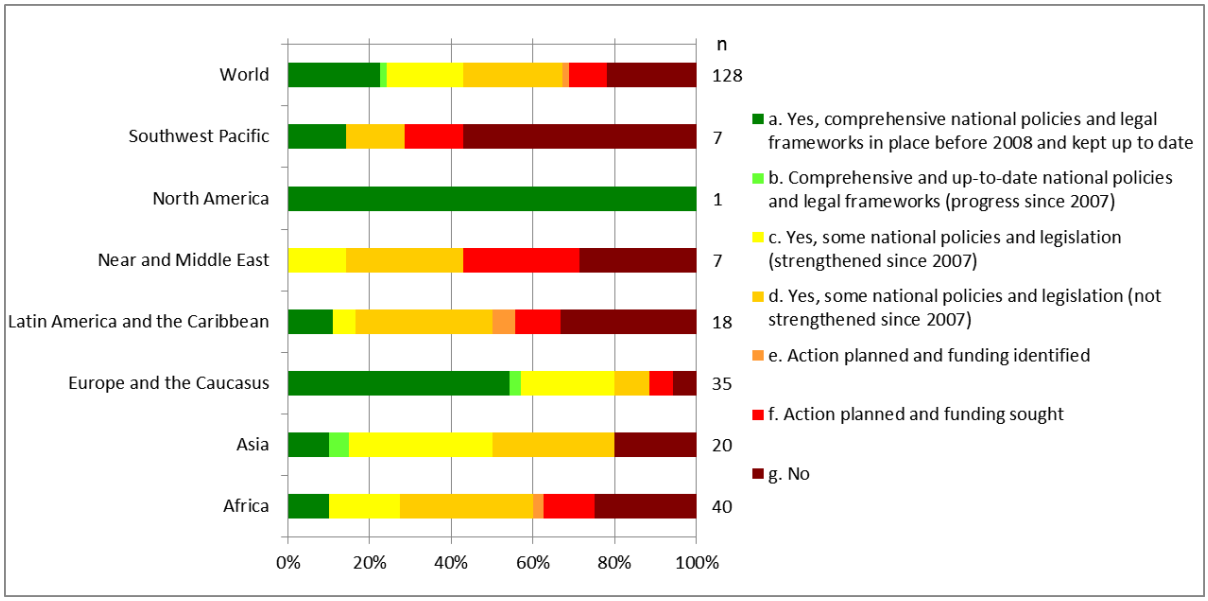
Figure 51. Q48 – What is the current status of your country's national strategy and action plan for animal genetic resources?



Approximately 25 percent of countries indicate that they have completed the preparation of a national

strategy and action plan for animal genetic resources. Some of these strategies and action plans have been endorsed by the respective government, others have been agreed by stakeholders but not endorsed by government. Some countries have already developed or are in the process of updating previously developed instruments. Another 25 percent of countries, approximately, are in the process of preparing their strategies and plans. Progress in terms of the proportion of countries that have started to prepare a national strategy and action plan has been slowest in the Southwest Pacific and the Near and Middle East. Only about 10 percent of all reporting countries indicate that they have no plans to develop a national strategy and action plan if they have not already done so, although about 30 percent have not yet identified the necessary funding.

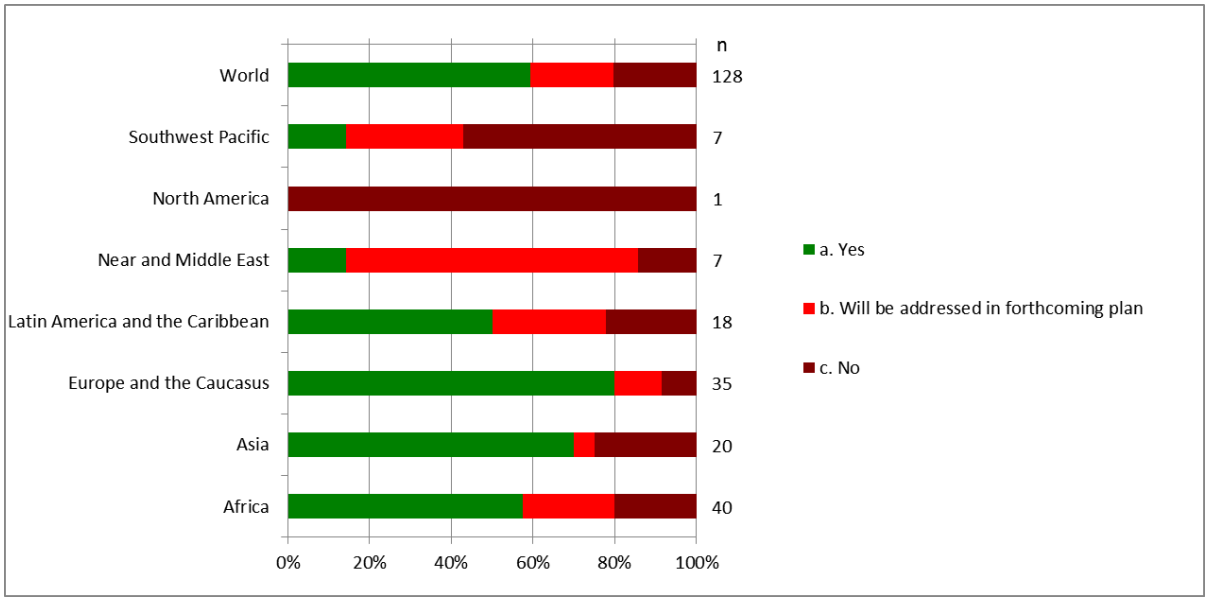
Figure 52. Q56 - Does your country have national policies and legal frameworks for animal genetic resources management?



Over 20 percent of reporting countries indicate that their national policies and legal frameworks for animal genetic resources are comprehensive and up to date. Europe and the Caucasus and the North America are the only regions in which the majority of reporting countries regard their polices and legal frameworks as being comprehensive and up to date. No countries in the Near and Middle East regard their frameworks as being comprehensive and up to date. Very few countries have managed to identify funding for improvements in this area.

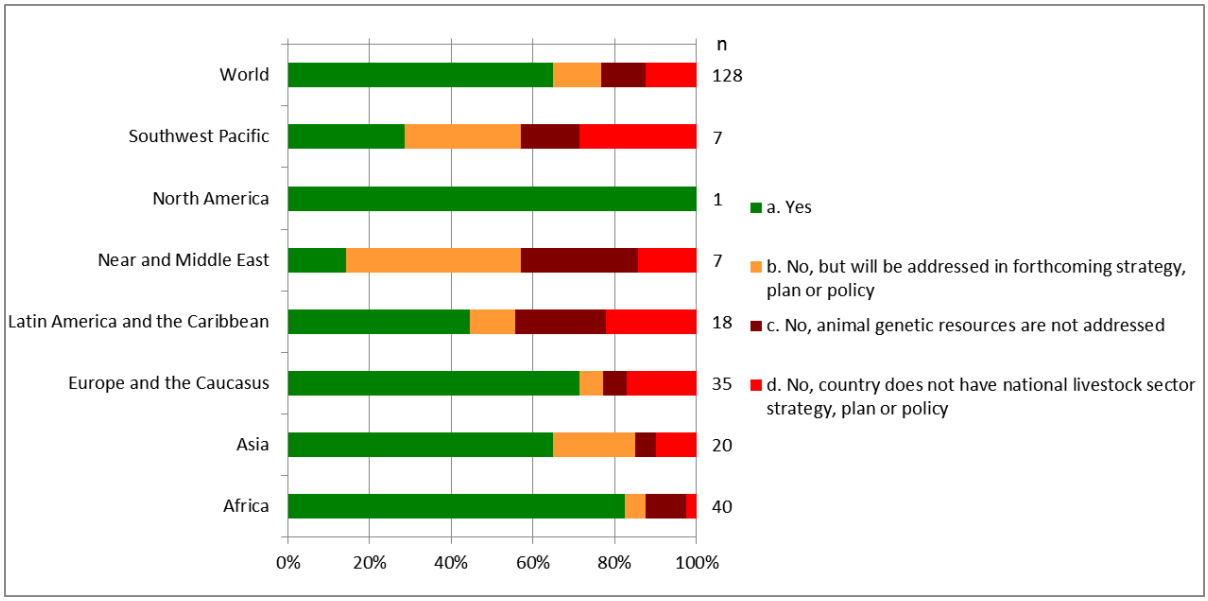
Additional questions contributing to Indicator SPA4

Figure 53. Q49 – Are animal genetic resources addressed in your country's National Biodiversity Strategy and Action Plan (http://www.cbd.int/nbsap/)?



Approximately 60 percent of reporting countries indicate that animal genetic resources are addressed in their Biodiversity Strategy and Action Plans.[30] An additional 20 percent of countries report that animal genetic resources will be addressed in their forthcoming plan.

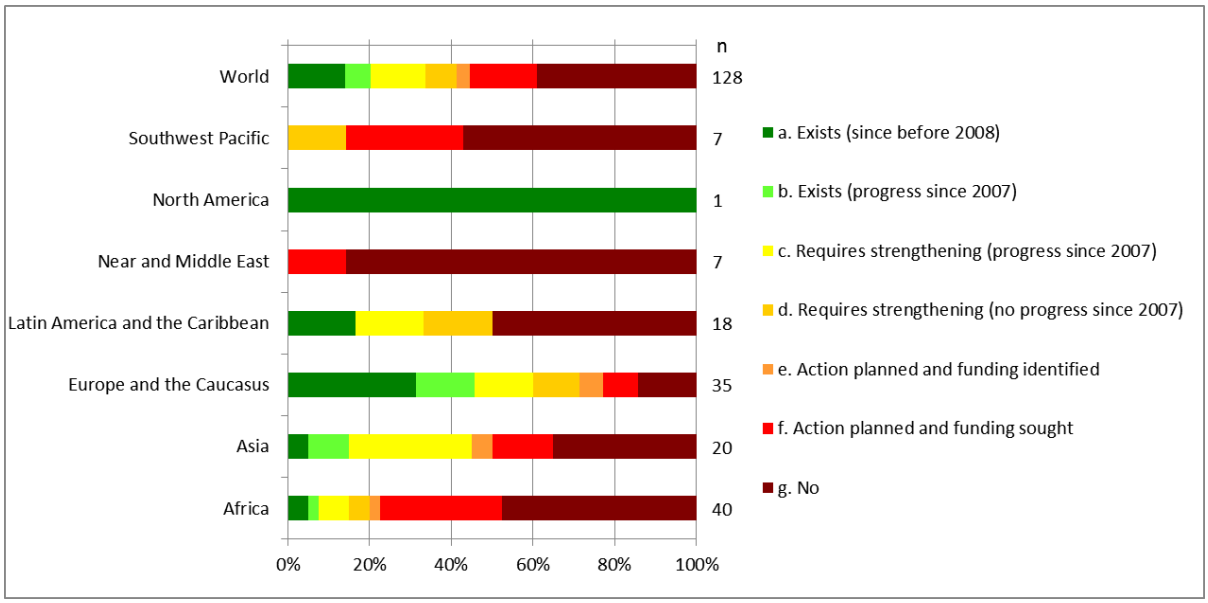
Figure 54. Q50 Are animal genetic resources addressed in your country's national livestock sector strategy, plan or policy (or equivalent instrument)?



In over 60 percent of reporting countries, animal genetic resources are addressed in the national livestock-sector strategy, plan or policy. The only regions where the majority of countries have no coverage of animal genetic resources in their instruments are the Near and Middle East and the Southwest Pacific.

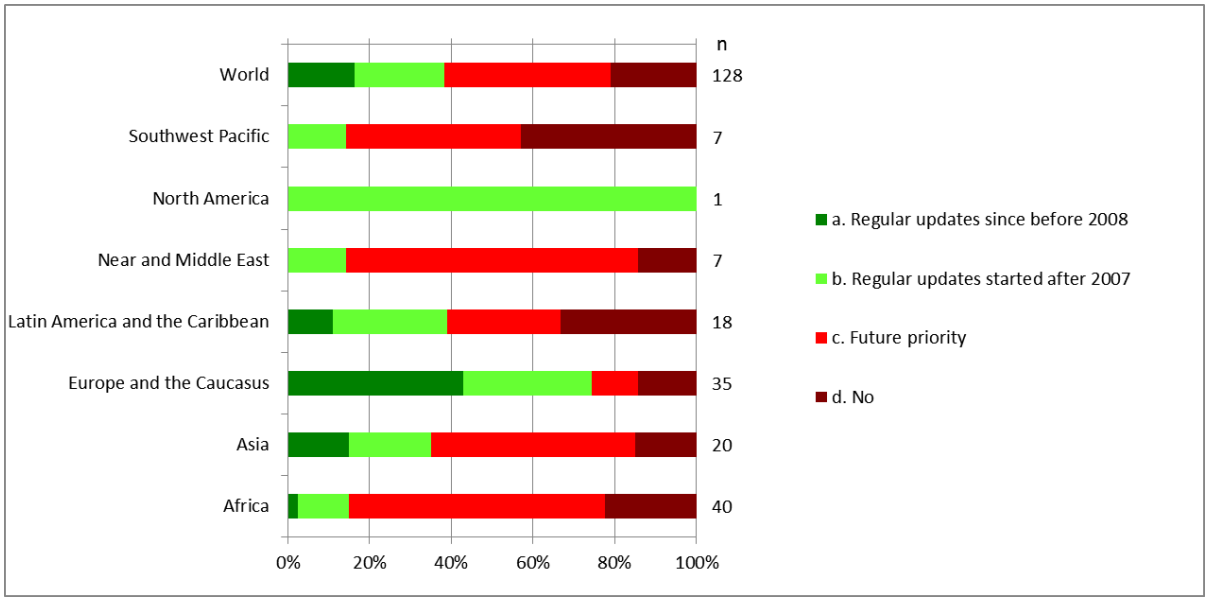
[30] Analysis of the 173 existing National Biodiversity Strategy and Action Plans revealed that 82 percent include animal genetic resources in their scope or include actions related to animal genetic resources.

Figure 55. Q51 – Has your country established or strengthened a national database for animal genetic resources (independent from DAD-IS)?



Approximately 40 percent of reporting countries indicate that they have established a national database for animal genetic resources, of which about half require strengthening. Developments in this field have been very limited in several regions, particularly in the Near and Middle East, the Southwest Pacific. Less than 10 percent of all reporting countries report progress since 2007.

Figure 56. Q52 – Have your country's national data on animal genetic resources been regularly updated in DAD-IS?

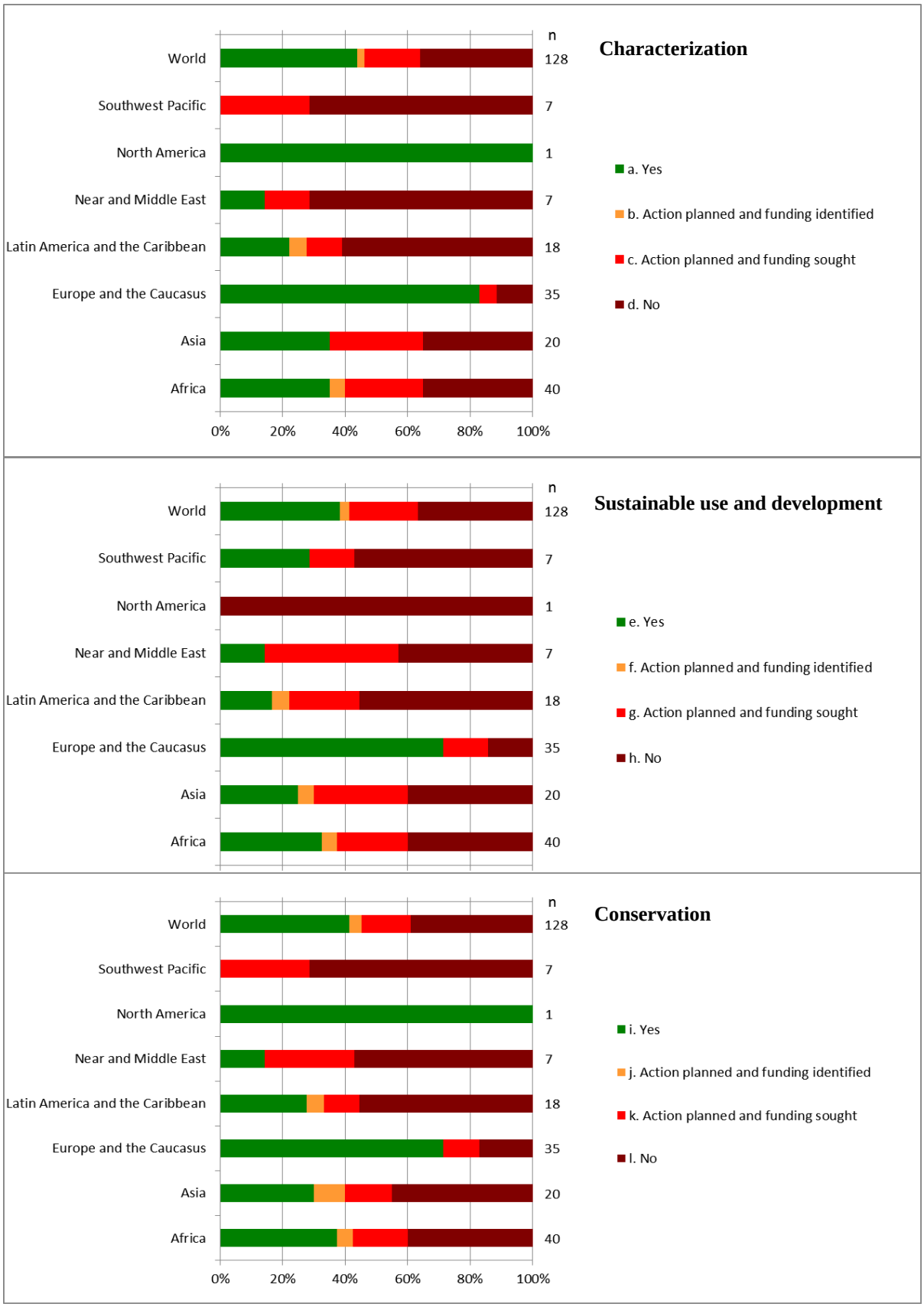


Less than 40 percent of reporting countries indicate that their national data on animal genetic resources have been regularly updated in DAD-IS. The majority of these countries started their regular updates after 2007. Less than 15 percent of countries in both the Southwest Pacific and the Near and Middle East report that their data are updated regularly. A common explanation across all regions for the lack of progress is limited staff and lack of funding.

Implementation and financing of the Global Plan of Action: collaboration

Indicator: The state of international collaboration for planning and implementing animal genetic resources measures

Figure 57. Q62 – Has your country established or strengthened international collaboration in characterization, sustainable use and development or conservation of breeds at risk?

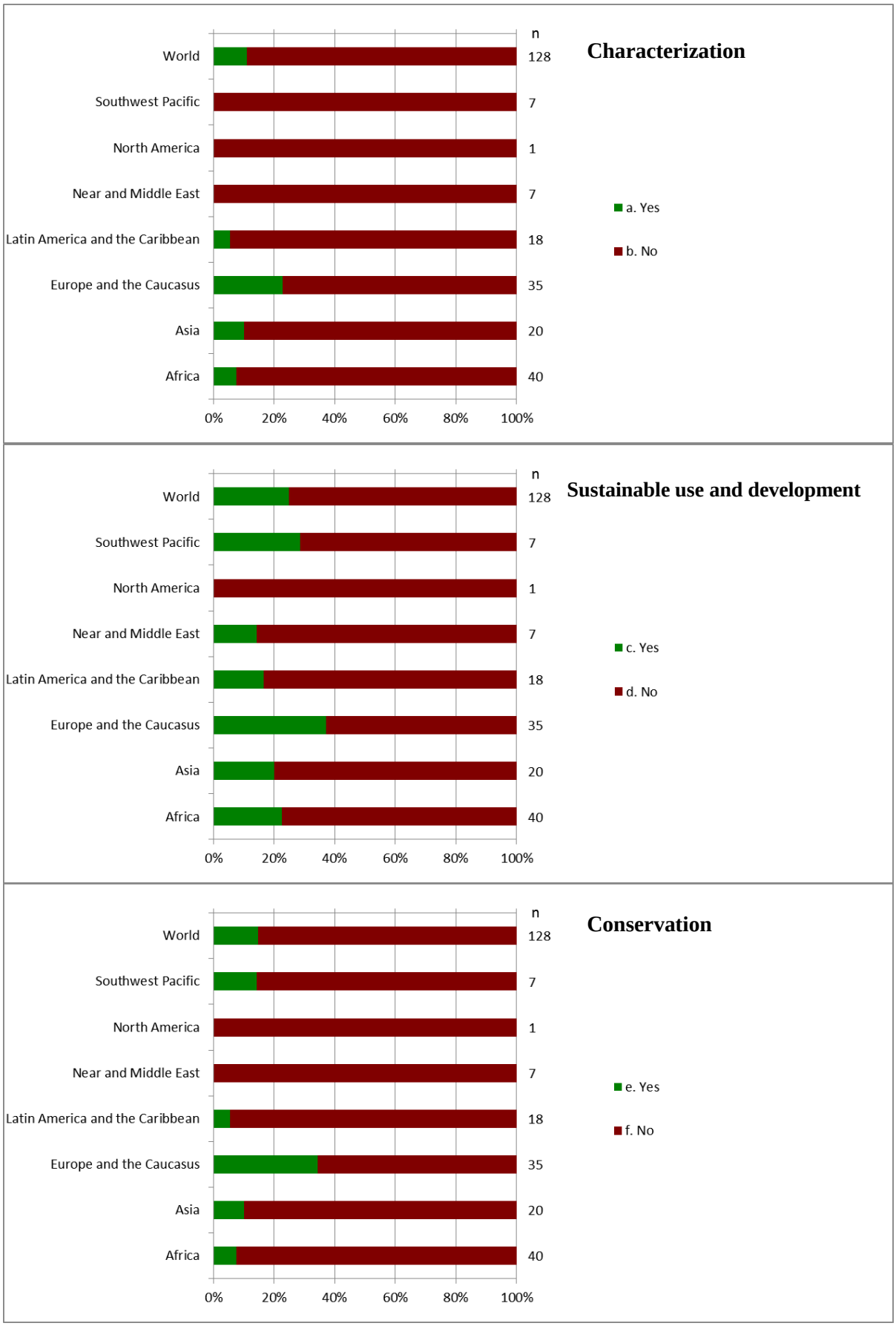


Approximately 45 percent of reporting countries indicate that they have established or strengthened international collaborative activities in the field of characterization. More countries report international actions in this field than in other areas of animal genetic resources management. However, action is far more frequently reported in Europe and the Caucasus and North America than in other regions. In several regions, action to date has been very limited or non-existent.

Less than 40 percent of reporting countries indicate that they have established or strengthened international collaborative activities in the field of sustainable use and development. Such initiatives are far more commonly reported by countries from Europe and the Caucasus than those from any other region.

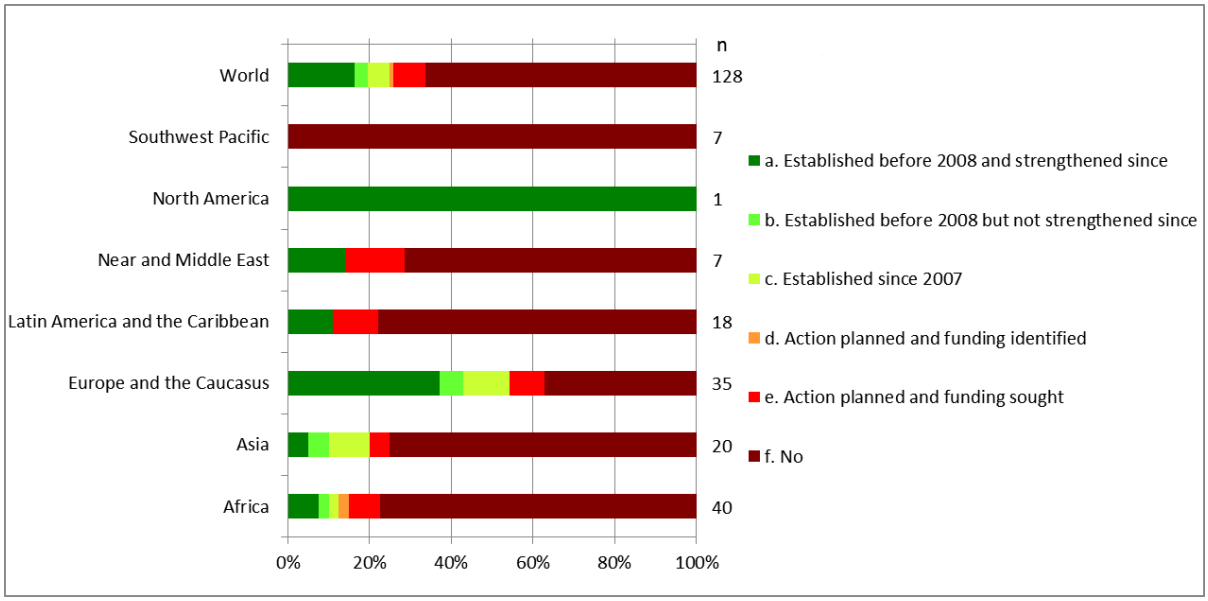
Slightly over 40 percent of reporting countries indicate that they have established or strengthened international collaborative activities in the field of conservation. No such initiatives are reported from the Southwest Pacific, and relatively few from the Near and Middle East.

Figure 58. Q63 Are there any international NGOs active in your country in the field of characterization, sustainable use and development and conservation of breeds at risk?



The reported activity of international NGOs working in the fields of characterization, conservation and sustainable use and development is generally low in all regions. Safeguard for Agricultural Varieties in Europe (SAVE Foundation) is mentioned multiple times by a range of reporting countries as a significant European NGO.

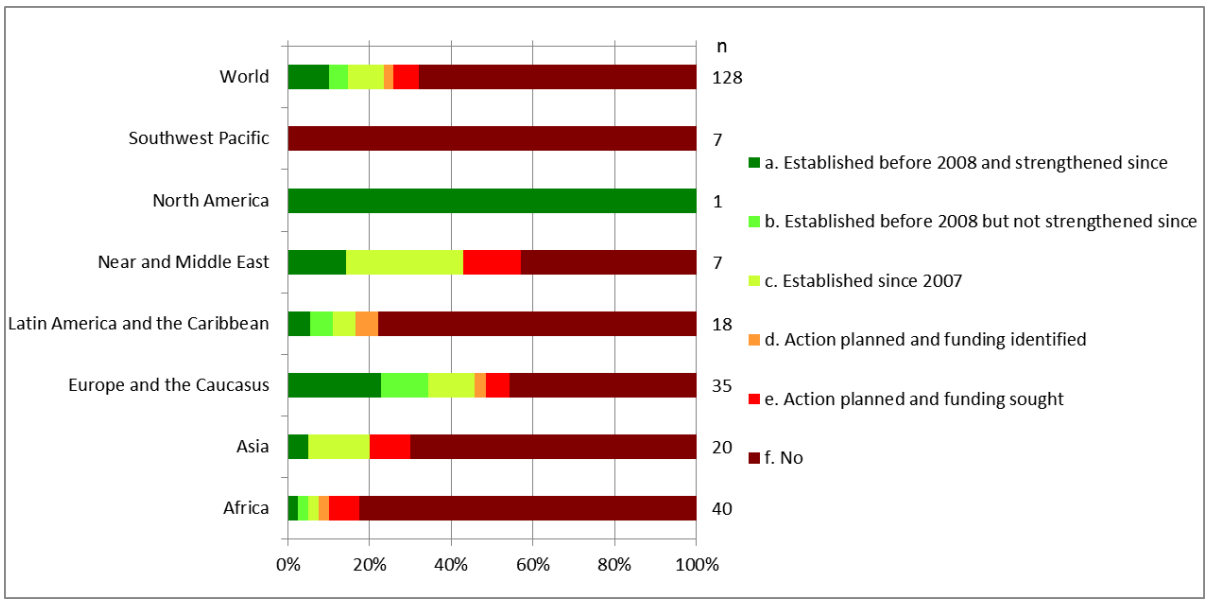
Figure 59. Q66 – Has your country supported or participated in international research and educational programmes assisting developing countries and countries with economies in transition to better manage animal genetic resources?



Approximately 25 percent of reporting countries indicate that they have supported or participated in international research and education programmes to assist developing countries and countries with economies in transition to better manage animal genetic resources. Current programmes mentioned in the country reports include: a Pan-Asian project, Improving Animal Genetic Resources Values and Productive Performance in Asia, implemented by the Asian Food and Agriculture Cooperation Initiative;[31] (mentioned in Mongolia's country report); and a training course, Genomic Management of Animal Genetic Resources in Tropical Regions,[32] organized by France's National Institute for Agricultural Research (INRA) and Agricultural Research for Development (CIRAD) in 2012 (mentioned in France's country report).

[31] http://www.afaci.org/index.asp
[32] http://umr-intertryp.cirad.fr/content/download/4234/31601/version/1/file/plaquette+EC+PARC.pdf

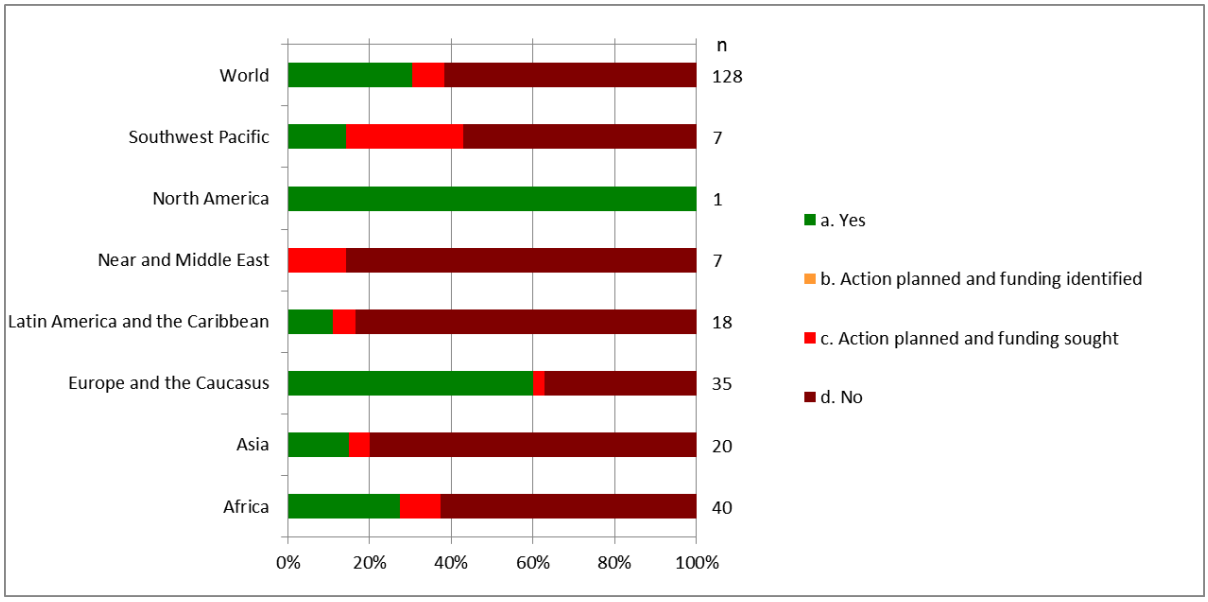
Figure 60. Q67 - Has your country supported or participated in programmes aimed at assisting developing countries and countries with economies in transition to obtain training and technologies and to build their information systems?



Almost 80 percent of reporting countries have not 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. Approximately 10 percent of these countries have action planned. Lack of funding is a frequently mentioned reason for the lack of activity in this field.

In Europe and the Caucasus, approximately 45 percent of countries have established or strengthened support programmes since 2007. The country report from Portugal, for example mentions cooperation with African Portuguese-speaking in the field of higher education. In Latin America and the Caribbean, where almost 70 percent of countries have had no involvement in such programmes, Brazil is involved with a programme to strengthen management in the Plurinational State of Bolivia (mentioned in Brazil's country report).

Figure 61. Q69 - 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)?

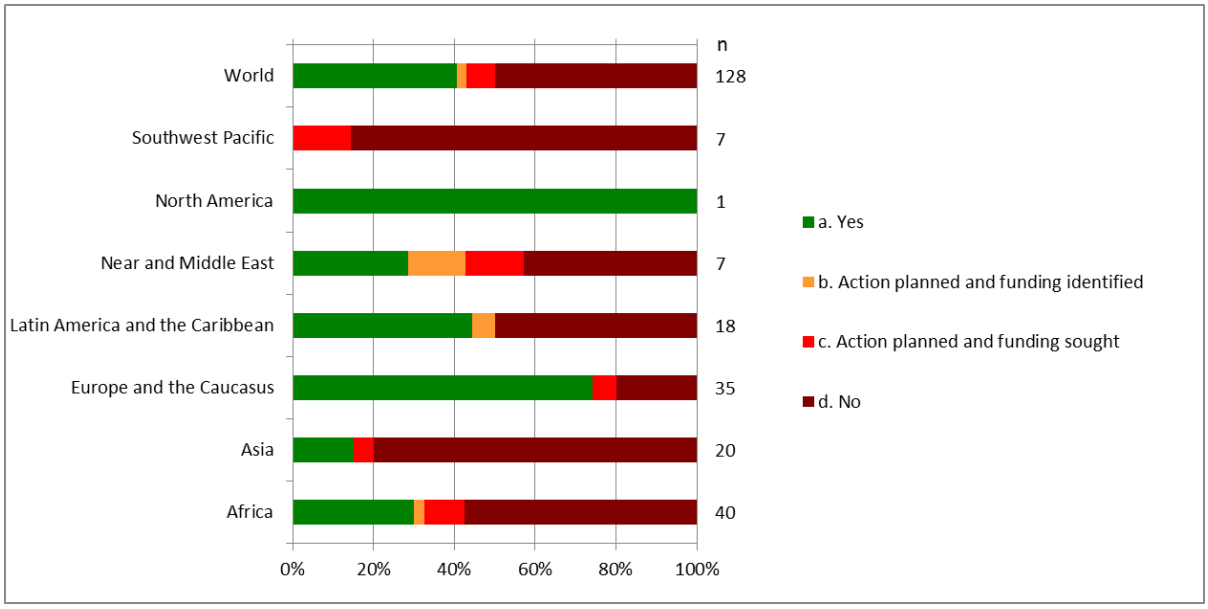


Approximately 30 percent of reporting countries have contributed to international cooperative

inventory, characterization and monitoring activities involving countries sharing transboundary breeds and similar production systems.

Several African countries report activities of this type. For example, the country report from Senegal mentions the Regional Project on Sustainable Management of Endemic Ruminant Livestock in West Africa (PROGEBE), a subregional project, with the activities of which include collaboration with the Gambia, Guinea and Mali in the characterization of transboundary trypanotolerant breeds. Examples from Europe and the Caucasus, include the BushaLive project involving several Balkan countries, which focuses on the characterization and assessment of the Busha cattle breed.

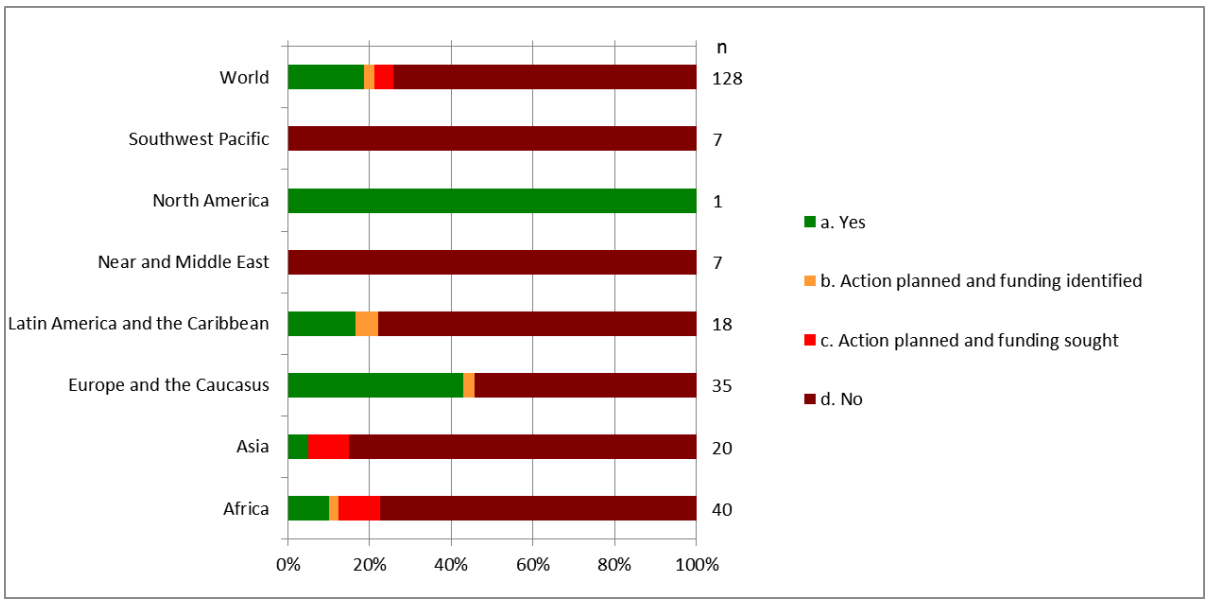
Figure 62. Q70 - Has your country contributed to establishing or strengthening global or regional information systems or networks related to inventory, monitoring and characterization of animal genetic resources (SP 1, Action 6)?



About 40 percent of reporting countries have contributed to establishing or strengthening global or regional information systems or networks related to inventory, monitoring and characterization of animal genetic resources. North America and Europe and the Caucasus are the regions where most progress has been made in this respect. In the latter region, for example, the European Regional Focal Point for Animal Genetic Resources (ERFP) has undertaken several actions to improve the documentation of animal genetic resources in the European Farm Animal Biodiversity Information System (EFABIS) and DAD-IS.[33] The country report from Germany mentions the development of the Cryoweb software used in the exchange of information exchange on cryoconserved genetic material at European level.

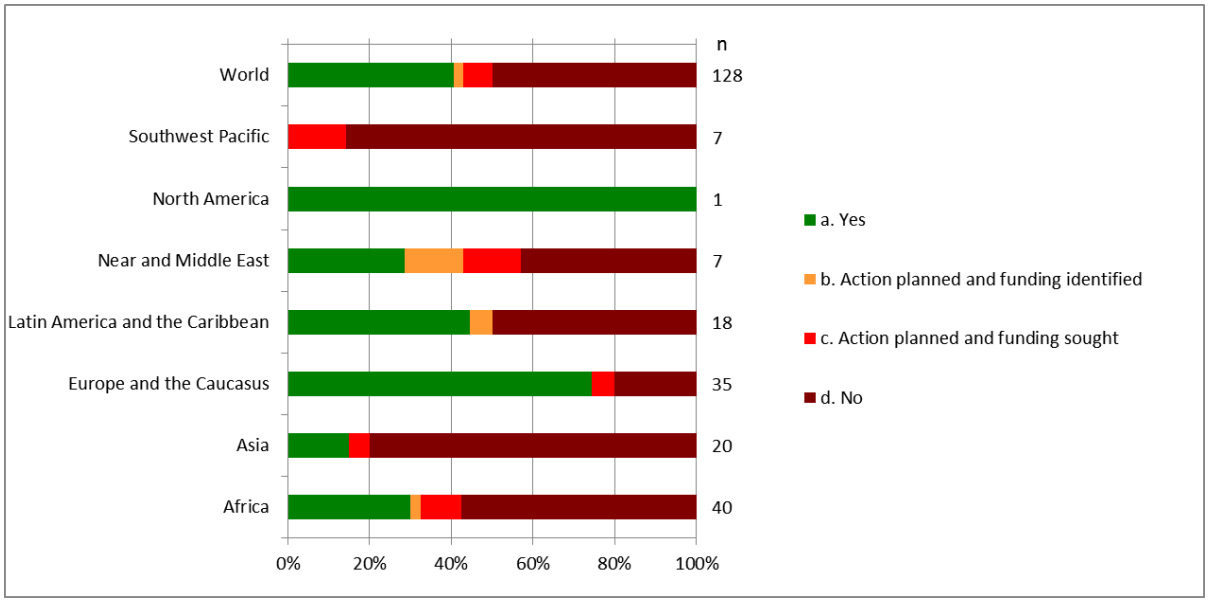
[33] For further information, see the documentation and information page of the http://www.rfp-europe.org/index.php?id=598 and http://www.rfp-europe.org/index.php?id=618

Figure 63. Q71 - Has your country contributed to the development of international technical standards and protocols for characterization, inventory and monitoring of animal genetic resources (SP2)?



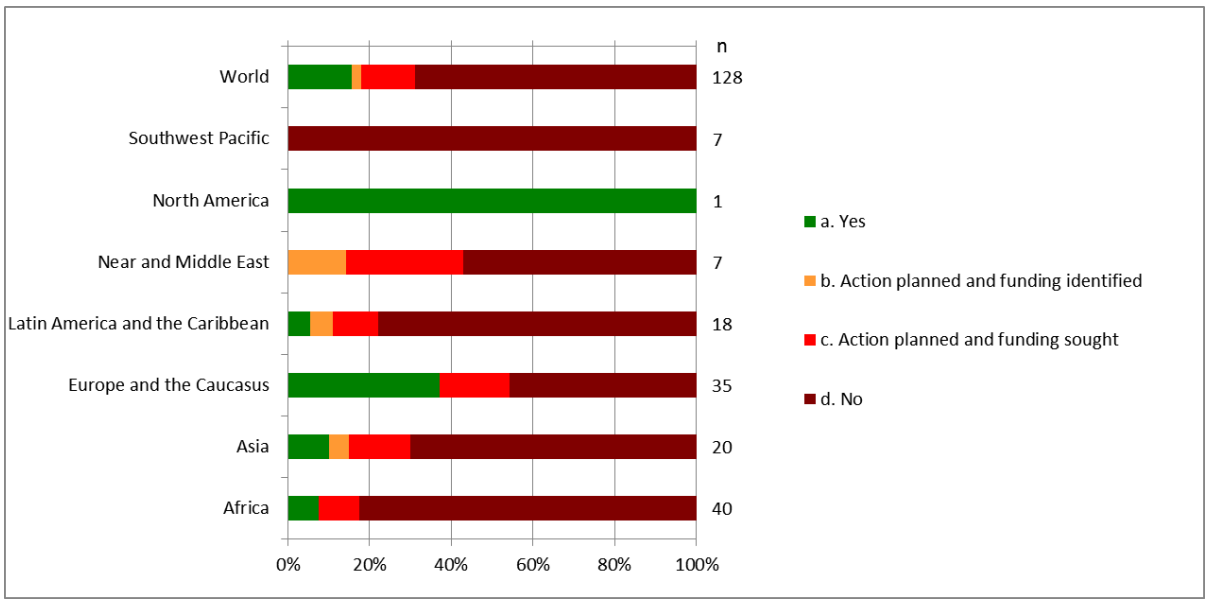
Less than 20 percent of reporting countries contribute to the development of international technical standards and protocols for characterization, inventory and monitoring of animal genetic resources. In Africa and Asia, the most commonly reported barrier is a lack of funding and technical resources. North America and Europe and the Caucasus are again the regions where most progress has been made in this respect. For example, the ERFP has undertaken a project on the development of models assessing breed risk status using population data and relevant georeferenced data.

Figure 64. Q72 - 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)?



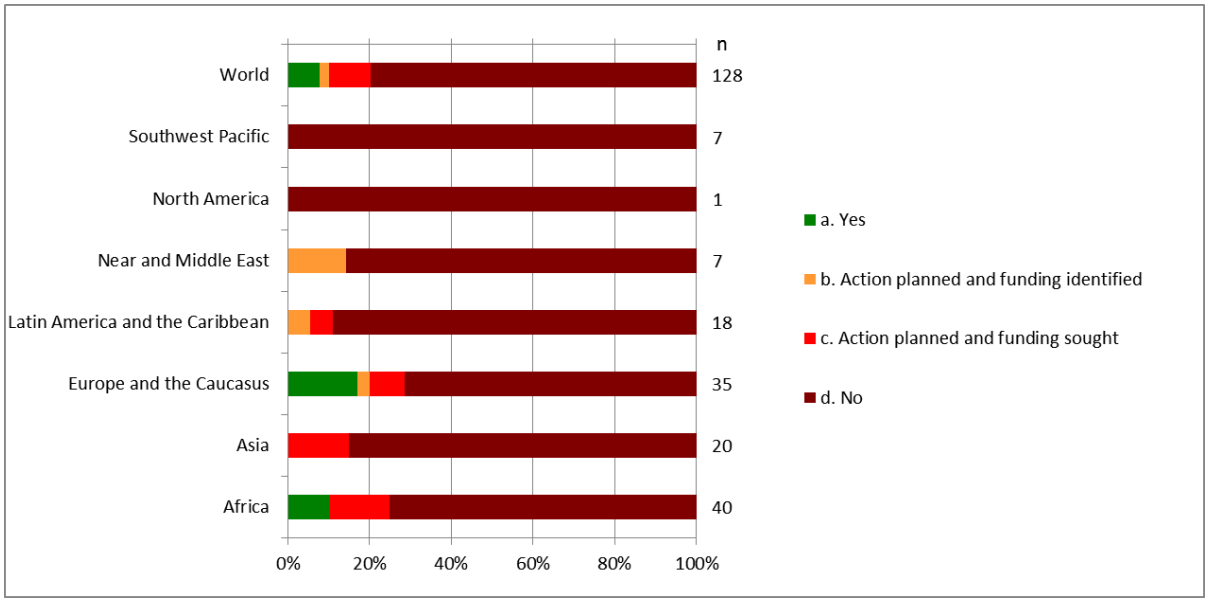
Over 40 percent of reporting countries have contributed to the development and implementation of regional *in situ* conservation programmes for breeds that are at risk. Again more activity is reported from the developed than from the developing regions of the world. However, the countries of Latin America and the Caribbean are also relatively active. In Africa and Asia, a lack of infrastructure and technical and financial resources is noted as a barrier to action in this field.

Figure 65. Q73 - 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)?



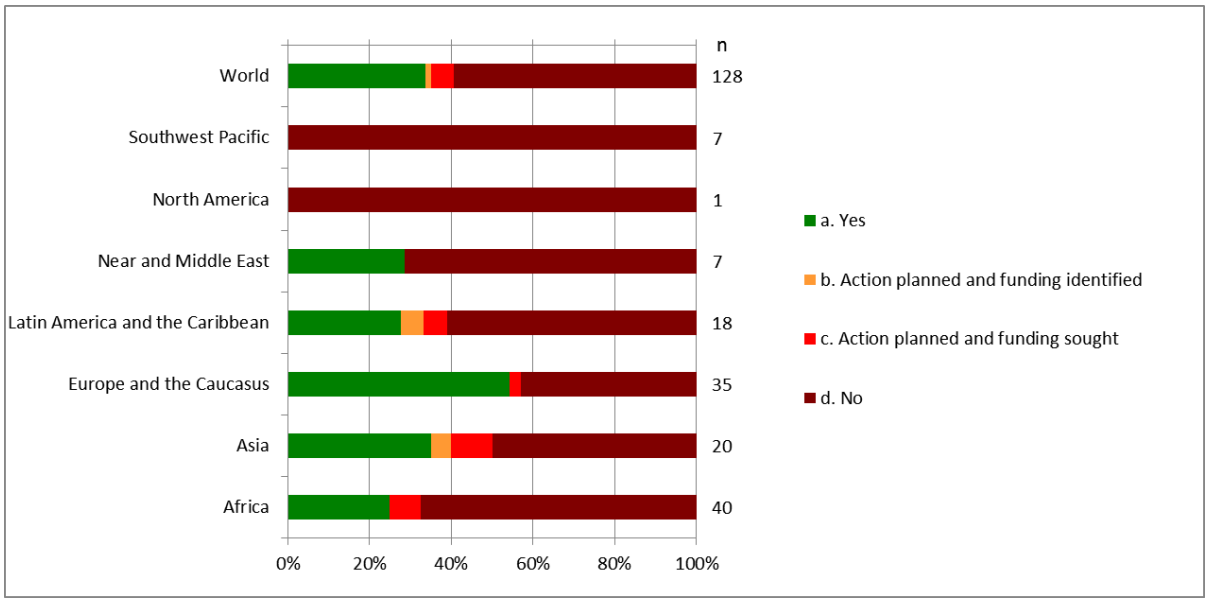
Less than 20 percent of reporting countries have contributed to the development and implementation of regional *ex situ* conservation programmes for breeds that are at risk. Several country reports from the Europe and the Caucasus region mention work on European gene bank networks. Among Asian countries, the Republic of Korea reports plans to provide artificial insemination technology for use on African native cattle.

Figure 66. Q74 - 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)?



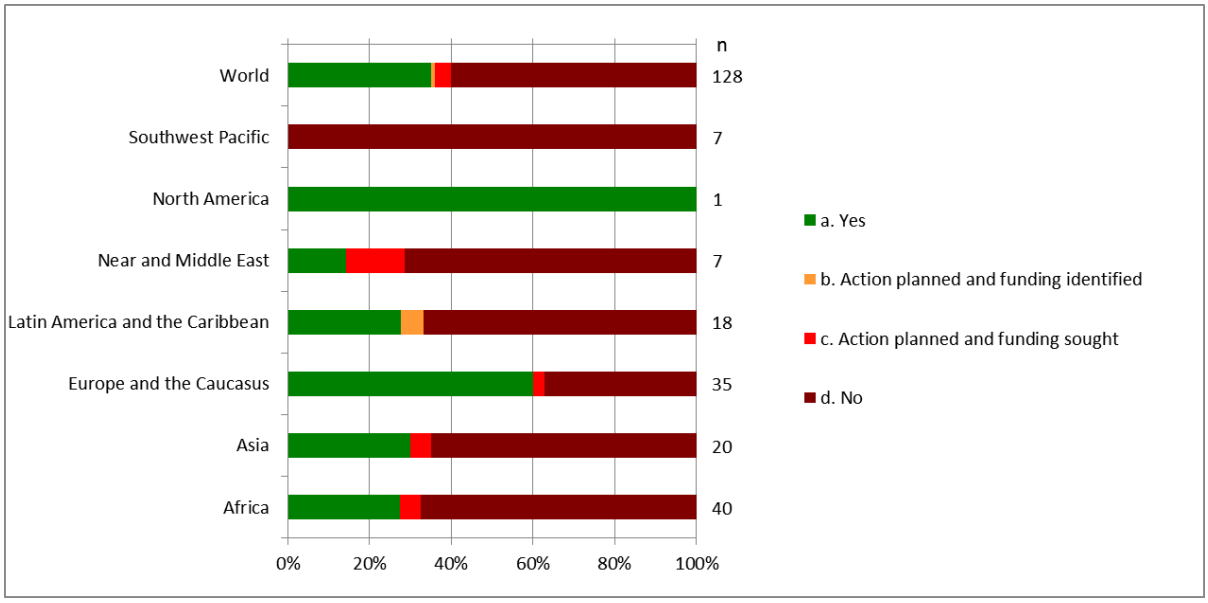
Less than 10 percent of reporting countries have contributed to the establishment of fair and equitable arrangements for the storage, access and use of genetic material stored in supra-national *ex situ* gene banks. The only regions where any activity is reported are Europe and the Caucasus and Africa.

Figure 67. Q75 - Has your country participated in regional or international campaigns to raise awareness of the status of animal genetic resources (SP19)?



The majority of reporting countries do not participate in regional or international campaigns to raise awareness of the status of animal genetic resources. Europe and the Caucasus is the only region in which a majority of countries report participation in such campaigns.

Figure 68. Q76 - Has your country participated in reviewing or developing international policies and regulatory frameworks relevant to animal genetic resources (SP 21)?

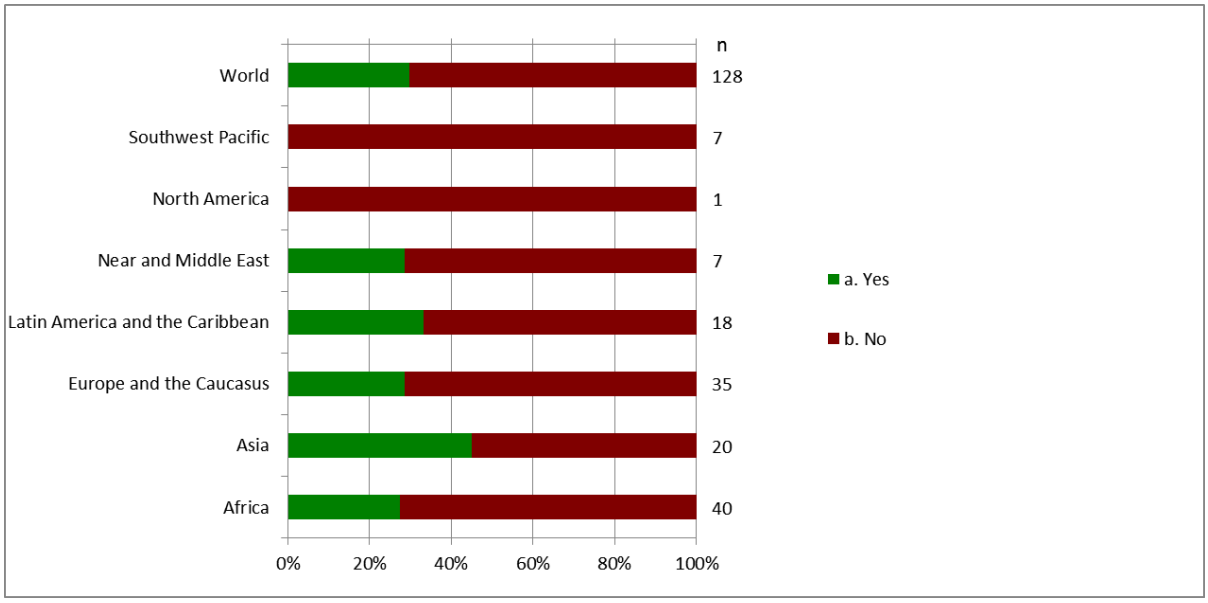


Over 30 percent of reporting countries participate in reviewing or developing international policies and regulatory frameworks relevant to animal genetic resources. The majority of these countries refer to work undertaken under the auspices of FAO. Countries from developed regions are generally more active in this field. In Europe and the Caucasus, some work is undertaken under the auspices of the ERFP. Among African countries, Kenya reports that it participated in the development of the East Africa Community's livestock policy.

Implementation and financing of the Global Plan of Action: funding

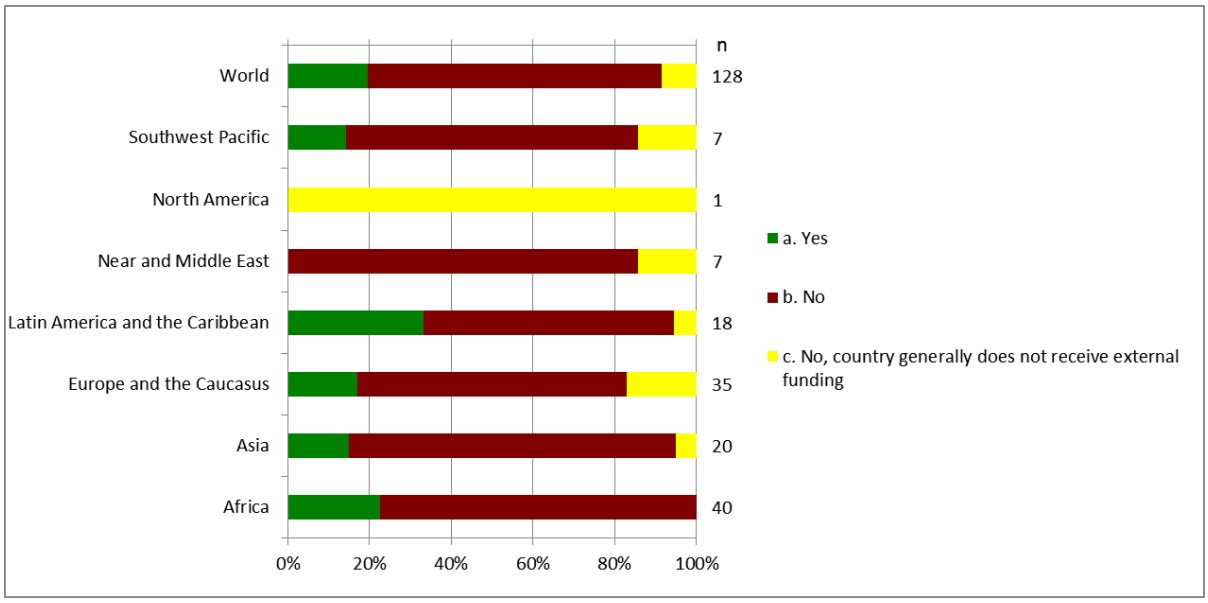
Indicator: The state of funding for the conservation, sustainable use and development of animal genetic resources

Figure 69. Q64 – Has national funding for animal genetic resources programmes increased since the adoption of the Global Plan of Action?



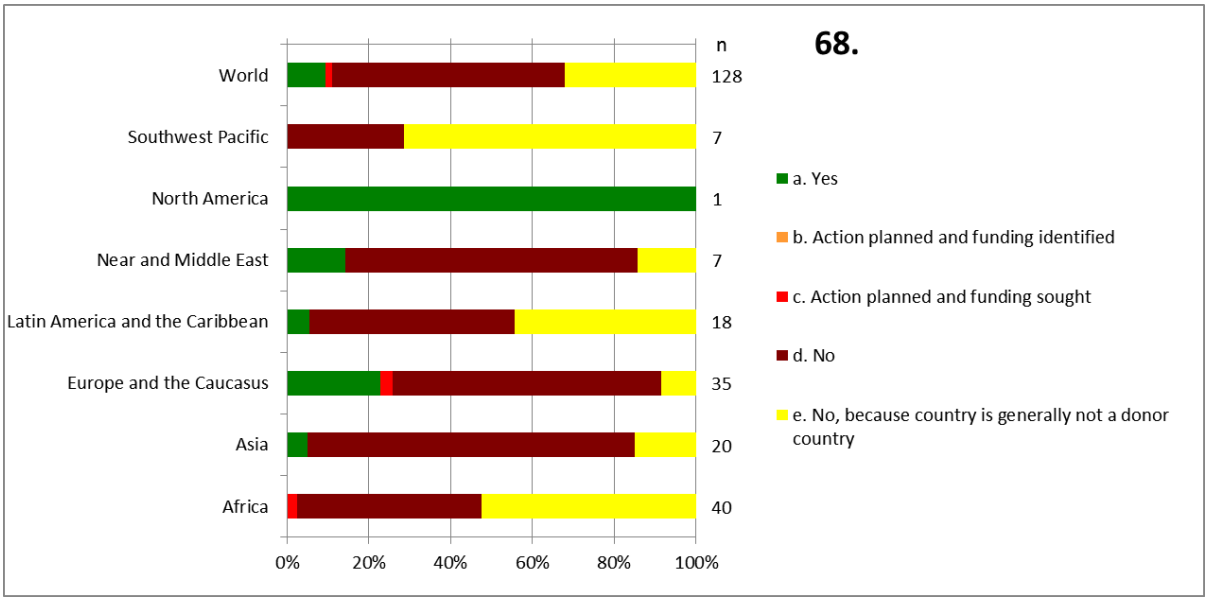
National funding for animal genetic resources management has increased since the adoption of the Global Plan of Action in approximately 30 percent of reporting countries. Asia is the region with the highest proportion of countries that have increased funding.

Figure 70. Q65 – Has your country received external funding for implementation of the Global Plan of Action?



Less than 20 percent of reporting countries received external funding for the implementation of the Global Plan of Action.

Figure 71. Q68 – Has your country provided funding to other countries for implementation of the Global Plan of Action?



Approximately 10 percent of reporting countries have provided funding to other countries for the implementation of the Global Plan of Action. Europe and the Caucasus and North America are the main donor regions.

Indicators

Indicators at the level of strategic priority areas, collaboration and funding

Table 4 presents a global summary of the indicators for the four strategic priority areas and for collaboration and funding expressed as colours and as average scores (see Table 2 for details of the indicator colour scheme). Table 4 also shows the percentage of reporting countries falling into the high, medium and low categories. Tables 5 and 6 present summaries of the indicators for the four strategic priority areas, plus those for collaboration and funding, at regional and subregional levels. Table 7 presents the same information as Table 6, for 2012 and 2014. Table 8 shows the indicators for each reporting country. Presenting this set of tables is intended to facilitate comparisons between countries, regions and subregions. The indicator scores (numeric values), which provide the baseline for future comparisons, are presented together with the colour scheme.

Table 4. Global overview of indicators for strategic priority areas and collaboration and funding — 2012 versus 2014

Reference in the Global Plan of Action	Countries Low (%)	Countries Medium (%)	Countries High (%)	Indicator colour and average score	
				2012	2014
SPA1	41	29	31	1.11	0.98
SPA2	45	24	31	1.04	0.89
SPA3	55	20	26	1.01	0.78
SPA4	39	33	29	0.98	0.95
Collaboration	73	17	11	0.53	0.54
Funding	74	13	13	0.32	0.53

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2.

A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:

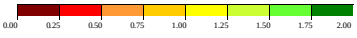
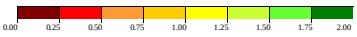


Table 5. Indicators for strategic priority areas – regional summary

Region	SPA 1	SPA 2	SPA 3	SPA 4	Collabor-ation	Funding
Africa	0.69	0.66	0.48	0.74	0.39	0.51
Asia	1.01	0.94	0.81	0.99	0.36	0.50
Europe and the Caucasus	1.48	1.31	1.29	1.43	1.03	0.54
Latin America and the Caribbean	0.89	0.90	0.77	0.91	0.33	0.65
Near and Middle East	0.57	0.33	0.22	0.35	0.25	0.38
North America	1.92	1.87	2.00	1.69	1.13	1.00
Southwest Pacific	0.57	0.37	0.25	0.23	0.11	0.38
World	0.98	0.89	0.78	0.95	0.54	0.53

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2.

A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:



Tables 4 and 5 show that globally, the indicators for all four strategic priority areas of the Global Plan of Action show a low-medium level of implementation. Strategic Priority Area 3 (conservation) has a slightly lower level of implementation than the other three strategic priority areas. Collaboration and funding remain at low levels.

Table 6. Indicators for strategic priority areas, collaboration and funding – subregional summary

Region	**SPA 1**	**SPA 2**	**SPA 3**	**SPA 4**	**Collaboration**	**Funding**
Africa	0.69	0.66	0.48	0.74	0.39	0.51
East Africa	0.71	0.61	0.53	0.72	0.31	0.71
North and West Africa	0.67	0.70	0.48	0.77	0.58	0.50
Southern Africa	0.73	0.64	0.45	0.71	0.15	0.39
Asia	1.01	0.94	0.81	0.99	0.36	0.50
Central Asia	0.92	1.00	0.48	0.90	0.22	0.50
East Asia	1.31	1.15	1.16	1.21	0.50	0.58
South Asia	0.85	0.69	0.71	0.79	0.33	0.72
Southeast Asia	1.03	1.00	0.89	1.10	0.40	0.22
Europe and the Caucasus	1.48	1.31	1.29	1.43	1.03	0.54
Latin America and the Caribbean	0.89	0.90	0.77	0.91	0.33	0.65
Caribbean	0.48	0.64	0.85	0.58	0.08	0.53
Central America	0.82	0.96	0.71	1.15	0.43	0.20
South America	1.19	1.02	0.75	0.95	0.44	1.00
Near and Middle East	0.57	0.33	0.22	0.35	0.25	0.38
North America	1.92	1.87	2.00	1.69	1.13	1.00
Southwest Pacific	0.57	0.37	0.25	0.23	0.11	0.38
World	0.98	0.89	0.78	0.95	0.54	0.53

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2.

A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:

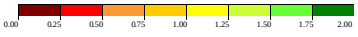
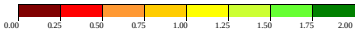


Table 7. Indicators for strategic priority areas, collaboration and funding – subregional summary comparing 2012 and 2014

Region	Coverage (%)		SPA 1		SPA 2		SPA 3		SPA 4		Collaboration		Funding	
	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014
Africa	**39**	**77**	**0.68**	**0.69**	**0.67**	**0.66**	**0.49**	**0.48**	**0.6**	**0.74**	**0.29**	**0.39**	**0.2**	**0.51**
East Africa	40	80	0.69	0.71	0.4	0.61	0.41	0.53	0.66	0.72	0.13	0.31	0.33	0.71
North and West Africa	48	74	0.62	0.67	0.68	0.7	0.47	0.48	0.52	0.77	0.38	0.58	0.21	0.5
Southern Africa	21	86	0.92	0.73	0.96	0.64	0.7	0.45	0.88	0.71	0.08	0.15	0	0.39
Asia	**26**	**65**	**1.23**	**1.01**	**1.14**	**0.94**	**1.26**	**0.81**	**1.1**	**0.99**	**0.16**	**0.36**	**0.5**	**0.5**
Central Asia	0	57		0.92		1		0.48		0.9		0.22		0.5
East Asia	60	80	1.42	1.31	1.22	1.15	1.42	1.16	1.26	1.21	0.08	0.5	0.89	0.58
South Asia	29	86	1.08	0.85	1.07	0.69	0.82	0.71	1.11	0.79	0	0.33	0.33	0.72
Southeast Asia	25	50	1.14	1.03	1.11	1	1.39	0.89	0.93	1.1	0.33	0.4	0.22	0.22
Europe and the Caucasus	**61**	**71**	**1.53**	**1.48**	**1.36**	**1.31**	**1.46**	**1.29**	**1.34**	**1.43**	**0.9**	**1.03**	**0.42**	**0.54**
Latin America and the Caribbean	**39**	**55**	**0.86**	**0.89**	**0.82**	**0.9**	**0.77**	**0.77**	**0.8**	**0.91**	**0.25**	**0.33**	**0.21**	**0.65**
Caribbean	8	38	0.17	0.48	0.2	0.64	0	0.85	0.29	0.58	0	0.08	0	0.53
Central America	40	60	0.79	0.82	0.65	0.96	0.55	0.71	0.66	1.15	0	0.43	0	0.2
South America	80	80	0.98	1.19	0.98	1.02	0.98	0.75	0.93	0.95	0.41	0.44	0.33	1
Near and Middle East	**29**	**50**	**0.73**	**0.57**	**0.8**	**0.33**	**0.48**	**0.22**	**0.57**	**0.35**	**0.25**	**0.25**	**0.5**	**0.38**
North America	**100**	**50**	**1.75**	**1.92**	**1.73**	**1.87**	**1.82**	**2**	**1.43**	**1.69**	**1.13**	**1.13**	**0**	**1**
Southwest Pacific	**20**	**47**	**0.69**	**0.57**	**0.93**	**0.37**	**0.45**	**0.25**	**0.52**	**0.23**	**0.5**	**0.11**	**0**	**0.38**
World	**41**	**65**	**1.11**	**0.98**	**1.04**	**0.89**	**1.01**	**0.78**	**0.98**	**0.95**	**0.53**	**0.54**	**0.32**	**0.53**

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2.

A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:



Reported levels of implementation in all strategic priority areas and collaboration and funding in Africa are at low levels. The lowest scoring indicator for this region is for collaboration, followed by funding and then conservation (SPA 3). At subregional level, North and West Africa has the highest scores in the region, especially with regard to policies, institutions and capacity building (SPA4). Southern Africa has the lowest overall scores, particularly with regard to conservation, (SPA3) policies, institutions and capacity building (SPA 4) and collaboration. Among individual countries (Table 9), there are a few exceptions to the low level of implementation that is generally prevalent in the region. For each of the Strategic Priority Areas 1, 2, 3, and 4, South Africa has reached a high level of implementation. Likewise, a few countries have reached a medium level of implementation for two or more indicators. Some countries, however, have very low levels of implementation across all the indicators.

In general, Asia has reached a medium level of implementation in all the strategic priority areas and a low level of implementation in collaboration and funding. East Asia continues to be slightly more advanced than the other subregions of Asia, having attained a medium level of implementation in Strategic Priority Areas 2, 3 and 4 and a high level in characterization, inventory and monitoring of trends and associated risks (SPA1). Central and South Asia both have low levels of implementation in conservation. South Asia is the only subregion also to indicate low levels of implementation for sustainable use and development. Across all strategic priority areas, most countries in Asia have reached medium levels of implementation. All countries in Asia, however, report a low level of collaboration and, with the two exceptions of the Republic of Korea and Viet Nam, a low level of financing.

Europe and the Caucasus as a whole has reached a high level of implementation in all four strategic priority areas. Collaboration is at a medium level and the state of funding remains at a low level. Only five countries out of 34 show low levels of implementation in more than two indicators. The majority of countries have reached a high level of implementation in all four strategic priority areas, and several more have only one strategic priority area where implementation is less well advanced. However, a number of countries remain at medium or low levels of implementation in several strategic priority areas.

Latin America and the Caribbean as a whole has reached a medium level of implementation in all four strategic priority areas. As in many other regions, levels of collaboration and funding are low. The region is characterized by great variability in the state of implementation of the Global Plan of Action at country level. A few countries have achieved high levels of implementation across all four strategic

priority areas, while a number of others remain at low levels of implementation in all or most strategic priority areas.

The Near and Middle East Region as a whole has reached low levels of implementation in all strategic priority areas and in collaboration and funding. There is some variation across the countries of the region. Two countries out of seven have reached at a medium level of implementation in two or more strategic priority areas.

North America has reached high levels of implementation across all four strategic priority areas. Collaboration and funding are less well developed.

The reporting countries of the Southwest Pacific generally have low scores for all indicators. The only exceptions are that Kiribati and New Zealand have reached a medium level of implementation in Strategic Priority Area 1 and that the Cook Islands has reached a medium level of implementation in funding.

Table 8. Indicators for strategic priority areas, collaboration and funding at country level

Region	SPA 1	SPA 2	SPA 3	SPA 4	Collaboration	Funding
Africa	0.69	0.66	0.48	0.74	0.39	0.51
East Africa	0.71	0.61	0.53	0.72	0.31	0.71
Burundi	0.92	0.60	0.36	0.92	0.00	1.67
Djibouti	0.25	0.00	0.18	0.00	0.00	0.33
Eritrea	0.83	0.13	0.36	0.54	0.00	0.00
Ethiopia	1.00	0.53	0.82	0.69	0.63	1.67
Kenya	0.50	1.33	0.55	0.92	0.38	0.67
Rwanda	0.42	0.40	0.36	0.69	0.00	0.33
Uganda	1.17	1.00	1.09	1.31	1.25	0.67
United Republic of Tanzania	0.58	0.87	0.55	0.69	0.25	0.33
North and West Africa	0.67	0.70	0.48	0.77	0.58	0.50
Algeria	1.17	0.73	0.82	0.69	0.13	0.00
Benin	0.50	0.20	0.73	0.77	1.25	0.00
Burkina Faso	0.92	1.33	1.45	0.92	1.63	1.00
Cameroon	1.33	0.60	0.91	1.15	1.25	0.67
Côte d'Ivoire	0.92	0.80	0.18	0.69	0.00	0.00
Democratic Republic of the Congo	0.67	1.33	0.36	1.15	0.50	0.33
Equatorial Guinea	0.33	0.20	0.18	0.00	0.38	0.00
Gabon	0.42	0.53	0.55	1.00	1.00	0.00
Gambia	0.25	0.40	0.36	0.23	0.13	0.33
Ghana	0.75	1.33	0.73	1.31	0.50	0.00
Guinea	0.58	0.53	0.18	1.15	0.50	0.33
Guinea-Bissau	0.08	0.27	0.00	0.46	0.00	0.00
Liberia	0.42	0.47	0.18	0.23	0.25	0.00
Mali	1.17	1.20	0.55	1.15	0.88	1.00
Mauritania	0.00	0.00	0.00	0.46	0.00	1.00
Niger	1.17	1.47	1.09	0.85	1.50	1.00
Nigeria	1.25	0.80	0.27	1.31	0.38	1.33
Senegal	0.67	1.13	0.82	0.85	0.75	1.00
Sierra Leone	0.00	0.00	0.00	0.31	0.00	0.33
Togo	0.75	0.60	0.18	0.77	0.50	1.67

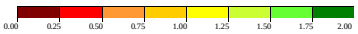
Region	SPA 1	SPA 2	SPA 3	SPA 4	Collaboration	Funding
Southern Africa	0.73	0.64	0.45	0.71	0.15	0.39
Botswana	0.67	0.47	0.64	0.69	0.13	0.00
Comoros	0.25	0.13	0.18	0.54	0.13	1.00
Lesotho	0.58	1.07	0.73	0.92	0.13	0.33
Madagascar	0.58	1.07	0.36	1.00	0.00	0.00
Malawi	0.33	0.13	0.00	0.31	0.13	0.00
Mauritius	0.75	0.40	0.36	0.85	0.00	0.33
Mozambique	0.92	0.53	0.45	0.31	0.38	0.67
Namibia	0.75	0.67	0.18	0.15	0.13	0.33
South Africa	1.67	1.67	1.55	1.54	0.75	0.00
Swaziland	0.92	0.64	0.18	0.62	0.00	0.00
Zambia	0.42	0.13	0.27	0.54	0.00	1.67
Zimbabwe	0.92	0.73	0.55	1.00	0.00	0.33
Asia	1.01	0.94	0.81	0.99	0.36	0.50
Central Asia	0.92	1.00	0.48	0.90	0.22	0.50
Iran (Islamic Republic of)	1.42	1.53	1.09	1.23	0.38	1.33
Kazakhstan	0.58	0.80	0.00	0.92	0.13	0.00
Kyrgyzstan	0.83	0.80	0.18	0.69	0.38	0.67
Tajikistan	0.83	0.87	0.64	0.77	0.00	0.00
East Asia Average	1.31	1.15	1.16	1.21	0.50	0.58
China	1.33	1.73	1.45	1.23	0.00	0.67
Japan	1.25	0.87	1.36	0.92	0.63	0.00
Mongolia	1.08	0.53	0.27	0.69	0.13	0.33
Republic of Korea	1.58	1.47	1.55	2.00	1.25	1.33
South Asia	0.85	0.69	0.71	0.79	0.33	0.72
Bangladesh	0.33	0.27	0.64	0.38	0.75	0.67
Bhutan	1.08	0.93	0.64	1.46	0.50	1.67
India	1.50	1.00	1.27	1.38	0.38	0.67
Maldives	0.33	0.00	0.00	0.00	0.00	0.33
Nepal	1.17	1.27	0.82	1.15	0.25	1.00
Sri Lanka	0.67	0.67	0.91	0.38	0.13	0.00
Southeast Asia	1.03	1.00	0.89	1.10	0.40	0.22
Indonesia	1.00	1.53	0.73	1.31	0.38	0.00
Malaysia	1.17	0.53	0.91	1.15	0.00	0.00
Philippines	0.67	0.73	1.09	1.00	0.13	0.67
Thailand	1.58	1.47	1.73	1.38	0.50	0.00
Timor-Leste	0.08	0.13	0.00	0.00	0.00	0.00
Viet Nam	1.67	1.60	0.91	1.77	1.38	0.67
Europe and the Caucasus	1.48	1.31	1.29	1.43	1.03	0.54
Albania	1.25	1.07	1.00	1.15	1.00	1.00
Austria	1.92	1.67	1.91	1.77	1.38	0.67
Azerbaijan	0.67	0.67	1.09	1.62	0.25	0.00
Belgium	1.17	1.33	1.27	1.15	1.13	1.33
Bulgaria	1.67	1.47	1.36	1.38	1.25	0.67

Region	SPA 1	SPA 2	SPA 3	SPA 4	Collaboration	Funding
Croatia	1.92	1.80	1.55	2.00	1.25	0.00
Cyprus	1.00	0.47	0.64	1.08	0.63	0.33
Czech Republic	1.58	1.60	1.55	1.31	0.88	0.33
Finland	1.83	1.80	1.45	1.54	1.50	1.33
France	1.67	1.47	1.55	1.85	1.25	0.33
Germany	1.75	1.40	1.00	1.92	1.88	1.00
Greece	1.75	1.14	1.18	1.62	1.00	0.00
Hungary	1.58	1.07	1.18	1.15	0.75	1.67
Iceland	1.75	1.53	1.55	1.85	0.75	0.00
Ireland	1.75	1.80	1.36	1.23	0.75	0.33
Israel	0.33	0.13	0.18	0.00	0.00	0.00
Italy	1.67	1.53	2.00	1.92	2.00	0.00
Latvia	1.67	1.27	1.55	1.31	0.38	0.00
Lithuania	1.58	1.20	1.64	1.38	0.13	0.67
Luxembourg	1.08	1.20	0.55	0.38	0.50	0.67
Montenegro	1.25	0.80	0.64	1.23	0.63	1.00
Netherlands	1.83	1.53	1.55	1.69	1.13	0.00
Norway	2.00	1.87	1.82	2.00	1.38	1.67
Poland	1.50	1.73	1.45	1.92	1.63	1.33
Portugal	1.75	1.27	1.45	1.23	1.50	0.67
Russian Federation	1.08	1.20	0.45	0.46	0.25	0.00
Serbia	1.42	0.53	0.55	0.92	1.13	0.00
Slovakia	1.25	1.53	0.82	1.08	0.63	0.00
Slovenia	1.75	1.20	1.82	1.77	1.38	0.00
Spain	1.75	1.73	1.73	1.85	1.88	0.67
Sweden	1.25	1.47	1.27	1.46	1.13	0.00
Switzerland	1.58	1.80	1.55	2.00	1.63	0.67
Turkey	0.75	0.67	1.00	1.54	0.88	2.00
Ukraine	1.67	1.53	1.73	1.92	0.63	0.00
United Kingdom	1.42	1.33	1.73	1.46	1.75	0.67
Latin America and the Caribbean	0.89	0.90	0.77	0.91	0.33	0.65
Caribbean	0.48	0.64	0.85	0.58	0.08	0.53
Barbados	0.83	0.87	0.82	0.54	0.25	0.33
Jamaica	0.92	0.93	1.64	0.92	0.00	0.67
Saint Vincent and the Grenadines	0.25	0.93	1.00	0.00	0.00	0.33
Suriname	0.42	0.27	0.09	0.54	0.00	1.00
Trinidad and Tobago	0.00	0.20	0.73	0.92	0.13	0.33
Central America	0.82	0.96	0.71	1.15	0.43	0.20
Costa Rica	0.25	0.60	0.00	0.85	0.00	0.33
Cuba	2.00	1.87	2.00	2.00	1.13	0.00
Dominican Republic	0.00	0.20	0.18	0.46	0.13	0.00
Guatemala	0.33	0.40	0.36	0.69	0.25	0.00
Mexico	1.50	1.73	1.00	1.77	0.63	0.67
South America	1.19	1.02	0.75	0.95	0.44	1.00

Region	SPA 1	SPA 2	SPA 3	SPA 4	Collaboration	Funding
Argentina	1.17	1.00	1.09	1.08	0.75	0.67
Bolivia (Plurinational State of)	1.33	1.20	0.82	1.23	0.75	1.00
Brazil	1.83	1.80	1.36	1.23	1.00	2.00
Chile	1.08	0.93	0.64	0.92	0.25	0.67
Ecuador	0.67	0.20	0.00	0.31	0.00	1.33
Paraguay	0.75	0.86	0.55	0.54	0.00	0.00
Peru	1.33	0.93	0.73	0.92	0.25	1.00
Uruguay	1.33	1.27	0.82	1.38	0.50	1.33
Near and Middle East	0.57	0.33	0.22	0.35	0.25	0.38
Bahrain	0.67	0.33	0.00	0.15	0.00	0.00
Egypt	0.83	0.87	0.64	0.85	0.88	0.00
Iraq	0.42	0.00	0.18	0.54	0.00	1.00
Jordan	0.50	0.53	0.09	0.23	0.13	0.00
Kuwait	0.17	0.13	0.18	0.23	0.25	0.67
Oman	1.00	0.20	0.27	0.38	0.38	1.00
Sudan	0.42	0.27	0.18	0.08	0.13	0.00
North America	1.92	1.87	2.00	1.69	1.13	1.00
United States of America	1.92	1.87	2.00	1.69	1.13	1.00
Southwest Pacific	0.57	0.37	0.25	0.23	0.11	0.38
Cook Islands	0.33	0.33	0.55	0.23	0.25	1.00
Kiribati	0.92	0.53	0.36	0.15	0.00	0.33
New Zealand	1.08	0.60	0.45	0.31	0.38	0.00
Niue	0.50	0.60	0.18	0.38	0.00	0.67
Samoa	0.75	0.53	0.00	0.38	0.00	0.00
Solomon Islands	0.42	0.00	0.00	0.15	0.13	0.33
Tonga	0.00	0.00	0.18	0.00	0.00	0.33
World	*0.98*	*0.89*	*0.78*	*0.95*	*0.54*	*0.53*

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2.

A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:



Figures 72 to 77 show the country-level indicators in the form of maps.

Figure 72. Implementing Strategic Priority Area 1 of the Global Plan of Action for Animal Genetic Resources: indicator for the completeness of characterization and inventory and the regularity of monitoring of trends and associated risks

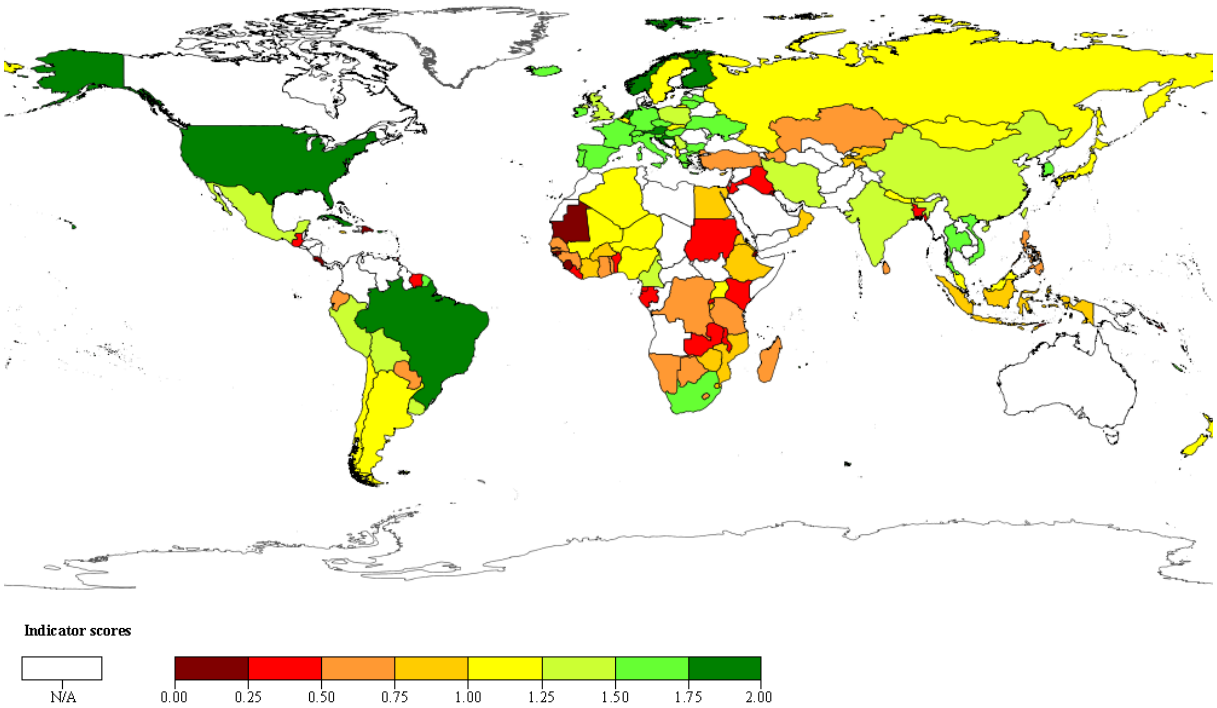


Figure 73. Implementing Strategic Priority Area 2 of the Global Plan of Action for Animal Genetic Resources: indicator for the state of sustainable use and development

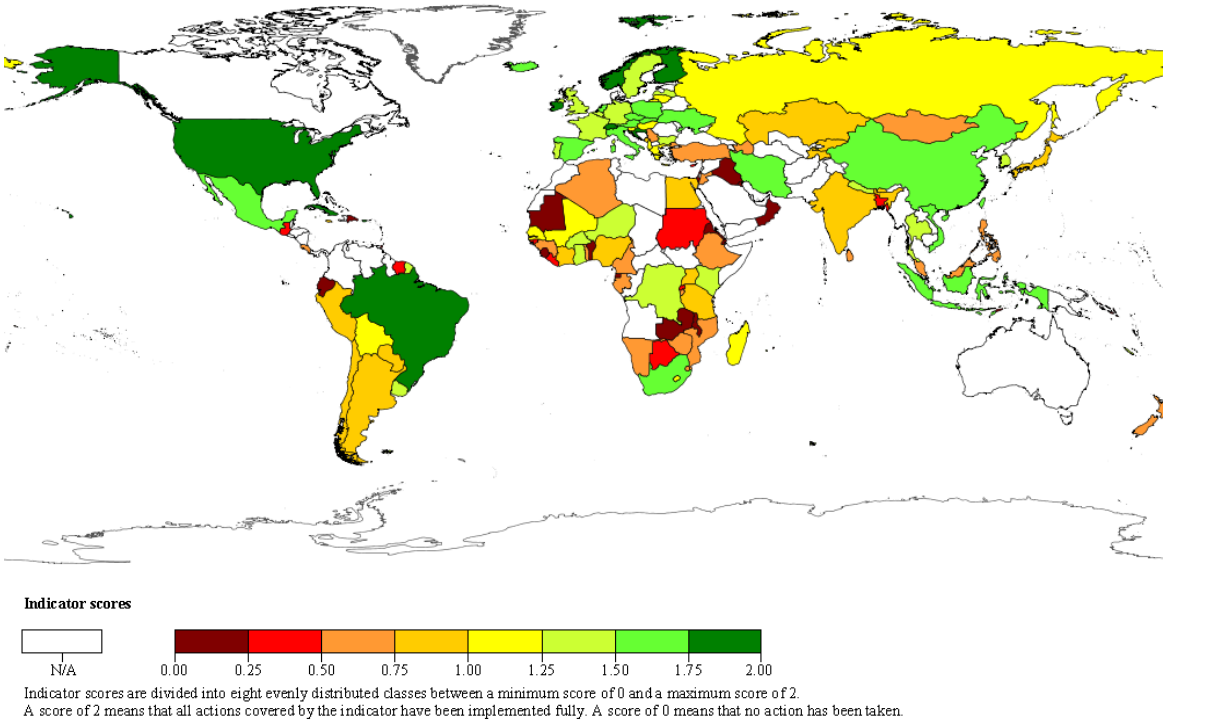


Figure 74. Implementing Strategic Priority Area 3 of the Global Plan of Action for Animal Genetic Resources: indicator for the state of national conservation policies

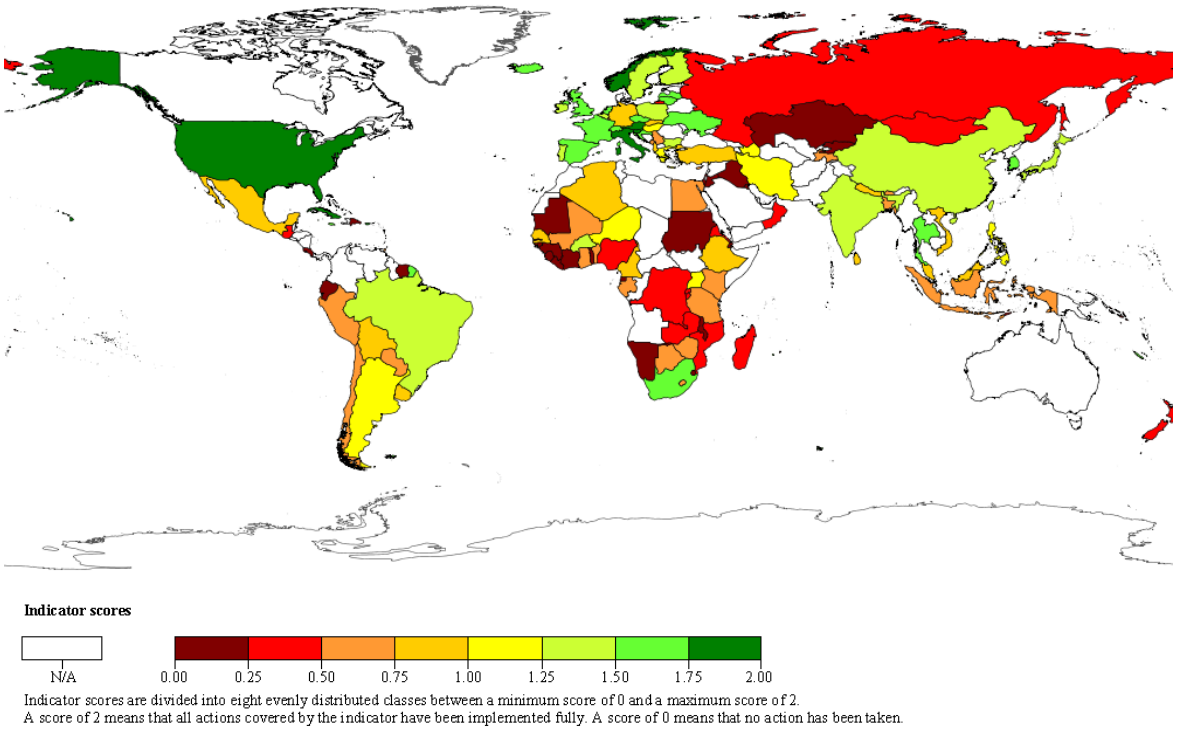


Figure 75. Implementing Strategic Priority Area 4 of the Global Plan of Action for Animal Genetic Resources: indicator for the state of national policies and legal frameworks and efforts to strengthen institutional and human capacities

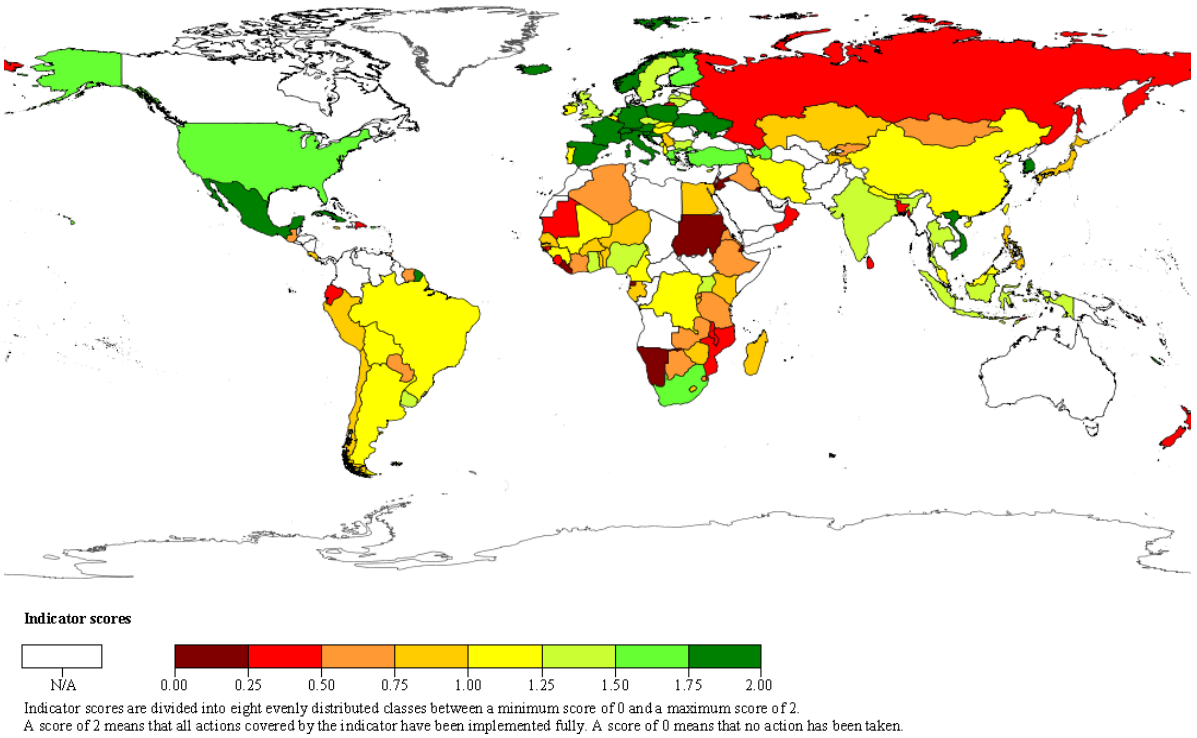


Figure 76. Implementing the Global Plan of Action for Animal Genetic Resources: indicator for the state of international collaboration

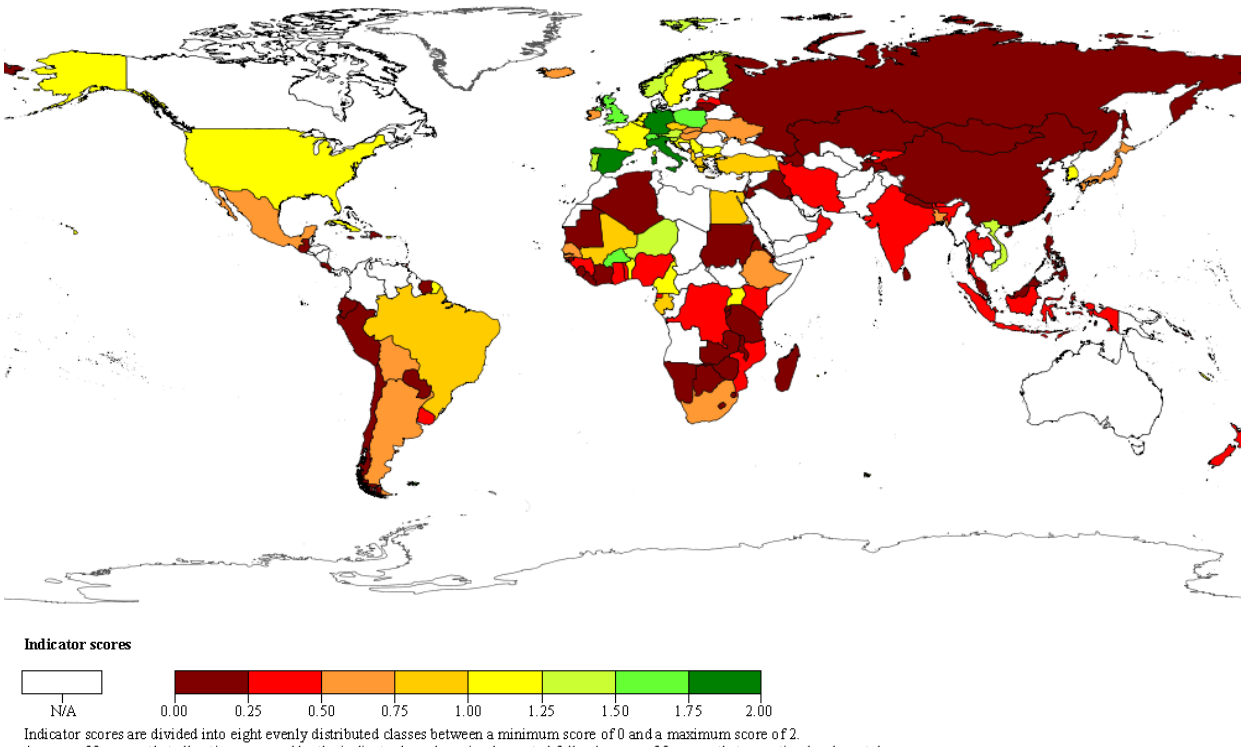
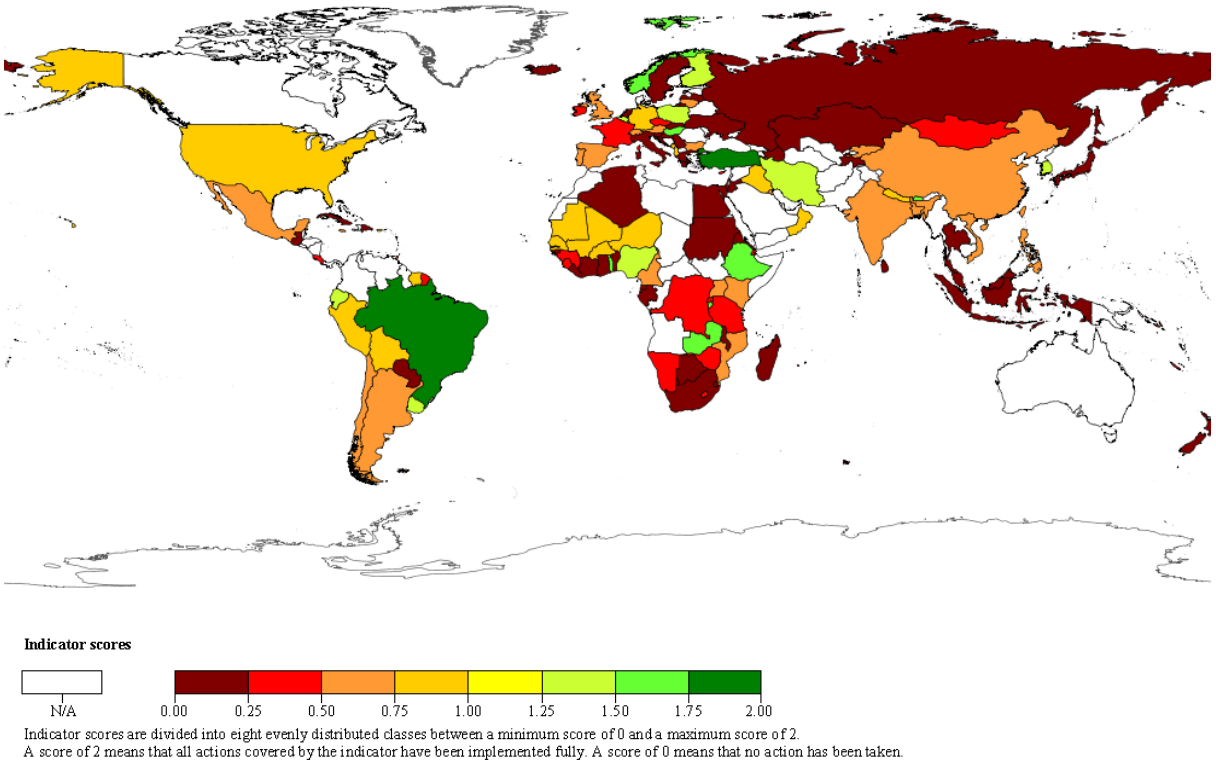


Figure 77. Implementing the Global Plan of Action for Animal Genetic Resources: indicator for the state of funding



Indicators at the level of strategic priorities

Table 9 presents a global summary of the indicators at the level of strategic priorities expressed as colours and as average scores (see Table 2 for details of the indicator colour scheme). Table 8 also shows the percentage of reporting countries falling into the high, medium and low categories for each indicator. Tables 10 and 11 present summaries of the strategic priority-level indicators at regional and subregional levels. Table 12 shows the indicator for each reporting country.

Tables 8 and 9 show that, globally, a medium level of implementation has been achieved for most strategic priorities. The indicators signalling the highest levels of implementation are SP1a (the completeness of characterization), SP12 (the state of efforts to strengthen national institutions for planning and implementing animal genetic resources measures) and SP18 (the state of efforts to raise national awareness of the roles and values of animal genetic resources). The indicators signalling the lowest levels of implementation are SP3 (the state of national sustainable use policies), SP5 (the state of efforts to promote agro-ecosystems approaches to the management of animal genetic resources) and SP9 (the state of *ex situ* conservation programmes).

Table 9. Global overview of indicators for strategic priorities

Reference in the Global Plan of Action		Countries low (%)	Countries medium (%)	Countries high (%)	Indicator colour and average score
SPA1	SP1a	42.2	5.5	52.3	1.03
	SP1b	40.6	24.2	35.2	0.96
SPA2	SP3	47.7	36.7	15.6	0.67
	SP4	43	21.1	35.9	0.97
	SP5	54.7	18	27.3	0.77
	SP6	49.2	28.9	21.9	0.77
SPA3	SP7	40.6	33.6	25.8	0.85
	SP8	26.6	54.7	18.8	0.92
	SP9	74.2	7	18.8	0.55
SPA4	SP12	47.7	0	52.3	1.06
	SP13	28.9	46.9	24.2	0.95
	SP14	47.7	28.1	24.2	0.82
	SP18	46.9	0	53.1	1.06
	SP20	52.3	18	29.7	0.84

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2. A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:

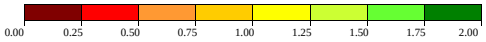


Table 10. Indicators for strategic priorities – regional summary

	SPA 1		SPA 2				SPA 3			SPA 4				
Region	**SP1a**	**SP1b**	**SP3**	**SP4**	**SP5**	**SP6**	**SP7**	**SP8**	**SP9**	**SP12**	**SP13**	**SP14**	**SP18**	**SP20**
Africa	0.68	0.71	0.55	0.66	0.65	0.55	0.50	0.68	0.31	0.85	0.78	0.53	0.70	0.60
Asia	1.13	0.96	0.75	1.04	0.83	0.88	0.70	0.90	0.70	1.03	1.00	0.83	1.20	0.98
Europe and the Caucasus	1.51	1.44	0.97	1.47	1.06	1.09	1.66	1.46	0.89	1.54	1.43	1.31	1.60	1.33
Latin America & the Caribbean	0.96	0.81	0.64	0.95	0.89	0.64	0.67	0.89	0.52	1.19	0.78	0.89	1.11	0.61
Near and Middle East	0.90	0.47	0.07	0.43	0.07	0.57	0.29	0.29	0.14	0.29	0.86	0.36	0.57	0.36
North America	2.00	1.86	2.00	2.00	1.00	2.00	2.00	2.00	2.00	2.00	1.00	1.50	2.00	2.00
Southwest Pacific	0.43	0.71	0.07	0.43	0.21	0.43	0.14	0.29	0.19	0.19	0.00	0.21	0.29	0.21
World	**1.03**	**0.96**	**0.67**	**0.97**	**0.77**	**0.77**	**0.85**	**0.92**	**0.55**	**1.06**	**0.95**	**0.82**	**1.06**	**0.84**

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2. A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:

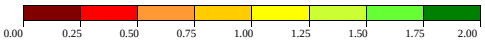


Table 11. Indicators for strategic priorities – sub-regional summary

	SPA 1		SPA 2				SPA 3			SPA 4				
Region	**SP1a**	**SP1b**	**SP3**	**SP4**	**SP5**	**SP6**	**SP7**	**SP8**	**SP9**	**SP12**	**SP13**	**SP14**	**SP18**	**SP20**
East Africa	0.79	0.70	0.63	0.70	0.44	0.44	0.38	0.75	0.42	0.75	0.63	0.44	0.75	0.69
North and West Africa	0.62	0.68	0.65	0.62	0.78	0.58	0.55	0.60	0.23	0.93	0.95	0.58	0.40	0.63
Southern Africa	0.69	0.79	0.33	0.70	0.58	0.58	0.50	0.75	0.36	0.78	0.58	0.50	1.17	0.50
Africa	**0.68**	**0.71**	**0.55**	**0.66**	**0.65**	**0.55**	**0.50**	**0.68**	**0.31**	**0.85**	**0.78**	**0.53**	**0.70**	**0.60**
Central Asia	1.00	0.86	0.25	1.32	0.88	0.50	0.25	0.50	0.17	1.00	0.75	0.75	1.50	1.00
East Asia	1.50	1.25	0.88	1.29	0.63	1.38	1.00	1.25	1.17	1.17	1.50	1.13	1.00	1.25
South Asia	1.11	0.79	0.67	0.67	0.75	0.75	0.50	1.00	0.56	0.89	0.83	0.67	0.67	0.67
Southeast Asia	1.00	1.00	1.08	1.05	1.00	0.92	1.00	0.83	0.89	1.11	1.00	0.83	1.67	1.08
Asia	**1.13**	**0.96**	**0.75**	**1.04**	**0.83**	**0.88**	**0.70**	**0.90**	**0.70**	**1.03**	**1.00**	**0.83**	**1.20**	**0.98**
Europe and the Caucasus	**1.51**	**1.44**	**0.97**	**1.47**	**1.06**	**1.09**	**1.66**	**1.46**	**0.89**	**1.54**	**1.43**	**1.31**	**1.60**	**1.33**
Caribbean	0.40	0.43	0.80	0.66	0.70	0.40	0.80	1.20	0.60	0.67	0.60	0.70	0.80	0.30
Central America	0.73	0.80	0.80	1.03	1.20	0.60	0.60	0.60	0.60	1.60	0.60	0.90	1.20	1.00
South America	1.46	1.05	0.44	1.09	0.81	0.81	0.63	0.88	0.42	1.25	1.00	1.00	1.25	0.56
Latin America & the Caribbean	**0.96**	**0.81**	**0.64**	**0.95**	**0.89**	**0.64**	**0.67**	**0.89**	**0.52**	**1.19**	**0.78**	**0.89**	**1.11**	**0.61**
Near and Middle East	**0.90**	**0.47**	**0.07**	**0.43**	**0.07**	**0.57**	**0.29**	**0.29**	**0.14**	**0.29**	**0.86**	**0.36**	**0.57**	**0.36**
North America	**2.00**	**1.86**	**2.00**	**2.00**	**1.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.50**	**2.00**	**2.00**
Southwest Pacific	**0.43**	**0.71**	**0.07**	**0.43**	**0.21**	**0.43**	**0.14**	**0.29**	**0.19**	**0.19**	**0.00**	**0.21**	**0.29**	**0.21**
World	**1.03**	**0.96**	**0.67**	**0.97**	**0.77**	**0.77**	**0.85**	**0.92**	**0.55**	**1.06**	**0.95**	**0.82**	**1.06**	**0.84**

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2. A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:

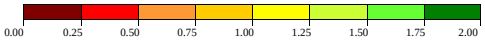


Table 12. Indicators for strategic priorities – country level

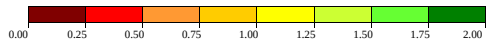
Region	SPA 1		SPA 2				SPA 3			SPA 4				
	SP1a	SP1b	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP12	SP13	SP14	SP18	SP20
Africa	**0.68**	**0.71**	**0.55**	**0.66**	**0.65**	**0.55**	**0.50**	**0.68**	**0.31**	**0.85**	**0.78**	**0.53**	**0.70**	**0.60**
East Africa	**0.79**	**0.70**	**0.63**	**0.70**	**0.44**	**0.44**	**0.38**	**0.75**	**0.42**	**0.75**	**0.63**	**0.44**	**0.75**	**0.69**
Burundi	1.00	1.14	0.00	1.14	0.50	0.00	0.00	0.00	0.00	0.67	1.00	0.00	2.00	0.50
Djibouti	0.33	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Eritrea	1.33	0.57	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.67	1.00	0.00	0.00	0.00
Ethiopia	0.67	1.14	0.50	0.57	0.00	0.50	0.00	1.00	0.67	0.00	0.00	0.50	2.00	1.00
Kenya	0.67	0.29	1.50	1.43	1.00	1.50	0.00	1.00	0.33	1.33	1.00	1.00	0.00	0.50
Rwanda	0.33	0.57	1.00	0.29	1.00	0.00	1.00	1.00	0.67	1.33	0.00	0.00	0.00	0.50
Uganda	1.33	1.14	1.00	1.14	0.50	1.00	1.00	1.00	1.33	1.33	2.00	1.50	0.00	2.00
United Republic of Tanzania	0.67	0.43	1.00	1.00	0.50	0.50	0.00	1.00	0.33	0.67	0.00	0.50	2.00	1.00
North and West Africa	**0.62**	**0.68**	**0.65**	**0.62**	**0.78**	**0.58**	**0.55**	**0.60**	**0.23**	**0.93**	**0.95**	**0.58**	**0.40**	**0.63**
Algeria	1.33	1.14	0.00	1.00	0.50	0.50	1.00	1.00	0.33	0.67	1.00	0.50	0.00	0.50
Benin	0.33	0.43	0.00	0.00	0.50	0.00	0.00	1.00	1.00	1.33	1.00	0.50	0.00	1.00
Burkina Faso	0.67	1.00	1.50	0.71	2.00	2.00	1.00	1.00	1.33	0.67	1.00	1.00	0.00	1.00
Cameroon	2.00	1.14	0.50	0.71	0.00	0.50	1.00	1.00	0.67	0.67	2.00	1.00	2.00	0.50
Côte d'Ivoire	0.33	1.14	1.00	0.86	1.00	0.00	0.00	0.00	0.00	1.33	1.00	0.00	0.00	0.00
Democratic Republic of the Congo	0.33	0.71	1.50	1.43	0.50	2.00	0.00	0.00	0.00	1.33	2.00	1.50	2.00	1.00
Equatorial Guinea	0.00	0.57	0.00	0.14	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gabon	0.00	0.43	0.50	0.29	0.50	0.00	1.00	1.00	0.00	2.00	1.00	0.50	0.00	0.50
Gambia	0.33	0.29	0.00	0.57	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.50	0.00	0.50
Ghana	1.33	0.43	1.00	1.43	2.00	0.00	0.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Guinea	0.00	0.71	0.00	0.57	0.00	1.00	0.00	0.00	0.00	0.67	1.00	1.00	2.00	1.00
Guinea-Bissau	0.00	0.14	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00
Liberia	0.00	0.43	0.00	0.29	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.00	0.00
Mali	1.33	1.14	1.00	1.43	1.50	0.50	1.00	1.00	0.00	0.67	2.00	1.00	0.00	1.50
Mauritania	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.50
Niger	0.67	1.43	2.00	1.14	1.50	1.50	2.00	1.00	0.33	1.33	1.00	0.00	0.00	1.00
Nigeria	1.67	1.14	1.00	0.43	1.50	1.00	2.00	1.00	0.00	2.00	1.00	1.00	0.00	1.00
Senegal	1.33	0.29	1.00	1.14	1.50	1.00	1.00	2.00	0.00	0.67	1.00	1.00	0.00	1.00
Sierra Leone	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	0.00
Togo	0.67	1.00	1.00	0.29	0.00	0.50	0.00	0.00	0.00	0.67	1.00	0.50	0.00	0.50
Southern Africa	**0.69**	**0.79**	**0.33**	**0.70**	**0.58**	**0.58**	**0.50**	**0.75**	**0.36**	**0.78**	**0.58**	**0.50**	**1.17**	**0.50**
Botswana	0.67	0.86	0.00	0.57	0.00	0.50	1.00	1.00	0.33	0.67	1.00	0.00	2.00	1.00
Comoros	0.33	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.67	0.00	1.00	2.00	0.50
Lesotho	0.33	0.57	1.00	0.86	2.00	1.00	1.00	1.00	0.00	1.33	0.00	1.00	2.00	0.50
Madagascar	0.33	0.57	1.00	0.71	1.50	1.00	0.00	0.00	0.00	1.33	1.00	0.50	0.00	0.50
Malawi	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Region	SPA 1		SPA 2				SPA 3			SPA 4				
	SP1a	SP1b	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP12	SP13	SP14	SP18	SP20
Mauritius	0.33	0.86	0.00	0.29	0.50	0.50	1.00	0.00	0.33	1.33	1.00	0.00	2.00	0.00
Mozambique	1.33	0.71	0.00	0.71	0.00	0.50	0.00	1.00	0.67	0.00	1.00	0.00	0.00	0.50
Namibia	1.33	0.71	0.00	1.00	0.00	0.50	0.00	1.00	0.33	0.00	0.00	0.00	0.00	0.00
South Africa	2.00	1.71	1.00	2.00	1.00	1.50	2.00	1.00	1.33	1.33	0.00	2.00	2.00	2.00
Swaziland	0.33	1.43	0.00	0.86	1.00	1.00	1.00	1.00	0.00	0.67	0.00	0.50	0.00	0.50
Zambia	0.33	0.57	0.00	0.14	0.00	0.50	0.00	1.00	0.67	0.67	0.00	0.50	2.00	0.00
Zimbabwe	1.00	0.86	1.00	1.00	1.00	0.00	0.00	2.00	0.67	1.33	2.00	0.50	2.00	0.50
Asia	**1.13**	**0.96**	**0.75**	**1.04**	**0.83**	**0.88**	**0.70**	**0.90**	**0.70**	**1.03**	**1.00**	**0.83**	**1.20**	**0.98**
Central Asia	**1.00**	**0.86**	**0.25**	**1.32**	**0.88**	**0.50**	**0.25**	**0.50**	**0.17**	**1.00**	**0.75**	**0.75**	**1.50**	**1.00**
Iran (Islamic Republic of)	1.33	1.29	1.00	1.71	1.50	1.00	1.00	1.00	0.67	1.33	1.00	1.00	2.00	1.50
Kazakhstan	1.00	0.57	0.00	1.43	0.50	0.50	0.00	0.00	0.00	1.33	0.00	1.00	0.00	1.50
Kyrgyzstan	0.67	0.86	0.00	0.86	1.00	0.00	0.00	0.00	0.00	0.67	0.00	1.00	2.00	0.50
Tajikistan	1.00	0.71	0.00	1.29	0.50	0.50	0.00	1.00	0.00	0.67	2.00	0.00	2.00	0.50
East Asia	**1.50**	**1.25**	**0.88**	**1.29**	**0.63**	**1.38**	**1.00**	**1.25**	**1.17**	**1.17**	**1.50**	**1.13**	**1.00**	**1.25**
China	1.33	1.43	1.50	1.86	2.00	2.00	2.00	2.00	1.33	2.00	1.00	0.50	2.00	2.00
Japan	1.00	1.43	1.00	1.00	0.00	1.00	0.00	1.00	1.33	0.00	2.00	1.50	0.00	0.50
Mongolia	1.67	0.86	0.00	0.43	0.00	1.50	0.00	1.00	0.67	0.67	1.00	0.50	0.00	0.50
Republic of Korea	2.00	1.29	1.00	1.86	0.50	1.00	2.00	1.00	1.33	2.00	2.00	2.00	2.00	2.00
South Asia	**1.11**	**0.79**	**0.67**	**0.67**	**0.75**	**0.75**	**0.50**	**1.00**	**0.56**	**0.89**	**0.83**	**0.67**	**0.67**	**0.67**
Bangladesh	1.33	0.00	0.00	0.43	0.00	0.50	0.00	1.00	0.67	0.00	1.00	0.00	0.00	0.00
Bhutan	0.67	1.29	1.50	0.71	1.50	1.50	1.00	2.00	0.67	2.00	0.00	1.00	2.00	1.50
India	1.67	1.29	1.00	1.29	0.50	0.50	1.00	1.00	1.33	1.33	2.00	1.50	0.00	1.00
Maldives	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nepal	1.67	1.00	1.00	1.00	2.00	1.00	1.00	1.00	0.33	1.33	1.00	1.00	2.00	1.00
Sri Lanka	1.33	0.57	0.50	0.57	0.50	1.00	0.00	1.00	0.33	0.67	1.00	0.50	0.00	0.50
Southeast Asia	**1.00**	**1.00**	**1.08**	**1.05**	**1.00**	**0.92**	**1.00**	**0.83**	**0.89**	**1.11**	**1.00**	**0.83**	**1.67**	**1.08**
Indonesia	0.67	1.14	2.00	1.43	1.50	2.00	1.00	1.00	0.67	1.33	1.00	1.00	2.00	1.50
Malaysia	0.67	1.43	1.00	0.57	1.00	0.00	1.00	1.00	1.33	0.67	1.00	0.50	2.00	1.50
Philippines	1.33	0.29	1.00	0.86	0.50	1.00	1.00	1.00	1.33	1.33	1.00	1.00	2.00	0.50
Thailand	2.00	1.29	1.00	1.57	1.50	1.00	2.00	1.00	1.33	1.33	1.00	1.50	2.00	1.50
Timor-Leste	0.00	0.14	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Viet Nam	1.33	1.71	1.50	1.57	1.50	1.50	1.00	1.00	0.67	2.00	2.00	1.00	2.00	1.50
Europe and the Caucasus	**1.51**	**1.44**	**0.97**	**1.47**	**1.06**	**1.09**	**1.66**	**1.46**	**0.89**	**1.54**	**1.43**	**1.31**	**1.60**	**1.33**
Albania	0.67	1.29	1.00	1.14	0.50	0.50	1.00	1.00	0.33	1.33	1.00	1.50	2.00	1.50
Austria	2.00	1.86	1.00	1.71	2.00	1.50	2.00	2.00	1.67	2.00	2.00	2.00	2.00	1.50
Azerbaijan	0.33	0.71	0.50	0.86	0.50	0.00	1.00	1.00	0.67	2.00	2.00	1.00	2.00	1.50
Belgium	1.67	1.00	1.00	1.29	1.50	2.00	1.00	1.00	1.33	1.33	2.00	1.50	2.00	1.00
Bulgaria	1.33	1.71	1.00	1.71	1.00	1.00	1.00	2.00	0.67	2.00	1.00	1.00	2.00	1.50
Croatia	2.00	1.86	2.00	2.00	1.00	1.50	2.00	2.00	1.00	2.00	2.00	2.00	2.00	2.00

Region	SPA 1		SPA 2				SPA 3			SPA 4				
	SP1a	SP1b	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP12	SP13	SP14	SP18	SP20
Cyprus	1.67	1.00	0.00	0.71	0.50	0.50	1.00	1.00	0.33	1.33	1.00	0.50	2.00	0.50
Czech Republic	1.33	1.86	1.00	2.00	1.50	0.50	2.00	2.00	1.00	1.33	2.00	1.00	2.00	1.00
Finland	1.67	1.86	1.00	1.86	2.00	2.00	2.00	2.00	0.67	2.00	1.00	2.00	2.00	1.00
France	2.00	1.71	1.00	1.71	2.00	2.00	2.00	2.00	1.67	2.00	2.00	2.00	2.00	1.50
Germany	1.67	1.71	2.00	1.29	1.00	1.00	2.00	1.00	0.67	2.00	2.00	1.50	2.00	2.00
Greece	1.67	1.71	1.00	1.29	1.00	1.00	2.00	2.00	0.33	1.33	2.00	1.00	2.00	1.50
Hungary	1.67	1.43	0.00	1.14	1.00	1.00	2.00	1.00	0.67	0.00	1.00	2.00	0.00	1.00
Iceland	1.67	1.71	1.00	1.71	1.00	1.50	2.00	2.00	1.00	2.00	2.00	2.00	2.00	2.00
Ireland	1.67	1.71	1.00	2.00	2.00	1.50	2.00	1.00	0.67	2.00	2.00	1.00	0.00	1.00
Israel	0.67	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Italy	1.33	1.71	1.50	1.43	1.50	1.50	2.00	2.00	2.00	2.00	2.00	1.50	2.00	2.00
Latvia	1.33	1.71	1.00	1.43	0.50	1.00	2.00	2.00	1.67	2.00	1.00	1.00	2.00	0.50
Lithuania	1.33	1.57	1.00	1.57	0.00	1.50	1.00	1.00	1.33	2.00	1.00	1.00	2.00	1.00
Luxembourg	0.67	1.00	0.00	1.86	0.50	0.00	1.00	1.00	0.00	0.67	0.00	0.50	0.00	0.00
Montenegro	1.33	1.29	0.00	0.71	2.00	0.50	2.00	1.00	0.00	0.67	1.00	0.00	2.00	1.50
Netherlands	1.67	1.86	1.00	1.71	1.00	1.50	2.00	1.00	0.67	2.00	2.00	2.00	2.00	1.00
Norway	2.00	2.00	2.00	1.71	2.00	2.00	2.00	2.00	1.33	2.00	2.00	2.00	2.00	2.00
Poland	1.67	1.57	1.00	2.00	2.00	1.00	2.00	2.00	0.67	2.00	1.00	2.00	2.00	2.00
Portugal	1.67	1.71	1.50	1.43	0.00	1.00	2.00	2.00	0.67	0.67	1.00	1.00	0.00	1.50
Russian Federation	1.67	0.86	1.00	1.71	1.50	0.50	1.00	1.00	1.00	0.67	1.00	1.00	0.00	0.50
Serbia	1.67	1.43	0.00	0.86	0.00	0.00	1.00	2.00	0.33	0.67	0.00	0.50	2.00	0.50
Slovakia	1.67	0.86	1.00	1.57	1.50	1.50	1.00	1.00	0.33	0.67	2.00	1.00	2.00	0.50
Slovenia	1.67	2.00	1.00	1.71	0.00	1.00	2.00	2.00	1.33	1.33	2.00	1.50	2.00	2.00
Spain	1.67	1.71	1.00	1.71	2.00	2.00	2.00	2.00	1.00	2.00	2.00	2.00	0.00	2.00
Sweden	1.33	1.29	1.00	1.43	2.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	2.00
Switzerland	2.00	1.29	1.50	2.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00	2.00	2.00	2.00
Turkey	1.33	0.43	0.50	0.57	0.50	0.00	2.00	1.00	1.33	2.00	1.00	1.00	2.00	1.50
Ukraine	2.00	1.71	2.00	1.57	0.50	1.50	2.00	1.00	1.33	2.00	2.00	2.00	2.00	2.00
United Kingdom	1.33	1.29	1.50	1.57	0.00	1.00	2.00	1.00	1.33	2.00	1.00	1.00	2.00	1.50
Latin America & the Caribbean	**0.96**	**0.81**	**0.64**	**0.95**	**0.89**	**0.64**	**0.67**	**0.89**	**0.52**	**1.19**	**0.78**	**0.89**	**1.11**	**0.61**
Caribbean	0.40	0.43	0.80	0.66	0.70	0.40	0.80	1.20	0.60	0.67	0.60	0.70	0.80	0.30
Barbados	1.00	0.71	1.00	0.71	1.00	1.00	1.00	2.00	0.67	0.00	1.00	0.50	0.00	0.50
Jamaica	0.33	0.86	0.50	1.00	0.50	0.50	1.00	1.00	1.33	0.67	1.00	1.00	2.00	1.00
Saint Vincent and the Grenadines	0.33	0.29	1.50	1.00	1.50	0.50	1.00	1.00	0.33	0.00	0.00	0.00	0.00	0.00
Suriname	0.33	0.29	1.00	0.29	0.00	0.00	0.00	1.00	0.00	0.67	0.00	0.50	2.00	0.00
Trinidad and Tobago	0.00	0.00	0.00	0.29	0.50	0.00	1.00	1.00	0.67	2.00	1.00	1.50	0.00	0.00
Central America	**0.73**	**0.80**	**0.80**	**1.03**	**1.20**	**0.60**	**0.60**	**0.60**	**0.60**	**1.60**	**0.60**	**0.90**	**1.20**	**1.00**
Costa Rica	0.00	0.14	1.00	0.57	1.50	0.00	0.00	0.00	0.00	1.33	0.00	0.50	0.00	0.50
Cuba	2.00	2.00	2.00	2.00	2.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Dominican Republic	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.67	1.33	0.00	0.50	0.00	0.50
Guatemala	0.00	0.29	0.00	0.14	0.50	1.00	0.00	0.00	0.00	1.33	0.00	0.00	2.00	0.00
Mexico	1.67	1.57	1.00	2.00	2.00	1.00	1.00	1.00	0.33	2.00	1.00	1.50	2.00	2.00

Region	SPA 1		SPA 2				SPA 3			SPA 4				
	SP1a	SP1b	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP12	SP13	SP14	SP18	SP20
South America	**1.46**	**1.05**	**0.44**	**1.09**	**0.81**	**0.81**	**0.63**	**0.88**	**0.42**	**1.25**	**1.00**	**1.00**	**1.25**	**0.56**
Argentina	1.67	1.00	0.00	1.14	0.50	1.00	1.00	1.00	0.67	2.00	1.00	1.50	0.00	0.50
Bolivia (Plurinational State of)	1.33	1.14	1.00	0.86	1.50	1.50	1.00	1.00	0.33	1.33	1.00	1.00	2.00	0.50
Brazil	2.00	1.71	1.50	2.00	2.00	1.00	2.00	1.00	0.67	2.00	1.00	2.00	2.00	1.00
Chile	1.33	1.00	1.00	0.71	0.50	1.00	0.00	1.00	0.00	0.67	1.00	1.00	2.00	1.50
Ecuador	0.67	0.86	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paraguay	1.33	0.43	0.00	1.14	0.00	1.00	1.00	1.00	0.67	0.67	2.00	0.50	0.00	0.00
Peru	1.33	1.14	0.00	1.00	1.00	0.50	0.00	1.00	0.33	1.33	0.00	0.50	2.00	0.50
Uruguay	2.00	1.14	0.00	1.71	1.00	0.50	0.00	1.00	0.67	2.00	2.00	1.50	2.00	0.50
Near and Middle East	**0.90**	**0.47**	**0.07**	**0.43**	**0.07**	**0.57**	**0.29**	**0.29**	**0.14**	**0.29**	**0.86**	**0.36**	**0.57**	**0.36**
Bahrain	1.00	0.71	0.50	0.57	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.50
Egypt	1.33	0.57	0.00	0.86	0.50	1.00	1.00	1.00	0.33	0.67	1.00	0.50	0.00	1.50
Iraq	0.67	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	1.00	0.00	2.00	0.00
Jordan	1.33	0.29	0.00	0.57	0.00	2.00	0.00	0.00	0.33	0.67	0.00	0.50	0.00	0.00
Kuwait	0.00	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Oman	1.67	1.00	0.00	0.43	0.00	0.00	1.00	1.00	0.33	0.00	1.00	0.50	2.00	0.50
Sudan	0.33	0.29	0.00	0.29	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
North America	**2.00**	**1.86**	**2.00**	**2.00**	**1.00**	**2.00**	**2.00**	**2.00**	**2.00**	**2.00**	**1.00**	**1.50**	**2.00**	**2.00**
Southwest Pacific	**0.43**	**0.71**	**0.07**	**0.43**	**0.21**	**0.43**	**0.14**	**0.29**	**0.19**	**0.19**	**0.00**	**0.21**	**0.29**	**0.21**
Cook Islands	0.00	0.29	0.00	0.14	0.00	1.00	0.00	0.00	0.67	0.00	0.00	0.50	0.00	0.00
Kiribati	0.33	1.14	0.00	0.57	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
New Zealand	1.33	1.29	0.50	0.86	0.50	0.50	0.00	1.00	0.67	0.67	0.00	1.00	0.00	0.00
Niue	0.67	0.57	0.00	0.71	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	2.00	0.50
Samoa	0.00	1.29	0.00	0.71	0.00	0.50	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00
Solomon Islands	0.67	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tonga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
World	**1.03**	**0.96**	**0.67**	**0.97**	**0.77**	**0.77**	**0.85**	**0.92**	**0.55**	**1.06**	**0.95**	**0.82**	**1.06**	**0.84**

Note: Indicator scores are divided into eight evenly distributed classes between a minimum score of 0 and a maximum score of 2. A score of 2 means that all actions covered by the indicator have been implemented fully. A score of 0 means that no action has been taken. Indicator scores:



Impact of the implementation of the Global Plan of Action

The indicators presented above describe the state of various aspects of animal genetic resources management after close to seven years of implementation of the Global Plan of Action. However, in many cases, countries had been working on these aspects of animal genetic resources management before the adoption of the Global Plan of Action. Thus, an advanced state of management cannot necessarily be attributed to the implementation of the Global Plan of Action (although developments before 2007 may in part be attributable to the "State of the World" process that led to the development and adoption of the Global Plan of Action). As described above, many of the questions in the country report questionnaire allowed countries to indicate whether or not progress has been made, in the respective field, since the adoption of the Global Plan of Action. For individual questions, the proportions of countries reporting progress can be seen in Figures 3 to 71. Figures 78 to 82 summarize the findings to give regional and global overviews of the progress made in the implementation of the various strategic priority areas of the Global Plan of Action.

As described above, the multiple-choice answers in the country progress report questionnaire were allocated to three categories according to whether they indicate that the respective activity had been completed before the adoption of the global plan of action, has progressed since the adoption of the Global Plan of Action or has not progressed since the adoption of the Global Plan of Action.

Figures 78 to 82 show the average proportion of countries giving answers falling into each of the three categories "completed before" (B-SPA1 – B-SPA4, B-GPA), "progress" (P-SPA1 – P-SPA4, P-GPA), and " no progress" (N-SPA1 – N-SPA4, N–GPA) across all the questions related to the respective strategic priority area. This can also be described as the proportion of all the answers related to the respective strategic respective strategic priority area, across all the reporting countries, falling into each category.

Figure 78. Summary of progress made in implementing Strategic Priority Area 1

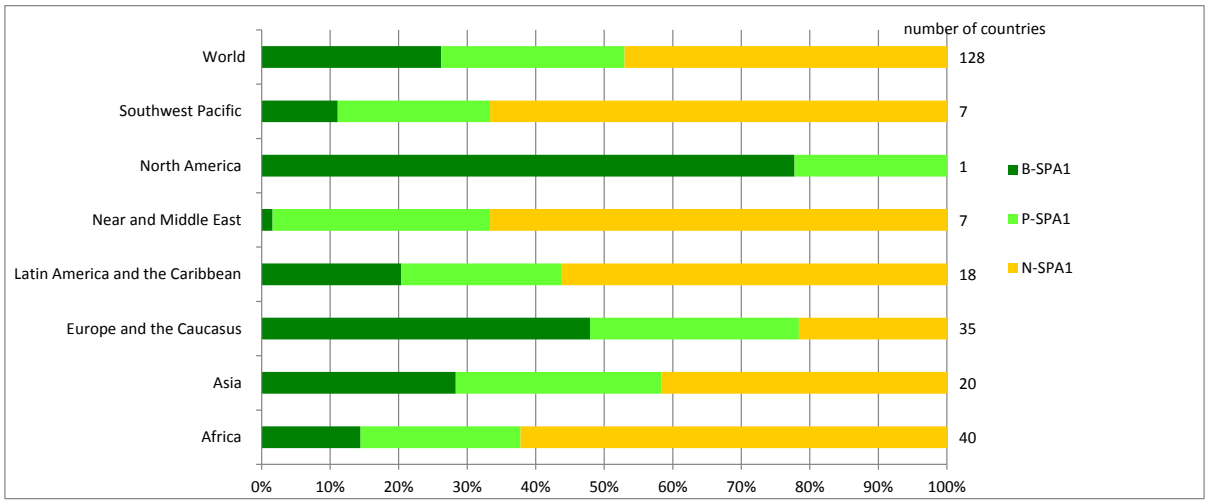


Figure 78 shows that, across the world, the most frequent category of answer to questions related to Strategic Priority Area 1 is "no progress" (more than 45 percent). More than 25 percent of answers indicate the respective aspect of the Global Plan of Action had been implemented to a satisfactory level before adoption. The remaining answers indicate progress. The proportion of answers indicating progress is quite similar (between 20 and 30 percent) across all regions. However, North America and Europe and the Caucasus started from a higher level of provision.

Figure 79. Summary of progress made in implementing Strategic Priority Area 2

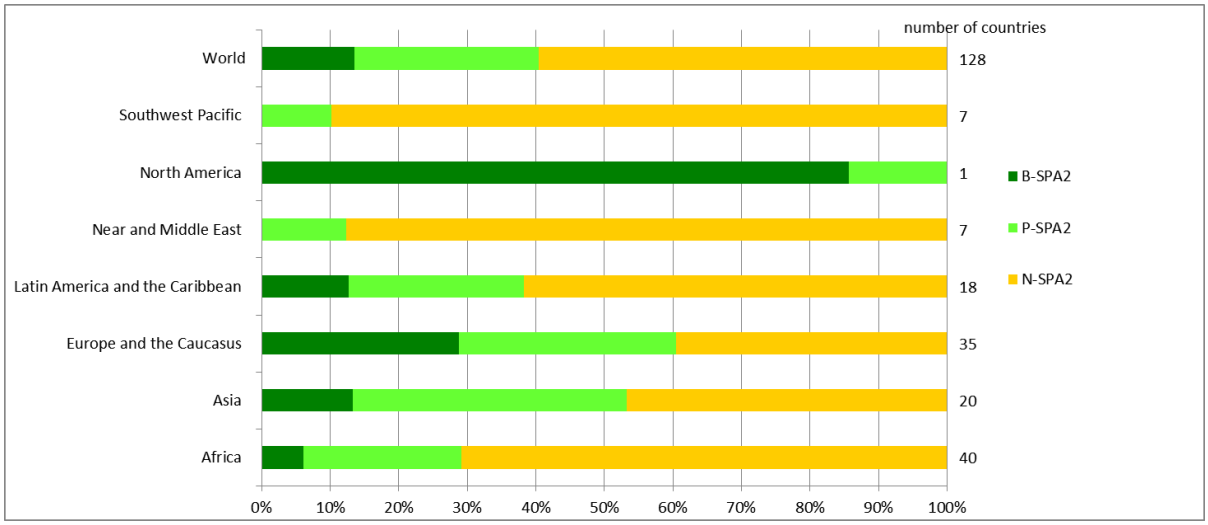


Figure 79 shows that, across the world, the most frequent category of answer to the questions related to Strategic Priority Area 2 is, again, "no progress", which accounts for almost 60 percent of answers. Regions reporting the most progress since the adoption of the Global Plan of Action are Asia and Europe and the Caucasus. North America started from a high level of activity within this strategic priority area and has made progress in all areas where improvements were still required. Lack of progress in activities related to this strategic priority area is particularly prevalent in the Southwest Pacific and the Near and Middle East.

Figure 80. Summary of progress made in implementing Strategic Priority Area 3

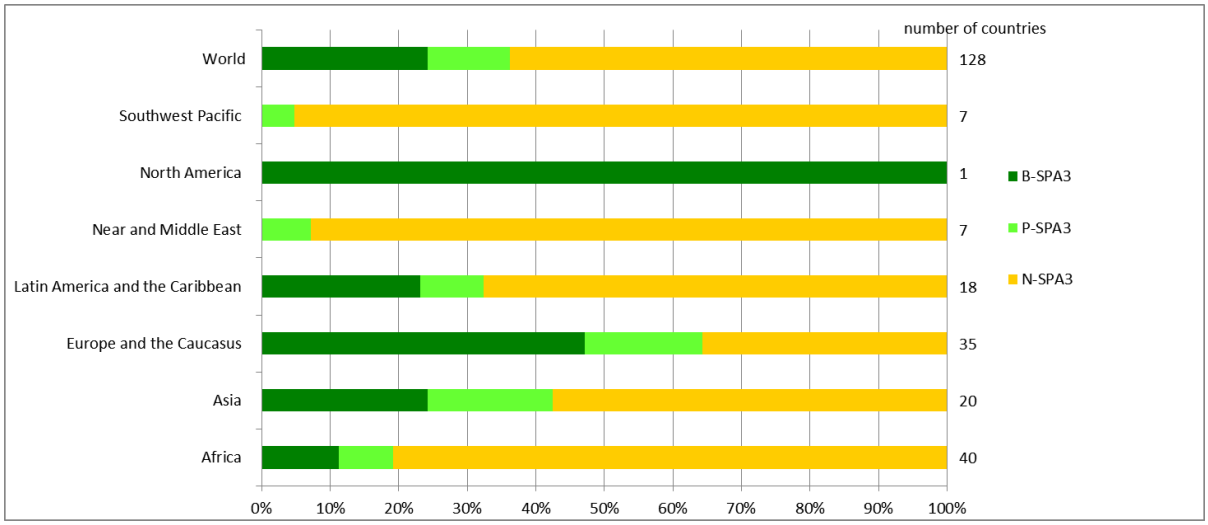


Figure 80 shows that Strategic Priority Area 3 is the strategic priority for which the least progress is reported. Apart from North America all regions are far from having reached a satisfactory level in the implementation of activities in the field of conservation, and progress since the adoption of the Global Plan of Action has been limited.

Figure 81. Summary of progress made in implementing Strategic Priority Area 4

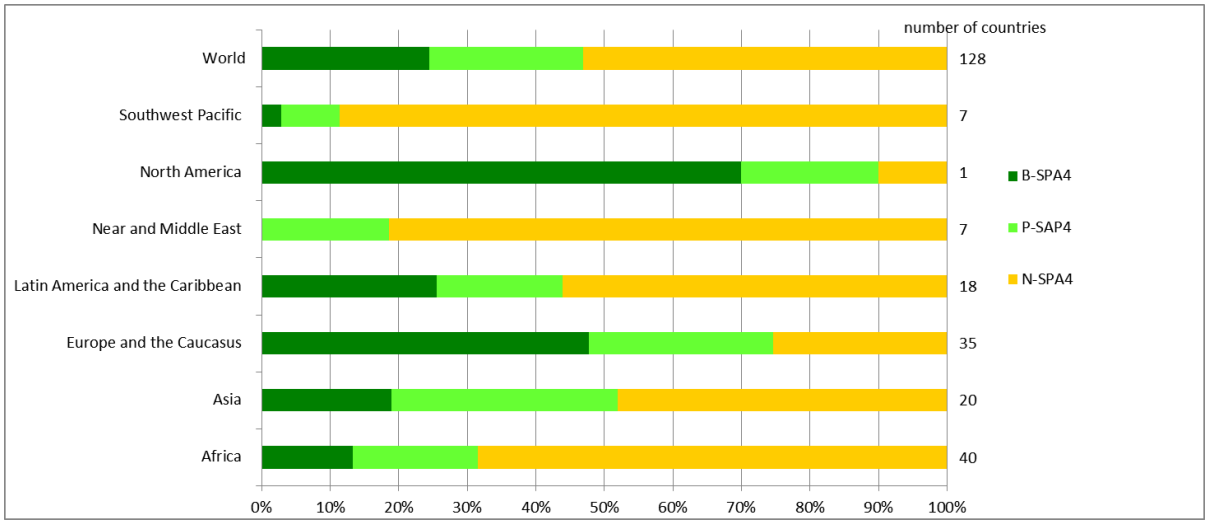
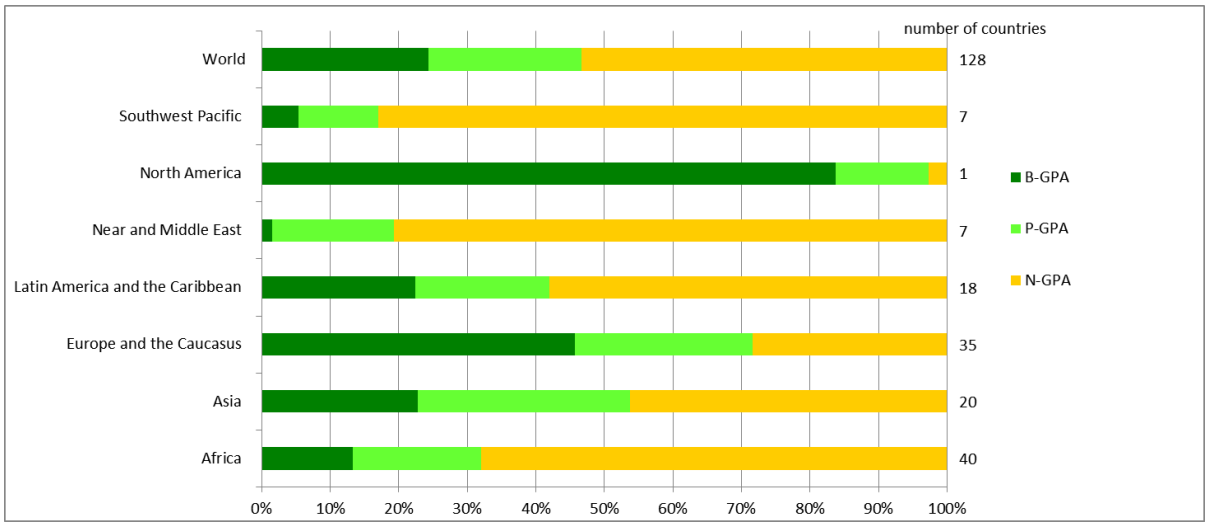


Figure 81 shows that the majority of answers related to Strategic Priority Area 4 fall into the "no progress" category. However, relatively encouraging levels of progress since the adoption of the Global Plan of Action are evident in Asia.

Figure 82. Summary of progress made in implementing the Global Plan of Action



Across all strategic priority areas covered by the Global Plan of Action and assessed in the Country Progress Report questionnaire, the most commonly reported action level is "no progress". This accounts for over 50 percent of answers. Approximately 25 percent of answers indicate that the respective activities had been implemented to a satisfactory degree prior to the adoption of the Global Plan of Action. The remaining answers indicate progress since 2007.

While it is clear that much remains to be done, the light-green bars in Figures 78 to 82 demonstrate that substantial progress has been made in all regions since the adoption of the Global Plan of Action and that in all regions, this progress extends across all four strategic priority areas.

IV. Progress made in the implementation of the global plan of action by regional focal points and networks

In February 2014, FAO invited Regional Coordinators for the Management of Animal Genetic Resources to report on progress made in their regions in the implementation of the Global Plan of Action. An electronic questionnaire was made available on the FAO web site.[34] Regional Coordinators were asked to submit their completed questionnaires electronically by 31 April 2014. They were reminded that the objective should be to "highlight collaborative efforts and indicate regional priorities for capacity building in relation to the implementation of the Global Plan of Action" [35] rather than to summarize activities at country level. Responses were received from the following regional focal points and networks:

- European Regional Focal Point for Animal Genetic Resources (ERFP);
- Latin America and the Caribbean's Regional Focal Point;
- Animal Genetic Resources Network - Southwest Pacific; and
- Asian Animal Genetic Resources Network.

The Sub-Regional Focal Point for West and Central Africa did not provide a progress report.

Strategic Priority Area 1. Characterization, Inventory and Monitoring of Trends and Associated Risks

In 2013, the ERFP Working Group Documentation and Information undertook a review of the list of transboundary breeds for the European Farm Animal Biodiversity Information System (EFABIS). Eighteen European countries[36] currently use the system for managing their animal genetic resources data. A draft concept for making EFABIS a permanent information infrastructure for animal genetic resources in Europe is being discussed. Another project financially supported by ERFP under its "call for action" aimed to harmonize the various existing risk-status and endangerment criteria, in order to provide comparable risk-status figures internationally. The ERFP Task Force on Risk Status and Indicators[37] continues to work on this issue.

In Latin American and the Caribbean, a proposed information system for animal genetic resources, linking up with Canada and the United States of America, is now in the final stage of completion and is due to be launched in 2014. Additional countries from the Latin America and Caribbean region will be invited to participate.

In Asia, focus has been on the strengthening and consolidating inventory, characterization, and monitoring of trends and associated risks, in order to determine conservation priorities and plan strategic breeding programmes. Activities related to this strategic priority area include work towards the establishment of early warning systems and response mechanisms at national level.

In the Southwest Pacific, an online network for discussions, dissemination of information, and communication between National Coordinators continues to be maintained. In order to streamline expenditure, integrating animal genetic resources-related matters into other regional meetings and workshops has been encouraged. As in the previous reporting period, the main activity within Strategic Priority Area 1 has been a characterization project on indigenous pigs and chickens, which has involved a number of countries.

[34] http://www.fao.org/Ag/AGAInfo/programmes/en/genetics/Second_state.html
[35] CGRFA-12/09/Report. Appendix G. ftp://ftp.fao.org/docrep/fao/meeting/017/k6536e.pdf
[36] Austria, Bulgaria, Cyprus, Estonia, Finland, Georgia, Greece, Hungary, Iceland, Ireland, Italy, Netherlands, Poland, Republic of Moldova, Slovakia, Slovenia, Switzerland, United Kingdom
[37] http://www.rfp-europe.org/index.php?id=492

Strategic Priority Area 2. Sustainable Use and Development

Reported regional-level activities within this strategic priority area are restricted mainly to Europe. The ERFP Task Force on Access and Benefit Sharing has contributed to discussions related to the European Union's legal framework for access and benefit-sharing in the wake of the adoption of the Nagoya Protocol. Several crossborder or multicountry projects are reported, including the continuation of the SUBSIBREED Project ("Proper way of supports for endangered livestock breeds"), which focuses on appropriate support measures for locally adapted livestock breeds in the European Union. The Animal Genetic Resources Network – Southwest Pacific continues to promote animal genetic resources issues at all levels in order to raise awareness and funds and encourage stakeholders to make sustainable use of their animal genetic resources.

Strategic Priority Area 3. Conservation

In Europe, ERFP established a working group on *ex situ* conservation,[38] which provides guidance to the ERFP assembly and supports and coordinates work on *ex situ* conservation throughout Europe. In 2012, a workshop to discuss a European gene bank strategy was organized by the ERFP, the European Federation of Animal Science (EAAP) and FAO. A draft concept for a European Gene bank Network for Animal Genetic Resources (EUGENA) was created in 2013, with the participation of 16 European countries, and is currently being implemented. ERFP has also supported a number of *in situ* conservation projects under its call for action. No regional gene bank has been established in Latin American and the Caribbean. However many countries within the region have created their own national gene banks. The Animal Genetic Resources Network – Southwest Pacific continues to stress the importance of establishing regional *ex situ* conservation facilities, because of the continuous threats facing the region's animal genetic resources. An important recent development has been the development of national livestock strategies that include animal genetic resources-related issues. This may lead to the allocation of funding for conservation measures. Establishing a regional *ex situ* gene bank is regarded as an important objective, but funding is limited. External support for conservation projects is sought, and the establishment of a gene bank in a developed country that has the necessary facilities available is regarded as a potential way forward. Priorities in Asia include capacity-building in methodologies for *in situ* and *ex situ* conservation.

Strategic Priority Area 4. Policies, Institutions and Capacity-Building

The ERFP continues to be involved in: facilitating regional communication; providing technical assistance; coordinating training, research and planning activities among countries; development of regional policies; assisting in the identification of projects; and interacting with government agencies, donors, research institutions and NGOs. In Latin America and the Caribbean, several regional workshops for National Coordinators for the Management of Animal Genetic Resources have been organized, and have provided opportunities for improving the integration of work on animal genetic resources within the region. The first call for proposals under the Funding Strategy for the Implementation of the Global Plan of Action resulted in the launch of two regional projects and two national projects. Since the last reporting period there has been member countries have shown increased interest in attending regional conferences on animal genetic resources. The Southwest Pacific region actively seeks partnerships with countries, organizations and other stakeholders in order to encourage collaboration in animal genetic resources management. Some animal genetic resources conservation activities have been implemented as part of strategies addressing climate change adaptation and food security measures, which are currently the main priorities at regional and national levels. In Asia, efforts to develop the regional focal point, guided by lessons learned from experiences in Europe, have continued.

[38] http://www.rfp-europe.org/fileadmin/SITE_ERFP/ERFP_meetings/2012_Bratislava/ERFP-Assembly_Bratislava2012_ExSitu_Hiemstra.pdf

V. Progress made in the implementation of the Global Plan of Action by international organizations

In accordance with the reporting schedule agreed by the Commission, FAO, in March 2014, invited close to 200 international organizations to report, via an electronic questionnaire made available on the FAO web site[39], on their activities in implementing the Global Plan of Action. This was the third round of reporting by international organizations, who had been invited in 2012 and at the end of 2010 to complete the same questionnaire.

A detailed analysis of the activities of international organizations in implementing the Global Plan of Action was provided in the 2012 *Synthesis Progress Report,*[40] The report concluded that a number of international organizations were making important contributions to the implementation of the Global Plan of Action, often via innovative, efficient and participatory programmes and projects, but that given the limited uptake of the survey, it was unclear to what extent the Global Plan of Action had influenced the activities of the majority of international organizations working in the livestock sector. Activities of international organizations were distributed across the four strategic priority areas of the Global Plan of Action. The information obtained during the latest round of reporting is consistent with these general conclusions. Some new developments are described below. The reports will be made available on the FAO web site.[41]

A total of 15 reports were received in 2014. This is more than the 11 reports received from the previous round of reporting in 2012. The significance of the State of the World reporting process probably encouraged more organizations to submit reports in the current round. The following organizations submitted reports in 2014:

- African Union Interafrican Bureau for Animal Resources (AU-IBAR);
- Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD);
- Bioversity International;
- International Atomic Energy Agency (IAEA);
- International Center for Agriculture Research in the Dry Areas (ICARDA);
- European Federation of Animal Science (EAAP);
- Heifer International;
- International Committee for Animal Recording (ICAR);
- International Livestock Research Institute (ILRI);
- League for Pastoral Peoples and Endogenous Livestock Development (LPP);
- Nordic Genetic Resource Centre (NordGen);
- Rare Breeds International (RBI);
- Safeguard for Agricultural Varieties in Europe (SAVE);
- Secretariat of the Convention on Biological Diversity (CBD);
- World Intellectual Property Organization (WIPO).

The following organizations submitted reports for the first time: ACSAD, CBD, ICAR and NordGen. The reports submitted by organizations that had not submitted reports during the previous rounds describe a wide range of activities, with each organization having its own particular focus in line with its mandate.

ACSAD reported projects addressing the establishment of genetic resources exchange networks (regional and subregional) and work on propagation, improvement and dissemination of local poultry in the Arab countries.

Activities reported by the CBD Secretariat include work on characterization, through the Global Taxonomy Initiative, as well as support for monitoring programmes and national biodiversity strategies and action plans.

[39] http://www.fao.org/ag/againfo/programmes/en/A5.html
[40] http://www.fao.org/docrep/meeting/027/mg044e.pdf
[41] http://www.fao.org/Ag/AGAInfo/programmes/en/genetics/Second_state.html

Activities reported by ICAR include providing technical support for the establishment of national animal identification and registration systems, developing animal recording and assisting in marker assisted selection.

The majority of activities reported by NordGen relate to Strategic Priority Areas 2 and 4 of the Global Plan of Action, and include work on the development of software for monitoring populations and optimal contribution selection, characterization of production environments, promotion of networking among stakeholders, and provision of training.

The World Association for Animal Production (WAAP) did not provide a report because it has undertaken few activities related to the implementation of the Global Plan of Action. However, it organized the 11th World Conference on Animal Production in Beijing in 2013.

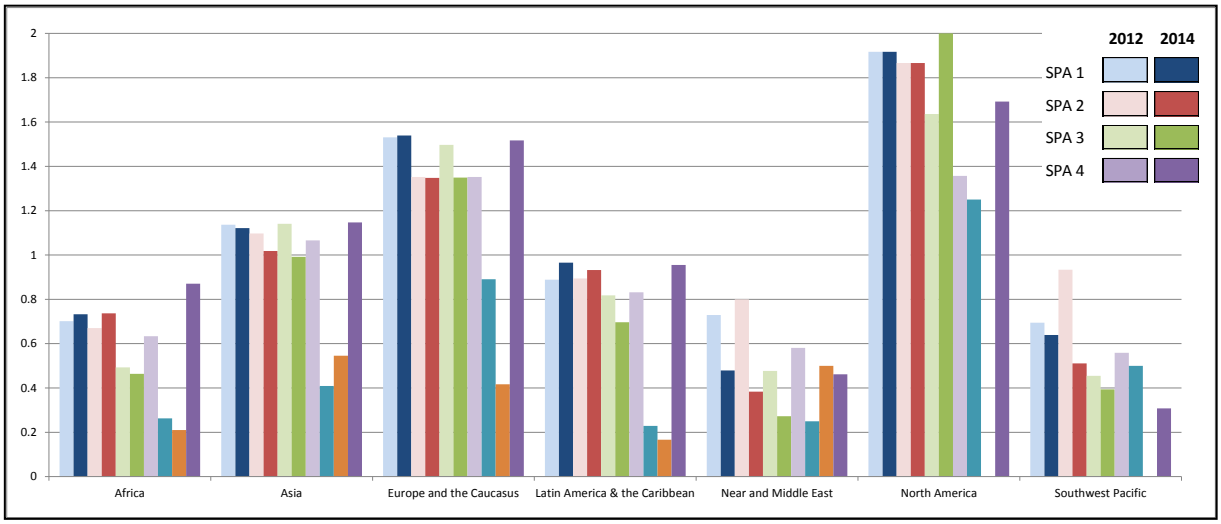
Most organizations that had previously submitted reports do not describe many major changes in their activities. Ongoing projects and other activities have progressed and new publications have been published or are in preparation. SAVE Foundation is implementing a regional project on the characterization of the Balkans Busha cattle that was selected under the Funding Strategy of the Global Plan of Action.[42]

The majority of organizations noted that despite awareness-raising initiatives, lack of political support and funding remains the biggest single constraint to the implementation of animal genetic resources programmes and projects.

VI. Changes since 2012

Figure 83 presents a comparison of the indicator scores in 2012 and 2014 for the various regions of the world, taking into account only the countries that provided reports in both rounds of reporting. The subjective nature of some of the questions, the minor adjustments made to the country progress report questionnaire, and the different contexts in which the data were collected (in 2014 as part of a more comprehensive country reporting process) mean that the apparent changes since 2012 need to be interpreted with caution. For example, falls in indicator scores do not necessarily mean that there has been a decline in the adequacy of provision in the respective strategic priority area. Countries may, for example, have decided that "partially implemented" is a more realistic description of their state of provision than "comprehensively implemented", either because of improved information on the state of provision or because of growing awareness of the scale of the challenge facing them. In other words, trends in the state of implementation may be confounded by trends in the state of knowledge and awareness at country level.

Figure 83. Indicators for strategic priority areas – regional summary comparing 2012 and 2014



[42] http://www.fao.org/ag/againfo/programmes/en/genetics/Funding_strategy.html

Note: The figure is based on data from the 82 countries that provided reports in both 2012 and 2014.

At the regional level, the Asian Animal Genetic Resources Network contributed to the reporting process for the first time. However, the Sub-Regional Focal Point for West and Central Africa did not contribute to the second round of reporting. Overall, the reports suggest that regional focal points have gained in strength, coordination and influence since 2012.

The reports from international organizations also indicate a number of new activities supporting the implementation of the Global Plan of Action. Many organizations contribute time, funding and resources across a range of strategic priorities.

VII. Conclusions

The indicators for the state of implementation of the various elements of the Global Plan of Action reveal substantial variations among the world's regions. Implementation is generally at a high level in Europe and the Caucasus and North America, at a medium level in Asia, and at a low level in other regions. However, individual countries from all regions have reached high levels of implementation in some strategic priorities.

Globally, the indicator for Strategic Priority Area 3 (Conservation) shows a slightly lower level of implementation than the indicators for the other three strategic priority areas. While the most frequently mentioned obstacles to enhancing conservation programmes are resource-related constraints, many countries mentioned that a lack of information on animal genetic resources is an important constraint. This underlines the fundamental importance of implementing Strategic Priority Area 1 (Characterization, inventory and monitoring of trends and associated risks).

In all regions, the indicators for the state of collaboration and for the state of funding show a lower level of implementation than the indicators for the strategic priority areas themselves. Financial constraints are also the most frequently mentioned obstacles and barriers to the implementation of the Global Plan of Action. Funding gaps remain substantial despite the fact that by endorsing the Global Plan of Action countries recognized that implementation required "substantial and additional financial resources"[43] and committed themselves to ensuring "due priority and attention to the effective allocation of predictable and agreed resources for the implementation of .. the Global Plan of Action"[44] and in the case of developed countries to attaching "due attention, including funding, to the implementation of .. the Global Plan of Action .. through bilateral, regional and multilateral cooperation". [45]

Analysis of the impact of the Global Plan of Action, measured in terms of whether or not progress has been made since its adoption in 2007, indicates widespread improvements. However, many countries report that in some areas of animal genetic resources management no improvements have been made since 2007. Many countries have developed national strategies and action plans for animal genetic resources in recent years. These instruments have the potential to facilitate improvements to key areas of animal genetic resources management, but effective implementation will require ongoing political commitment and adequate resources.

The regional progress reports indicate varying degrees of progress since the first round of reporting. The ERFP, the longest established regional focal point, continues to report activities across all strategic priority areas. A number of activities are reported by the Regional Focal Point for Latin America and the Caribbean and the Animal Genetic Resources Network – Southwest Pacific. The Asian Animal Genetic Resources Network, launched only in 2013, has established regional priorities for action. The Sub-Regional Focal Point for West and Central Africa did not contribute to this second round of reporting.

[43]Global Plan of Action for Animal Genetic Resources, paragraph 50; www.fao.org/docrep/010/a1404e/a1404e00.htm
[44]Global Plan of Action for Animal Genetic Resources, paragraph 67; www.fao.org/docrep/010/a1404e/a1404e00.htm
[45]Global Plan of Action for Animal Genetic Resources, paragraph 68.

International organizations continue to make significant contributions to the implementation of the Global Plan of Action, often via innovative, efficient and participatory programmes and projects. The activities of these organizations span the four strategic areas of the Global Plan of Action.

Despite the encouraging progress described in this report, the task of improving the management of the world's animal genetic resources management remains far from complete. The reasons for this continue to include a lack of sufficient financial resources and low levels of inter-country collaboration. Decision-makers are encouraged to use the country-level indicators presented in this report as a means of identifying strategic priority areas and strategic priorities where action is particularly required.

Annex

Annex 1. Overview: Indicators and targets of the Global Plan of Action by strategic priority area (SPA) and implementation and financing (collaboration and financing) and questions used for their calculation

SPA 1 Characterization, inventory and monitoring of trends and associated risks

SPA 1 Goal	Improved understanding of the status, trends and associated risks, and characteristics of all aspects and components of animal genetic resources, to facilitate and enable decision-making for their sustainable use, development and conservation
SPA 1 Indicator	The completeness of characterization and inventory and the regularity of monitoring of trends and associated risks
SPA 1 Target	Increase the completeness of characterization and inventory and improve monitoring of trends and associated risks
SP 1 a (34)	Inventory and characterize animal genetic resources, monitor trends and risks associated with them, and establish country-based early-warning and response systems
SP 1 a	The completeness of characterization
SP 1 a	Increase the completeness of characterization

Q 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)?
Q 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)?
Q 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)

SP 1 b	Inventory and characterize animal genetic resources, monitor trends and risks associated with them, and establish country-based early-warning and response
SP 1 b	The completeness of inventory and the regularity of monitoring of trends and associated risks
SP 1 b	Increase the completeness of inventory and improve monitoring of trends and associated risks

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

Q 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)?

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

Q 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)?

Questions contributing in addition to SPA 1

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

Q 59.1 Are there any national NGOs active in your country in the fields of characterization?

SPA 2 Sustainable use and development

SPA 2 Goal Enhanced sustainable use and development of animal genetic resources in all relevant production systems, as a key contribution to achieving sustainable development, poverty eradication and adaptation to the effects of climate change

SPA 2 The state of sustainable use and development

SPA 2 Improve the state of sustainable use and development

SP 3 Establish and strengthen national sustainable use policies

SP 3 The state of national sustainable use policies

SP 3 Improve the state of sustainable use policies

Q 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)?

Q 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)?

SP 4 Establish national species and breed development strategies and programmes

SP 4 The state of national species and breed development strategies and programmes

SP 5 Improve the state of national species and breed development strategies and programmes

Q 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)?

Q 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)?

Q 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)?

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

Q 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)?

Q 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)?

Q 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)?

SP 5 Promote agro-ecosystems approaches to the management of animal genetic resources

SP 5 Indicator The state of efforts to promote agro-ecosystems approaches to the management of animal genetic resources

SP 5 Target Increase efforts to promote agro-ecosystems approaches to the management of animal genetic resources

Q 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)?

Q 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)?

SP 6 Support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources

SP 6 Indicator The state of efforts to support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources

SP 6 Target Increase efforts to support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources

Q 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)?

Q 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)?

Questions contributing in addition to SPA 2

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

Q 59.2 Are there any national NGOs active in your country in the fields of sustainable use and development?

SPA 3 Conservation

SPA 3 Goal Secure the diversity and integrity of the genetic base of animal genetic resources by better implementing and harmonizing measures to conserve these resources, both in situ and ex situ, including in the context of emergencies and disasters

SPA 3 The state of conservation

SPA 3 Improve the state of conservation

SP 7 Establish national conservation policies

SP 7 The state of national conservation policies

SP7 Improve the state of national conservation policies

Q 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)?

SP 8 Establish or strengthen in situ conservation programmes

SP 8 The state of in situ conservation programmes

SP 8 Improve the state of in situ conservation programmes

Q 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)?

SP 9 Establish or strengthen ex situ conservation programmes

SP 9 The state of ex situ conservation programmes

SP 9 Improve the state of ex situ conservation programmes

Q 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)?

Q 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)?

Q 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)?

Questions contributing in addition to SPA 3

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

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

Q 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)?

Q 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)?

	Q 44	Does your country implement programmes to promote documentation and dissemination of knowledge, technologies and best practices for conservation (SP 11, Action 2)?
	Q 59.3	Are there any national NGOs active in your country in the fields of conservation of breeds at risk?

SPA 4 Policies, institutions and capacity-building

SPA 4 Goal		Established cross-cutting policies and legal frameworks, and strong institutional and human capacities to achieve successful medium- and long-term planning for livestock sector development, and the implementation of national programmes for the long-term
SPA 4 Indicator		The state of national policies and legal frameworks and efforts to strengthen institutional and human capacities
SPA 4 Target		Improve the state of national policies and legal frameworks and increase efforts to strengthen institutional and human capacities
SP 12		Establish or strengthen national institutions, including national focal points, for planning and implementing animal genetic resources measures, for livestock sector development
SP 12 Indicator		The state of efforts to strengthen national institutions for planning and implementing animal genetic resources measures
SP 12 Target		Increase efforts to strengthen national institutions for planning and implementing animal genetic resources measures
	Q 47	Does your country have sufficient institutional capacity to support holistic planning of the livestock sector (SP 12, Action1)?
	Q 53	Has your country established a National Advisory Committee for Animal Genetic Resources (SP 12, Action 3)?
	Q 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)?
SP 13		Establish or strengthen national educational and research facilities
SP 13 Indicator		The state of efforts to strengthen national educational and research facilities
SP 13 Target		Increase efforts to strengthen national educational and research facilities
	Q 60	Has your country established or strengthened research or educational institutions in the field of animal genetic resources management (SP 13, Action 3)?
SP 14		Strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for sustainable use and development, and for conservation
SP 14 Indicator		The state of efforts to strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for sustainable use and development, and for conservation
SP 14 Target		Increase efforts to strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for sustainable use and development, and for conservation

	Q 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)?
	Q 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)?
SP 18	Raise national awareness of the roles and values of animal genetic resources	
SP 18	The state of efforts to raise national awareness of the roles and values of animal genetic resources	
SP 18	Increase efforts to raise national awareness of the roles and values of animal genetic resources	
	Q 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)?
SP 20	Review and develop national policies and legal frameworks for animal genetic resources	
SP 20	The state of national policies and legal frameworks for animal genetic resources	
SP 20	Improve the state of national policies and legal frameworks for animal genetic resources	
	Q 48	What is the current status of your country's national strategy and action plan for animal genetic resources (SP 20)?
	Q 56	Does your country have national policies and legal frameworks for animal genetic resources management (SP 20)?
Questions contributing in addition to SPA 4		
	Q 49	Are animal genetic resources addressed in your country's National Biodiversity Strategy and Action Plan (http://www.cbd.int/nbsap/)?
	Q 50	Are animal genetic resources addressed in your country's national livestock sector strategy, plan or policy (or equivalent instrument)?
	Q 51	Has your country established or strengthened a national database for animal genetic resources (independent from DAD-IS) (SP 15, Action 4)?
	Q 52	Have your country's national data on animal genetic resources been regularly updated in DAD-IS?

Implementation and financing of the Global Plan of Action: Collaboration

Indicator	The state of international collaboration for planning and implementing animal genetic resources measures	
Target	Improve the state of international collaboration for planning and implementing animal genetic resources measures	
	Q 62.1	Has your country established or strengthened international collaboration in (SP 16): Characterization?
	Q 62.2	Has your country established or strengthened international collaboration in (SP 16): Sustainable use and development?
	Q 62.3	Has your country established or strengthened international collaboration in (SP 16): Conservation of breeds at risk?
	Q	Are there any international NGOs active in your country in the fields of:

	63.1	Characterization?
	Q 63.2	Are there any international NGOs active in your country in the fields of: Sustainable use and development?
	Q 63.3	Are there any international NGOs active in your country in the fields of: Conservation of breeds at risk?
	Q 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)?
	Q 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)?
	Q 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)?
	Q 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)?
	Q 71	Has your country contributed to the development of international technical standards and protocols for characterization, inventory and monitoring of animal genetic resources (SP2)?
	Q 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)?
	Q 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)?
	Q 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)?
	Q 75	Has your country participated in regional or international campaigns to raise awareness of the status of animal genetic resources (SP19)?
	Q 76	Has your country participated in reviewing or developing international policies and regulatory frameworks relevant to animal genetic resources (SP 21)?

Implementation and financing of the Global Plan of Action: Funding

Indicator		The state of funding for the conservation, sustainable use and development of animal genetic resources
Target		Improve the state of funding for the conservation, sustainable use and development of animal genetic resources
	Q 64	Has national funding for animal genetic resources programmes increased since the adoption of the GPA?
	Q 65	Has your country received external funding for implementation of the GPA?
	Q 68	Has your country provided funding to other countries for implementation of the Global Plan of Action?

Annex 2. Relationship between implementation of Strategic Priority Area 1 and the availability of breed population data at regional level