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CONTRIBUTION OF THE COORDINATION MECHANISM OF THE GLOBAL TAXONOMY INITIATIVE (GTI) TO THE FURTHER DEVELOPMENT AND ELABORATION OF GOALS AND TARGETS FOR THE STRATEGIC PLAN BEYOND 2010

Note by the Executive Secretary

1. At its ninth meeting, the Conference of the Parties to the Convention on Biological Diversity, in decision IX/22, paragraph 4 (a), endorsed the outcome-oriented deliverables contained in the annex to the same decision as relevant outputs of the programme of work on the Global Taxonomy Initiative (GTI).

2. Pursuant to decision IX/22, the GTI Symposium "Taking Stock of the Renaissance in Taxonomy: Post -2010 Capacity-Building in Taxonomy for the Convention on Biological Diversity" was held at United Nations Office at Nairobi on 15-16 May 2010. The speakers at the Symposium presented the progress on the outcome-oriented deliverables and the participants discussed on the application of these deliverables for the implementation of the Convention beyond 2010.

3. At the ninth meeting of the Coordination Mechanism for the GTI, held at the United Nations Office at Nairobi on 16 May 2010, there was further discussion on the Strategic Plan of the Convention beyond 2010, taking into account the result of the symposium mentioned in the paragraph 2 above and the prioritized needs in taxonomy summarized in the note by the Executive Secretary on results and lessons learned from regional taxonomic needs assessments and identification of priorities (UNEP/CBD/SBSTTA/14/15). The Coordination Mechanism decided to send information for the further development and elaboration of goals and targets for the post-2010 Strategic Plan of the Convention.

4. Accordingly, the Executive Secretary is circulating herewith, for the information of participants in the third meeting of the Ad Hoc Open-ended Working Group on Review of Implementation of the Convention on Biological Diversity a "Contribution of the Coordination Mechanism of the GTI to further development and elaboration of goals and targets for the Strategic Plan beyond 2010 of the Convention" in the third meeting of the Ad Hoc Open-ended Working Group on Review of Implementation of the Convention as submitted by the Chair of the GTI Coordination Mechanism.

5. The report is circulated in the form and language in which it was received by the Secretariat.

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Contributions of the Coordination Mechanism of the Global Taxonomy Initiative (GTI) to the further development and elaboration of goals and targets for the post-2010 Strategic Plan from the 9th meeting of the GTI CM, 16th May 2010, UNON Nairobi, to the 3rd meeting of the Working Group on Review of Implementation

The Coordination Mechanism of the CBD Global Taxonomy Initiative (GTI CM) at its 9th meeting (16th May 2010, UNON, Nairobi) welcomed the opportunity to provide input via the Secretariat to WGRI3 and other formal and informal consultations into the discussions towards developing the new, post 2010 Strategic Plan for the Convention, and in particular towards the outcome-oriented goals and targets to be adopted by COP10. Discussions by the CM were based on draft documents UNEP/CBD/SBSTTA/14/10 and UNEP/CBD/WGRI/3/3, and also incorporated views from a wider range of experts collected during the dedicated GTI Symposium on "Taking Stock of the Renaissance in Taxonomy: Post 2010 Capacity Building for the Convention on Biological Diversity" (15-16 May 2010, UNON, Nairobi).

The CM agreed that its discussions and input should concentrate on contributions towards possible milestones and indicators for the 20 drafted post-2010 targets, and try to not to engage in discussing the overall mission of the strategy or the re-wording of the proposed targets as currently contained in the relevant documents (SBSTTA14 + WGRI3).

Notwithstanding these self-imposed limitations, the CM also agreed that the targets for the new, post 2010 Strategy to be adopted should be kept as short, succinct and clear as possible, especially for communication to society and the greater public, and be based on and substantiated by simple and objectively measurable indicators, following current best scientific standards and practises. According to these criteria, it was felt that particularly current targets 9, 10, 11, 14, 15 and 19 could benefit from some re-wording. Given the high political nature of the discussions around the targets, Parties could perhaps consider to agree to a shorter, "catch-phrase" title for each target to be used for communication, and have the balanced negotiated wording accepted as a subtitle for official use.

Overall it was felt that the GTI through its cross-cutting nature and Program of Work (PoW) with built in linkages to all thematic areas and many other cross cutting issues of the Convention could become especially important for monitoring the achievements of many of the new goals and targets, and should thus be involved in further discussing and developing possible indicators and monitoring protocols. In order to underpin the substance and credibility of the new strategy, Parties, other governments and stakeholders should make a dedicated effort to better involve and liaise with scientific institutions and organizations involved in biodiversity research, particularly those with significant taxonomic resources, which genuinely are interested in documenting and monitoring biodiversity, its conservation and sustainable use.

With reference to the "Scientific Considerations" stated in UNEP/CBD/SBSTTA/14/10 (section IV, pp. 4 ff), the CM would like to point out that the GTI, like the Global Strategy for Plant Conservation (GSPC), in its updated PoW also now relies on some 55 specific, outcome-oriented deliverables, mostly with clear timelines and outputs, for its implementation. With some of these deliverables already been met (see UNEP/CBD/SBSTTA/14/15), the format chosen has already been successful towards documenting and monitoring progress towards implementation for individual actions and goals of the GTI PoW. Following adoption of the post 2010 targets, the CM will consider how to further develop indicators and targets for taxonomic capacity which underlies the achievement of these targets.

With regard to the GTI PoW and its overriding principle for taxonomic capacity building, it was also emphasized that the challenge remains to develop and sustain sufficient human, institutional and other infrastructural capacity in many parts of the world relevant for the GTI. Many countries still fall short of sufficient capabilities to even inventory, document, and monitor the state of their biodiversity, which is critical for successfully conserving, sustainably managing and using biodiversity, and not the least for implementing an international regime on access and benefit sharing. In that respect it is timely that from the recommendation on GTI (UNEP/CBD/SBSTTA/14/L.6, para 15) recently adopted by SBSTTTA14, the Secretariat will be mandated, if COP10 so decides, to develop a comprehensive capacity building strategy for the Global Taxonomy Initiative, taking into account taxonomic needs and priorities for the thematic areas and other cross-cutting issues, in particular for the work on protected areas and invasive alien species.

Following this focussed approach for its discussion, the CM felt that direct linkages to and further involvement of the GTI could be made and would be particularly relevant to further elaborating targets 1, 5, 6, 7, 9, 11, 12, 13, 16, 19 and 20, as currently drafted. The comments provided below to individual targets focus on input and contributions by taxonomy and the GTI to these targets, including possible indicators, and partners and stakeholders listed. In that sense, this information is meant to complement and in no way to replace the background and detail provided in the available documents.

Strategic Goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society:

Target 1: By 2020, everyone is aware of the value of biodiversity and the steps they can take to protect it

Rationale: This target is directly relevant for GTI, in particular for planned activity 4 of its PoW on "Public awareness and education", but also in relation to planned activities 6 (Strengthening of existing networks for regional cooperation in taxonomy) and 7 (Develop a coordinated global taxonomy information system). The CM considers wide and open access to and general use of baseline information about local and regional biodiversity as both a key instrument and a measure for achieving this target.

Among the possible indicators and baseline information already listed for this target (in SBSTTA14/10), is the "the number of visits to museums and parks", which are mostly institutions engaging in taxonomic research and (taxonomic) knowledge dissemination. It should be pointed out, however, that some countries still lack museums, botanic gardens or other relevant public institutions with a dedicated focus on biodiversity, or don't have such institutions easily available to most of their population.

Considering further possible mechanisms and indicators for achieving and measuring the appreciation of biodiversity by society, the wider availability and access, and most importantly the use of online information systems on biodiversity should be considered. Many of these systems either directly represent taxonomic products in the form of online catalogues, national/regional inventories or registers for organisms, or are based on them. Relevant examples include the Encyclopedia of Life (EOL), The Global Biodiversity Information Facility (GBIF), as well as dedicated systems for specific organism groups such as FishBase, HerpNET, International Legume Database and Information Service (ILDIS), AlgaeBase, Species Fungorum, the Global Butterfly Information System (GloBIS), and many others. Also, digitization efforts of biodiversity literature resources so far only available in print such as through the Biodiversity Heritage Library (BHL) project can contribute to this goal and towards the wider use of such information by citizen science (non-professional or volunteers) activities. Such online systems also become increasingly customized for local and regional applications. With access to and use of

such online systems and media being easily recorded, they can also provide reliable indicators for achieving this target.

Possible indicators:

- access to and usage of online information systems on (e.g., GBIF, EOL, BHL);
- availability and number of national and regional biodiversity (online) information systems, including national faunas and floras;
- number of dedicated biodiversity-related museums, parks, and gardens available at the national level;
- number of citizen science activities engaging in biodiversity recording and monitoring at national and local level.

Partners and Stakeholders:

Digital online biodiversity information systems and data bases (e.g., GBIF, EOL, CoL, BHL, Barcode of Life database, etc); botanic gardens, zoos, and nature parks; local and national natural history museums; international and regional organisations with a taxonomic focus (e.g., BirdLife, IUCN-SSP, etc); dedicated citizen science groups and programs for recording and monitoring biodiversity.

Target 2: By 2020, the values of biodiversity are integrated by all countries in their national accounts, national and local strategies and planning processes, and by business, applying the Ecosystem Approach.

Target 3: By 2020, subsidies harmful to biodiversity are eliminated, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied.

Target 4: By 2020, Governments and stakeholders at all levels have formulated, and have begun to implement, sustainability plans to keep the use of resources within ecological limits.

Although no immediate suggestions for input by the GTI was received by the CM to targets 2 to 4, it was mentioned that some of the baseline information for these targets also will need to use taxonomic data and information.

Strategic Goal B. Reduce the direct pressures on biodiversity and promote sustainable use.

Rationale: Effectively reducing direct pressures on biodiversity requires for all ecosystems and habitats a better understanding of individual species biology, especially their tolerance of environmental change and ability to rebound or recover from perturbation, including an understanding of their distribution and dynamics. Our ability to objectively assess and monitor the state of specific habitats and ecosystems, including the recognition of specific tipping points, importantly relies on taxonomic knowledge and associated data, e.g., regarding the biological properties of individual species and their distribution dynamics. Furthermore, species composition is a relevant factor included for most measures and indices used to assess ecosystems and habitats, which again require taxonomic inventory data to be available.

This same rationale applies in particular to targets 5, 6, 7, 9 and 10 currently listed under this goal.

Target 5: By 2020, the loss and degradation of forests and other natural habitats is halved.

Rationale: Meaningful indicators for measuring the achievement of this target require taxonomic resources and knowledge, both in the form of baseline information and for developing meaningful indicators. This target relates to GTI PoW planned activity 8 (Forest biological diversity), as well as to those GTI planned activities linking to other thematic areas and habitats (10-14). For objectively assessing forests as well as any other natural habitats, relevant indicators will include or be based on "trends in the abundance and distribution of selected species" as already mentioned (SBSTTA 14/10), for which taxonomic baseline data, including identification tools and services, are needed. In the case of plants, such baseline data should also become available through local and national efforts in implementing the Global Strategy for Plant Conservation (GSPC), in particular its targets 1-3.
For further interpretation and application of these ground-based data towards assessing forest degradation at larger scales, they need to be integrated with information from the extent of forest gained from remote sensing and other monitoring techniques (e.g., from GEO-BON), for which a mechanism is already listed as a specific output (4.8.2) under the GTI PoW under its planned activity on forest biological diversity. In an analogous manner, this applies also to other types of natural habitats to be possibly assessed under this target.

Possible indicators:

- biodiversity richness indices for monitoring and assessing the state of forests and other habitats;
- availability and number of natural forest and other habitat assessments at national and local level;
- availability and application of species-related indicators for forest degradation

Partners and Stakeholders:

The Center for International Forestry Research (CIFOR), the International Union of Forest Research Organizations (IUFRO), and national and local forestry research institutions; national and local research institutions focussing on other specific natural habitats; GEO-BON, including all actors.

Target 6: By 2020, overfishing and destructive fishing practices are eliminated.

Rationale: See above, as under goal B, and target 5.
GTI can help to define and provide species-related indicators on fishing practices, and means and ways to implement them.

Partners and Stakeholders:

FishBase, Census of Marine Life, Ocean Biogeographic Information System (OBIS), World Register of Marine Species (WoRMS), GBIF, Consortium for the Barcode of Life (CBOL); FAO; national and regional taxonomic research institutions.

Target 7: By 2020, all areas under agriculture, aquaculture and forestry are managed sustainably.

Rationale: See above, as under goal B, and target 5.
GTI can help to define and provide species-related indicators on sustainable management for agriculture, aquaculture, and forestry, and means and ways to implement them.

Partners and Stakeholders:

FishBase, GBIF; BioNET regional loops; Consortium for the Barcode of Life (CBOL); FAO; national and regional taxonomic research institutions.

Target 8: By 2020, pollution from excess nutrients and other sources has been brought below critical ecosystem loads.

Target 9. By 2020, pathways for the introduction and establishment of invasive alien species have been controlled, and established invasive alien species are identified, prioritised and controlled or eradicated.

Rationale: This target directly relates planned activity 16 (Invasive alien species) of the GTI PoW and to several of its outcome oriented deliverables, e.g., *Output 5.16.1* which provides information on IAS to be accessible and *Output 5.16.2*, which provides relevant taxonomic information (identification tools, including keys and DNA-barcodes) for customs and quarantine services on invasive alien species at national and regional levels, to be available by 2012. Furthermore, *Output 5.16.4.* (online information system for actual and potential invasive species for each continent), *Output 5.16.8.* (correlate and manage updated taxonomy for all known invasive species, following the call in the Global Invasive Species Programme (GISP) Global Strategy), and *Output 5.16.9.* (development of protocols for IAS identifications) are also relevant for this target, both as mechanisms achieving it and as possible indicators, among others.

Possible indicators:

- (improved) ability to rapidly identify potential and actual invasive alien species;
- (improved) ability to detect and contain IAS before becoming established using taxonomic knowledge;
- trends in available monitoring data of invasive alien species at regional and global levels;
- availability of identification keys, field guides and other taxonomic and educational materials addressing invasive alien species;
- number of countries where national invasive alien species strategies contain lists of species in need to be controlled at national and regional levels;
- number of species listed as controlled invasive alien species at national, regional or global levels.

Partners and stakeholders:

Global Invasive Species Program (GISP), GISIN, FishBase, GBIF, Catalogue of Life (including Species 2000 and ITIS), BioNET-INTERNATIONAL, IUCN-SSC-ISSG, Consortium for the Barcode of Life (CBOL), Secretariat of IPPC.

Target 10: By 2020, manage the multiple pressures on coral reefs and other vulnerable ecosystems impacted by climate change and ocean acidification so as to maintain their integrity and functioning.

Rationale: See above, as under goal B, and target 5.
GTI can help to define and provide species-related indicators on sustainable management for coral reefs and other vulnerable ecosystems impacted by climate change and ocean acidification, and means and ways to implement them.

Partners and Stakeholders:

Census of Marine Life, Ocean Biogeographic Information System (OBIS), World Register of Marine Species (WoRMS), ReefBase, FishBase, GBIF; Consortium for the Barcode of Life (CBOL); national and regional taxonomic research institutions; the International Coral Reef Initiative (ICRI); UNEP-WCMC.

Strategic Goal C. Safeguard ecosystems, species and genetic diversity

Target 11: By 2020, at least 15% of land and sea areas, including the areas of particular importance for biodiversity, have been protected through representative networks of effectively managed protected areas and other means, integrated into the wider land- and seascape.

Rationale: All scientific procedures and methods for identifying and prioritizing areas for their protection value based on biodiversity rely, often heavily, on taxonomic baseline information supplemented by distribution information. From a GTI perspective, protected area selection based on such methods would lead to increased biodiversity conservation value for those areas, compared to areas selected purely based on landscape, political, or other criteria. Likewise, for monitoring the effective, sustainable management of protected areas, basic updated knowledge about the biodiversity contained is required. Ideally, all protected areas would have access to a complete and regularly updated inventory about all their biodiversity, which currently however is not available in most cases. The recent focus on an "all taxa biodiversity inventory + monitoring" (ATBI+M) approach for protected areas could be expanded to greater benefits for more sustainable management, and also provide means to better involve local population and stakeholders.

Protected area selection and management thus depends on implementation of the GTI PoW, specifically its planned activity 19 (Protected areas). From the outcome oriented deliverables currently contained in the GTI PoW under this activity, particularly *Output 5.19.1.* (inventories for each protected area for at least mammals, birds, reptiles, amphibians, fish, and butterflies), and *Output 5.19.3.* (pilot project to demonstrate identification of habitats and priority-setting for establishing new protected areas, through distributions of species at local, national and regional levels) seem particularly relevant for monitoring the achievement of this target.

An important milestone in improving availability of current biodiversity data for individual protected areas has recently been achieved through cooperation between and establishing a dynamic interface between the World Database of Protected Areas (WDPA) and The Global Biodiversity Information System (GBIF). Further linking of these baseline inventory data with species-based information, e.g., through the Encyclopedia of Life (EOL), will greatly enhance both the visibility of the biodiversity components for protected areas, and their effective management especially at the local and national level. When applied to protected areas, the Integrated Biodiversity Assessment Tool (ibat) could also benefit from linking to these taxonomic and species baseline information.

Possible indicators:

- Number / percentage of protected areas with available, up-to-date, comprehensive biodiversity inventories
- Number / percentage of protected areas with available data from current biodiversity monitoring programs
- Selection of protected areas based on scientific biodiversity richness indicators
- Trends for species of high conservation status / value in protected areas at national and local level

Partners and stakeholders:

GBIF; World Database of Protected Areas (WDPA), including IUCN + UNEP-WCMC; Encyclopedia of Life (EOL); national and local biodiversity inventory and assessment programs; national and regional taxonomic research institutions involved in biodiversity inventory and monitoring programs; BirdLife International; Conservation International (CI); UNESCO-MAB; WWF.

Target 12: The extinction of known threatened species has been prevented.

Rationale: Monitoring achievements for this target require baseline taxonomic and associated species-based data and information, particularly on species distribution and occurrence. With regard to the GTI PoW, this target specifically relates to planned activities 5 (Global and regional capacity-building to support access to and generation of taxonomic information), 7 (Development of a coordinated taxonomy information system), and 19 (Protected areas). As a specific outcome-oriented deliverable from the GTI PoW, *Output 5.19.2.* (Automated development of lists of the IUCN - Red List taxa for all Protected Areas) directly relates to this target.

For accessing information on the occurrence and distribution of threatened species, many GTI related projects and products are already available, such as existing online biodiversity information systems (GBIF, EOL, etc). These mostly taxonomic-based systems, however, are mostly not focussed on threatened species or provide yet fully comprehensive information for those species, but already are increasingly used as information sources for reporting obligations.

Possible indicators:

- Trends in occurrence and distribution of threatened (red-listed) species
- Trends in occurrence and distribution of CITES listed species
- Completeness, availability, and trends for red lists at national and regional levels

Partners and stakeholders:

GBIF; EOL; IUCN Red Lists; World Database of Protected Areas (WDPA).

Target 13: By 2020, the status of crop and livestock genetic diversity in agricultural ecosystems and of wild relatives has improved.

Rationale: See above, as under goal B, and target 5. In addition, taxonomic institutions and facilities play a key role in maintaining and supporting both the *in* and *ex situ* storage of agricultural crops, livestocks, and other beneficial organisms in seedbanks, genebanks, gardens, cultures or other suitable collections. This target relates directly to planned activity 12 (Agricultural biological diversity) of the GTI PoW, and the outcome-oriented deliverables included there (*Outputs* 4.12.1, 4.12.2 and 4.12.3.).

Possible indicators:

- Number of agricultural and livestock species, their genetic diversity, and their wild relatives safely preserved at in and ex situ storage
- Number of agricultural pests and beneficial organisms controlled or managed at national and regional levels, by using taxonomic guides, tools, including DNA barcoding
- Trends in beneficial organisms populations (e.g., pollinators) critical to agricultural production and ecosystems

Partners and stakeholders:

RBG Kew and other botanic gardens and seedbanks; WFCC registered Culture Collections; Consortium of the Barcode of Life CBOL); CGIAR; FAO.

Strategic Goal D: Enhance the benefits from biodiversity and ecosystems.

Rationale: The GTI can probably contribute by linking species-based information especially on useful or important properties of species and prediction of potential uses for the two goals listed under this goal. This could include identification services for species locally appropriate for REDD and other restoration projects.

Target 14: By 2020, ecosystems that provide essential services, and contribute to local livelihoods, are safeguarded or are being restored, and adequate and equitable access to essential ecosystem services is guaranteed for all, especially for indigenous and local communities and the poor and vulnerable.

Target 15: By 2020, the contribution of biodiversity to ecosystem resilience and to carbon storage and sequestration is enhanced, through conservation and restoration, including restoration of at least 15% of degraded forest landscapes, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Strategic Goal E. Enhance implementation through planning, knowledge management and capacity development, and the fair and equitable sharing of the benefits arising from the use of genetic resources.

Target 16: By 2020, each Party has implemented an effective national biodiversity strategy, contributing to the achievement of the mission, goals and targets of the Strategic Plan.

Rationale: For developing and implementing an effective national biodiversity strategy, taxonomic baseline information and resources are essential components, and also critically underpin any biodiversity-related reporting activities. Similarly, preparation of National Reports and other ways of monitoring this target is supported by GTI baselines.

Possible indicators:

- Number of countries which included species diversity at national level in the 5th National Report
- Number of countries which icluded species diversity at protected areas in the 5th National Report

Target 17: By 2020, access to genetic resources is enhanced, and substantial benefits are shared, consistent with the international regime on access and benefit sharing.

Target 18: By 2020, traditional knowledge, innovations and practices are protected and their contribution to the conservation and sustainable management of biodiversity is recognized and enhanced.

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

Rationale: As indicated in the background text (SBSTTA14/10) for this to be a target for the GTI, the CM also felt that target 19 is at the centre of most of the GTI PoW with its focus on building and providing scientific and technical capacity, especially for inventorying, recording, and monitoring biodiversity. The target touches upon almost all aspects and activities (1-19) included under the GTI PoW, and many of its output oriented deliverables, which could also be considered as possible milestones and indicators. Furthermore, in collaboration between the CM, the 2010 Biodiversity Indicator Partnership (BIP), and other relevant stakeholders, a few new, genuine "taxonomy" indicators should be developed, which would allow to monitor progress for reaching and sustaining adequate scientific taxonomic capacities at local and national levels, which currently are still lacking for many countries and regions.

Apart from the GTI and other programmes under the Convention directly linked to biodiversity science and technologies, such as the Global Strategy for Plant Conservation (GSPC), the Global Invasive Species Programme

(GOSP) and others, this target also provides opportunity for the wider engagement of other fields from the biodiversity research community and scientific stakeholders, all involved in sharing knowledge and especially innovative technologies. The CM is convinced that the greater involvement of the biodiversity research community and scientific stakeholders, some listed below, will not only benefit the achievement of this target, but also many other activities of the Convention (see also, results from the Trondheim 2010 Conference).

For the success of this target, however, the considerable knowledge gap remaining with regard to many aspects of biodiversity, from the basic task of inventorying life on Earth to fully understanding the functioning of ecosystems, demands that respective research and capacity building priorities need to be build into national, and, especially, international development plans and research programs. New and emerging technologies relevant for taxonomy, such as DNA barcoding and meta-genomic approaches, IT applications including automated identification tools, and improved field recording techniques provide opportunities to considerably speed up taxonomic discoveries, and the wider dissemination and applicability of new data and information.

Possible indicators:

- Number of countries with up-to-date national biodiversity inventories (floras & faunas)
- Number of countries and regions with national/regional centres for biodiversity information and research
- Number of countries sharing biodiversity data and contributing to GBIF
- Improved ability to identify species and its distribution at the local and national level
- Increased rate of species discovery and species description

Partners and Stakeholders:
BioNET International; CBOL, including other regional and thematic DNA barcoding projects and programmes; DIVERSITAS; GBIF; The Consortium of European Taxonomic Facilities (CETAF), The Natural Science Collections Alliance (NSCA), and other networks of collection-based taxonomic institutions; scientific biological, especially taxonomic societies and networks; national and regional taxonomic research institutions.

Target 20: By 2020, capacity (human resources and financing) for implementing the Convention has increased tenfold.

Rationale: As mandated by the GTI PoW, both human and infrastructural capacity for taxonomy needs to be increased for most countries and regions in order to contribute to implementing the goals of the Convention. The overriding focus on capacity building for the entire GTI PoW makes this target also relevant for the GTI. Like for other sectors, progress towards achieving the target can be directly assessed by proportional increases and levels of support to taxonomic institutions and services at the respective national and regional levels. In the context of building taxonomic capacities, the challenging gap persisting between many developing, especially biodiversity-rich and developed countries needs to be particularly addressed.

Possible indicators:

- Rates of investment / institutional support for taxonomic facilities
- Number of experts employed for taxonomic work
- Size, maintenance, and output of taxonomic research collections
- Capacities available for implementing GTI at the national and regional level.
