

(Questions are extracted from Annex I)

KEY SCIENTIFIC AND TECHNICAL NEEDS RELATED TO THE IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

The Subsidiary Body on Scientific, Technical and Technological Advice, at its seventeenth meeting, identified key scientific and technical needs related to the implementation of the Strategic Plan for Biodiversity 2011-2020, including:

(a) *Social science* - The need for better ways to draw on social sciences to motivate choices consistent with the objectives of the Strategic Plan for Biodiversity 2011-2020 and to develop new approaches through, inter alia, better understanding of behavioural change, production and consumption patterns, policy development, and the use of non-market tools. The need for more effective communication, education and public awareness to be spread more widely through school systems and other channels and to devise communication and awareness strategies on biodiversity, complementing communication, education and public awareness efforts with other perspectives including research on intercultural and intracultural communication experiences;

Answers

- An opinion poll was conducted by the Cabinet Office in 2009, 2012 and 2014, to survey public awareness towards biodiversity and to use it for taking measures. In particular, the following lists were surveyed: recognition of the word “biodiversity”, recognition of the National Biodiversity Strategy, recognition of the Aichi Biodiversity Targets (2012 and 2014), awareness to actions for conservation of biodiversity (2012 and 2014), awareness to values of ecosystem services (2012 and 2014), actions by multiple sectors for conservation of biodiversity (2012 and 2014), future actions for lives in consideration of biodiversity.
- Since 2013, as in units of 47 prefectures, Japan has been developing environmental education programs for elementary and middle school students which include a viewpoint of Education for Sustainable Development (ESD).

(b) *Data and information* – The need for more accessible, affordable, comprehensive, reliable and comparable data and information streams through, inter alia, facilitated access to remote sensing, better collection and use of *in situ* observations, proxies, citizen science, modelling, biodiversity monitoring networks, better application of data standards and interoperability related to data acquisition and management to produce policy-relevant products, including indicators and scenarios to inform decision-making;

Answers (Reference: page 38 of 5th National Report)

- Operation of “Monitoring sites 1000”: In order to continuously track changes in ecosystems at fixed points over a long period of time, Japan launched the Project for Promoting the Monitoring of the

Sites of Important Ecosystems (Monitoring Sites 1000) in 2003. As of March 2015, surveys are being conducted at 1,017 sites (including provisional values) with various ecosystems nationwide. Monitoring Sites 1000 is characterized by the fact that citizens who are active in local communities cooperate with the project in addition to surveys by researchers, in order to implement the surveys more efficiently and effectively. The project has prepared manuals and is holding training sessions and seminars in order to support citizen activities. The results of these surveys are being used as basic data for designating protected areas, preparing the Red List, etc. The project compiles survey results over a five-year period for each type of ecosystem, in order to have more effective utilization of survey results for assessing the achievement levels for the Aichi Biodiversity Targets and for the implementation of other conservation measures.

(c) *Evaluation and assessment* – The need for improving and promoting methodologies for assessing the status and trends of species and ecosystems, hotspots and conservation gaps as well as ecosystem functions, ecosystem services and human well-being, at the national, regional and global levels;

Answer (Reference: page 93 of the 5th National Report)

- With respect to information related to biodiversity at the national level, ongoing surveys centered mainly around the National Survey on the Natural Environment, which has been performed since 1973, have been carried out. However, it is important that such surveys be carried out in an ongoing manner via the same methods in order to perceive changes over time.

Detailed information about the National Survey on the Natural Environment is available at:

http://www.biodic.go.jp/english/kiso/fnd_f.html

- Reports of Comprehensive Assessment of Biodiversity in Japan (Japan Biodiversity Outlook) and Japan Satoyama Satoumi Assessment were released in 2010. Furthermore, to grasp the trend of biodiversity and ecosystem services in Japan, we are supposed to complete the comprehensive assessment by 2015. Therefore, we are currently conducting the assessment, which is called JABES.
- The Ministry of the Environment has been conducting the "Comprehensive Research for the Observation, Forecast and Evaluation of Asian Biodiversity" since 2011 with Japanese researchers using the Environment Research and Technology Development Fund. As well, "Strategic Research on Global Mitigation and Local Adaptation to Climate Change" has been started since 2015. Another research project, "Predicting and Valuing Ecological and Socio-Economic Values of Ecosystem Services through Integrated Social-Ecological Systems Approach", is now in the stage of feasibility study.

(d) *Planning and mainstreaming* – The need for improvement and better use of appropriate planning tools, and approaches for mainstreaming, in implementing the Strategic Plan for Biodiversity 2011-2020 through, inter alia: biodiversity safeguards, tools and methods for spatial planning, including integrated land use and coastal and marine planning, valuation of biodiversity, ecosystem functions and ecosystem services; and mainstreaming biodiversity into sustainable development and other relevant policy sectors;

Answers

- The government of Japan formulates the National Spatial Strategy as a policy guideline for comprehensive spatial development. The current edition was developed in 2008, and it will be revised in the summer of 2015. It will include the importance of promoting preservation of biodiversity as well as conservation, restoration and utilization of natural environment to build sustainable nation in harmony with nature.
- Visualizing biodiversity and ecosystem services through economic valuations is an effective way of mainstreaming biodiversity. In Japan, the carrying out, collection, and accumulation of case examples of assessments within Japan are moving forward, such as the trial economic assessments of the biodiversity that was conserved via the designation of Amami Oshima as a national park, the national countermeasures against crop damage from sika deer (*Cervus Nippon*), the restoration of wetlands and tidal flats and the rehabilitation of Tsushima leopard cat (*Felis bengalensis euphilura*), which were done thus far, as well as the estimates of economic values of ecosystem services of Japan's wetlands and tidal flats in FY2013. (page 63 of the 5th National Report). Also, for the purpose of publicizing economic values of ecosystem services widely to citizens, the government has created a pamphlet which introduces TEEB (The Economics of Ecosystems and Biodiversity) and also created a website which explains the economic valuation of biodiversity and ecosystem services in order to raise the awareness of people (page 11 of the 5th National Report).
- The Japan Business and Biodiversity Partnership is a program voluntarily established in 2010 by the business community and others. In order to encourage businesses to take action for the conservation of biodiversity and the sustainable use of its components, the program provides and shares information via the website and publishes a newsletter, as well as surveying the activities conducted by corporate members each year. The results of the surveys show that the awareness of businesses and activities by businesses has increased. For example, 50% of businesses included the idea of biodiversity conservation in their management principles and policies or environmental policies as of 2010, but the percentage increased to 93% by 2014.)
- The Ministry of the Environment has been conducting the "Comprehensive Research for the Observation, Forecast and Evaluation of Asian Biodiversity" since 2011 with Japanese researchers using the Environment Research and Technology Development Fund. As well, "Strategic Research on Global Mitigation and Local Adaptation to Climate Change" has been started since 2015. Another research project, "Predicting and Valuing Ecological and Socio-Economic Values of Ecosystem Services through Integrated Social-Ecological Systems Approach", is now in the stage of feasibility study.

(e) *Linking science and policy* – The need for better integration of science and policymaking and for improved science-policy interfaces, particularly at the local and national levels and through the use of IPBES, and the improved and wider use of tools to promote policy coherence and policy evaluation and to produce scenarios and options relevant to policymakers;

Answers

- For appropriate decision making on biodiversity, it is important that experts assess biodiversity using the latest scientific findings and that the results are shared with the world. The government will actively participate in the IPBES established in April 2012 and contribute to their activities so that it will become an effective and efficient framework which operates on a scientific basis. The government will also prepare domestic systems to work with the IPBES. (page 109 of NBSAP)

(f) *Maintenance, conservation and restoration of ecosystems* – The need for better understanding of ecosystem processes and functions and their implications for ecosystem conservation and restoration, ecological limits, tipping points, socio-ecological resilience and ecosystem services; and improved methodologies and indicators for monitoring ecosystem resilience and recovery, in particular for vulnerable ecosystems;

Answers

- Providing advice to the nature restoration council for the nature restoration projects which this council formulates based on the Law for the Promotion of Nature Restoration.

Details of the Law for the Promotion of Natural Restoration:

http://www.env.go.jp/nature/saisei/law-saisei/law_e.pdf

- Formulating the plans for the “Ecosystem Maintenance and Recovery Work” in accordance with the National Park Law and their implementation.
- Continuous operation of Monitoring Sites 1000
- Designating sika deer and wild boar as wildlife to be controlled, which are causing serious damage on ecosystems, etc., due to their population increase and their habitat expansion. Also, implementing support for development of plan and implementation of, and related to, projects of capturing such wildlife based on the protection and control of wild birds and mammals and hunting management law, to prefectural governments.
- Japan is providing technical support to a number of initiatives based upon the Action Plan for the Conservation and Sustainable Use of Socio-ecological Production Landscapes (Satoyama), which was formulated in FY2010, with a view towards the conservation and use of Satoyama areas within Japan. These initiatives include sharing information related to precedent case examples, and providing technical support on handbooks on methods for selecting regions subject to conservation and their conservation and management.

(g) *Economic instruments* – The need for better understanding of the performance of economic instruments and their wider use in achieving the objectives of the Strategic Plan for Biodiversity 2011-2020, as well as poverty eradication strategies, taking into account national socioeconomic conditions, and the need for improved guidance and tools to develop positive incentives and for the identification, elimination, phasing out or reform of harmful incentives, consistent and in harmony with the Convention and other relevant international obligations, as well as the integration of biodiversity in national accounting, as appropriate, and reporting systems;

Answers

- Support is provided to local governments and other entities for the formulation of statutory plans related to the conservation of biodiversity in local regions and the promotion of initiatives based on these plans. As of the end of FY2014, 53 statutory plans (Local Biodiversity Strategies, implementation plans for the extermination of invasive alien species, etc.) had been formulated.
- Support projects promoting the conservation of biodiversity have been offering financial support for biodiversity conservation activities through partnerships by a diverse array of actors in local regions in order to encourage such activities. As of FY2014 support had been provided to the activities of 64 organizations. As for those organizations to which support has concluded, all of the organizations are still continuing with or expanding upon their activities through a variety of different structures to this day.

(h) *Traditional knowledge* – The need for better ways to include relevant indigenous and traditional knowledge systems and the collective actions of indigenous and local communities to complement scientific knowledge in support of the effective implementation of the Strategic Plan for Biodiversity 2011-2020, with the approval and involvement of the holders of such knowledge, innovations and practices;

(i) *Scientific and technical cooperation* – The need to foster improved scientific and technical cooperation among Parties, scientific networks and relevant organizations, in order to match capabilities, avoid duplication, identify gaps and achieve efficiencies. The need to enhance the clearing-house mechanism of the Convention to make scientific and technical cooperation more effective;

(j) *Different approaches* – The need to strengthen non-monetary valuation tools and methodologies for the maintenance of ecosystem functions.

Answers

- The number of organizations taking part in the International Partnership for the *Satoyama* Initiative, which was launched at the Tenth Meeting of the Conference of the Parties to the Convention on Biological Diversity (COP10), has grown from the 51 organizations from the time of its initial launch to a total of 167 organizations (as of April 2015), including the governments of 16 countries. Moreover, the *Satoyama* Initiative Promotion Network, which promotes coordination between the relevant organizations within Japan under the principals of the initiative, was established at the fourth regular meeting for the initiative (September 2013) with the participation of 101 organizations.