ASSESSING COST OF IMPLEMENTING THE AICHI TARGETS OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020

Target 19

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

1. Background

1.1 Existing work

The present note builds on, and amends, the financial needs assessment for implementing the Strategic Plan for Biodiversity 2011-2020 and the Aichi biodiversity targets, undertaken by the GEF Secretariat for the fourth replenishment cycle (quoted as GEF 2011 hereafter). It is complemented with existing or proposed budgets for major pertinent regional and global programmes and mechanisms, such as the Diversitas International Biodiversity Science Programme[1], bionet and its regional programmes,[2] and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).[3]

1.2 Technical Rationale

Each country needs access to information to identify threats to biodiversity and determine priorities for conservation and sustainable use. While nearly all Parties report that they are taking actions related to monitoring and research, most also indicate that the absence or difficulty in accessing scientific information is an obstacle to the implementation of the goals of the Convention. Action taken to reach this target will also benefit the other targets of the Strategic Plan by encouraging new research, the development of new technologies and improved monitoring. Such actions will strengthen the policy-science interface and will contribute to the fulfilment of the other elements of the Strategic Plan. [4]

1.3 Relevant COP Decisions

This target is related to relevant decisions on identification, monitoring, indicators and assessments, technology transfer and cooperation, and the Global Taxonomy Initiative. In addition, COP guidance to the GEF is also relevant as it indicates concrete activities with funding needs.

COP 10: Decision X/24: Review of guidance to the financial mechanism

4.12 Access to and transfer of technology (Article 16)

(a) Implementation of the programme of work on technology transfer and technological and scientific cooperation, consistent with Articles 16 to 20 of the Convention and based on needs and priorities identified by developing country Parties and Parties with economies in transition, in particular:
   i. Building policy, legal, judicial and administrative capacity;
   ii. Facilitating access to relevant proprietary technologies;
   iii. Providing other financial and non-financial incentives for the diffusion of relevant technologies;

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[1]/ http://www.diversitas-international.org/

[2]/ http://www.bionet-intl.org

[3]/ http://www.ipbes.net/

[4]/ http://www.cbd.int/sp/targets/rationale/target-19/

iv. Building capacities of, and empowering, indigenous and local communities and all relevant stakeholders with respect to access to and use of relevant technologies;
v. Improving the capacity of national research institutions for the development of technologies, as well as for adaptation, diffusion and the further development of imported technologies consistent with their transfer agreement and international law including through fellowships and international exchange programmes;
vi. Supporting the development and operation of regional or international initiatives to assist technology transfer and cooperation as well as scientific and technical cooperation, including those initiatives designed to facilitate South-South cooperation and South-South joint development of new technologies and also such cooperation among countries with economies in transition;

(b) Preparation of national assessments of technology needs for implementation of the Convention;
(c) Ongoing national programmes for conservation and sustainable use of biodiversity through improved access to and transfer of technology and innovation;
(d) Provision of capacity building, where needed, on, inter alia: (i) technologies for conservation and sustainable use; (ii) governance and regulatory frameworks associated with access and transfer of technology and innovation;
(e) Projects that promote access to, transfer of and cooperation for joint development of technology.

4.13 Technical and scientific cooperation and Clearing-House Mechanism (Article 18)

(a) Capacity building for the clearing-house mechanism, such as training in information and communication technologies and web content management that enable developing countries and countries with economies in transition to fully benefit from modern communication, including the Internet;
(b) Establishing and strengthening biodiversity information systems such as, inter alia, training, technology and processes related to the collection, organization, maintenance and updating of data and information;
(c) Establishment and updating of national clearing-house mechanisms and participation in the clearing-house mechanism of the Convention;
(d) Activities that provide access to scientific and technical cooperation.

COP 10 – Decision X/25: Additional guidance to the financial mechanism

Technology transfer and cooperation

14. *Recalling* the importance, as underlined in the preamble to decision VIII/12, of developing specific approaches to technology transfer and technological and scientific cooperation to address the prioritized needs of countries based on the priorities in national biodiversity strategies and action plans and to link technology needs assessments to those priorities, while avoiding non-specific, global approaches to this issue, *invites* funding institutions, including the Global Environment Facility, to provide financial support to the preparation of such technology needs assessments;

Clearing-house mechanism

15. *Requests* that the Executive Secretary and the Global Environment Facility cooperate to facilitate access to funding for the clearing-house mechanism as a key component to support the implementation of the Strategic Plan for Biodiversity 2011-2020, as well as the implementation of national biodiversity strategies and action plans;

2. Implementation: Milestones and activities

2.1 Milestones

- By 2012, a review of the relevant knowledge and technologies available in-country and of the gaps in knowledge and technologies necessary to implement the Convention has been carried out;
- By 2014, a national clearing-house mechanism is established, together with a strategy to improve access to knowledge and technologies.[5]

2.2 Activities

For knowledge that is already available, access could be improved through the further development of the clearing-house mechanism at national and global levels, and through a functional clearing house mechanism supporting both information dissemination and the effective promotion of scientific and technological cooperation. Relevant information includes biodiversity-related data as well as tools, methodologies and technologies that are relevant for biodiversity conservation, sustainable use and benefit sharing, and case-studies, good practices, and lessons learned, of their use.

Further efforts are also needed, at national, regional, and global levels, to improve biodiversity-related knowledge and reduce uncertainties around the relationship between biodiversity change, ecosystem services and impacts on human well-being. This requires substantial investment in global and national biodiversity observation networks, implementation of the Global Taxonomy Initiative, and further investment in research, including modelling, participatory research, and scientific and technological cooperation more generally, as well as in the science-policy interface (i.e., at global level, IPBES).

Individual and institutional capacity building at national level will constitute a major component and will in particular contribute to strengthening national and regional knowledge and innovation networks including higher education and other research institutions. This may include the establishment of new chairs, teacher visiting programs, student exchange programs, national and international scholarships, research grants, among others, possibly embedded in strengthened long-term scientific and technological cooperation programmes. Institutional capacity building will also include concrete projects to establish and strengthen national nodes of the clearing house mechanism.

Enabling activities may include, in the first years, undertaking a review of the relevant knowledge and technologies available in-country and of the gaps in knowledge and technologies necessary to implement the Convention, as per the suggested milestone above.

3. Costing

3.1 Activities at national level

In light of the above, the following types of activities are relevant:

1) Observation
2) Individual and institutional capacity building and strengthening
3) Enabling activities

GEF (2011) assesses, for 2014-2018, an average of $1 million US per country for capacity building and strengthening, and another $1 million per country for observation at national level. This implies $200K

[5]/ ibid.

US per year, respectively. GEF (2011) provides a funding range under three different levels of ambition: introduction of pertinent activities (i) at least in 50 countries; (ii) in 100 countries or (iii) in 155 countries. For the sake of the global costing, it is suggested to adapt the levels of ambition (in terms of the number of countries) accordingly.

Enabling activities such as the suggested review and gap analysis of knowledge and technologies could be $50K US per country.

For the period 2013-2020 (8 years), the average total would then be $3,250,000 US per country.

National activities: evaluated at three levels of ambition

a) Implementing this activity in 100 countries would require $325 million US
b) Implementing this activity in 155 countries would require $503.75 million US
c) Implementing this activity in all countries would require $633.75 million US

3.2 Activities at sub-regional and regional levels

GEF (2011) assesses, for 2014-2018, cooperative programmes varying by the number of countries and the endowment by country, under again three different levels of ambition:

a) Implementing this activity in 5 countries at $3 million per country would require $15 million US, or $3 million per year;
b) Implementing this activity in 7 countries at $5 million US would require $35 million US, or $7 million per year;
c) Implementing this activity in 10 countries at $5 million US would require $50 million US, or 10 million per year.

An example: BioNET's regional networks:

The global network for taxonomy BioNET has regional networks - the 'Locally Owned and Operated Partnerships' (LOOPs). These help their members build and apply taxonomic capacity to address issues in various fields, including other sciences, biodiversity research, management and use, agriculture, food security and poverty reduction, industries, and policy decision making. BioNET comprises to date 10 government-endorsed regional networks with 105 member countries in Africa, Asia, the Caribbean, Latin-America, and Oceania. [6] According to informal expert advice, enabling these regional networks to effectively discharge this portfolio of activities would require an average of $3 million US per year and network, or $30 million per year – and this would just be for implementing the Global Taxonomy Initiative, notwithstanding other areas where regional or sub-regional scientific and technological cooperation programmes would be useful (e.g., on invasive alien species). This shows that the GEF figures, for the level of regional cooperation, need to be amended for the purpose of this global costing exercise.

For the period 2013-2020 (8 years), it is therefore suggested to define funding needs under levels of ambition as follows:

Sub-regional and regional activities: evaluated at three levels of ambition

a) $2 million US per year for 20 regional or sub-regional programmes, which would require $320 million US;

[6]/ See http://www.bionet-intl.org/opencms/opencms/regions/default.jsp

b) $3 million per year for 30 regional or sub-regional programmes, which would require $720 million US:
c) $3 million for 40 regional or sub-regional programmes, which would require $1.2 billion US.

3.3 Activities at global level

GEF (2011) foresees capacity building and strengthening as well as observation as relevant activities at global level and assesses, for 2014-2018, $5 million or $10 million US for capacity building ($1 or $2 million per year), while observation at the global level will require more funds and is evaluated at $20 million US, at $30 million US or at $40 million US ($4, $6, or $8 million per year).

For the purpose of global costing, these figures need to be amended as follows.

a) *Global work on data collection, for instance for taxonomic purposes*
It is unclear whether 'observation at global level' in GEF (2011) includes global taxonomic work; however, it is noteworthy that just operating the Bionet Global Programme for instance comes at $1 million per year[7], while the annual budget of the Global Biodiversity Information Facility (GBIF) comes already at $6.1 million US per year.[8] In light of these figures, and for the sake of the global costing exercise, such data collection work will therefore be treated as a separate activity and will be assessed accordingly.

b) Promoting global scientific and technological cooperation
For instance, core funding for the Diversitas International Biodiversity Science Programme was $1.35 million US per year in 2010, not including various in-kind contributions. Strengthening the global clearing house mechanism for effective promotion and facilitation of technical and scientific cooperation is assessed at initially $195K US per year.

c) Strengthening the global science-policy interface
For instance, the total annual indicative cost of operating the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is assessed between $5.5 million US and $13.3 million US.[9]

For the period 2013-2020 (8 years), it is therefore suggested to define funding needs under levels of ambition as follows:

Global activities: evaluated at three levels of ambition

a) Capacity building at $1 million per year, or $8 million in total;
Observation at $4 million per year, or $32 million in total;
Data collection at $10 million per year, or $80 million in total;
Promoting global scientific and technical cooperation at $2 million per year, or $16 million in total;
Science-policy interface at $5.5 million per year, or $44 million US in total;
With total requirements of $180 million US.

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[7]/ http://www.bionet-intl.org/opencms/opencms/fundingCampaign/fundingCampaign-engl.html

[8]/ GBIF Annual Report 2011, at http://www.gbif.org/communications/resources/print-and-online-resources/download-publications/annual-reports/

[9]/ See document UNEP/IPBES.MI/2/7 at http://www.ipbes.net/previous-ipbes-meetings/second-session-of-plenary.html

b) Capacity building at $2 million per year, or $16 million in total;
Observation at $6 million per year, or $48 million in total;
Data collection at $15 million per year, or $120 million in total;
Promoting global scientific and technical cooperation at $3 million per year, or $24 million in total;
Science-policy interface at $10 million per year, or $80 million US in total;
With total requirements of $288 million US.

c) Capacity building at $2 million per year, or $16 million in total;
Observation at $8 million per year, or $64 million in total;
Data collection at $15 million per year, or $120 million in total;
Promoting global scientific and technical cooperation at $4 million per year, or $32 million in total;
Science-policy interface at $13.3 million per year, or $106.4 million US in total;
With total requirements of $338 million US.

3.4 Global costing

Bearing in mind that different levels of ambition could be picked for different levels, summing up the above across same levels of ambition lead to indicative global figures, for 2013-2020 as follows:

All activities: evaluated at three levels of ambition

a) Low ambition: **$825 million US** (or $103 million US per year)
b) Medium ambition: **$1.516 billion US** (or $190 million US per year);
c) High ambition: **$2.171 billion US** (or $271 million US per year).
