

A PROPOSAL TO EAST ASIAN GOVERNMENTS
FOR THE ESTABLISHMENT AND OPERATION OF AN
EAST ASIAN LOOP OF BioNET-INTERNATIONAL

KNOWN AS

E A S I A N E T



This Proposal was produced by
The East Asia LOOP Formulation Workshop
23-27 July 2001, Beijing, PR China,
organised by
The Institute of Zoology, Chinese Academy of Sciences, PR China
and
The Technical Secretariat of
BioNET-INTERNATIONAL –
The Global Network for Taxonomy



Glossary

ANet	Ant Net - The Asian myremecology network
ANMR	Asian Network on Microbial Research
BIOCON	The consortium of expert centres in the developed world that provide input to BioNET-INTERNATIONAL's sub-regional LOOPs
CAS	Chinese Academy of Sciences
CBD	Convention on Biological Diversity (www.biodiv.org)
CDI	Capacity Development Initiative (www.gefweb.org/Site_Index/CDI/cdi.html)
CHM	Clearing House Mechanism (of the CBD; www.biodiv.org/chm/)
CICETE	China International Centre for Economic & Technical Exchanges, Ministry of Foreign Trade & Economic Cooperation
COP	Conference of the Parties of the CBD
DIWPA	DIVERSITAS in West Pacific/Asian (http://ecology.kyoto-u.ac.jp/~gaku/diwpaindex.html)
EANetTBC	East Asian Network for Taxonomy and Biodiversity Conservation
EASIANET	The proposed East Asian LOOP of BioNET-INTERNATIONAL
EcoPort	A web-based ecology knowledge processor (www.ecoport.org)
EuroLOOP	The consortium of developed country expert institutions in Europe
GBIF	Global Biodiversity Information Facility (www.gbif.org)
GEF	Global Environment Facility (www.gefweb.org/)
GISP	Global Invasive Species Programme (http://jasper.stanford.edu/GISP/)
GTI	Global Taxonomy Initiative of the CBD (www.biodiv.org/programmes/cross-cutting/taxonomy/default.asp?lg=0)
IGO	Inter-governmental organisation
IPI	International Pollinators Initiative
IPPC	International Plant Protection Convention (www.ippc.int/)
LCC	LOOP Coordinating Committee
LOOP	Locally Organised and Operated Partnership (= BioNET sub-regional network)
MA	Millennium Assessment of Global Ecosystems (www.millenniumassessment.org/en/index.htm)
NACI	National Coordinating Institute of a LOOP
NECI	Network Coordinating Institute of a LOOP
NGO	Non-governmental organisation
NI	National Institute of a member country of a LOOP
PoW	Programme of Work
SBSTTA	Subsidiary Body for Scientific, Technical and Technological Advice (to the CBD)
SDC	Swiss Agency for Development and Cooperation (http://194.230.65.134/dezaweb2/home.asp)
SEPA	State Environmental Protection Administration (PR China)
Species 2000 AO	Species 2000 Asia Oceania (www-sp2000ao.nies.go.jp/)
SPS	Sanitary and Phytosanitary
TCDC	Technical Cooperation between Developing Countries (www.tcdwide.net/tcdweb/index.html / www.ecdc.net.cn/)
TCN	Technical Cooperation Network
TecSec	The Technical Secretariat of BioNET-INTERNATIONAL
UN	United Nations (www.un.org)
UNDP	United Nations Development Programme (www.undp.org)
WTO	World Trade Organisation (www.wto.org)

Contents

I. EXECUTIVE SUMMARY	6
II. BACKGROUND.....	9
A. INTERNATIONAL BACKGROUND.....	9
B. EAST ASIA BACKGROUND.....	10
C. THE NEED FOR TAXONOMIC CAPACITY BUILDING.....	11
D. SOLUTIONS	12
E. EAST ASIAN PRIORITIES.....	13
F. RECOMMENDATIONS.....	15
1. TO THE GOVERNMENTS OF EAST ASIAN COUNTRIES.....	15
2. TO GOVERNMENTS OF DEVELOPED COUNTRIES	16
3. TO FUNDING AGENCIES.....	16
III. THE EAST ASIAN LOOP.....	17
A. TITLE AND DESCRIPTION.....	17
B. GOAL	17
C. OBJECTIVES.....	17
D. MEMBERSHIP	18
E. STRUCTURE (FIGURE 1).....	18
1. National Level.....	18
2. Subregional Level	18
3. Global Level (Figure 2).....	19
F. MANAGEMENT AND COORDINATION	20
G. MANDATES	21
1. The LOOP Coordinating Committee (LCC)	21
2. The Network Coordinating Institute (NECI).....	21
3. The National Coordinating Institutes (NACIs)	22
4. National Institutes (NIs).....	23
5. Working Groups.....	24
H. RESPONSIBILITIES	24
I. FUNDING	24
IV. WORK PROGRAMMES	26
A. INFORMATION AND COMMUNICATION SERVICES	26
1. GOAL.....	26
2. OBJECTIVES.....	26
3. ACTIVITIES.....	27
B. HUMAN RESOURCE DEVELOPMENT (TRAINING)	28
1. GOAL.....	28
2. OBJECTIVES.....	28
3. ACTIVITIES.....	28

C.	REHABILITATION OF RESOURCES.....	30
1.	<i>PROJECT GOAL</i>	30
2.	<i>OBJECTIVES</i>	30
3.	<i>ACTIVITIES</i>	31
D.	DEVELOPMENT AND APPLICATION OF APPROPRIATE TECHNOLOGIES AND TOOLS.....	31
1.	<i>PROJECT GOAL</i>	31
2.	<i>OBJECTIVES</i>	32
3.	<i>ACTIVITIES</i>	32
E.	ESTABLISHMENT AND SUSTAINABILITY OF THE NECI.....	33
1.	<i>OBJECTIVES</i>	33
2.	<i>ACTIVITY</i>	33
APPENDIX		35
A.	NATIONAL COORDINATING INSTITUTES (NACIs) AND THEIR ASSOCIATED NATIONAL INSTITUTES (NIs).....	35
B.	PARTICIPANTS LIST OF THE FORMULATION WORKSHOP.....	37

I. EXECUTIVE SUMMARY

- 1) The EASIANET Formulation Workshop was held at the Institute of Zoology, CAS, Beijing, China, 23-27 July 2001. The Workshop was organised by the Institute of Zoology, Chinese Academy of Sciences (CAS) and the Technical Secretariat of BioNET-INTERNATIONAL, the Global Network for Taxonomy.
- 2) The Workshop was attended by a total of 18 participants: 2 national representatives from each potential EASIANET Member country i.e. PR China, DPR Korea, Japan, Mongolia, and South Korea, 2 resource persons from the BioNET-INTERNATIONAL Technical Secretariat, UK, 1 person as Acting Programme Officer - Global Taxonomy Initiative (GTI) of the Convention on Biological Diversity (CBD) Secretariat, Montreal, Canada, a representative from the Secretariat of ASEANET, the Southeast Asian LOOP of BioNET-INTERNATIONAL and two observers each from the Chinese Academy of Sciences (CAS) and Chinese State Environmental Protection Administration (SEPA).
- 3) The travel costs of the official delegates from DPR Korea and Mongolia and the full local costs related to the workshop were supported by the TCDC Programme of UNDP through their TCDC Division, and CICETE (China International Centre for Economic & Technical Exchanges, Ministry of Foreign Trade & Economic Cooperation).
- 4) The goals of the Workshop were to:
 - (i) formulate this detailed proposal for the establishment of a Technical Cooperation Network (TCN) for taxonomic capacity building in the East Asian region;
 - (ii) debate and agree on TCN structures to best strengthen capacity building, collaboration and networking among and between member countries and their relevant institutions;
 - (iii) develop a strategic plan for subregional taxonomic capacity building that meets the needs of national sustainable development programmes and National Biodiversity Strategy and Action Plans including:
 - (iv) development of a shared vision for pooling, sharing and optimising subregional expertise, information, records, collections, infrastructure and technologies for the further enhancement of taxonomic capacity in the subregion; and
 - (v) drafting programmes of work to meet the identified taxonomic capacity needs of regional and national development and biodiversity management plans, including the required support for implementation of international environmental conventions, for example, the Convention on Biological Diversity (CBD), the International Plant Protection Convention (IPPC) and other initiatives the Global Invasive Species Programme (GISP)

- 5) The Opening Address was given by Dr Nicholas King, Director of the BioNET-INTERNATIONAL Technical Secretariat (TecSec), UK, followed by official welcoming speeches from Dr Yi-Yu Chen, Vice President of CAS and Mr Dehui Wang, Deputy Director General of the Department of Nature and Ecology Conservation, SEPA, PR China.
- 6) A Keynote Address on the need for a Technical Cooperation Network to build the required taxonomic capacity in East Asia was delivered by Prof. Da-Wei Huang, Director of the Institute of Zoology, CAS, PR China.
- 7) Dr. Nicholas King, TecSec, briefed the delegates on the latest developments in BioNET-INTERNATIONAL including the progress made by existing subregional LOOPS and the wide international support for the role of LOOPS in enabling subregions to become self-reliant in taxonomic needs by building taxonomic capacity.
- 8) Dr Chris Lyal, Acting Global Taxonomy Initiative (GTI) Programme Officer, Convention on Biological Diversity (CBD) Secretariat, briefed delegates how Parties to the CBD have identified the current inadequacy of taxonomic capacity as an impediment to implementing the CBD in most countries and how the GTI Programme of Work (recommended by SBSTTA 6) identifies the BioNET-INTERNATIONAL LOOPS as appropriate subregional structures and mechanisms for developing taxonomic capacity and services to support implementation of the CBD.
- 9) A GTI report for Asia was given by Dr Junko Shimura, Asian GTI Coordination Mechanism representative, Japan.
- 10) Country reports were presented by national representatives on the current status of taxonomic resources in the five prospective EASIANET countries i.e. PR China, DPR Korea, Japan, Mongolia and South Korea.
- 11) Realising the need to optimise the use of taxonomic resources and expertise through pooling and sharing national taxonomic capacity and making their infrastructures, material and manpower resources available to all member countries through a reciprocal arrangement, the Workshop participants unanimously recommended the establishment of a Technical Cooperation Network for the East Asian region, to be known as EASIANET, the EAST ASIAN LOOP of BioNET-INTERNATIONAL.
- 12) The Workshop participants unanimously recommended the Institute of Zoology, CAS to be the Network Coordinating Institute (NECI). Each Member country also put forward their country's nomination for a National Coordinating Institute (NACI) and a list of the National Institutions (NIs) which had agreed to participate in the network during national consultations prior to the formulation workshop.
- 13) The objectives, work programmes, membership, structure, management and coordination of EASIANET, and the mandates of the LOOP Coordinating Committee, NECI, NACIs

and NIs were debated, identified and described. The network will function as a 'Locally Owned and Operated Partnership' or LOOP of BioNET-INTERNATIONAL, whereby all decisions on priorities, activities and operations are made by the member country representatives who make up the LOOP Coordinating Committee, the decision-making body of the network.

14) Five Work Programmes were drawn up to meet the priority needs within each country and the subregion as a whole:

- a) Information and Communication Services;
- b) Human Resource Development (Training);
- c) Rehabilitation of Resources;
- d) Development and Application of Appropriate Technologies and Tools; and,
- e) Establishment and Sustainability of the NECI and LOOP

15) Following governmental endorsement of this proposal, BioNET-INTERNATIONAL will make available some US\$130 000 over the first two years of EASIANET's existence to catalyse the establishment of the LOOP structure and activities towards ensuring future sustainability.

16) This Proposal is now presented to member country governments for their approval and endorsement.

II. BACKGROUND

A. INTERNATIONAL BACKGROUND

Taxonomy is a tool of fundamental importance to meeting the whole spectrum of humankind's daily needs: production of food, fuel and fibre, maintenance of human, plant and animal health, and in general assuring a safe and sustainable environment to live in and the future well-being of people and the biodiversity on which we are totally dependent. Therefore, not only should taxonomy be appreciated and recognised as a critically necessary resource, but it should also be available to all in need of it world-wide. However, taxonomy's importance passes largely unnoticed and, whilst the majority of the world's population and the earth's biodiversity are to be found in the developing world, some 95% of the world's taxonomic skills and resources reside in the developed world.

The inadequacy of taxonomic skills and resources in the developing world places in jeopardy not only the people of developing countries, but also the crops, livestock and genetic material upon which the developed world is also increasingly dependent. Further, with globalisation there are ever greater movements of people and commodities. The growing frequency of such movements is rapidly spreading associated organisms, particularly pests and diseases, into new countries. The quickest and most cost effective solution to this problem is effective quarantine enforcement including "safe origin" requirements, which is only possible through prompt and accurate identification of the organisms involved at the points of exit and entry.

Implementation of a number of international conventions and agreements - such as the Convention on Biological Diversity (CBD), the International Plant Protection Convention (IPPC), the Sanitary and Phytosanitary (SPS) Agreement of the World Trade Organisation (WTO), the Global Invasive Species Programme (GISP) and the Cartagena (Biosafety) Protocol - is greatly hindered by the inability of countries to access adequate taxonomic capacity. In particular, Parties to the CBD have recognised that implementation of the Convention is being significantly constrained by the lack of capacity in developing countries - the so-called 'Taxonomic Impediment' - and under the CBD the need for taxonomic capacity building is being explicitly addressed by its Global Taxonomy Initiative (GTI). Most recently, the Sixth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD has recommended to the Conference of the Parties (COP) of the CBD a GTI Programme of Work (PoW) identifying in detail a range of taxonomic capacity needs to facilitate implementation of the Convention¹. This Proposal therefore makes specific reference to the GTI PoW and a number of other relevant CBD Decisions and Recommendations to demonstrate how EASIANET can contribute to

¹ COP6 will consider the GTI PoW for endorsement in April 2002.

implementation of the GTI PoW and thereby underpin the full implementation of the CBD (and other related activities) by member countries.

BioNET-INTERNATIONAL, the Global Network for Taxonomy, was established in 1993 with a specific mandate to facilitate establishment of subregional Technical Cooperation Networks (TCNs) to assist taxonomic capacity building and has already created an international network of more than 1000 taxonomic institutions in over 120 countries, facilitated by a Technical Secretariat based in the United Kingdom. Via its subregional TCNs known as LOOPs (Locally Organised and Operated Partnerships), BioNET-INTERNATIONAL provides a proven model for *pooling, sharing and optimising existing taxonomic resources on a reciprocal basis* in the various subregions, and for maximising the transfer of taxonomic information, expertise and new technologies from expert centres in the developed world to the relevant institutions in the LOOPs. The GTI PoW specifically identifies the subregional networks of BioNET-INTERNATIONAL as appropriate structures and mechanisms for building the required taxonomic capacity subregionally in support of national CBD obligations. Therefore, establishment of the East Asian subregional LOOP will be a significant step towards enhancing the capacity of the LOOP member countries to meet the decisions pertaining to the GTI and fulfil their obligations under the CBD.

B. EAST ASIA BACKGROUND

For the purposes of this proposal, the following five countries, namely PR China, DPR Korea, Japan, Mongolia and South Korea are designated as comprising East Asia. Of these five countries, three, namely PR China, DPR Korea and Mongolia are classified as developing countries.

The East Asia subregion has abundant natural resources and a wealth of biodiversity. East Asian countries, being conscious of their unique, rich but fragile natural inheritance have long been prominent contributors to the world's environmental conservation initiatives, as evidenced by their ratification of both the Convention on Biological Diversity and Agenda 21. There is deep common concern throughout the region over environmental sustainability and particularly over issues that sound taxonomic services can help to mitigate, such as pesticide pollution from agricultural activities, identification, control and eradication of alien invasive species and the irreversible loss of genetic resources through ongoing habitat destruction.

During the last two decades, some parts of the subregion have experienced massive economic development activities aimed at raising standards of living. The countries of the subregion are increasingly concerned that these rapid economic developments have negatively affected biodiversity and hence the medium and longer term sustainability of such development programmes. Thus, capacities for assessment, study and systematic observation and evaluation of biodiversity need to be reinforced at both national and subregional levels. A national and subregional initiative supported by international cooperation is an effective

means to assisting with the *in situ* protection of the ecosystems and the *ex situ* conservation of biological and genetic resources.

C. THE NEED FOR TAXONOMIC CAPACITY BUILDING

The countries of East Asia have, through various Decisions of the Conference of the Parties (COP) to the CBD, recognised that there is a ‘Taxonomic Impediment’ preventing the optimal use and conservation of biodiversity in the subregion and hindering implementation of the CBD. As noted in COP Decision IV/1D, the *urgency for the availability of taxonomic information to countries of origin, and the need of developing countries to develop national collections and human and institutional capacities in taxonomy*, the countries of East Asia and other Parties to the CBD recognise the urgent need to overcome this impediment.

The fourth COP discussed the issue of taxonomic capacity building in detail and proposed a series of measures, including formation of the Global Taxonomy Initiative (GTI), to solve the problem. First, the importance of establishing precise capacity building needs was recognised in Decision IV/1D (Suggestions for Action 1) which identified the need for countries to conduct national taxonomic needs assessments, and to link these to national reporting under the CBD. Such needs assessments at both national and subregional scales will form critical early steps to define priority EASIANET activities. Both the needs assessments and the work by the participating institutions in EASIANET will facilitate the ability of member country governments to make their national reports to the CBD.

A recent major UNDP-GEF review of capacity needs in developing countries (the Capacity Development Initiative or CDI, www.gefweb.org/Site_Index/CDI/cdi.html) has identified, in each region including Asia, the need for more taxonomic capacity to conduct activities that are essential for sustainable development, such as ecosystem monitoring and assessment. The CDI found that taxonomy was commonly a high priority for capacity development. Countries typically lack the “critical mass” of expertise and reference materials in taxonomy that are needed for successful management of biodiversity.

In developed countries, lack of investment is leading to a decreasing number of taxonomic experts and inadequately maintained facilities, reducing the capability of these countries to provide the necessary underpinning scientific rationale to policies on sustainable development. Investment in training of young scientists in taxonomy and in collaboration with other relevant scientific fields (including bioinformatics) is required to support inter-regional sharing of taxonomic expertise and to maintain levels of scientific capacity.

A further widely recognised factor driving the need for subregional self-sufficiency in taxonomy is the growing difficulty that developing countries face in obtaining taxonomic services from the developed world expert institutions. Cost is a major obstacle: developed world institutions today are no longer fully subsidised by their governments and consequently charge for their taxonomic services at rates that are typically too great for developing countries. A further obstacle is the limited capacity in developed country expert institutions.

Major world centres of taxonomy are overwhelmed by demands for identifications from their own national environmental programmes and international biodiversity activities in which their countries participate. Consequently, developing countries are not only badly lacking in their own taxonomic capacity to support their development programmes, but also in the opportunities to obtain such services elsewhere.

D. SOLUTIONS

In these circumstances, the obvious solution to the problem of inadequate taxonomic services in developing countries is for them to achieve self-sufficiency and self-reliance in this field by the quickest and cheapest means. Experience in developed countries has shown that it is totally uneconomic and quite unnecessary to establish and sustain fully comprehensive capabilities and resources in each and every country. An approach whereby individual country resources are shared by a group of collaborating nations is much more cost-effective.

A tried and tested mechanism for such a collaborative approach at the subregional level² exists in the form of the Technical Cooperation Network (TCN), devised and successfully implemented world-wide by the United Nations Development Programme (UNDP). Taxonomic self-sufficiency in developing countries can best be achieved by training, providing resources to existing taxonomic institutions, and speeding the introduction of appropriate new technologies and skills from expert centres to groups of developing country institutions within Technical Cooperation Networks. BioNET-INTERNATIONAL was devised to meet this very need by establishing subregional TCNs known as LOOPs (Locally Organised and Operated Partnerships).

Parties to the CBD have also recognised the important capacity building role played by subregional networks such as EASIANET by endorsing (via Decision III/10) recommendation II/2 of SBSTTA regarding capacity building: “*national institutions and regional and subregional networks should be established or strengthened and linkages enhanced with taxonomic institutions in developing and developed countries*”. Thus the proposed structure and work programmes of EASIANET are designed to assist the countries of the subregion to build the taxonomic capacity needed for development, including implementation of the COP Decisions.

The LOOPs of BioNET-INTERNATIONAL seek not only to work in close partnership with relevant global and subregional initiatives but to provide a sub-regional focal point and national focal points for all such activities to work through. EASIANET will strive to work with, and provide taxonomic support to, globally recognised initiatives and programmes such as the Global Invasive Species Programme (GISP), International Pollinators Initiative (IPI), the Millennium Assessment of Global Ecosystems (MA), Global Biodiversity Information

² The United Nations defines East Asia as a subregion of the Asia region.

Facility (GBIF) and the Clearing House Mechanism of the CBD (CHM). Subregionally, EASIANET will seek to build supportive relationships and avoid duplication of effort of a number of initiatives including, for example: DIVERSITAS in West Pacific and Asia (DIWPA); Anet; the East Asian Network for Taxonomy and Biodiversity Conservation (EANetTBC); GaiaList 21; Species 2000 AO (Species 2000 Asia Oceania) and the Asian Network on Microbial Research (ANMR).

The East Asia LOOP is tailor-made to meet the specific taxonomic needs of its member countries and sub-regional development priorities and this document - the detailed Proposal for establishing and operating this LOOP - derives from the deliberations and recommendations of the LOOP Formulation Workshop convened in Beijing, China from 23 to 27 June, 2001. It is intended for submission to relevant government institutions in each country for approval and endorsement.

E. EAST ASIAN PRIORITIES

The EASIANET LOOP Formulation Workshop identified nine priority needs that must be addressed before the subregion can start to be considered reasonably self-reliant in taxonomy. This initial assessment of priority needs is consistent with the lack of capacity recognised as comprising the 'Taxonomic Impediment' to implementation of the CBD. Further identification of the detailed, specific measures that will lead to the most cost-effective development of taxonomic self-sufficiency in the subregion requires a detailed needs assessment at both the national and subregional levels (as noted in COP Decisions IV/1D and V/9). This would identify specific user needs and elaborate the national priorities in taxonomic infrastructure, human resources and new technologies. At the subregional level, such an assessment will allow identification of options for achieving economies of scale by pooling, optimising and sharing resources, a goal that can be most effectively facilitated by the full operationalisation of a TCN such as EASIANET.

Priority Needs:

1. Integration of taxonomy with other sectors

The contribution of taxonomists is particularly vital for national implementation of the CBD (COP Decisions III/10; IV/1D; V/9), other related conventions (eg. IPPC), international initiatives such as the GISP, GBIF and MA, subregional and national development plans and trade in agricultural products, and is further recognised by the assessments compiled by the Capacity Development Initiative of UNDP-GEF. Taxonomists need to become better informed on these initiatives, and national development and biodiversity management programmes need to communicate their needs for taxonomic tools and services more effectively to taxonomic institutions.

2. Core funding

As recognised at the global level, the taxonomic tools needed to achieve sustainable development can only be delivered if there is sufficient funding to maintain adequate trained human resources and core reference resources such as biological collections. Taxonomy is thus in urgent need of greater sustained long term funding from various sources, including governments, international organisations and NGOs to support the production of the required taxonomic tools and expertise. For example, many institutions and research centres do not have sufficient core funding for full-time posts to attract young taxonomy graduates.

3. Human Resources

COP Decision III/10 endorses recommendation II/2 of SBSTTA regarding capacity building: *“for new taxonomists to be recruited there is a need to provide employment opportunities. It is urgent that parties take this need into consideration and integrate it into the programme of capacity building”*. The need for training of adequate numbers of taxonomists, especially young taxonomists, in the subregion is urgent. Insufficient capacity exists to do even basic biodiversity inventory work, as called for by the CBD (COP Decision III/10). Addressing the skills shortage requires, for example, the strengthening of curricula for taxonomy in universities, retention of taxonomic posts and the establishment of an incentives mechanism to attract students to the profession of taxonomy. Overall, as is common on a global scale, the greatest deficiency in expertise is in lower organisms such as insects, fungi and soil microbes, the critical species which drive ecosystem processes such as soil nutrient turnover and pollination and which are the greatest causes of agricultural loss. Further, collections facilities need professional managers to manage and maintain the critical biological collections and other reference materials.

4. Collections Facilities

National Taxonomic Reference Centres to ensure efficient management of and access to subregional biological collections and data are recognised as important by the CBD (COP Decisions IV/1D and V/9.2C). The national and subregional needs assessments can facilitate identifying the level to which each country requires national facilities as opposed to shared subregional facilities. Existing collections require upgrading and expansion as most are held in facilities that are inappropriate for the long term storage of degradable biological materials and have had insufficient funding to allow procuring of adequate reference materials such as published journals or to conduct fieldwork to supplement the materials.

5. Mechanisms that promote scientific collaboration

Taxonomy is a highly interdisciplinary and international endeavour – like all science, it depends on access to people, materials, data and publications between institutions and across borders. For example, management of invasive alien species is by definition an international and multilateral problem. In particular, the subregion needs to support greater international cooperation in information exchange, training of taxonomists and in studies of biodiversity, ecosystems and environmental protection. The LOOP, not only between its member

countries, but also through its linkage to the rest of BioNET-INTERNATIONAL's Global Network, is a highly appropriate mechanism to facilitate collaboration and international linkages.

6. Modern technology facilities

Subregional taxonomic self-sufficiency also requires in the longer-term the development of facilities for sophisticated taxonomic investigations at the tissue, cell and molecular levels. Currently, taxonomic studies in the subregion are limited to analysis of specimen anatomy and morphology.

7. Reference Materials

Most institutions in the subregion do not have adequate access to standard reference texts such as monographs and international journals.

8. Information management and electronic databases

Some electronic tools have been developed in a minority of institutes in the subregion but significantly greater investment is needed to establish databases that facilitate access to appropriate information and make it available to users across the subregion and more widely. Internet connectivity and improved accessibility to collections data accelerate the building of taxonomic capacity in the region. By participating in such initiatives as EcoPort and the GBIF, the sharing of data with the global taxonomic community will be facilitated, which will help to increase the capacity of the taxonomic institutions in the subregion.

9. Mechanisms to facilitate the exchange of specimens and information

In all countries of the subregion a proportion of specimens collected within national borders are now held by institutes elsewhere. The lack of these reference specimens, and the information associated with them, pose a significant obstacle to effective taxonomic work within the subregion. Formalisation of agreements between countries in the proposed network will help to overcome this lack of access to material and increased access to information will help leverage further material and information from countries outside the region (CBD Decision III/10).

F. RECOMMENDATIONS

The East Asia LOOP Formulation Workshop proposed the following recommendations:

1. TO THE GOVERNMENTS OF EAST ASIAN COUNTRIES

That they accord proper recognition to the fundamental importance of sound taxonomic capacity and services in their implementation of the Convention on Biological Diversity, including national development plans for sustainable agriculture by:

- 1) Allocating adequate financial and manpower resources to their existing taxonomic centres in accordance with COP Decisions IV/1D and V/9;
- 2) Approve the establishment and sustaining of a TCN or LOOP of BioNET-INTERNATIONAL in the form of EASIANET, a structure designed to enable achievement of subregional self-sufficiency in the taxonomic services that are needed to support national development programmes and the meeting of national obligations under the CBD and Agenda 21; and
- 3) Actively seeking funding support to supplement local inputs to ensure the successful execution of the LOOP's work programmes and enable achievement of subregional self-reliance in taxonomy.

2. TO GOVERNMENTS OF DEVELOPED COUNTRIES

In accordance with the modus operandi established by BioNET-INTERNATIONAL and facilitated by the LOOP structure, that they support the activities and programmes of the LOOP by making available their taxonomic expertise and resources and otherwise assist the member countries to achieve subregional taxonomic self-sufficiency and self-reliance, in accordance with COP Decision IV/1D.

3. TO FUNDING AGENCIES

That they, recognising the critical nature of EASIANET's objectives, provide financial, technical, material and other inputs to enable the establishment and subsequent sustainability of the LOOP, the execution of its work programmes, the provision of NECI and NACI services and otherwise assist the LOOP to achieve its technical and development objectives, in accordance with COP IV/1D.

III. THE EAST ASIAN LOOP

A. TITLE AND DESCRIPTION

The Formulation Workshop proposed that:

the LOOP should be known as *EASIANET, THE EAST ASIAN LOOP of BioNET-INTERNATIONAL: a subregional Technical Cooperation Network (TCN) for taxonomic capacity building.*

The short name for the LOOP will be “**EASIANET**”.

B. GOAL

To establish and sustain within the East Asia subregion realistic self-reliance in required taxonomic infrastructure, human resources and services to meet national sustainable development needs.

C. OBJECTIVES

- 1) To enable the achievement of national and subregional objectives in the development of sustainable management of all biological resources and ecological systems.
- 2) To strengthen existing centres of expertise and establish new capabilities and resources so as to provide the region with the appropriate infrastructure and cadre of taxonomists needed to ensure self-sufficiency and self-reliance in taxonomy.
- 3) To conduct training, rehabilitate collections and records, develop user-friendly aids for identification, and transfer information and technology under donor supported institutional strengthening and capacity-building programmes.
- 4) To assist East Asian countries to meet their commitments to the Convention on Biological Diversity, IPPC, other relevant conventions protocols and initiatives and Agenda 21.
- 5) To provide individual member governments, international organisations, NGOs, IGOs and donors, with a taxonomic structure and focal points within the sub-region and each country in order to facilitate economies of scale, and provision of the best possible advice on taxonomic matters, and the best possible taxonomic services in support of their programmes.

D. MEMBERSHIP

Membership is non-exclusive and initially shall comprise all member countries of East Asia, represented by their designated National Coordinating Institutes (NACI's).

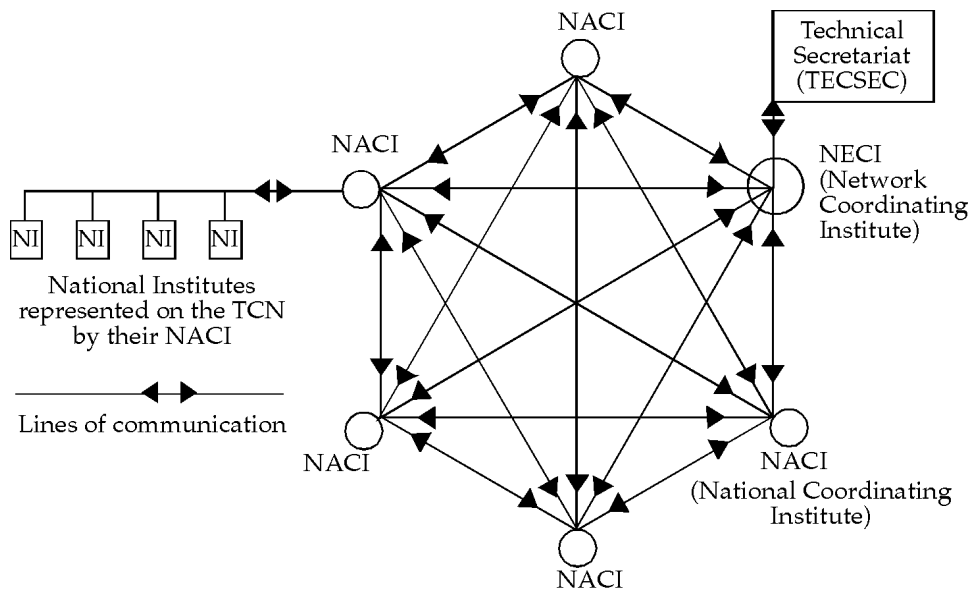
Other institutes and organisations are welcomed as Associate Members, by application and/or invitation as deemed desirable by the LOOP members.

E. STRUCTURE (Figure 1)

1. National Level

Those national organisations and other bodies within individual countries, which are identified by national representatives as being appropriate and desirable member institutes, and designated as **National Institutes (NIs)**, shall form 'in-country' national networks to facilitate cooperation and collaboration. A single National Institute elected by the NI's to coordinate this national network shall be designated the **National Coordinating Institute (NACI)**.

Figure 1: Conceptual model of a 6-Member LOOP or TCN



2. Subregional Level

The activities of the LOOP shall be coordinated by a designated **Network Coordinating Institute (NECI)**, with a dedicated Coordinator and supporting staff (as appropriate), and located at an appropriate taxonomic institute in a member country. It shall function as the LOOP Focal Point, a centre for receipt and dissemination of information, and the liaison link

with the BioNET-INTERNATIONAL Technical Secretariat and other LOOPs, etc. It shall provide a first point of contact for all external bodies.

The Institute of Zoology, CAS has been designated as the NECI of EASIANET for the first 3 years.

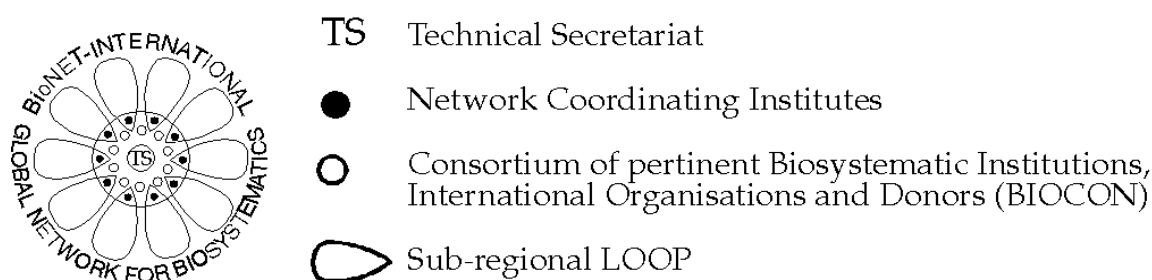
The designation of the NECI will be reviewed every three years by the LCC and can be rotated among the member countries or repeated, as agreed by the LCC.

3. Global Level (Figure 2)

i) LOOPs

The LOOPs (Locally Organised and Operated Partnerships) are the very core of the Global Network. They are based on the UN concept of *Technical Cooperation Networks* (TCNs) and are dedicated, through South - South cooperation, to mobilising, pooling and optimising the use of existing taxonomic skills and resources within the subregions for the benefit of all LOOP Members. The Global Network subregions accord closely to those prescribed by the United Nations.

Figure 2: Conceptual model of the global network



ii) BIOCON (The Consortium for Technical Support for BioNET-INTERNATIONAL)

This consortium of the world's major centres of taxonomic expertise and resources is designed to provide, where necessary, the information, skills, materials and technologies needed by developing country subregions to achieve self-reliance in taxonomy. It is an important source of technical support for donor-funded programmes for capacity building and human resource development in the BioNET-INTERNATIONAL LOOPs of the developing world i.e. North - South cooperation.

This consortium is being created world-wide as developed country institutions begin to collaborate to make their diverse resources available. The first subregional consortium, EuroLOOP, with some 100 institutions spread through some 25 European countries was

established in 1994 and is now expanding as it embarks on the task of inventorying the resources it has to offer to developing country LOOPS.

F. MANAGEMENT AND COORDINATION

Management of LOOPS is founded on four functional levels:

- | | |
|---|--|
| (i) National Institutes (Nis) | the relevant bodies within individual countries who work together as a national network to implement LOOP work programmes. |
| (ii) National Coordinating Institutes (NACIs) | the single institutes in member countries designated to coordinate the activities of the National Institutes (NIs). |
| (iii) The LOOP Coordinating Committee (LCC) | the governing body of the LOOP comprised of the NACIs together with any other invited bodies. |
| (iv) The Network Coordinating Institute (NECI) | the executive of the LCC, elected to coordinate and manage the affairs and work of the LOOP. |

The LOOP will be managed by a **LOOP Coordinating Committee (LCC)**, comprised of the member country National Coordinators from the NACIs (and Associate Members where such exist).

The affairs and activities of the LOOP will be coordinated in accordance with the plans and directions of the LCC by the Network Coordinator of the **Network Coordinating Institute (NECI)**. The NECI will also serve as the direct link between the National Coordinating Institutes of the member countries, between the LOOP and the central **Technical Secretariat (TecSec)**, between the LOOP and NECIs of other BioNET-INTERNATIONAL LOOPS, as well as with the consortium of developed country technical support institutes of **BIOCON**.

Designated **Working Groups** may conduct identified work programmes with leadership provided by elected institutions, which will serve as the focal point for these programmes, in accordance with the directions and wishes of the LCC and with the assistance of the NECI as Coordinator.

G. MANDATES

1. The LOOP Coordinating Committee (LCC)

This is composed of the NACIs and other Members in the LOOP structure and the NECI which also serves as its executive arm or Secretariat. Thus, there will be at least one representative from each member country and from each of the other identified Associate Member bodies (where such exist). The LCC's responsibilities are as follows:

- 1) Promote, maintain and sustain the LOOP and its activities, by securing the necessary commitment and financial support of LOOP member governments and funding for core activities and Work Programmes from donor agencies, and through good management of resources.
- 2) Serve as the subregional advisory body on taxonomy and its development in providing the best possible advice to LOOP member governments, international organisations and donors and others on all taxonomic matters in the region.
- 3) Appoint and oversee the activities of the NECI and enable it to serve as an effective Secretariat and executive arm of the LCC.
- 4) Prescribe the mandates of all coordinating institutes within the LOOP (NECI and NACIs) and terms of reference for Working Groups.
- 5) Devise and enable the implementation of Work Programmes and other activities designed to achieve LOOP objectives.
- 6) Draw up the LOOP Budget for core activities and work programmes and oversee use of allocated resources.
- 7) Seek funding for specific programmes, from member country contributions and funding agencies.
- 8) Meet at least annually for the purpose of conducting LOOP business, especially to evaluate progress and outputs in relation to inputs and identify needs, with rotational venues if practical.
- 9) To decide on inviting and/or approving applications for membership.

2. The Network Coordinating Institute (NECI)

This is the core of the LOOP and carries substantial responsibilities. It is the centre for receipt, collation and distribution of information and contacts. It is the Secretariat of the LOOP Coordinating Committee (LCC). It is the link between the NACIs and the direct link between the LOOP and TecSec and the link through TecSec with all other

BioNET-INTERNATIONAL LOOPS and with BIOCON. *The designated NECI needs to provide adequate logistical and operational support for the Network Coordinator to fulfil their role.*

The responsibilities of the NECI are as follows:

- 1) Coordinate the activities of the network in accordance with the instruction and directions of the LCC.
- 2) Prepare programmes of work and budgets as approved by the LCC and with the appropriate support and inputs from NACI's and others.
- 3) Draft reports on activities and the Annual Report of the network as required by the LCC, again and with the appropriate support and inputs from NACI's and others.
- 4) Serve as, and provide an effective link between, the NACIs and the Technical Secretariat.
- 5) Collect, collate and disseminate information; issue a Newsletter at agreed intervals (again dependent on receiving adequate contributions from the NACIs and others).
- 6) Organise LCC meetings.
- 7) Serve as the repository of literature, documents and papers relating to the network, as required.
- 8) Liase with and facilitate the operation of Working Groups.
- 9) Generally function as the executive arm of the LCC.
- 10) Process funding proposals on behalf of the LCC where these have been drafted by the LCC and others.

3. The National Coordinating Institutes (NACIs)

The NACI is the anchor-point of national activities, and has within it at least one person designated as the National Coordinator to whom responsibility for LOOP affairs is delegated (an 'alternate' should also be designated). The responsibilities of the NACI are as follows:

- 1) Nominate a National Coordinator (person and post) and an 'alternate' in the case of the non-availability at a particular time of the nominated Coordinator, and *allocate institutional time and budget within that post to allow for the proper execution of NACI responsibilities.*

- 2) Designate and support the Coordinator to serve as the national representative on the LCC and to implement the decisions and recommendations of the LCC at national level.
- 3) Coordinate a national network of NI's and national taxonomic activities and programmes in support of the LOOP work programmes (which are focussed on meeting national needs).
- 4) Liase with and exchange information with other NACIs and the NECI on a continuous basis.
- 5) Provide, as delegated, leadership and/or support for Working Groups and other programmes.
- 6) Communicate, on a continuous basis, on all LOOP and BioNET-INTERNATIONAL activities to and from National Institutes and to and from the NECI.
- 7) Liase with all CBD and GTI Focal Points of the subregion to ensure the LOOP is supporting, where appropriate, subregional activities aimed at implementing the CBD.

4. National Institutes (NIs)

These are those Government institutes, organisations, services (e.g. quarantine), NGO's and other private and public sector bodies which have something to offer to LOOP activities or who need LOOP services (i.e. *both providers and users of taxonomic services and products*). Together they constitute the National Network within which the National Coordinator is the focal point. Their responsibilities are as follows:

- 1) Assist the NACI in the implementation of decisions and recommendations of the LCC at national level.
- 2) Contribute expertise, resources, information, research findings etc. to the LOOP through the NACI and NECI.
- 3) Actively participate in all feedback systems of the LOOP (e.g. identification of needs, achievements, problems, solutions, new knowledge, technologies, new records, newsletters etc.).
- 4) Lead, support and facilitate, as delegated, and otherwise contribute to Working Groups, and other LOOP programmes.
- 5) Communicate on a monthly basis with the NECI and with the designated National CBD and GTI Focal Points to report on LOOP activities (and thereby assist the Focal

Points in writing their National and other reports) and learn of the latest progress in national implementation of the CBD and other initiatives.

- 6) Provide and maintain the GTI Programme Officer at the Secretariat of the CBD with a list of national taxonomic experts, indicating which CBD thematic areas and Cross-cutting issues they are expert in and including their regularly updated contact details.

5. Working Groups

The members of Working Groups consist of a group of specialists appointed by the LOOP Coordinating Committee. The size of these groups may vary according to the workload of the Working Group. The LCC may change members or size of the various groups or modify their Terms of Reference from time to time if necessary or useful. One member of each group should function as the Focal Point for that Group, and be responsible for maintaining the necessary contacts between the group members, other groups and the NECI.

Working Groups should be established to deal with specific problems in the region. Working Groups may be permanent, addressing matters that need constant attention such as training, or may be temporary e.g. to deal with difficult taxonomic group problems, suspected invasive alien introductions etc.

The LCC should establish Terms of Reference for each Working Group, and the Working Group should submit a Technical Report on activities, conclusions and recommendations to the NECI to be presented and discussed at the LCC.

H. RESPONSIBILITIES

Designated National Institutes, National Coordinating Institutes, the Network Coordinating Institute, and the LOOP Coordinating Committee assume the responsibility to function in accordance with the mandates provided in this Proposal.

By agreeing to this Proposal each government undertakes to allocate sufficient staff time and resources to enable the designated coordinator in the NACI to perform their LOOP role effectively, as described in the NACI mandate. In the case of the country hosting the NECI, the host government further agrees to providing sufficient staff time, resources and operational costs (such as internet connections, telephone calls, postage, etc.) to enable the NECI to function effectively as described in the NECI mandate.

I. FUNDING

The ultimate objective of EASIANET is to provide an effective mechanism for the institutions of one member country to provide taxonomic services to those in other

countries on a reciprocal basis in the true spirit of a TCN. Such an arrangement should involve no money transfers or foreign exchange and hence is sustainable even in circumstances of economic stringencies.

Functioning of the LOOP requires sustained commitment by individual member governments, who must be prepared *through institutional core budgets* to contribute their share of manpower and material resources to LOOP activities and services, for the benefit of the LOOP members as a whole, and in return for their reciprocal inputs. This contribution in kind will almost inevitably involve, above all else, manpower and the allocation within national budgets of greater support for existing taxonomists, and possibly the appointment and provisioning of new taxonomic posts (in accordance with COP Decisions IV/1D & V/9). It may also involve hosting exchange visits by other member country scientists and meetings, and providing facilities and material support.

The success of the LOOP and the achievement of its objectives, like those of BioNET-INTERNATIONAL as a whole, depend on substantial funding support. An important advantage of Technical Cooperation Networks is that they provide a permanent structure that can ensure the long-lasting impact of donor inputs. They are cost-effective given due commitment by member governments, effective performance by their NECIs, realistic work programmes and adequate technical support. EASIANET, as a part of BioNET-INTERNATIONAL, has the support of BioNET-INTERNATIONAL's dedicated Technical Secretariat and the technical support consortium of major world centres in the form of BIOCON.

Subject to government endorsement of the EASIANET LOOP, BioNET-INTERNATIONAL will provide catalytic start-up funding of £90,000 (currently equivalent to approximately US\$130,000) over two years for EASIANET. This funding will be managed by the NECI on behalf of the LCC and used in the first two years of LOOP operation to establish the required networking infrastructure, support some core activities and, importantly, as matching cofinancing to help leverage funds from governments and funding agencies. Whilst the CBD's GTI does not have funds and is not a funding mechanism, its establishment by the Parties to the CBD is a powerful call to all governments and donors to provide the financial resources needed to implement the GTI Programme of Work, and the establishment of sub-regional LOOPS via BioNET-INTERNATIONAL is an important facilitating step in doing so.

IV. WORK PROGRAMMES

The five priority Work Programmes of the Network, designed to ensure successful establishment of a network, its long-term sustainability and the operationalisation of the identified priority capacity building needs are:

1. Information and Communication Services;
2. Human Resource Development (Training);
3. Rehabilitation and Strengthening of Resources;
4. Development and Application of Appropriate Technologies and Tools; and,
5. Establishment and Sustainability of the NECI and LOOP

A. INFORMATION AND COMMUNICATION SERVICES

1. GOAL

To develop in the East Asian subregion an information and communication service for the EASIANET LOOP.

2. OBJECTIVES

- 1) To ensure the NECI and NACIs have sufficient communications infrastructure and agreed reporting structures to support effective networking and the exchange of relevant information regarding taxonomy-related activities.
- 2) To ensure, by proactive networking, that the LOOP is working in partnership with other relevant initiatives nationally, subregionally and globally.
- 3) To ensure access to databases and major published reference works such as taxonomic monographs, Red Lists of endangered species, quarantine checklists and back subscriptions of key serial journals and ensure future subscriptions to appropriate publications.
- 4) To identify the priority taxonomic information needs of the region (COP V/9). For example, an information service providing all relevant knowledge is needed to cover traditional taxonomy, molecular techniques, new records, current pest distribution maps and A1 and A2 quarantine pest lists and incidence and threats of invasive alien

species. Relevant information on natural enemies, beneficial organisms, bioindicators and bioremediation agents need to be accessed and kept up to date (COP IV/1D).

- 5) To promote further development of the subregion's databases and provision of information in national languages and in a common working language, chosen by the delegates to the Formulation Workshop to be English (COP IV/1D).
- 6) To encourage new taxonomic work in response to identified needs (e.g. focussed revisions and checklists of priority groups such as fungi, crop pests, natural enemies, pollinators, bioindicators, etc.) and in support of CBD thematic areas and cross-cutting issues (COP III/10; V/7);.
- 7) To make available for use relevant information products e.g. identification and diagnostic tools, interactive and pictorial keys, pest distribution maps, species inventories, specimen and living organisms collections inventories etc. in a variety of hard copy and electronic media (COP V/9:2b).
- 8) To promote rapid transfer and sharing of taxonomic and biodiversity information throughout the subregion (COP IV/1D) as well as with international initiatives such as the CBD CHM, the GBIF , Species 2000 and EcoPort.
- 9) To assist with rapid information collation and dissemination for purposes of facilitating national CBD and other reports.

3. ACTIVITIES

Within the first six months:

- 1) Conduct a LOOP information and communications needs assessment.
- 2) Ensure access of NACIs and NECI to appropriate computer hardware and software including computers with modem, CD-ROMs, e-mail access, and Internet (all ongoing operational costs eg. telephony costs to be covered by the host Institute).
- 3) Design, set up and maintain a regularly updated EASIANET website, linked with the BioNET-INTERNATIONAL website (www.bionet-intl.org).
- 4) Electronic networking, including dissemination of Newsletters, and a mailing list updated quarterly, to include CBD Focal Points and other collaborating partners. Newsletters and hardcopies of data and information to be posted to physical addresses where access of these locations to internet connectivity may be difficult.
- 5) Establish contact with all relevant initiatives nationally, subregionally and globally.

Longer term: the needs assessment will determine priority areas of activity for action over the longer term, for example, suggested needs might include acquisition of relevant standard references such as text books and taxonomic monographs; subscription to taxonomic journals; develop or commission computerised identification tools, pictorial keys and distribution maps; produce a subregional database of expertise and specialists in taxonomy.

B. HUMAN RESOURCE DEVELOPMENT (TRAINING)

1. GOAL

To increase the level of taxonomic self-reliance within the subregion via human resources capacity building in priority taxonomic areas (COP V/9:2d).

2. OBJECTIVES

- 1) Identify taxonomic training needs and resources required (COP IV/1D and V/9:2b).
- 2) Ensure a nucleus of taxonomists at all NACIs available as a LOOP resource.
- 3) To provide training in key taxonomic groups at different educational levels, including vocational, technical and higher academic levels (COP IV/1D: Suggestions for Action 5).
- 4) To develop joint training programmes for the subregion with support from institutes as part of North-South and South-South cooperation (COP IV/1D: Suggestions for Action 3 & 11).

3. ACTIVITIES

Identification of Needs

- 1) Knowledge and skills gaps at different educational levels, including vocational, technical and higher academic levels, including technicians, parataxonomists, applied biologists, and taxonomists, identified at NACIs and NIs.
- 2) Participatory learning models for training of extension agents and farmers/producers assessed for appropriateness to the subregion.
- 3) Training courses, workshops, materials, resource institutes, trainers and other opportunities identified.

Training - Technicians and Parataxonomists

Technicians are diploma or degree holders, whose duties are to provide assistance to professional officers, and supervise and train technical assistants/parataxonomists. They may require training in basic and advanced aspects of field specimen collection, preparation, processing, documentation and curation; advanced laboratory techniques applicable to taxonomy; data input and retrieval; illustration techniques; identification and classification of priority taxa, for example economically important pests and diseases, endangered species and human disease vectors. Training of technicians and parataxonomists will expand the range of organisms that can be processed in the subregion, reducing the need for international identifications to be carried out and paid for.

A target for the number of people to be trained at each level in each country will be determined by the needs assessment. A short-course (6-12 weeks) option is usually most cost-effective and should be undertaken at key sites within the subregion where possible depending on the outcome of the needs assessment.

Training - Professional Officers

Professional officers are usually degree holders, and include applied biologists as well as specialist taxonomists. To utilise and develop existing subregional expertise five key elements are required:

- 1) Upgrading of knowledge and skills of both applied biologists and taxonomists already working in key areas;
- 2) Full training of specialists in key groups of organisms important in the region.
- 3) This should include providing at least one qualified specialist at each NACI to serve as the focal point of development of further expertise and sustaining the institutional capacity (i.e. 'train the trainer').
- 4) Applied taxonomists trained in the broader areas of application for example, bio-safety, bio-prospecting, and Intellectual Property Rights and associated taxonomic techniques.
- 5) Training in business and administrative management for managers of taxonomic institutions as part of efforts to strengthen capacity in those institutions (COP IV/1D: 11)

In all training programmes a key element of sustainability of capacity is the sustained provision of employment for those undergoing the training (COP IV/1D: Suggestions for Action 5).

Develop or acquire appropriate training materials:

- 1) Training manuals developed and acquired in areas of interest.

- 2) Diagnostic keys and guides developed.
- 3) Existing distance learning and multimedia packages on taxonomy and biodiversity acquired and disseminated.
- 4) EASIANET multimedia packages for specialists and non-specialists developed.
- 5) Available taxonomic keys and guides adapted into extension support materials to aid farm/field-level biodiversity identification and utilisation.

C. REHABILITATION OF RESOURCES

1. PROJECT GOAL

To secure, enhance and make accessible existing reference collections containing material from the East Asian subregion through National Taxonomic Reference Centres (COP III/10).

2. OBJECTIVES

- 1) To assess the status of existing facilities and resources (COP V/9:2a&b; IV/1D: Suggestions for Actions 11.i) and identify priorities (COP IV/1D: Suggestions for Action 3).
- 2) To recommend to LOOP member governments one or more NIs as dedicated National Taxonomic Reference Centres (COP V/9: 2c).
- 3) To enhance the existing strengths in collections, and related human resource capability and scientific literature (CBD III/10 endorsing SBSTTA recommendation II/2).
- 4) To promote the use in the subregion of compatible collection management procedures to facilitate effective network access to collections and collection information within and between the countries of the EASIANET subregion (COP IV/1D: Suggestions for Action 3 & 4).
- 5) To establish methods of access to collections of East Asian material held outside the subregion and information held therein (COP IV/1D: Suggestions for Action 3).
- 6) To maintain collections for both scientific investigations and educational museums of natural history, as well as to produce popular products such as field guides.
- 7) To establish new collections and reference materials in response to priority subregional needs and demands.

3. ACTIVITIES

Needs assessment

Conduct a needs assessment of the current strengths and weaknesses, including collections, taxonomic range, housings, environmental control, collection documentation and management procedures and support services, curatorial expertise and taxonomic capability. NACIs to submit copies of the report to the NECI and their national CBD Focal Point for inclusion in Country Reports to COP (COP IV/1D: Suggestions 1 & 7). The needs assessment would include:

- 1) Establish the needs assessment team; methodologies developed & standardised (possibility to acquire process outline and questionnaire from other LOOPs).
- 2) Taxonomic facilities and resources inspected at NACIs and NIs and those needing rehabilitation identified.
- 3) Sustainable options for establishing specialised National Taxonomic Reference Centres and/or museums recommended.

Implementation

Initial needs identified could result in the following phased activities:

- 1) Specimen collection, culturing, preservation, storage and curation equipment/materials.
- 2) Key groups, eg. insect/arthropod collections, herbaria, and fresh water collections upgraded and maintained
- 3) Germplasm collections of food and tree/forestry crops upgraded and maintained.
- 4) Microbial collections (fungi, bacteria, microalgae and virus collections) upgraded and maintained.
- 5) Specialised identification tools available at a subregional centre.

D. DEVELOPMENT AND APPLICATION OF APPROPRIATE TECHNOLOGIES AND TOOLS

1. PROJECT GOAL

To improve specialist and non-specialist skills, knowledge and taxonomic capability through the development, provision and use of the full range of existing and new user-friendly taxonomic tools (COP IV/1D: Suggestions for Action 3).

2. OBJECTIVES

- 1) Ensure access to appropriate existing or new user-friendly tools such as:
 - methods to extract locally relevant data from global information systems (COP IV/1D: Suggestions for Action 9);
 - monitoring systems for quarantine species and invasive alien species (CBD Article 8(h));
 - biodiversity monitoring and assessment methodologies within the thematic areas of the CBD (COP III/10; V/7);
 - information products and field-guides for ‘non-taxonomic’ user-groups e.g. extension officers, rangeland managers, sustainable ecotourism (COP IV/1D: Suggestions for Action 6);
 - morphological and molecular techniques (COP IV/1D: para 11d);
 - tools to develop taxonomic databases locally that can be made accessible to and from global information systems.
- 2) Adapt and/or develop species monitoring protocols

3. ACTIVITIES

- 1) Identify the priority animal, plant and micro-organism groups and the appropriate technologies and tools according to needs;
- 2) Commission and/or produce multimedia diagnostic kits and according to prioritised needs such as:
 - Field guides to assist on species identification and monitoring in agriculture (e.g. electronic keys for fruit flies) as called for in COP Decision V/5, forestry (COP Decision IV/7), marine and coastal ecosystems (COP Decision IV/5), inland waters (IV/4), dry and sub-humid lands (COP Decision V/23) and public health;
 - Historical profiles showing incidence, abundance and distribution of species in any of agriculture, forestry, marine and inland waters fisheries, public health and soil ecosystems (COP III/10; V/7);
 - National and subregional lists of pests, pathogens, weeds, migratory species, invasive (Article 8(h)) and threatened species;
 - biological control agents;

- organisms for use in medicine.
- 3) Dissemination of new or adopted tools.
 - 4) Training in use of acquired tools.

E. ESTABLISHMENT AND SUSTAINABILITY OF THE NECI AND LOOP

Sustainability of the network and the NECI is dependent on the commitment of member country governments to underpin the operational costs of the network over the long term, in accordance with COP Decision IV/1D which calls on parties to support national and regional capacity building activities.

The EASIANET Formulation Workshop unanimously recommended that the Institute of Zoology, CAS should serve as the Network Coordinating Institute (NECI) of EASIANET for the first phase (3 years).

1. OBJECTIVES

- 1) Ensure a system is in place for the sustainable operation of the NECI through a combination of BioNET-INTERNATIONAL seed funding, NECI support and funding agency contributions;
- 2) Support EASIANET linkages with NACIs, NIs, other LOOPS and the Technical Secretariat of BioNET-INTERNATIONAL;
- 3) Increase awareness, commitment and use of national and subregional taxonomy services;
- 4) Promote national and subregional policies on taxonomy and biodiversity studies;
- 5) Assess the impact of EASIANET activities.

2. ACTIVITY

- 1) Develop a plan for sustainable provision of NECI operational costs and activities.
- 2) Establish the NECI office.
- 3) Appoint a LOOP Coordinator.
- 4) Recruit a NECI Secretary if required.

- 5) Equip the NECI Office if required.
- 6) Train Coordinator/Secretariat in project management and proposal development if required at the NECI and at each NACI.
- 7) Institute budgets, financial control mechanisms and measurables such as:
 - A list of collaborating partners with their major activities developed in year 1, updated annually and disseminated to members and partners;
 - An EASIANET newsletter created in year 1 and released quarterly to members and collaborating partners (such information products are dependent on adequate participation in information provision by NACI's, NI's and others);
 - 1 technical exchange visit completed by 1 or more participants per country;
 - LOOP publicity material available at events organised by collaborating partners;
 - Taxonomic services publicised nationally through print, television and radio media;
 - An award system for innovative taxonomic work established by end year 2 to motivate national taxonomists;
 - 1 taxonomic/biodiversity sensitisation workshop completed for policy makers in year 1 and year 3 per country;
 - 1 public sensitisation workshop on bio-safety, bio-prospecting and Intellectual Property Rights completed in year 1 and year 3 per country;
 - 1 technical seminar on bio-safety, bio-prospecting and Intellectual Property Rights completed for policy makers in each countries by end year 2;
 - NACIs liase with CBD Focal Points to assist with drafting subregional policies on taxonomy and biodiversity and provide information for Country Reports;
 - Submit to funding agencies a request for funding of the NECI budget for the first 3 years from EASIANET's inception;
 - 70% or more of the NI and collaborating institutes receive and use taxonomic keys, tools and other materials developed and/or adapted by EASIANET;
 - All participating countries are motivated to integrate NACI operations into their national institutional budgets by end year 1;
 - CBD Focal points use the services of EASIANET in the member countries.

APPENDIX

A. NATIONAL COORDINATING INSTITUTES (NACIs) AND THEIR ASSOCIATED NATIONAL INSTITUTES (NIs)³

Country	National Coordinating Institute (NACI)	National Institute (NIs)
China	Institute of Zoology, Chinese Academy of Sciences	<p>Chinese Academy of Sciences Institute of Zoology, Beijing Institute of Botany, Beijing Institute of Microbiology, Beijing Institute of Genetic, Beijing Kunming Institute of Zoology, Kunming, Yunnan Kunming Institute of Botany, Kunming, Yunnan South China Institute of Botany, Guangzhou, Guangdong Research Center for Eco-Environmental Science, Beijing Xishuangbanna Tropical Botanical Garden, Xishuangbanna, Yunnan Shenyang Institute of Applied Ecology, Shenyang, Liaoning Shanghai Institute of Entomology, Shanghai Wuhan Institute of Botany, Wuhan, Hubei Wuhan Institute of Virology, Wuhan, Hubei Institute of Hydrobiology, Wuhan, Hubei Institute of Oceanology, Qingdao, Shandong South China Sea Institute of Oceanography, Guangzhou, Guangdong Northwest Plateau Institute of Biology, Xining, Qinghai Chinese Academy of Agricultural Sciences Institute of Plant Protection, Beijing Institute of Biological Control, Beijing Chinese Academy of Forestry Sciences Institute of Forestry, Beijing Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing Beijing Agricultural University, Beijing Nankai University, Tianjin Northwest Agricultural University, Shaanxi Nanjing Agricultural University, Nanjing, Jiangsu Zhejiang University, Hangzhou, Zhejiang Fujian Agricultural University, Fuzhou, Fujian Nanjing Agriculture University, Nanjing, Jiangsu Northeast Forestry University, Harbin, Heilongjiang Henan Agriculture University, Zhengzhou, Henan Liaoning Normal University, Shenyang, Liaoning Inner Mongolia Teachers' University, Hohhot, Inner Mongolia Shanxi University, Taiyuan, Shanxi Hebei University, Baoding, Hebei Jiangxi Agriculture University, Nanchang, Jiangxi Hunan Normal University, Changsha, Hunan Shaanxi Normal University, Xian, Shaanxi Zhongshan University, Guangzhou, Guangdong Shandong Agricultural University, Jinan, Shandong Sichuan Normal University, Nanchong, Sichuan South-Western Agriculture University, Chongqing Guizhou Agriculture University, Guiyang, Guizhou Beijing Natural History Museum, Beijing Tianjin Museum of Natural History, Tianjin Shanghai Natural History Museum, Shanghai Beijing Agricultural and Forestry Academy, Beijing Guangdong Institute of Entomology, Guangzhou, Guangdong Qinghai Agricultural & Forestry Academy, Xining, Qinghai Gansu Academy of Agricultural Sciences, Lanzhou, Gansu</p>

³ The list of National Institutes is subject to ongoing revision according to national priorities.

		<p>Institute of Biology, Guangxi Academy of Sciences, Guilin, Guangxi Institute of Plant Protection, Anhui Agricultural Academy, Hefei, Anhui Ningxia Academy of Agro-Forestry Sciences, Yinchuan, Ningxia Institute of Microbiology, Xinjiang Academy of Agricultural Sciences, Ürümqi, Xinjiang Plant Protection Research Institute, Chinese Academy of tropical Agricultural Sciences, Danzhou, Hainan Agricultural Sciences Research Institute in Tibet, Lhasa, Tibet Dept. of Ecology & Biodiversity, University of Hong Kong Kadoorie Farm & Botanic Garden Corporation, Hong Kong Institute of Zoology, Academia Sinica, Taiwan, China. National Taiwan University Dept. of Plant Pathology & Entomology, National Taiwan Univ.</p>
DPR Korea		Institute of Zoology, Academy of Sciences of DPR Korea
Korea		<p>Advanced S&T Information Division, Korea Institute of S&T Information Department of Biological Science, Sungkyunkwan University Department of Applied Biology, Division of Biological resources and Science, Dongguk University Korean Institute for Biodiversity Research (KIBIO), Chonbuk National University.</p>
Japan		<p>Department of Earth and Environmental Sciences, Faculty of Science, Kagoshima University Species 2000 Asia Oceania Secretariat, Laboratory of Intellectual Fundamentals, National Institute for Environmental Studies Global Environment Division, National Institute for Environmental Studies, Japan Environment Agency Entomological Laboratory, Kobe University Environmental Impact Assessment Division, Environment Agency</p>
Mongolia	Institute of Biology, Mongolian Academy of Sciences	<p>Institute of Biology, Mongolian Academy of Sciences Division of Microbiology Institute of Botany Mongolian State University Mongolian Pedagogical University Mongolian Agricultural University Institute of Geoecology Institute of Agriculture (Darkhan City) Pedagogical Institute (Khovd City) Institute of epidemiology and virology. Biotechnological Centre State Standard and Meterology Service. State Central Laboratory of Husbandry and Hygiene. Natural History Museum.</p>

B. Participants List of the Formulation Workshop

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