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Generating robust insights about a global
voluntary environmental network

BetterEvaluation

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Introduction

Development interventions are increasingly implemented in the form of international, voluntary networks. However, such networks of institutional and/or individual members pose challenges for evaluation professionals. They are dynamic systems with complex organisational forms and have open, often loose and non-hierarchical membership structures. Furthermore, their diverse institutional mandates and fluctuating authorities and responsibilities flow from and around autonomous members. Thus, accountability for what has been achieved by whom is diffuse and participatory planning, implementation and monitoring, as well as evaluation is as necessary as it is difficult.

BioNET – the global network for taxonomy – is one example of such a network. In 2010, the Swiss Agency for Development and Cooperation (SDC), the main funder of the BioNET Global Programme and the BioNET Global Secretariat, commissioned a summative evaluation. Previously, the expected outcomes of the BioNET Global Programme 2007-11 had been described in an operational plan with specific, measurable and time-bound objectives (activities, milestones, responsibilities) as laid out in a logframe. They were monitored to comply with the expectations of BioNET's donors and governance bodies, conventionally assuming a causal chain of inputs, activities, outputs, outcomes, and impact. However, taking into account BioNET's complexity with its autonomous and diverse membership, the dynamic and unpredictable interactions and interdependences between its actors, and the resulting high degree of unpredictability, the network had, in 2010, started to introduce the Outcome Mapping (OM) methodology (Earl et al. 2001; Outcome Mapping Learning Community: www.outcomemapping.org) developed by the Canadian International Development Research Center (IDRC) for the planning of its work.

Based on the positive experience of the Secretariat and network with OM in planning, and recognising the advantages of OM in assessing the results of networks, SDC chose an OM-inspired approach called 'Outcome Harvesting' (see Methodology section) as the basis for an evaluation design that suited the nature of this network. In particular, it was acknowledged that it would be difficult if not impossible to determine BioNET's direct *impact* in its key areas of biodiversity conservation and agriculture / food security, but it would be possible and informative to generate evidence and assess the merit and worth of BioNET's *outcomes*: observable changes in the behaviour, relationships, activities and actions of individuals, groups, organisations or institutions with whom

BioNET works. These outcomes are 'downstream' from the activities and outputs that BioNET controls, while 'upstream' from impact. They would then serve to verify the qualitative and quantitative progress towards the objectives of the operational plan 2007-2011 and the logframe.

This article discusses three aspects of evaluation practice:

1. how Outcome Harvesting, complemented by interviews, was employed as a practical way to identify and evaluate the (sometimes unanticipated) outcomes of an extensive network;
2. what was undertaken to ensure validity and credibility of the outcomes met the needs of the primary intended users of the evaluation; and
3. how the challenges of using a time-intensive methodology in a time-deficient situation were addressed.

Evaluation Context and Questions

BioNET – the global network for taxonomy

BioNET promotes taxonomy and the application of species knowledge to address development challenges. Taxonomy is the science and practice of discovery, description, classification and naming of organisms, preserving collections of them and providing keys and tools for their identification and data on their distributions. It delivers basic and indispensable knowledge for many fields of human interest and contributes in many ways to the planet's sustainability. The main purpose of BioNET is to promote, develop and organise taxonomic capacity, particularly in less economically developed countries, so the taxonomic community can better support biodiversity conservation and sustainable and equitable use, agriculture and thus food security, industries, other sciences and policy implementation.

BioNET was established in 1993 as an international member country network. To date, the network comprises ten government-endorsed regional networks, the 'Locally Owned and Operated Partnerships' (LOOPs), encompassing institutions and 3,000 individuals in over 100 countries in Africa, Asia and Oceania, the Caribbean and Latin America. During the evaluation period, the Global Secretariat, located in the UK, had two staff members employed by its host organisation CABI (Centre for Agricultural Bioscience International) and two freelance

consultants supporting the Secretariat. BioNET's regional and national coordinators normally undertook their BioNET tasks voluntarily; none were employed or managed by the Global Secretariat.

The BioNET Global Programme 2007-2011

From 2007-2011, BioNET pursued an ambitious 'Global Programme' supported by SDC to achieve results in **four key areas** as specified in the BioNET logframe and operational plan:

1. *Fortify the operational platform:* The Global Secretariat worked with the regional networks to develop capacity, strategies and operational support needed to respond in a timely manner to user needs.
2. *Accelerating the development of taxonomic resources, tools and technologies:* The Global Programme aimed to mobilise taxonomists to collaborate with technical partners and adopt innovative approaches to develop demand-driven, user-friendly taxonomic products.
3. *Policy development and communications:* To promote the long term sustainability of the taxonomic sector, the network worked together to provide relevant and timely technical input into policy development and to advocate the relevance, roles and capacity needs of taxonomy. For example, BioNET advised the Executive Secretary of the Convention on Biological Diversity (CBD) and acted as an important implementer of the Global Taxonomy Initiative (GTI), a Programme of Work under the CBD.
4. *Resource mobilisation and governance:* The Secretariat and the regions worked jointly to increase funding for the network, for example through developing a strategic funding profile. Also, the governance mechanism and monitoring and evaluation system were adapted to better reflect the needs of a democratic, multinational initiative.

An overarching strategic goal of the 2007-2011 phase was to better align the regional networks and their respective Programmes of Work under the global 'BioNET umbrella'. When BioNET started, it was intended that the Secretariat would be operational for only a short phase, with LOOPs soon operating independently. Later it was found that the Secretariat and its Global Programme provided an essential 'glue' for the network, representing the international face of BioNET (public relations and communications) and

delivering many global functions (global level knowledge and information exchange, partnerships, fundraising, and policy work), thus uniting the network to work as 'One BioNET' and form a strong, global platform for taxonomy.

Evaluation purpose, primary users and evaluation questions

With the 2007-2011 phase of the Global Programme coming to an end, SDC commissioned an evaluation that focused on assessing the merit and worth of the results achieved by the Secretariat-led Global Programme, with 'results' being defined as intended or unintended outcomes influenced by the Secretariat or the BioNET regional networks. The summative evaluation took place from December 2010 to March 2011 with the **purpose** of

- assessing the results of the Global Programme January 2007 – December 2010 and the added value of the main funder's contribution;
- assessing the potential of the international BioNET network to contribute further to food security and biodiversity agendas, and
- contributing to organisational learning.

The **primary intended users** and uses of the evaluation's findings were:

- SDC, the main funder of the BioNET Global Programme: the findings were to be used to decide if and how to further support BioNET.
- The BioNET Global Secretariat and Board: the findings were to be used to guide development of the 2012-16 BioNET strategy and help develop relationships with funders.
- The international not-for-profit organisation CABI, the host organisation of the Global Secretariat: the findings were used to assess the potential role of BioNET in 'Plantwise', CABI's new food security initiative.

In addition, not only the findings but also the evaluation itself served as a learning experience, where the *process* of generating answers to the evaluation provided regional network members and the Secretariat with new understanding of the effectiveness of BioNET and the Secretariat's leadership role.

Four **evaluation questions** were agreed by SDC, the Global Secretariat, CABI and the evaluators, summarised here as:

1. What do the outcomes achieved by the BioNET Global Programme imply for how it should do things differently in the future?
2. To what extent and how do the outcomes of BioNET represent a (potential) contribution to improved food security / agricultural research for development in less developed countries?
3. To what extent and how do the outcomes of BioNET represent a (potential) contribution to implementing the CBD nationally, regionally and globally?
4. To what extent was more funding and diversified sources achieved, and what are the major reasons for this?

Methodology

Outcome Harvesting - adapting Outcome Mapping principles for evaluations

The Outcome Harvesting approach was developed by Ricardo Wilson-Grau with colleague evaluators Claudia Fontes, Fe Briones Garcia, Gabriela Sánchez, Goele Scheers, Jennifer Vincent, Juliette Majot, Marcie Mersky, Martha Nuñez, Mary Jane Real, and Wolfgang Richert over the past eight years as an approach to monitor and evaluate the achievements of a multitude of networks, NGOs, research centres, think tanks and community-based organisations around the world (Majot *et al.* 2010; Wilson-Grau and Britt 2012). Outcome Harvesting is inspired by the definition of 'outcome' in OM, namely: observable changes in the behaviour, relationships, activities and actions of 'boundary partners' i.e. those individuals, groups or organisations with whom a project or programme interacts and works with directly to affect change. In the BioNET evaluation, these were called 'social actors' to avoid the confusion that can sometimes arise when using the term 'boundary partner' in groups with no prior experience with OM.

While the OM concepts of 'outcome challenges' and 'progress markers' can be used in the evaluation, they are not necessary components for Outcome Harvesting. The method uses a general elimination methodology (GEM) (Scriven, 2008) employed in numerous disciplines, as varied as forensic science, epidemiology, archaeology and geology, which works backward from an effect to determine its cause. That is, first the change in a social actor is identified and then the specific contribution of the evaluated organisation or network is determined. If the evaluation is of an

organisation that has used OM's 'intentional design' for its planning and, therefore, has predefined what is to be achieved in terms of outcome challenges – outcomes in the future – and agreed indicators of progress towards them, Outcome Harvesting can compare and contrast the outcomes achieved against them. In the BioNET case, however, OM was only introduced as a planning, monitoring and evaluation (PME) system in late 2010. Hence, the Global Secretariat and the evaluators decided that there was no added value in reconstructing the network's strategic objectives as outcome challenges and much less creating progress markers.

Managing the evaluation

The lead evaluator, Ricardo Wilson-Grau, an expert in network evaluation, negotiated the Terms of Reference (ToR) and the evaluation design with the Secretariat Director, Richard Smith, and managed the implementation. The evaluation team further consisted of co-evaluator Geoffrey Howard, an expert in biodiversity with the International Union for Conservation of Nature (IUCN), and co-evaluator Mike Jeger, a plant health expert and consultant. The collective role of the evaluation team was to ensure the process was a systematic, data-based inquiry that answered all the evaluation questions. The staff of the BioNET Global Secretariat supported the implementation of the evaluation by engaging and communicating with different stakeholders, as well as verifying, submitting and helping to classify the outcomes.

Defining the task

The *initial evaluation specification* was developed by the Secretariat Director in negotiation with SDC and CABI. It defined the purpose, scope, timeline, uses and users, seven evaluation questions, main reference sources, potential methods to be used, the characteristics of the evaluation team and the budget. Once agreed, the Secretariat Director developed the specification into the *Terms of Reference* in close collaboration with the lead evaluator. The lead evaluator's participation in the drafting of the ToR allowed for an important exchange of information and ideas and a mutual understanding of the task to develop. As a result, the number of evaluation questions was reduced from seven to four with substantial modification. The evaluation questions agreed in the ToR resulted from a process of negotiation and compromise that sought to balance the key requirements of SDC, the Secretariat and CABI with what could practically be achieved in the time and with the budget available. The understanding and trust

developed between the commissioners and evaluators during the negotiation of the ToR proved to be important for coping with the uncertainty underlying the evaluation. The unknowns included the scope and nature of the outcomes achieved by BioNET, and the degree to which autonomous, voluntary informants throughout the network would be willing and able to provide the required information retrospectively.

An *evaluation design* was developed as the first step in implementation of the evaluation to specify how the methodology would be applied, how the quantitative and qualitative data would be analysed and interpreted and the data presented and disseminated. It further specified what each evaluator would set out to do (and not do) to avoid substantive evaluation administration and communication problems.

For each evaluation question, the evaluators defined the information required, sources of information, procedure for collecting data and ensuring its validity and credibility, and the method of analysis, interpretation and synthesis. Similar to the ToR, the evaluation design was developed through an iterative process by the lead evaluator in consultation with the Secretariat Director and co-evaluators. The review of the original evaluation questions in the ToR when designing the criteria and standards for the data that would be required to answer them, proved to be important. For example, the evaluation questions in the ToR focused on both the effectiveness of BioNET and its efficiency. Since efficiency has to do with the relationship between resources, activities and outputs and the evaluation was to focus solely on outcomes, the Global Secretariat and evaluators agreed to re-write the evaluation questions in order not to address these areas of BioNET's performance.

The evaluation was designed to 'harvest' BioNET's outcomes during 2007-2010 and assess in how far they would verify progress towards the objectives in the BioNET operational plan and logframe. *Outcomes* were defined as "*observable changes in the behaviour, relationships, activities and actions of social actors, who in turn were defined as individuals, groups, organisations or institutions that were influenced in a small or large way, directly or indirectly, intentionally or not by BioNET (the representatives from the regions or the Secretariat staff)*". The social actors included those internal to the network, i.e. the BioNET Board, Global Secretariat, regional/national coordinators or regional/national coordinating institutions, other members of BioNET (subscribers to the BioNET electronic newsletter) and CABI, as well as those external to it: taxonomists not involved in BioNET in some way, the Parties and Secretariat of the CBD, plant health/agricultural agencies, other relevant public bodies, donors, and other end users of BioNET's outputs (processes, goods and services produced by the network).

It was agreed that the evaluation required two types of outcome descriptions:

- *Short descriptions*: consisting of a one sentence description of a positive or negative BioNET outcome achieved in 2007-2010 (who changed what, when and where) and a one sentence description of BioNET's contribution to this change (see Box 1).
- *Full-blown descriptions*: for a small, selected number of outcomes, more extensive descriptions were required describing in one or two paragraphs each (about one page): i) who changed what, when and where; ii) the significance of the change for the Global Programme objectives; and iii) how BioNET contributed and the importance of this contribution (see Box 2).

The process through which the short outcome description format was developed illustrates the iterative process of designing the evaluation. As conceived in the original evaluation design, short outcome descriptions were defined as consisting of a single sentence describing who BioNET had influenced to change in what way, when and where during 2007-2010. However, after examination of written materials, the lead evaluator and Secretariat Director agreed to modify this definition to include a statement of how BioNET contributed. The change was made because (a) the more comprehensive descriptions, while still concise, were much more informative; and (b) it was felt that the work required was feasible given the expected number of outcomes.

Finally, with the help of the Secretariat, the lead evaluator used the BioNET logframe and business plan to extract 13 specific pre-defined objectives for the four Global Programme key areas. The outcomes identified through the evaluation were later mapped to these pre-defined objectives to assess progress in the four key areas (see Table 1). Developing and negotiating the evaluation specification, ToRs and design together took place over a period of about one month.

Data collection

Data collection using Outcome Harvesting was also an iterative process. The process began with the lead evaluator extracting and drafting 93 short outcome descriptions from 58 written sources such as logframe status reports, reports from the regions to the Secretariat, reports from the Secretariat to the Board, project reports, as well as the BioNET website and the e-newsletter.

The Secretariat then reviewed and amended these (see 'Data verification' below), sometimes separating one or merging two descriptions, as well as adding further important outcomes that had not been reported in the documents provided to the evaluators. The lead evaluator reviewed the resulting list of about 140 outcomes and sent it to the regional BioNET network representatives. They were asked numerous questions to obtain more specific information about incomplete outcomes, along with detailed instructions on identifying and formulating additional outcomes from their regions that had never been reported. In addition, the Secretariat engaged with the regions to encourage the coordinators to respond to the evaluators' requests. The input from the regions extended the final list to 187 outcomes which first the evaluators and then the Secretariat reviewed and amended and finally categorised according to the four key areas and 13 pre-defined objectives of the Global Programme. Data collection, categorization, verification and substantiation (see below) together took about two months.

Box 1: Example of an outcome description

In October 2010, at the Conference of the Parties (COP) 10 in Nagoya, Japan, the Parties to the Convention on Biological Diversity adopted the decision on the Global Taxonomy Initiative which was drafted based on recommendations agreed at the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) International Year of Biodiversity conference (IYB) in Paris in January 2010.

The BioNET Secretariat designed the taxonomy session of the UNESCO IYB programme with the GTI CM Chair, led the organisation of the session and participated in the conference recommendation drafting group and subsequently influenced discussions at the 14th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA14) which resulted in inclusion of the recommendations in the draft COP decision.

Categorisation: Key Area C: "Contribute to an enabling policy environment and communications". Objective 6: "Promote the long-term sustainability of the taxonomic sector by helping create an enabling policy environment and by providing unique communication services."

Table 1: Pre-defined objectives of the BioNET Global Programme

Key Area A: Fortify the operational platform

1. Strengthen the LOOPs so they can increase the quality, quantity and sustainability of locally-optimised taxonomic responses to user needs for LOOP member countries and LOOP client institutions.
2. Develop the capacity, business models and operational support of LOOPs needed to respond in a timely manner to market needs.

Key Area B: Accelerate the development of taxonomic resources, tools and technologies

3. Mobilise taxonomists to develop taxonomic resources and use them to deliver user-friendly, demand-driven products.
4. Facilitate innovative approaches to taxonomic product development using digital and molecular technologies, resources and tools.
5. Promote optimisation and dissemination of taxonomic products to meet local market needs.

Key Area C: Contribute to an enabling policy environment and communications

6. Promote the long-term sustainability of the taxonomic sector by helping create an enabling policy environment and by providing unique communication services.
7. Provide relevant and timely technical input into policy development, advocating (under CBD) the roles and capacity needs of taxonomy in IAS management and ABS and (under IPPC and WTO) sanitary and phytosanitary measures
8. Promote taxonomy at all levels to strengthen the implementation of global multilateral agreements and regional processes.
9. Produce a website, e-Bulletin, and PR products on taxonomy to facilitate outreach and electronic information exchange between potential collaborators

Key Area D: Mobilise resources, governance and monitoring and evaluation (M&E)

10. Secure adequate and sustainable funding for BioNET to enable its LOOPs, partners and other stakeholders to fully address the Taxonomic Impediment and implement the GTI
11. Establish the Global Taxonomy Partnership (GTP) to support BioNET's mission and implementation of the GTI.
12. Adapt BioNET's governance to be representative of core customer interests and allow flexible responses to emerging opportunities
13. Enhance M&E to allow strategic management decisions and increase participation & ownership.

Box 2: Example of a 'full blown' outcome description

A. Outcome

The BioNET Secretariat has organized a one day session on taxonomy at the UNESCO International Year of Biodiversity Science Policy Conference held in January 2010 at its Headquarters in Paris. The concept and programme drafted by the BioNET Secretariat motivated several leading taxonomy practitioners and users, policy makers, and media persons involved in the communication of environmental themes, to participate as speakers or panel members in the conference. The session was named "The biodiversity knowledge base: taxonomy today and tomorrow for environmental sustainability and human well-being"; its main objectives were to

- Review significant developments and trends in taxonomy.
- Raise awareness of the importance of taxonomy.
- Provide an opportunity for dialogue between different stakeholder groups.
- Strengthen linkages between the taxonomy community, decision makers, communicators and educators.
- Identify issues and challenges for the proposed "Special Trust Fund for Taxonomy".
- Distil messages for the UNESCO Conference Declaration

At the end of the day, the participants had developed several key messages recommending ways to scale up and sustain taxonomy; Richard Smith of the BioNET Secretariat participated in the UNESCO Conference recommendations drafting group to integrate these in the Conference Declaration as inputs to the CBD and other key conservation planning meetings in 2010. In October 2010, Parties to the CBD agreed to welcome and include these recommendations from the UNESCO Conference in decision X/39. No other recommendations from conferences or other fora outside the CBD were included in this CBD decision.

B. Significance

Offering a platform for dialogue among taxonomists, end-users, policy decision makers and communicators / educators, the UNESCO Conference served several Key Areas of BioNET's Global Programme, e.g.

- Key Area B: mobilize taxonomists to better understand end-user needs and to deliver demand-driven outputs prioritized with respect to society's needs,
- Key Area D: seek to mobilize resources through engagement of stakeholders for the "Global Taxonomy Partnership Fund" project,
- Key Area C – Communications: engage taxonomist and media people in developing approaches to overcome barriers in education and communication of taxonomy, and particularly
- Key Area C – Policy: promote the long-term sustainability of the taxonomic sector by helping create an enabling policy environment and provide relevant and timely technical input into the policy development by communicating the needs of taxonomy required to address today's biodiversity challenges. Inclusion of the recommendations in a CBD decision adds greatly to their potential impact as Parties now need to respond and report on their responses to the decision in CBD national reports.

c. BioNET's contribution

At the "Global Taxonomy Partnership Fund" stakeholder workshop organized by the BioNET Secretariat in Paris, June 2009, Assistant Director General Walter Erdelen of the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) invited the BioNET Secretariat to organize a taxonomy session at the UNESCO Conference.

BioNET Secretariat's Richard Smith and Kornelia Rassmann together with Christoph Häuser (chair GTI-CM) developed a concept for the session's programme, recruited speakers, invited abstracts, developed guidelines for speakers and panelists and questions for the panel. BioNET-PACINET Chair Randy Thaman was a speaker. Richard Smith chaired the panel discussion and summarised the recommendations of the session participants on scaling up and sustaining taxonomy, and participated in the UNESCO Conference recommendations drafting group.

In March 2010, the BioNET Secretariat was involved in the SBSTTA14 discussions in Nairobi, which proposed the inclusion of the recommendations in the draft COP10 decision, ultimately leading to their adoption at COP10, Nagoya, in October 2010.

BioNET's extensive, world wide network embracing taxonomy practitioners and users, as well as policy, technology and capacity building partners allows it to harmonize and synthesize diverse needs of the community. Together with its unique niche – to help bridging the gap between end-user needs and the taxonomic sector's ability to meet those needs – this puts the BioNET in an ideal position to represent the taxonomy/end-user interface at policy fora and, vice versa, communicate taxonomy-related needs of policy and regulatory bodies to taxonomists internationally, thereby mobilizing prioritised responses that will contribute to the achievement of the anticipated Rio+20 Goals.

Data verification, substantiation and interviews

For verification, the three evaluators examined each outcome to ensure that:

- They described observable changes in the behaviour, relationships, activities and actions of social actors.
- The description of BioNET's influence was sufficiently concrete and specific to be verifiable.
- There was a plausible rationale between the substance and coherence of what was reported as achieved as an outcome and the reported contribution of BioNET.

For this exercise they used the logic of multiple lines and levels of evidence (MLLE) (Rogers, 2010) to make judgments about the plausibility of the causal link between what BioNET did to influence the change in the social actor described in the outcome, however small, indirect and unintentional that change may have been.

Triangulation played an important role as a strategy for increasing the validity of the evaluation. At several stages during the Outcome Harvesting process, the Global Secretariat and the focal network actors from the regions, too, reviewed the data to ensure that the information was accurate and comprehensive. Specifically, they were asked to assess each outcome whether they found it significant for the application of taxonomy for development; whether the social actor who was influenced was fully identified in the description; whether BioNET had in fact an influence on the change, and whether this was accurately described in the contribution statement.

In addition, the evaluators undertook independent verification of outcomes through consultations with selected informants when they considered it necessary or potentially helpful to their making the judgements required to answer the evaluation questions. Interviews were conducted with half a dozen plant health and biodiversity experts, thus further informing the evaluators' interpretation and synthesis of data.

Finally, the evaluators selected up to three outcomes for each of the four key areas of BioNET's work (in total 10 outcomes) whose substance and veracity they considered especially relevant to the evaluation questions. They asked their authors to write a fuller formulation of about one page each. The evaluators then subjected each of these 'full blown' outcomes to an additional step of 'substantiation' by up to three third parties familiar with BioNET's work in general and the outcome in particular. Each substantiator was asked to what extent – fully, partially or not at all – he or she agreed with the description of the outcome,

its significance and BioNET's contribution. They were also invited to make additional comments on the outcome statement. In the end, seventeen third parties replied and substantiated the ten outcomes. Fifteen substantiators fully agreed with the description of the outcome but two only partially. All seventeen substantiators fully agreed with the significance of and BioNET's contribution to each outcome. In sum, the evaluators considered the outcomes to be valid as formulated.

Interpretation and synthesis

The evaluators organised and interpreted the data to answer the evaluation questions, discussed the preliminary report with the main users at a face-to-face meeting and then finalised the report. The purpose of the discussion was to correct factual errors of commission or omission and ensure that the report was as readable as possible. The evaluators did not negotiate their interpretation of the data.

The 187 valid outcomes reflected BioNET's internal progress accomplished in strengthening the network and mobilising resources, the impressive development of taxonomic resources, tools and technologies, and its contribution to an enabling policy environment. The data allowed the evaluators to conclude that in 2007-2010 BioNET achieved an impressive set of outcomes and has had significant accomplishments in all four areas of strategic work (see Table 2) that strengthened the network, enhanced the ability of taxonomists around the world to respond to end-user needs, and contributed to an enabling policy environment for taxonomy.

The key conclusions of the evaluators based on the Outcome Harvesting approach and the complementary interviews with respect to the evaluation questions included:

- The BioNET Global Programme has surpassed its aim to ensure that regions are better able to generate technical solutions or respond to enquiries. Participation and ownership in the regions were bolstered and the amalgamation of Global Secretariat and local initiatives blossomed, demonstrating progress in uniting the LOOPs under the global 'BioNET umbrella' and working as 'One BioNET'. The evaluators concluded that the role played by the Global Secretariat hosted by CABI is a critical element in the continuing success of BioNET, notably enhancing the development of the regions.

- BioNET has been the major international player in promoting taxonomy and the dissemination of taxonomic products in the agricultures of developing countries. The evaluators thought that it would be difficult to identify any other organisation or initiative that could undertake this role equally effectively.
- Particularly through the interviews with the biodiversity and plant health experts it became clear that BioNET's allies recognise the network as the leader in supporting the Convention on Biological Diversity and championing the GTI. In fact, the evaluators thought that the CBD GTI would not have survived without BioNET.
- In spite of doubling its income in 2007-2010 compared to the four years previous, BioNET was unsuccessful in securing the funding it had planned. Still, the outcomes data show that in spite of this, BioNET was able to take action and deliver in the regions, as well as contribute to important changes in other stakeholders that are critical taxonomic impediments and the GTI. Also, the evaluators recognised that the Global Secretariat developed a proactive strategic approach in developing a funding profile, rather than only responding to funding opportunities as these arose.

Use of the evaluation

It has become customary for evaluations to include recommendations in the evaluation report. In this evaluation, however, while stating their key conclusions and recommended points for discussion, the evaluators refrained from making specific recommendations to the users of the evaluation - e.g. to SDC if and how to continue financial support to BioNET, or to CAB International on BioNET's role in a specific food security initiative. The evaluators considered this inappropriate for the following reasons.

A good evaluation will draw reasonable conclusions from solid evidence. Evaluators must ensure that sufficient high quality data is gathered and then well formulated. The data must be plausible and verifiable. Then, conclusions need to be drawn based on evidence — that is, the data has to be accurately interpreted and judgments made about the relationships between all the data in order to answer each one of the evaluation questions. The findings and the conclusions may be on the cutting edge and lead to substantial discussion by the primary intended users, as proved to be the case with this evaluation.

Table 2 – BioNET Outcomes 2007-2010 by the four key areas of work to which each outcome primarily corresponded

Global Programme's Four Key Areas of Work	Total
A – Fortify the operational platform (LOOPs)	28%
B – Accelerate the development of taxonomic resources, tools and technologies	25%
C – Contribute to an enabling policy environment and communications	17%
D – Mobilise resources, governance and monitoring and evaluation (M&E)	30%

However, the evaluators felt that to take the next step and recommend what decisions or actions BioNET should take, would be an unreasonable expectation of an evaluation team. Factors determining BioNET's decision-making included entirely legitimate political, legal, public-perception, financial, programmatic, and ethical considerations, most of which were confidential or highly sensitive or both. The evaluators – appropriately – did not have access to this information. Each one of these factors alone, and especially when combined, was at least as important as the findings and conclusions of the evaluation when the primary intended users made decisions about what to do and not do. Still, with the evaluation in hand – a document with 187 outcomes mapped to the key areas and 13 objectives of the BioNET Global Programme, and the evaluation report with the evaluators' conclusions - the BioNET Secretariat, its Board and SDC had solid evidence and expert interpretations that stimulated discussion. Together with the other factors, this permitted them to make highly informed judgments.

The BioNET Secretariat found that the evaluation findings and process provided significant insights into the results of BioNET and into approaches that can further improve the effectiveness of the network. The Secretariat's application of OM concepts in planning documents as input to the evaluation design and the findings of the evaluation thus informed BioNET's future planning. Also, the Global Secretariat facilitated the dissemination of the BioNET 2007-11 summative evaluation report and management decisions derived from the evaluation, and the report and lessons learned were used to increase appreciation of BioNET and its networking strategies among its members and potential supporters.

The Board, too, found the findings highly informative and agreed with key conclusions such as the critical role of the Secretariat and importance of further increasing network member involvement in governance. Although 16 years of direct support for the Secretariat from SDC ended in August 2011 because of a change of priorities and strategies, SDC was very interested in finding new ways to support BioNET. Most immediately, it supported a dialogue between BioNET and CABI with the aim of developing an SDC-supported collaboration to implement CABI's food security initiative 'Plantwise'. Furthermore, CABI decided to invest its own resources in continuing some Secretariat functions, recognising these to be essential for the network and also in CABI's interests. The evaluation also catalysed significant changes to governance: the Board decided to dissolve itself in favour of a "LOOP Council" to be comprised of representatives from each BioNET region, thereby greatly reinforcing the role of network members in governance. Hence while the evaluation refrained from recommendations, the evaluation process served as a learning experience for the users and its evidence-based answers and conclusions concerning the evaluation questions, catalysed highly significant changes, which, in difficult economic circumstances, have helped secure a future for BioNET at the global level.

Challenges in the evaluation process

Use of OM and Outcome Harvesting for evaluating a global, diverse network

International, voluntary networks are complex, dynamic systems whose strengths of flexibility, diversity of resources, opportunities for cooperation among many different organisations and people, and opportunities for resource sharing, also impose challenges for participatory planning, implementation, monitoring and evaluation. In contrast to NGOs, academic institutions, donor agencies and other organisational forms, networks face considerable uncertainty when establishing a common vision and mission for those with diverse institutional mandates and when trying to understand the limits to a network's sphere of influence or measuring its contribution to results.

OM specifically acknowledges these challenges and makes a number of relevant key assumptions about development and humanitarian interventions (Earl *et al.* 2001; Ambrose *et al.* 2012). For example, while recognising that impact is the ultimate goal towards which a development intervention works, OM focuses on the outcomes eventually leading to development impact – rather than on the impact itself – because the complexity and long-term nature of the development process often makes it extremely difficult to link impacts to a specific intervention. Further, OM assumes that sustainable ecosystems and human wellbeing depend on human behaviour and hence defines outcomes as behavioural changes. However, it recognises that there are limits to the influence that any intervention can expect to have on behavioural change outcomes. There may be multiple actors and factors essential to achieving sustainable change and therefore, instead of focusing on cause and effect attribution, OM looks for the contribution of an intervention towards behavioural change outcomes. Hence it assumes that interventions, as external agents, can only influence and contribute to outcomes and eventually impact; they do not control whether an outcome occurs or, ultimately, impact is realised.

Although the BioNET Global Programme was based on a logframe approach and many of the intended users of the evaluation did not have much experience with OM, the approach proved to be a very informative way to assess BioNET's contribution as a network to concrete, specific outcomes. This was achieved through a participatory, iterative and highly flexible process: both the evaluation design and implementation contained uncertainty about what would best work to meet the purpose of the evaluation and the process had to be adapted as the steps of the evaluation unfolded.

However, in the end this resulted in a rich database of outcomes shared and reviewed among all network actors involved in the evaluation process. Furthermore, by assessing an open-ended range of changes rather than a closed set of predetermined indicators (as is often the case in conventional evaluations), unforeseen positive and negative outcomes were recorded that otherwise could easily have been overlooked.

Nonetheless, the data did not represent the complete accomplishments of BioNET, especially at the regional level. The reasons for this are varied. The basic sources for the outcomes were reports that were written without the concept of outcomes in mind. Unreported outcomes that were identified during the evaluation by the Secretariat or the regions depended

on people's memory, usually of one person. If more people could have been involved, more outcomes would have been identified.

In addition, there is the double bind of negative outcomes. Influencing a social actor *not* to take action – avoiding something undesirable from happening – can be a significant outcome but is often awkward to formulate as a change and informants need to be especially encouraged and trained to report these. In addition, some outcomes may be considered negative changes to which a counterpart inadvertently contributed and which may have significantly detracted from, undermined or obstructed a desirable result. While the BioNET actors were encouraged to identify negative outcomes or outcomes where social actors did not take action, they were probably underreported.

Still, the outcomes harvested during the evaluation were seen as representative for the accomplishments of BioNET during the evaluation period and were favourably compared to what the evaluators perceived as intended outcomes articulated in the BioNET logframe. Together with the evidence from the interviews, this resulted in conclusions and recommended points of discussion that stimulated dialogue among different BioNET stakeholders and supported important management decisions shaping BioNET's future.

Validity and credibility of outcomes through verification and substantiation

A problem with Outcome Harvesting is that normally most of the written or oral sources for the outcomes informing the evaluation are internal. To ensure that the information collected from BioNET sources was still acceptable for use by the primary intended users of the evaluation, the evaluation design, including the verification and substantiation process, was agreed with these users.

The verification process helped to ensure that the outcome statements described a behavioural change in a social actor could be plausibly linked to a contribution of BioNET. The substantiation process gave the evaluation itself more weight, as the independent substantiators' public record of their agreement or disagreement with the outcomes provided an additional dimension of credibility.

Furthermore, both verification and substantiation had process uses. Verification helped to enhance the BioNET regional coordinators' understanding of the nature of the links between their activities and

outcomes achieved while substantiation served as a promotional element for the network that strengthened linkages to some of the external partners who were invited to participate in the evaluation process.

Tight time schedule and time intensive methodology

The first-time use of a participatory OM-derived evaluation methodology in BioNET demanded substantial time from the Global Secretariat (about 15 person days in addition to developing the ToR), who gave input to the evaluation design, engaged regional coordinators in the evaluation and above all drafted, reviewed, verified and classified outcome statements. For their part, the regional coordinators, who serve BioNET in a voluntary capacity, invested many hours in reviewing outcomes and draft additional statements from their respective regional networks. Moreover, the evaluators were on a very tight time schedule to complete the project within three months.

Without any baseline data from previous OM-type monitoring, the Secretariat's understanding of the network was crucial to adapt the OM-derived evaluation approach, help identify key network actors and social actors, and facilitate the evaluators' engagement and interaction with them. Also highly beneficial was the pre-existing knowledge of OM concepts of three Secretariat staff members gained through reading, an introductory training workshop at ODI (Overseas Development Institute, UK) and through preliminary testing of OM concepts in network strategy development, supported by the lead evaluator in a mentoring capacity. The high level of engagement of network members and substantiators decisively determined the timely delivery and success of the evaluation.

Even with this strong support from internal resources, the 187 outcomes are at most only representative of the progress in the four key areas of work identified in the logframe and operational plan of the BioNET Global Programme. Much more investment of human time and financial resources would have been needed to develop, classify, validate and substantiate a more comprehensive set of outcomes. It is clear that the evaluation would have been much quicker and more efficient if an OM-based PME system had been put in place at the start of the Global Programme in 2007, providing a stronger platform for the Outcome Harvesting approach.

CONCLUSIONS

The OM-inspired Outcome Harvesting approach proved to be very effective to deal with the complex evaluation challenges the network faces and sufficiently flexible to be adapted to the specific needs of the BioNET Global Programme. Furthermore, the approach had a strong positive effect encouraging learning at different levels and amongst different groups of BioNET's stakeholders. The intensive Outcome Harvesting process promoted a high level of self-reflection and creativity in summarising the social changes that had been influenced in a diversity of social actors. It resulted in increased engagement and a better understanding of BioNET's mission and achievements among network members participating in the evaluation, and helped to familiarise network actors with the concept of 'contribution' rather than 'attribution' that is at the heart of OM. This is expected to be helpful when using OM in the future regional and global strategic planning processes and for further improving the PME system in the next phase of BioNET. The experience gained, therefore, should have lasting benefits as it has contributed significant insights that are now shaping BioNET's approach to planning and monitoring. Last but not least, the outcomes harvested provided a rich resource of succinct 'achievement statements' to use for promotional purposes.

Works cited

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