

the global network for taxonomy



Who is BioNET?

BioNET is "the most comprehensive network..." for taxonomy (decision VI/8 of the Convention on Biological Diversity). It is unique in being the only organisation dedicated to promoting taxonomy globally. BioNET is building capacity and regional partnership networks to realise its vision: that anyone, anywhere in the world is able to find the correct name for any plant, animal, fungi or micro-organism.

BioNET Strategy

Combine global level communication and technical partnerships (Secretariat) with knowledge of regional markets for taxonomy and product delivery (LOOPS).

BioNET Fact Sheet

Founded 1993 to promote the taxonomy needed for decision making, development, conservation, environmental science, climate change adaptation, etc. particularly in the developing world.

Secretariat in the UK.

Ten regional government-endorsed partnerships (LOOPS) established to date, bringing together institutions from

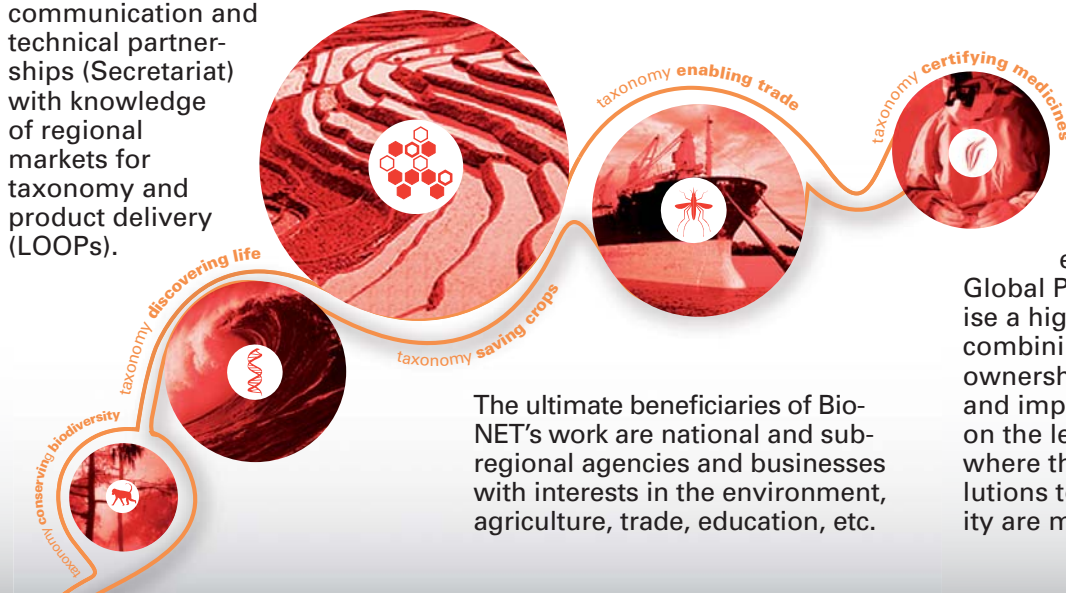
115 countries in Africa, Asia and Oceania, the Caribbean and Latin America.

Why BioNET?

Taxonomy matters for biodiversity conservation; its sustainable use and benefit sharing; agricultural productivity; international trade; poverty reduction; health and human well-being; and other areas of human interest. Yet, taxonomic institutions are in critical decline worldwide ("Taxonomic Impediment").

BioNET's main area of excellence is to understand the needs of the taxonomic markets (via LOOPS and policy forums), mobilise capacity across borders, and incorporate its local knowledge to produce taxonomic products that meet market needs.

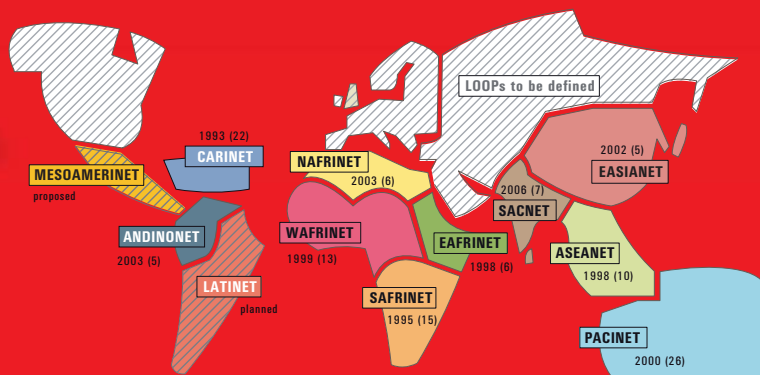
BioNET has a clear mandate from the CBD and strong partnerships with organisations with related interests (GBIF, CBOL, CBIT, etc.). Its centrally managed Global Programme is able to mobilise a highly cost-effective structure, combining local optimisation and ownership with global presence and impact. BioNET's efforts focus on the less industrialised countries, where the needs for sustainable solutions to greater taxonomic capacity are most acute.



The ultimate beneficiaries of BioNET's work are national and sub-regional agencies and businesses with interests in the environment, agriculture, trade, education, etc.

What is a LOOP?

Locally Owned and Operated Partnership = Technical Cooperation Network: permanent structure, endorsed by governments, owned and operated by the member institutions.



LOOPS are BioNET's unique capacity building and product delivery mechanisms. Their interests extend from taxonomic services (e.g. species identifications), product development (e.g. identification aids) and adoption and use of technologies, to training and provision of facilities for biological and literature collections, and more. LOOP membership is open to any organisation offering taxonomic services.

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BioNET is uniquely suited to work with partners locally and internationally to assemble the relevant stakeholders for modern taxonomic technologies.

DNA barcoding is emerging as a global standard in taxonomy, one that promises to bring a significant level of automation, standardization and high-throughput data analysis to specimen identification. It was developed as a tool for taxonomists but is increasingly enabling those with no taxonomic expertise in diverse user communities such as agriculture, trade, health and biodiversity conservation to make at least preliminary specimen identifications.

Developing nations have least access to expert taxonomic knowledge and resources (e.g. reference collections, taxonomic publications,

BioNET is CBOL's "lead partner" in outreach and promotion of DNA barcoding in the South.

web-based databases), yet the highest amount of genetic diversity and hence the highest need for standardized,

rapid and user-friendly taxonomic methods. With its regional networks (LOOPS) active in most developing countries, BioNET has been identified as the "lead partner" for the Consortium for the Barcoding of Life in outreach and promotion of DNA barcoding in the South.

BioNET facilitates regional DNA barcoding workshops and follow-up meetings, and provides project development support to establish prioritised, demand-driven barcoding projects, under careful consideration of the specific local, technological and financial needs.

In 2006/07 BioNET partnered with CBOL and others to organise four regional workshops, build awareness of DNA barcoding, discuss its potential applications, and examine the practical steps needed to initiate barcoding activities in these regions.

- ❑ Southern Africa: 7-8 Apr. 2006; Cape Town, South Africa (67 participants from 32 countries).
- ❑ Eastern Africa: 18-19 Oct. 2006; Nairobi, Kenya (61 participants from 15 countries, including 5 eastern African countries).
- ❑ Central & South America: 19-20 Mar. 2007; Campinas, Brazil (50 participants from 13 South and Central American countries).
- ❑ East, South & Southeast Asia: 21. Sep. 2007, Taipei, Taiwan.

The meetings generated several outputs in the form of specific regional barcoding projects or partnerships.

The Scale Insect Barcoding Initiative

SIBI is a direct output of the southern African DNA barcoding meeting in April 2006. Scale insects are a major agricultural pest in Africa and worldwide. As other pests they move across borders, hence it was agreed that BioNET-SAFRINET (the southern African LOOP of BioNET) should help to establish a pan-African initiative to develop DNA barcoding for scale insects and transfer the technology among the countries of the Southern African Development Community (SADC).

A group of scale insect taxonomists and molecular biologists from Australia, Kenya, South Africa and the USA was formed to plan the project and establish a list of priority species. A proposal for SIBI capacity building and development was submitted to SADC by BioNET-SAFRINET, via the Department of Agriculture, South Africa. The project will initially concentrate on important scale insect species found on agricultural products moving between South Africa and its trading partners. As resources permit, SIBI will be expanded to include East and West Africa.

BioNET aims to

- ❑ facilitate partnerships between barcoding labs and members of the regional networks.
- ❑ increase the number of proposals for DNA barcoding projects and capacity building.
- ❑ increase the number of in-country training courses and research fellowships to barcoding labs.
- ❑ support the establishment of regional barcoding centres with significant lab capabilities.
- ❑ promote the implementation of barcoding by national governments in the region as part of their biodiversity programs.

