TERMINAL REVIEW

OF THE

SOUTHERN AFRICAN BOTANICAL DIVERSITY NETWORK

(FORMERLY 'INVENTORY, EVALUATION AND MONITORING OF BOTANICAL DIVERSITY IN SOUTHERN AFRICA: A REGIONAL CAPACITY AND INSTITUTION BUILDING NETWORK (SABONET)')

GEF/UNDP PROJECT RAF/F97/G33
(APRIL 1998 TO MAY 2005)
PIMS 160

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5 April 2005

UNDP

IUCN The World Conservation Union

UNITED STATES OF AMERICA

SOUTH AFRICAN national biodiversity institute SANBI

GEF Global Environment Facility

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LIST OF ACRONYMS

ABGN	African Botanic Gardens Network
AETFAT	Association for the Taxonomic Study of the Flora of Tropical Africa
APC	African Plants Checklist
API	African Plants Initiative
BGCI	Botanic Gardens Conservation International
BOZONET	Botanical and Zoological Taxonomic Network for Eastern Africa
CBD	Convention on Biological Diversity
CITES	Convention on the International Trade in Endangered Species of Flora and Fauna
COP	Conference of Parties
GBIF	Global Biodiversity Information Facility
GEF	Global Environment Facility
GTI	Global Taxonomy Initiative
IABIN	Inter-American Biodiversity Information Facility
IPA	Important Plant Areas
IUCN	The World Conservation Union
IUCN ROSA	The World Conservation Union, Regional Office for Southern Africa
IUCN-SSC	The World Conservation Union Species Survival Commission
MDG	Millennium Development Goals
MSB	Millennium Seed Bank, Kew, UK
NBI	National Botanical Institute, South Africa
NETCAB	Networking and Capacity Building Programme
NGO	Non Governmental Organisation
POW	Programme of Work
PRECIS	Pretoria National Herbarium (PRE) Computerised Information System, South Africa
PROTA	Plant Resources of Tropical Africa
RBG KEW	Royal BotanicGardens, Kew, UK
SABONET	Southern African Botanical Diversity Network
SADC	Southern African Development Community
SANBI	South African National Biodiversity Institute
SBSTTA	Subsidiary Body for Scientific, Technical and Technological Advice of the CBD
SCBD	Secretariat, Convention on Biological Diversity
SECOSUD	Service for the Environmental Conservation of Biodiversity and Sustainable Development
SEPASAL	Survey of Economic Plants in Arid and Semi-Arid Plants, Kew, UK.
SSC	SABONET Steering Committee
TOR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WSSD	World Summit on Sustainable Development
WWF	World Wide Fund for Nature

EXECUTIVE SUMMARY

1. The Terminal Review mission of the Southern African Botanical Diversity Network (SABONET) was undertaken from 17th February to 4th March 2005 with an aim to assess the relevance, performance and success of the project. In assessing project implementation, the team used the GEF review criteria of implementation approach, country ownership and drivenness, stakeholder participation and public involvement, sustainability, replication approach, financial planning, cost-effectiveness, and monitoring and evaluation.

2. The SABONET project was initiated in 1996 with initial co-funding from the United States Agency for International Development (USAID) through the Networking and Capacity Building Initiative (NETCAB) of the World Conservation Union's Regional Office for Southern Africa (IUCN ROSA) based in Harare, Zimbabwe. The project started on 1st April 1998, with UNDP as the implementing agency and South Africa's National Botanical Institute (NBI) as the executing agency. Whilst the expected end of project date was 1st April 2002, fluctuations in the currency exchange rates for the South African Rand to the US Dollar resulted in gains that allowed additional funds for the project to complete additional activities as recommended by the Mid-term Review (Timberlake and Paton 2001). The proposed project closing date will be 1st April 2005.

3. The SABONET project development objective was to "C**ontribute towards sustainable human development in the southern African region through the effective conservation of natural resources**". This goal was probably too broad and too ambitious for this type of capacity building project. There was no possibility for the project activities to contribute to sustainable human development directly. This affected the PIR project rating during the annual project evaluation. The Terminal Review evaluation however has been undertaken based on the overall objective and not the development goal.

4. The immediate objective of the project was to "*develop a strong core of professional botanists, taxonomists, horticulturists and plant diversity specialists within the ten countries of southern Africa, competent to inventory, monitor, evaluate and conserve the botanical diversity of the region in the face of specific development challenges, and to respond to the technical and scientific needs of the Convention on Biological Diversity*".

5. The proposed project outputs were: (1) Trained professional southern African plant taxonomists, horticulturists and plant diversity specialists, (2) Formal establishment of a collaborating Southern African Botanical Diversity Network, (3) Electronic information system on the region's plant diversity, (4) Production of regional human and infrastructural inventories, (5) Plant diversity evaluations and monitoring within the region and (6) Development of a regional botanic gardens conservation strategy. Following the SABONET Mid-term Review (Timberlake & Paton 2001), the following activities were added under outputs 3, 5 and 6, thus (3b) Produce a Regional Poaceae checklist, (5b) Assess end-user needs at national level through consultative workshops and (6b) Develop a Threatened Plants Programme for the participating botanical gardens.

6. While the SABONET project was conceived soon after the Convention on Biological Diversity (CBD) came into force and prior to the finalisation of the current programmes of work of the Convention, its design was visionary and robust and has enabled the ten southern African countries to accelerate progress in the implementation of the CBD, particularly within the framework of the Global Taxonomy Initiative (GTI) and the Global Strategy for Plant Conservation (GSPC).

7. The logframe was revised annually by the SABONET Steering Committee and necessary modifications made in response to emerging needs in the context of the project. Annual work plans were based on the logframe that was used as a tool for monitoring, evaluation, and financial planning. All the regional annual reports reflect progress in the achievement of the activities, highlight gaps and challenges.

8. The SABONET project has been exceptionally successful in a number of regards. Of the 45 project activities identified in the logframe, only three were later cancelled and two not fully achieved. The SABONET project has largely achieved its broad objective of building the regional human, infrastructural and institutional capacity.

9. The project ran a total of 22 in-house regional dedicated training courses using local resources and expertise in the fields of herbarium management (3), database management (7), plant identification of various taxonomic groups (5), environmental impact assessment (1), cycad conservation (1), botanical drawing (1) and field courses (1). Sixteen of these courses were held in South Africa while six were held in other countries in the region. Four courses were held at the national level (Namibia - Grass identification and PRECIS Computer course, Zambia-Herbarium Management and EIA, and South Africa - Cycad Conservation Course). Various Red listing courses were held at the national level to develop red lists and were supported in part by IUCN ROSA through the NETCAB funding.

10. A total of 186 participants attended the regional courses of which just over one third (37%) were female. While the project made efforts to ensure gender balance, this was constrained in part by prevailing institutional structures and establishments. In the second phase of the project, 75 internships were held within the region between herbaria and botanical gardens to strengthen the technical and research skills base depending on the specific institutional needs and priorities. Of the 22 MSc students sponsored by the project, 19 have completed their studies and three are due to complete their studies by the end of the year. Three recipients of SABONET scholarships excelled in their MSc degrees with distinction and two have proceeded to PhD. registration.

11. The SABONET project has provided an excellent model for networking at a regional level. The project has actively strengthened networking within the 17 regional herbaria and 22 botanical gardens in the 10 participating countries. A network newsletter was published three times a year, with a mailing list of 905 people worldwide. A total of twenty three issues have been published. Regional and national technical project publications were produced as the SABONET Report Series. Out of a total of forty two approved reports, 33 have been produced and eight are in press. Nineteen of these reports were national publications. Computer hardware and software were purchased for all herbaria, and computer networks put in place. One regional computer training course was held at the beginning of the project (1997) and six database management courses held in Pretoria (5) and Windhoek (1).

12. Of the ten countries, only Namibia was able to database all their collections with 81,211 specimens even though they had initially starting databasing their collection using a different database (BRAHMS-Botanical Research and Herbarium Management System) and had to restart all over again with the PRECIS system. During the 2004/2005 period, the existing PRECIS databases have been migrated to the open-source MySQL platform to allow for greater flexibility and interoperability as well as easier interface with the newer Microsoft XP and Microsoft 2000 given that the earlier database structure was based on Microsoft 1997. In the later phase of the project database activity shifted to the computerisation of Poaceae with a better success rate. All the institutions managed to database 100% of their Poaceae except Botswana, Lesotho, Mozambique and Swaziland.

13. There is a threat of some databases at smaller institutions being orphaned – the databases will become non-functional. Perhaps we should learn from other initiatives such as IABIN and GBIF, link closely to African Plants Initiative (API) and African Plants Checklist (APC) as well other regional initiatives such as SEPASAL, MSB and PROTA, as a means of consolidating institutional information management systems. This will allow better-targeted conservation and a stronger context to gain additional project funding, whether for research or practical conservation activities.

14. To strengthen the institutional capacity and meet the infrastructural needs identified for each of the ten countries, herbarium cabinets, computers and peripherals, microscopes and freezers were purchased. For field work, a Toyota Hilux 4x4 Diesel vehicle, camping equipment, cameras and GPS were also purchased through SABONET, and as a result of this, the project conducted 109 national field collecting expeditions during the project phase.

15. With additional support from IUCN ROSA's NETCAB Programme and using the SABONET framework, the SABONET Project organised national red listing workshops using the IUCN red listing criteria in all the ten countries and developed draft national red lists. Three Important Plant Area (IPA) Workshops were held in Namibia, South Africa and Mozambique and a regional IPA workshop held in South Africa prior to national IPA workshops. Countries with incomplete checklists and databases were constrained in reviewing and identifying IPAs at a national level. There are plans to follow up IPA workshop recommendations in Namibia.

16. End-user workshops were therefore held in all the SABONET countries and a summary of the findings are presented in the SABONET Report No. 29. Various Threatened Plants Programmes were developed in the later phase of the project linked to the International Agenda for Botanic Gardens in Conservation (IA) and national red lists developed as part of the SABONET project in 22 botanical gardens in the region.

17. The retention of SABONET trained staff is going to be a continuing challenge for some countries. The lack of an enabling environment, visionary leadership and poor salaries are issues that seriously affect staff retention and these have to be addressed in the long-term if benefits are to accrue from the SABONET investment. At a regional level, there is going to be a continued need for additional capacity building in biodiversity informatics and horticulture, in addition to plant taxonomy and conservation. However, SABONET has put in place appropriate linkages to pursue this in the long term.

18. Various national and regional UNDP, GEF and other donor-funded projects were implemented during the SABONET project phase. Efforts were made to integrate and link these to SABONET, such as the Survey of Economic Plants in Arid and Semi Arid Lands (SEPASAL) in Namibia (Royal Botanic Gardens, Kew); Millennium Seed Bank projects with South Africa, Namibia and Botswana (RBG, Kew); Plant Resources of Tropical Africa (PROTA) project in Malawi (Wageningen University, Netherlands); and the African Plants Initiative and African Plant Checklist projects (funded by the Mellon Foundation, with leadership from SANBI). SABONET intended to work closely with the SADC-Italian funded SECOSUD project, but with limited success, as this project was not completed.

19. In general, the degree of country ownership and drivenness varied between countries depending on two factors: the pro-activeness of the National Coordinator and members of the SABONET National Working Group (NWG) and the institutional mandate or position within the larger government structures. In instances where the National Working Groups were not effective, there was limited input from stakeholders in country to enhance country ownership and drivenness. There was a greater need to steer project outputs to address local needs more closely through a focus on other local initiatives and agendas such as work on medicinal, food and useful plants. These would provide relevance to agricultural, forestry, natural resource management sector and poverty eradication strategies and plans.

20. Due to the specific overall objectives and logframe being developed before most of the CBD POW and emerging NBSAPs and MDGs, there wasn't sufficient flexibility to allow countries to steer SABONET activities towards national needs. The imbalance between country resources, institutional capability and manpower affected the ability and willingness of countries to meet specified project outputs. Even though the project has come to an end, there has been limited effort at the national level to communicate the relevance of the project to its sectoral and development plans.

21. Through a high quality three times yearly newsletter with a global distribution list of 905, a SABONET Report series and frequent presence at key international and regional meetings, SABONET became widely known as a flagship GEF taxonomic, capacity building and networking project. The limited uptake of these products outside the SABONET fraternity at national and regional level could be attributed to a very focused approach of SABONET (i.e. plant taxonomy, with limited conservation or tailored taxonomic products), while the emphasis on capacity building as the major output limited potential entry points for government stakeholders.

22. At the regional and international level, the project was very effective in building linkages to the broader taxonomic and botanic gardens community. SABONET revitalized southern African botanical institutions' involvement in the taxonomic community working on the African flora (AETFAT) and made significant contributions to the AETFAT Congresses in Meise, Belgium (2000) and Addis Ababa, Ethiopia (2002). Its database experiences have been instrumental in the development of the African Plants Initiative and the African Plant Checklist project with linkages to the all the key botanical/plant taxonomic expertise in Africa, Europe and the USA. Through its activities with botanical gardens, SABONET has built strategic linkages to the African Botanic Gardens Network and Botanic Gardens Conservation International and has implemented various aspects of the International Agenda for Botanic Gardens in Conservation. Overall, the project has been more successful at the international level than was expected, and as successful at the regional level as could reasonably be expected.

23. The SABONET project model was very well designed to meet its objectives and highly replicable. It is however important to stress that SABONET has some unique elements that were responsible for its huge success that may not be easy to replicate in other contexts, but could be up-scaled. These are: (a) a strong **project champion** with institutional, regional and international support and presence, (b) visionary yet **adaptable project leadership** and management, (c) a transparent and strong regional Steering Committee with **consistent membership** during the project phase chaired by a competent leader, (d) **willing, focused and motivated team players in a regional context**, and **(e) highly experienced and committed support** from the GEF Regional Advisor.

24. A good indicator of the project replicability is the proposed GEF/UNDP Eastern Africa Botanical and Zoological Networks in Taxonomy (BOZONET), which has been modeled on SABONET. The outputs of SABONET have been up-scaled and replicated through the Africa Botanic Gardens Network, the African Plants Initiative and African Plant Checklist project, as well as related initiatives such as the MSB project, SEPASAL and PROTA. Some SABONET products have been replicated in-country.

25. SABONET was designed to be very cost-effective in delivering project objectives and exceeded expectations. No significant budgetary adjustments were needed and the project delivered more outputs than initially planned. In delivering its major outputs, the project spent 62.1% of the budget on training, national staff (whose costs has been taken on locally after the project) and equipment. Only 6.3 % was spent on regional administration. In general, the administrative costs were kept low with 75% of the budget being spent in-country on project activities as defined by the logframe.

26. The SABONET management structure was very effective. The project was very well managed with a very effective and functional Regional Office manned by three competent and highly qualified Regional Coordinators over the project lifetime. The choice of NBI as the executing agency was supported by all the National Coordinators and they noted that it was the best placed institute in the region to carry out this role. It was agreed in principle that a rotating Secretariat would have been costly and ineffective. Participating institutions were comfortable with the Secretariat being based in South Africa, allowing access to key resources and universities.

27. The national implementing offices were based at the SABONET collaborating institution and had a National Coordinator who was usually the institutional head. The main setback was that the SABONET project added an extra burden on the busy heads of institutions and there was need for a dedicated project officer supported by the project. The National Working Group worked effectively in a few countries but less so in others.

28. Apart from the internal annual reports based on the logframe prepared by the national and regional offices, the project prepared UNDP Annual Project Reports (APR) and GEF/UNDP Project Implementation Reports (PIR) following the formats required in a timely and satisfactory fashion. UNDP did not have any issues of concern regarding project monitoring and evaluation. A Mid-termReview was undertaken in 2001 in addition to two project Tripartite Reviews, while an internal Terminal Review was conducted in 2004. Similar reports were prepared for the IUCN/USAID NETCAB funding. All funds were audited annually by the appointed NBI auditors.

29. UNDP was the best placed implementing agency for the SABONET project as all the participating countries have a national UNDP office with the potential to support in-country implementation. SABONET had a development goal and its capacity building and institutional strengthening focus was directly linked to the UNDP mandate and focus in the region. Some UNDP offices were actively involved and interested in project activities and participated in National Working Groups (e.g. Namibia, Malawi, Botswana, South Africa). In South Africa, the UNDP office provided good support to the regional office. The GEF/UNDP Regional Coordinator provided timely and practical guidance for the project.

30. **The following are the recommended actions :**

Follow up actions:

Databases:

- Follow up to finalize MOU on data sharing between the Namibia's National Herbarium (WIND) and SANBI. This could be used as a potential model for regional/bilateral data sharing agreements if found appropriate.
- SANBI needs to clarify its role and what potential support might be available to participating institutions concerning the PRECIS Specimen Database development, future upgrades, trouble-shooting and training. The SABONET National Coordinators should communicate their expectations clearly and agree modalities. It would be worthwhile to have some formal institutional agreement that would be valid post-SABONET.
- Institutions that have not completed databasing their specimens should set SMART targets on this activity and seek additional funding to complete it.

Red Lists:

- Review national Red Lists, update them and disseminate results to the relevant agencies, especially those working on *in situ* and *ex situ* conservation.

End-user workshops

- Follow up on recommendations of the end-user workshops at a national level.
- Strengthen partnerships developed during the project.
- Explore ways and means to build linkages to relevant sectoral and national policies by working closely with the relevant agencies.
- Build linkages to the GTI and GSPC focal points and join forces to define and push forward a locally relevant national plant conservation and sustainable use agenda.

The SABONET Exit Strategy:

The **national institutions** need to mainstream SABONET gained resources and capacity. Recommended follow on activities include the following:

- Establish linkages to potential funding organizations such as the Belgian GTI focal point funding for internships.
- Explore new sources of funding at local, regional and international levels and pursue them.
- Seek and clarify potential partnerships and linkages at national and regional level that may be useful in soliciting funds, and use these to develop new projects or programmes.
- Carry out strategic reviews to identify their strengths and relevance, e.g. to relevant thematic programmes and policy frameworks such as invasive species, useful plants and medicinal plants, which they could focus on to demonstrate relevance, ensure sustainability and attract local and regional support.
- Strengthen linkages between botanical gardens, Botanic Gardens Conservation International and the African Botanic Gardens Network, whilst herbaria should strengthen linkages to BioNET International and AETFAT.

At the regional level, the **Steering Committee** needs to:

- Outline the linkages and legacy of the SABONET project in relation to the API and APC, and to other related projects such as the MSB, SEPASAL, GBIF, PROTA, and BGCI's African Small Grants Programme.
- Agree on pragmatic options for sustaining the SABONET network.
- Update the SABONET website and build links to national participating institution websites.

The SABONET Legacy: What next?

A. Each National Coordinator should produce a document on outlining how the project has benefited the institution, country and region, including linkages to CBD (especially GTI, GSPC, IAS, PA), UNCCD, CITES and other environment and sustainable development agreements, and circulate this to relevant stakeholders, especially the CBD focal points.

B. Collaborating institutions should compile the outcomes of the SABONET project in the context of the GTI and GSPC, present these to the CBD focal points and request that these be included in the country national reports.
C. Since the GTI is due for an in-depth review of progress in implementation at COP 8 (March 2006, Brazil) the SABONET Regional Office should produce a paper summarizing the experience of SABONET in implementing the GTI as a component of this review for southern Africa. This paper can be submitted by the GTI focal point of one of the participating institutions as an information document to SBSTTA 11. (Some of the SABONET National Coordinators are GTI focal points and could facilitate this, e.g. Botswana, Malawi and South Africa).
D. In order to ensure long-term access to the excellent documents produced by SABONET and share experiences in building capacity for taxonomy at the national and regional level, the SABONET Regional Office should compile a CD-ROM/DVD of all electronic outputs (within acceptable copyright limits) and disseminate these. Copies should be made available to the CBD Secretariat and BioNET International libraries, amongst others. Consultations with the latter and the GTI Officer may provide further guidance. Any freely accessible electronic documentation should also be availed to the Clearing House Mechanism of the CBD.
E. Hard copies of all available literature should be disseminated to all key libraries to ensure continued access long after SABONET closes.
F. A strategy for database updates and long-term maintenance should be formulated to avoid the in-country datasets being orphaned and abandoned, or worse still have the wheel re-invented through other funding mechanisms. Discussions with relevant stakeholders and links to the African Plants Initiative and GBIF may provide some alternative scenarios.

I INTRODUCTION

In accordance with the GEF/UNDP Monitoring and Evaluation policies and procedures, all regular and medium sized projects supported by the GEF should undergo a final evaluation upon completion of implementation. The Terminal Review mission of the Southern African Botanical Diversity Network (SABONET) was undertaken from 17th February to 4th March 2005 by Ms Stella Simiyu (Secretariat, Convention on Biological Diversity and Botanic Gardens Conservation International - Nairobi, Kenya) and Mr Jonathan Timberlake (Biodiversity Foundation for Africa, Bulawayo, Zimbabwe).

The aim of the Terminal Review was to assess the relevance, performance and success of the SABONET project. The review sought to identify early signs of potential impact and sustainability of results including contribution to capacity development and achievement of environmental goals, as well as lessons learned with a view to make recommendations that might improve the design and implementation of other GEF/UNDP projects. In assessing project implementation, the team used the GEF review criteria of implementation approach, country ownership and drivenness, stakeholder participation and public involvement, sustainability, replication approach, financial planning, cost-effectiveness, and monitoring and evaluation. The detailed Terms of Reference for the Review are presented in Annex 1.

1.1 Methods

A variety of tools were used by the review team. These included a desk study of the SABONET project documentation, personal interviews with relevant staff and stakeholders, field visits, questionnaires, email and telephone consultations.

Various documents produced by SABONET, including minutes of the National Working Group and regional Steering Committee meetings, SABONET Report Series and SABONET News, UNDP Annual Project Reports and GEF Project Implementation Reports, annual and financial reports for each participating country, the SABONET Mid-term Review and Internal Terminal Review Report, were all reviewed.

Due to time constraints, only five countries (Botswana, Malawi, Namibia, South Africa and Zimbabwe) were visited during the review period. Earlier, one member of the review team, MrTimberlake, visited and reviewed the project in Mozambique on 22-23 November 2004. A brief meeting was held in Pretoria with the SABONET National Coordinators for Angola and Zambia on 4 March 2005. The itinerary for the review mission is presented in Annex 2 while the list of the people interviewed is included as Annex 3. The framework questionnaire used for the interviews during the country visits is presented as Annex 6 (a,b).

In order to ensure that adequate feedback from all SABONET participating countries was represented in the review process, a detailed review questionnaire was sent electronically to all the National Coordinators, including those in countries that were visited, and the responses submitted by email to the Team Leader within seven days. Responses were received from nine out of the ten countries, with no response received from Swaziland[1], even after telephone follow up. Telephone and/or email communication was used where necessary. A summary of the findings from the field visits and responses to the questionnaires is presented in Annex 4.

The preliminary findings of the review were presented by the review team to part of the SABONET Steering Committee[2].

[1] The National Coordinator left the Herbarium, and was not in the country.

[2] Chair of the regional SABONET Steering Committee (Prof. Brian Huntley), SABONET National Coordinator, South Africa (Prof. Gideon Smith), SABONET Regional Coordinator (Yolande Steenkanp), Christopher Willis (former SABONET Regional Coordinator) and two representatives from the regional Steering Committee, Angola (Prof. Esperança Costa) and Zambia (Dr Patrick Phiri).

II SABONET PROJECT AND DEVELOPMENT CONTEXT

2.1 RELEVANCE OF THE SABONET PROJECT

The ten countries that constitute southern Africa (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe) comprise less than two percent of the world's land area but contain 10% of the global flora found in ecosystems of global importance. Examples of these include:

- 17 centres of plant diversity identified by the IUCN/WWF global review,
- arid and semi-arid ecosystems including the whole of the Karoo-Kalahari-Namib region comprising 46% of the world's succulent flora,
- the Cape Floristic Kingdom, the richest centre of botanical diversity and endemism worldwide,
- the Okavango Delta and Kafue wetlands, besides several RAMSAR and World Heritage Sites,
- unique forest ecosystems such as the Guineo-Congolian forests of Angola, Zanzibar-Inhambane coastal forests of Mozambique, and various Afromontane forests,
- Mountain ecosystems such as Mount Mulanje in Malawi, the Maluti-Drakensberg of South Africa and Lesotho and the Chimanimanis of Mozambique and Zimbabwe.

With varied threats such as a high human population, land degradation and unsustainable natural resource extraction compounded with high levels of urbanisation, many of these ecosystems that are of local, national, regional and global significance are under threat and many species are endangered. Only 6% of the region falls within the protected area network. However, the institutional capacity and capability within the region to carry out botanical inventory, monitoring and conservation was weak, and totally lacking in some countries, and there was hardly any regional coordination or collaboration. In order to address these challenges, a meeting of southern African botanists was held in Maputo, Mozambique in February 1990 leading to the formation of an informal "Network of Southern African Plant Scientists (NESAPS)". The participants agreed that priority should be given to capacity building and institutional support at a regional level, but due to lack of funding they were not able to move forward.

Several related conferences and workshops were held at national and regional levels to develop action plans. The meetings reviewed the regional/national patterns of botanical diversity, conservation status, research, infrastructure and training needs, socio-economic potential and priorities for action. As a result of two regional conferences in 1993 (Bulawayo, Zimbabwe and Cape Town, South Africa), a consensus was reached to raise funds for a regional project to address these needs and the gaps identified. The baseline was identified as poorly researched botanical diversity with few trained botanists in permanent posts working with poor facilities that compromised the ability of the institutions and staff to make any meaningful contribution to the study, conservation and sustainable use of botanical diversity. The focus of the project would be to establish a regional network and to urgently establish a regional capacity building and infrastructural support programme.

The Southern African Botanical Diversity Network project was initiated in March 1996 with initial co-funding from the United States Agency for International Development (USAID) through the Networking and Capacity Building Initiative (NETCAB) of the World Conservation Union's Regional Office for southern Africa (IUCN ROSA), based in Harare, Zimbabwe. The full GEF funding was accessed in September 1997 and the official starting date of the four-year full GEF/UNDP project was 1st April 1998, with UNDP as the implementing agency and South Africa's National Botanical Institute (NBI) as the executing agency. The project sought to ensure cost effectiveness by strengthening south-south development, regional collaboration to share collective skills in the region, and to develop local solutions to local problems using local capacities, technologies and resources where available. Whilst the expected end of project date was 1st April 2002, fluctuations in the currency exchange rates for the South African Rand to the US Dollar resulted in gains that allowed additional funds for the project to complete additional

activities as recommended by the Mid-term Review (Timberlake and Paton 2001). The proposed project closing date will be 1st April 2005.

The SABONET project development objective was to "**Contribute to the sustainable human development**[3] **in the southern African region through the effective conservation of natural resources**".

The immediate objective of the project was to "*develop a strong core of professional botanists, taxonomists, horticulturists and plant diversity specialists within the ten countries of southern Africa, competent to inventory, monitor, evaluate and conserve the botanical diversity of the region in the face of specific development challenges, and to respond to the technical and scientific needs of the Convention on Biological Diversity*".

The IUCN ROSA co-finance budget through the NETCAB project (1995-1998) was US$ 447,000 while the GEF support through UNDP was US$ 4,656,000. The annual staff and operating budgets of the participating institutions provided the in-kind contribution by respective governments was estimated at US$ 7,905,000 for the entire project phase. The target beneficiaries of the project were the national or main functional herbaria and botanical gardens in the participating countries that would use the project outcomes to enable them to fulfil their obligations to the Convention on Biological Diversity and other international conventions.

2.2 IMPLEMENTATION

The SABONET project was managed and administered through the National Botanical Institute (NBI), now the South African National Biodiversity Institute (SANBI). NBI provided the office space and additional infrastructural support[4] through its National Herbarium, Pretoria (PRE), South Africa, where the SABONET Regional Office was based.

A Regional Coordinator, project Financial Officer and an Administrative Assistant were hired by NBI to run the regional office. To expedite their work, clear guidance was provided in the project document on their Terms of Reference, financial and reporting arrangements to the GEF, UNDP and other donors. In addition, terms of reference were initially outlined for a Herbarium Research Officer and a Technical Research Assistant, to be appointed in the national participating institutions, whose costs were met by the USAID/IUCN ROSA funding. Their main role was to facilitate field studies, research and curate the plant collections.

2.3 EXPECTED PERFORMANCE AND SUCCESS OF THE PROJECT

The expected outputs of the SABONET project as defined in the initial Project Document (Huntley *et al*., 1998) are outlined below.

However, after the SABONET Mid-term Review (Timberlake & Paton 2001), the following activities were added under outputs 3, 5 and 6:

3b Produce a Regional Poaceae checklist
5b. Assess end-user needs at the national level through consultative workshops
6b. Develop a Threatened Plants Programme for the participating botanical gardens.

[3] The proposed goal for the SABONET project was probably too broad and too ambitious for this type of capacity building project. There was no possibility for the project activities to contribute to sustainable human development directly. This affected the PIR project rating during the annual project evaluation. The Terminal Review evaluation however has been undertaken based on the overall objective and not goal.

[4] e.g. meeting rooms, equipment and accommodation facilities for the regional training courses.

Expected output	Verifiable indicators
1. Trained professional southern African plant taxonomists, horticulturists and plant diversity specialists	33 postgraduate biodiversity specialists, 39 parataxonomists, 16 living collections managers, 14 MSc/PhD biodiversity specialists
2. Formal establishment of a collaborating Southern African Botanical Diversity Network	Functional Steering Committee, Project Coordinators office, National Working Groups
3. Electronic information system on the region's plant diversity	National and regional databases for botanical diversity information
4. Production of regional human and infrastructural inventories	Publication of reports based on surveys done within the region
5. Plant diversity evaluations and monitoring within the region	Publication of national and regional checklists, red data lists and conservation strategies
6. Development of a regional botanic gardens conservation strategy	Publication of a Southern African Botanical Gardens Conservation Strategy

III FINDINGS AND CONCLUSIONS

3.1 PROJECT FORMULATION

3.1.1. IMPLEMENTATION APPROACH

Whilst the SABONET project was conceived soon after the Convention on Biological Diversity (CBD) came into force and prior to the finalisation of the most of the current programmes of work of the Convention, its design was visionary and robust and indeed has enabled the ten southern African countries to accelerate progress in the implementation of the CBD, particularly within the framework of the Global Taxonomy Initiative (GTI)[5] and the Global Strategy for Plant Conservation (GSPC)[6].

The SABONET project has inadvertently delivered a strategic response to the GTI Programme of Work (POW) and set the southern African Parties ahead in its implementation. The Logical Framework developed well before the GTI POW provided an excellent fit to the delivery of its first three operational objectives.

The Programme of Work (POW) of the GTI elaborates five operational objectives as indicated in the table below:

[5] The aim of the GTI is to enable the provision of appropriate taxonomic information and capacity to underpin decision-making in the conservation of biological diversity, sustainable use of its components and equitable sharing of the benefits derived from the utilisation of these resources. This is to be achieved by addressing (a) the lack of taxonomic information, and (b) the need to build capacity for taxonomic activity (Hamdallah Zedan, 2003, in GTI Programme of Work Brochure, CBD Secretariat, 2003).
[6] The ultimate and long-term aim of the GSPC is to halt the current and continuing loss of plant diversity. It emphasizes the need for capacity building, especially in developing countries, in order to achieve the 16 outcome oriented global targets by 2010 (CBD Decision VI/9).

1. Assess taxonomic needs and capacities at national, regional and global levels for the implementation of the Convention.
2. Provide focus to help build and maintain the human resources, systems and infrastructure needed to obtain, collate, and curate the biological specimens that are the basis for taxonomic knowledge.
3. Facilitate an improved and effective infrastructure/system for access to taxonomic information, with priority on ensuring that countries of origin gain access to the information containing elements of their biodiversity.
4. Within the major thematic work programmes of the Convention, include key taxonomic objectives to generate information needed for decision-making in conservation and sustainable use of biological diversity and its components.
5. Within the work of cross cutting issues of the Convention, include key taxonomic objectives to generate information needed for decision-making in the conservation and sustainable use of biological diversity and its components.

Seven of the 16 outcome targets of the GSPC are of direct relevance to the SABONET logframe. These are:

- Target 1: A widely accessible working list of known plant species, as a step towards a complete world flora.
- Target 2: A preliminary assessment of the conservation status of all known plant species, at national, regional and international level.
- Target 5: Protection of 50% of the most important plant areas for plant diversity assured.
- Target 8: 60% of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10% of them included in recovery and restoration programmes.
- Target 14: The importance of plant diversity and the need for its conservation incorporated into communication, educational and public awareness programmes.
- Target 15: The number of trained people working with appropriate facilities in plant conservation increased, according to national needs, to achieve the targets of the Strategy.
- Target 16: Networks for plant conservation activities established or strengthened at national, regional and international levels.

The logframe was revised annually by the SABONET Steering Committee and necessary modifications made in response to emerging needs in the context of the project. After the Mid-term Review, new elements linked to GTI operational Objective 5 and the GSPC (i.e. Red Lists, IPA workshops, threatened plants programmes and end-user workshops) were incorporated into the logframe and implemented. Three activities related to the digitization of vegetation maps of major vegetation types, biomes and ecosystems within the region (Activity 5.2), production of relational databases in GIS formats (which formed a bulk of the SECOSUD linked activities) (Activity 5.3), and evaluation of the conservation status of selected vegetation types/ecosystems/biomes per country and region (Activity 5.10) were cancelled.

Annual work plans were based on the logframe that was used as a tool for monitoring, evaluation, and financial planning. All the regional annual reports reflect progress in the achievement of the activities, and highlight gaps and challenges.

Linkages and partnerships

There was opportunity in the latter part of the project to review the logframe and streamline it in line with emerging relevant CBD POW and GEF mandates. In addition, there was opportunity to consider national differences in capacities and priorities, and to contextualize these in the logframe. It is apparent that the traditional model of herbaria and botanical gardens, with associated structures/mandates/practices, still largely defines the framework of operation and thinking in many national institutions in the region. This has limited the ability of these institutions to redefine themselves in order to fit their local contexts and deliver timely outputs. The potential benefits of thinking 'out of the box' was well illustrated by the threatened plants programmes in which a regional objective was expressed differently at the national level and tailored to national needs and priorities as was the case of *Hoodia* propagation[7] in Namibia and the extinction garden[8] in the Kirstenbosch National Botanical Garden, South Africa. SABONET provided an opportunity for a paradigm shift on institutional roles and practices. The project could have internalized this through the logframe and added value to institutional outputs to ensure sustainability and institutional growth.

Various related initiatives that emerged during project implementation, such as the Inter-American Biodiversity Information Network (IABIN) and the Global Biodiversity Information Network (GBIF), could have informed new thinking and delivery of outputs for SABONET, especially in the area of minimum international standards for interoperability and development of national nodes within the context of distributed data networks. South Africa progressed well in this aspect as SANBI will soon develop the South African Biodiversity Information Portal. There has been limited consideration of such options by the other participating institutions. However, it will be necessary for these issues to be considered in the context of emerging initiatives such as the African Plants Checklist and African Plants Initiative.

Various national and regional UNDP, GEF and other donor-funded projects were implemented during the SABONET project. Efforts were made to integrate various national initiatives and link these to SABONET, such as the Survey of Economic Plants in Arid and Semi Arid Lands (SEPASAL) in Namibia (Royal Botanic Gardens, Kew); Millennium Seed Bank projects with South Africa, Namibia and Botswana (RBG, Kew); Plant Resources of Tropical Africa (PROTA) project in Malawi (Wageningen University, Netherlands); and the African Plants Initiative and African Plant Checklist projects (funded by the Mellon Foundation, with leadership from SANBI). SABONET intended to work closely with the SADC-Italian funded SECOSUD project, but with limited success as this project was not completed.

Other relevant GEF projects included the UNDP/IUCN/SADC Southern Africa Biodiversity Programme (regional); Mount Mulanje Conservation Trust (Malawi); Biodiversity Strategy for Lesotho; Biodiversity Conservation Strategy and Action Plan (Botswana); Lake Malawi/Nyasa Biodiversity Project (Malawi) and the Okavango River Basin Project (Angola, Botswana and Namibia).

SABONET project expertise was used in field surveys and assessments (e.g. the Malawi NORAD and JICA-supported biodiversity projects) and relevant outputs were filtered into national policy processes such as Red Lists and checklists in the Botswana Conservation Strategy. However, this only happened when there were strong National Working Groups in place to build the strategic linkages.

These partnerships, and many more, were developed at national and regional level although this was not explicitly elaborated in the logframe. Yet they form potential exit strategies for some of the

[7] Two species of *Hoodia* are harvested from the wild for medicinal purposes. In Namibia the project sought to develop propagation techniques that would allow local communities and farmers to produce these species sustainably and meet market demands, thereby assuring conservation of the wild resources, income generation and sustainable livelihoods.

[8] The extinction garden within the Kirstenbosch National Botanical Garden contains Red List taxa with appropriate interpretation. The aim is to get the extinction message across to the public by putting a 'face' to the red lists.

SABONET activities. However, in some countries, such as Botswana and Namibia, strong partnerships were developed with the UNDP, CBD and GEF focal points. Partnerships were weaker in countries such as Zimbabwe and Zambia where the institutional structure did not provide direct linkages.

3.1.2 COUNTRY OWNERSHIP AND DRIVENNESS

All ten participating countries, except Angola and Namibia, had signed and ratified the CBD at the beginning of the SABONET project. However, they were all keen to participate in the project and the NETCAB funding from USAID/IUCN ROSA was used to support activities for non-party countries until they had ratified the convention and became eligible to receive GEF support. Further, the countries have gone ahead and developed various policy and legal instruments for the conservation and sustainable use of biodiversity in line with the principles of the CBD such as National Biodiversity/Conservation Strategies and Action Plans.

In some instances, SABONET has responded to priorities outlined in these plans or informed their development. For example, in Botswana, SABONET project outputs have been incorporated into the NBSAP and will be incorporated into the 10th National Plan. In Malawi, the project was directly linked to the CBD as the Herbarium chairs the National Biodiversity Committee. Various government officials were involved in the National Working Groups, e.g. in Botswana and Namibia, where the CBD focal point was actively involved in project. However, this was not consistent throughout the region.

In general, the degree of country ownership and drivenness varied between countries depending on two factors: the proactiveness of the National Coordinator and members of the SABONET National Working Group (NWG) and the institutional mandate or position within the larger government structures. The role of the National Working Groups[9] was to help strengthen country ownership of the project activities and ensure that they were implemented in a timely and appropriate manner. It was also the reason behind their broad composition that included representatives from the Government (Ministry of Environment), NGOs (e.g. IUCN, WWF), national *in situ* and *ex situ* conservation agencies, universities and other research institutions.

For example, the National Botanical Research Institute in Namibia has a specific mandate within the Ministry of Agriculture that allowed it to fully integrate and implement all SABONET activities within one institution. As an active member of various national committees, and with a strong NWG that also has strong stakeholder representation from the line Ministry, UNDP and university, the project was fully country-owned and integrated and hence became a great success. The situation was different in South Africa where the project was implemented through a few sections of the larger NBI, and therefore the NWG was not made up of national representatives of key agencies but rather experts and practitioners in similar fields from across the country. In the case of Botswana, the project was run out of both the National Museum and University with a broad range of stakeholders on the NWG who were not always consistent in their attendance.

However, one of the key indicators of success has been government commitment to sustain project maintained staff after the project finishes (e.g. Malawi, Namibia, Zimbabwe, South Africa), while in Lesotho and Botswana government policy did not offer such options. In countries where there was limited country ownership of the project, limited government resources were available post-SABONET to sustain activities initiated, e.g. databasing. Although capacity and resources have been developed, in many cases there has been limited uptake of the output by government agencies and stakeholders, as they perceived that institutions rather than countries owned and drove the project and hence the outputs were for internal use.

[9] They were responsible for prioritizing the capacity building options, ensuring the candidates selected were appropriate and facilities and resources were adequate to meet the national needs, and that staff were hired in a transparent manner based on institutional/local policy.

Whereas various reports and publications have been developed by SABONET, very few are in use outside the SABONET fraternity. This could be attributed to a very focused approach of SABONET (i.e. plant taxonomy, with limited conservation or tailored taxonomic products), while the emphasis on capacity building as the major output limited potential entry points for government stakeholders.

Even though the project has come to an end, there has been limited effort at the national level to communicate relevance of the project to its sectoral and development plans. For example, apart from the regional publications such as Willis & Smith (2004)[10], which demonstrates the linkage and utility of SABONET outputs to prevailing needs and priorities, there are no equivalent in-country publications and reports synthesizing the project's outputs at a national level and the relevance to key national processes such as CBD national reporting.

3.1.3 STAKEHOLDER PARTICIPATION AND PUBLIC INVOLVEMENT

The SABONET project had many stakeholders both within the botanical/taxonomic community and end-users. The outreach and public awareness strategy was one of the great successes of SABONET.

Through a high quality quarterly newsletter with a global distribution list of 905, a SABONET Report Series and frequent presence at key international and regional meetings, SABONET became widely known as a flagship GEF taxonomic, capacity building and networking project. The SABONET Chair and Regional Coordinator and various National Coordinators attended CBD Conference of Parties (COP) 5 as members of their national delegations and presented various talks at side events. This trend was followed at COP 6 and 7. In Malawi, the National Coordinator also chaired the National Biodiversity Committee and hence SABONET was involved in setting up the Mount Mulanje Conservation Trust.

At the regional and international level, the project was very effective in building linkages to the broader taxonomic and botanical gardens community. SABONET revitalized southern African botanical institutions' involvement in the taxonomic community working on the African flora (AETFAT) and made significant contributions to the AETFAT Congresses in Meise, Belgium (2000) and Addis Ababa, Ethiopia (2002). Its database experiences have been instrumental in the development of the African Plants Initiative and the African Plant Checklist project with linkages to the all the key botanical/plant taxonomic expertise in Africa, Europe and the USA. Through its activities with botanical gardens, SABONET has built strategic linkages to the African Botanic Gardens Network and Botanic Gardens Conservation International, and has implemented various aspects of the International Agenda for Botanic Gardens in Conservation. Progress by South Africa’s eight National Botanical Gardens in implementing the activities associated with the International Agenda for Botanic Gardens in Conservation was internally reviewed by SANBI in 2004.

At the regional level, the project sought to build linkages to the SECOSUD project. Unfortunately, this project did not run to completion. Linkages were also built with other relevant national, regional and international programmes. For example, the SABONET Red Lists linked to the IUCN Species Survival Commission’s Red Listing Programme, which brought together several in-country partners such as government, NGO and the private sector, including volunteers. The Threatened Plants Programme brought on board key partners and collaborators in botanical gardens linked to land, parks and wildlife managers and conservation agencies.

The regional and national field trips were designed to include national partners, including other research and conservation agencies such as forestry, wetland specialists and rangeland managers. As a result, towards the end of the project, new partners have been brought on board such as PROTA (Namibia) SEPASAL (Namibia), MSB, API, and the APC (various countries).

[10] Willis C.K. & Smith G.F. 2004. The Global Strategy for Plant Conservation: implications for succulent plant conservation in southern Africa. Aloe 41: 1, 6-15

However, at the national level, the deliberate effort to build linkages to other stakeholders was only emphasized towards the end of the project following the recommendation by the Mid-term Review to organize end-user workshops in all participating countries. These workshops, however, did not adequately define and segregate the clients from the resource providers. Ideally, this was an opportunity for the taxonomic community to listen to its customers (government agencies, local communities, NGOs and research institutions) and find out what they need most. The institutions would then go back home and ask themselves in a separate forum how they should deliver these outputs in the desired formats.

Unfortunately, the workshops tended to emphasize the taxonomic needs to make the practice more effective and efficient (manpower, resource development and mobilization, infrastructure, funding, etc). Therefore in a number of cases the end-user community was not able to clarify and define its needs. Overall, it was not clear what the true versus perceived needs were. This process is crucial to inform institutional strategic planning and even more so in the face of shrinking government budgets where institutions are forced to demonstrate relevance. The taxonomic and conservation community in southern Africa still have a unique opportunity post-SABONET to demonstrate their contribution to national poverty reduction strategies and action plans, health improvement (especially related to chronic diseases such as AIDS and malaria) and economic empowerment.

There has been effective dissemination of project results, publicity and awareness campaigns by the project, especially through the excellent newsletters and SABONET reports. Indeed, SABONET is known worldwide as a result of its effective communication strategy. The only weakness was that this was predominantly a one-way communication system and only occasionally required feedback and input from other stakeholders. The linkages to the private sector, local communities and NGOs in the evaluation of the project activities were limited.

3.1.4 REPLICATION APPROACH

Replication proper:

The SABONET project model was very well designed to meet its objectives and highly replicable. It is however important to stress that SABONET has some unique elements that were responsible for its huge success that may not be easy to replicate in other contexts, but could be up-scaled. These are:

- a strong **project champion** with institutional, regional and international support and presence,
- visionary yet **adaptable project leadership** and management,
- a transparent and strong regional Steering Committee with **consistent membership** during the project phase chaired by a competent leader
- **willing, focused and motivated team players in a regional context,**
- **highly experienced and committed support** from the GEF Regional Advisor.

The most easily replicable elements are indicated in the table below.

• A dedicated regional secretariat with Regional Coordinator, Administrative Officer and Finance Officer backstopped by a credible and reputable institution, paid for by project funds.
• National Coordinators in leadership positions in national participating institutions with an ability to mobilize institutional resources to support project activities.[11]
• A regional Steering Committee operating on the consensus principle, comprising National Coordinators and chaired by the host institution, with meetings being held in the different countries where feasible and occasionally linked to other regional and international meetings.[12]

[11] However, this was a constraint in smaller institutions where the National Coordinators were overwhelmed as the SABONET reporting and project implementation took more than 50% of their time. A national project Secretariat with specially hired and project-funded officer would be preferable.

- National Working Groups to support and facilitate national implementation with specific terms of reference, comprising strategically selected partners to enhance dissemination and uptake of project outputs as well as ensure country ownership and drivenness.[13]
- Common and/or shared boundaries, needs and priorities at various levels, e.g. SABONET-southern Africa, SADC political unit, shared phytochoria and flora, shared needs and priorities, plants.
- A set of partner institutions in-country with similar mandates, needs, priorities and aspirations carefully selected through consultation. [14]
- Strong executing agency with visionary and committed leaders to manage large project funding , internalize overheads and provide additional services such as financial management, international disbursement, auditing and reporting consistently over the project period (i.e. NBI).
- Highly motivated, competent and qualified staff at the regional office.
- Effective public awareness and project dissemination strategy such as through the use of dedicated websites, project report series and newsletters.
- Strong capacity building element with the ability to develop robust in-house training programmes backed with adequate and appropriate resources, including internships and short relevant courses.
- Ability of national participating institutions to provide resources in-country (staff, equipment and additional finances).
- A central regional vision and purpose, but flexible, to cater for different national priorities and needs, hence balance between regional versus national prioritized elements.

A good indicator of the project replicability is the proposed GEF/UNDP Eastern Africa Botanical and Zoological Networks in Taxonomy (BOZONET)[15], which has been modeled on SABONET. The outputs of SABONET have been up-scaled and replicated through the African Botanic Gardens Network, the African Plants Initiative and African Plant Checklist project, as well as related initiatives such as the MSB project, SEPASAL and PROTA.

Some SABONET products have been replicated in-country. Namibia is revising the national Red List and following up on the recommendations of the IPA and end-user workshops with the broader stakeholder community. This has been broadened to cover the whole biosystematics community. Some training courses have been replicated at national level, such as the Herbarium Techniques course in Zambia and the use of the NTSYS analysis package at the SADC Gene Bank through MSc training of Claid Mujaju (Zimbabwe) through SABONET. Botanical gardens projects started through the Threatened Plant Programme need to be reviewed through consultation with stakeholders in-country and up-scaled as appropriate.

3.1.5 COST-EFFECTIVENESS

[12] Partner institutions should preferably have equivalent mandates and scope, otherwise there should be enough flexibility in measuring delivery of outputs e.g. small vs. large institutions; differing mandates e.g. universities vs. national research institutionsand government departments

[13] National Working Groups are effective if membership is carefully selected to meet project requirements and terms of reference are clarified at initial stages.

[14] Sufficient logframe flexibility to allow needs of smaller institutions and relevant national needs to be met.

[15] The BOZONET project to be implemented in Ethiopia, Kenya, Uganda and Tanzania builds on the SABONET model, but expands the concept to include zoologists. The project, currently at PDF B proposal stage, aims to deliver relevant and timely taxonomic products to end-users. This will be defined at end-user workshops to be held before the start of the project.

SABONET was designed to be very cost-effective in delivering project objectives and exceeded expectations. The project supported activities in-country, which strengthened biodiversity conservation activities in southern Africa (hotspots, rangelands, forests, etc. of global value). It secured co-finance from IUCN ROSA and USAID, which was used before GEF funding set in. Later co-finance from NETCAB, NORAD and related projects SECOSUD, SEPASAL, PROTA projects was secured that allowed sustainability and uptake of project outputs. Project outputs clearly enabled countries to meet their obligations to the CBD, especially in relation to the GTI and GSPC targets, and checklists are key contributions to all the thematic CBD work programmes.

No significant budgetary adjustments were needed and the project delivered more outputs than initially planned. Expenditure breakdown is summarized below.

Regional Office expenditure	(6.3%)
Admin including SC, UNDP, missions	16.4%
National SABONET Staff	**24.4%**
Training	**16.0%**
Publications	**12.3%**
Field trips	**3.0%**
Equipment	**21.7**%

In delivering its major outputs, the project spent 62.1% of the budget on training, national staff (whose costs has been taken on locally after the project) and equipment. Only 6.3 % was spent on regional administration. In general, the administrative costs were kept low with 75% of the budget being spent in-country on project activities as defined by the logframe, thus:

National expenditure	78.7%
Central expenditure	21.3%

3.1.6 UNDP COMPARATIVE ADVANTAGE

UNDP was the best-placed implementing agency for SABONET as all the participating countries have a national UNDP office with the potential to support in-country implementation. SABONET had a development goal and its capacity building and institutional strengthening focus was directly linked to the UNDP mandate and focus in the region.

3.1.7 LINKAGES BETWEEN SABONET AND OTHER INTERVENTIONS

SABONET had the potential to strengthen linkages and contribute to the national needs and priorities, especially as related to:

- International policy frameworks – CBD, UNCCD, UNFCCC, CITES,
- national policy frameworks – poverty reduction strategy papers,
- national responses to MDGs, WSSD outcomes etc.,
- internal and sectoral policy and regulatory frameworks e.g. related to SADC,
- general public and local communities,
- the conservation agencies, wider botanical and taxonomic community, and
- the donor community at national and regional level.

However, the project focused mainly on the wider taxonomic/botanical community, conservation agencies, and later on CBD related issues. Examples of sectoral linkages developed with the SABONET project include:

National and regional initiatives	Pan-African Initiatives
• USAID/IUCN ROSA support from NETCAB for Red Listing (regional) • MSB project (South Africa, Namibia, Botswana, Malawi) • IPA workshops (Namibia, Mozambique and South Africa) • SEPASAL project - Kew (Namibia) • Tree Atlas project (Namibia) • Threatened Plants Programme (Namibia)	• API project - Africa/Kew; • APC project - Geneva • PROTA – Wageningen • African Botanic Gardens Network • AETFAT • BGCI – African Small Grants Programme

There was a greater need to steer project outputs to address local needs more closely through a focus on other local initiatives and agendas such as work on medicinal, food and useful plants. The SECOSUD project was set to work on this aspect but was not implemented as planned. Other interventions would have been through the botanical gardens focusing on cultivation protocols for indigenous useful plants following consultation with stakeholders to meet appropriate needs e.g. water-wise gardening in Botswana and Namibia, indigenous food, medicinal and useful plants in Zimbabwe, etc. These would provide relevance to agricultural, forestry, natural resource management sector and poverty eradication strategies and plans.

3.1.8 INDICATORS OF SUCCESS

The SABONET project has been exceptionally successful in a number of regards. Of the 45 project activities identified in the logframe, only three were later cancelled and two not fully achieved. The indicators were well selected and suitable. Some of the significant successes include the following:

- Herbaria and botanical gardens needs assessments were done to establish baselines
- 28 regional and national courses were developed in-house to meet local needs
- 26 postgraduate students were supported, six have progressed with alternative funding to the next level (3 PhD, 3 MSc)
- Networked and computer hardware and up-to-date PRECIS software in place in all 10 countries
- Herbarium database in place in all ten countries at various levels of completion, Poaceae completed
- 75 internships conducted and completed with many inter-institutional relationships developed
- Various checklists (national, tree, Poaceae, Pteridophytes, Bryophytes, and a conservation checklist - Nyika) published
- Storage cabinets for herbaria and field collecting equipment in place and in use
- Relevant regional publications produced (e.g. regional Index Herbariorum and needs assessments) plus SABONET reports
- Initial steps to engage stakeholders - Threatened Plants Programme, Red lists and end-user workshops
- Regional networks strengthened - AETFAT, ABGN
- Website developed and maintained during the project phase
- Newsletter produced and circulated internationally
- Potential strategic partnerships developed
- Greater visibility of southern African taxonomy, taxonomists and taxonomic products in international, regional and national fora

3.1.9 MANAGEMENT ARRANGEMENTS

The management structure, i.e. a regional office with national implementing units guided by a regional Steering Committee and National Working Group respectively, was found to be very effective. The Regional Office[16] comprised the Regional Coordinator, Financial and Administrative Officer, hired and administered by NBI. Their duties were determined by the SSC. The choice of NBI as the executing agency was supported by all the National Coordinators and they noted that it was the best placed institution in the region to carry out this role. It was agreed in principle that a rotating Secretariat would have been costly and ineffective. Participating institutions were comfortable with the Secretariat being based in South Africa allowing access to key resources and universities. SSC meetings were initially held in South Africa but later rotated to other countries. National Coordinators rated the regional staff as highly qualified, competent and they performed to expectation. Three different Regional Coordinators were in post during the project phase; the first was instrumental in giving SABONET its identity and momentum, which were maintained by the others. There was adequate budgetary allocation for the Regional Coordinator to visit the national counterparts and provide support as needed, and this was greatly welcomed by the country teams.

The national implementing offices were based at the national SABONET collaborating institution and had a National Coordinator[17] who was usually the institutional head. The main setback was that the SABONET project added an extra burden on the busy heads of institutions and there was need for a dedicated project officer supported by the project. As a result, all the accounting and reconciliation for the national expenditures was handled at the regional office. Some institutions (Namibia and Botswana) had problems in disbursement of funds and managing accounts. Namibia had to hire the services of another NGO to manage its funds, while Botswana held two different accounts, one with the University and the other with the central Treasury. This made accounting and access to funds very difficult and hampered national project implementation.

3.2 IMPLEMENTATION

3.2.1 FINANCIAL PLANNING

The table below gives a breakdown of proposed expenditure (1998 columns) by category compared to assumed actual expenditures to the effective end of the project.

Item	Nov 1998	% total	2004[18]	% total
Admin (incl. mission costs, country visits, Steering Committee, UNDP)	713,490	15.3	762,592	16.4
[Steering Committee + country visits alone]	[207,391]	[4.5]	[212,686]	[4.6]
Regional staff	273,521	5.9	293,713	6.3
National contract staff (+ country advances)	1,990,043	42.7	1,136,181	24.4
Training	322,829	6.9	743,411	16.0

[16] This was responsible for: planning all regional activities e.g. SSC, training, internships and regional field trips; preparing monthly statements of accounts, quarterly reports to UNDP, PIR; purchase and shipping of equipment as agreed by the SSC; disbursement of funds to national offices and authorizing local purchases; production of publications, newsletters; and upkeep of the website and communication.

[17] The National Coordinator was the main accounting officer for the project at the national level and was responsible for the preparation of quarterly project reports; implementation of project activities at national level; coordination and inter-sectoral linkages at the national level; appointment and supervision of local SABONET staff; production of national publications; communication and public awareness; Chair of the National Working Group; national activities informed by and guided by a National Working Group whose stakeholders were defined in the Project Document.

[18] Figures from Budget Revision of end 2003 (Document 9), with actual expenditure to end 2003 plus budgeted figure for 2004. Figures rounded to nearest USD.

Publications	54,348	1.2	574,062	12.3
Field trips	81,304	1.7	138,110	3.0
Equipment (incl. purchase, operation, maintenance)	1,220,465	26.2	1,011,629	21.7
TOTAL (USD)	4,656,000	99.9[19]	4,659,698	100.1

The proportion spent on administration is commendably low for such a complex regional project, showing that effective administration and coordination does not have to be financially onerous. Regional staffing costs (which exclude administrative positions) were also low, significantly less than for direct national staff costs. The proportion given to equipment was also very reasonable, and equipment was not considered to be a significant constraint to activities by most project participants. The great increase (10 times) in amount and proportion given over to publications presumably reflects changes recommended by the Mid-term Review. Training took up more than twice the funds originally allocated. Other proportions remained remarkably similar over the evolution of the project, 1998-2004.

Databasing costs by 2004 (2003 plus budgeted for 2004) were USD894,075, or 19.2% of total project costs (IT staff and department, herbarium technical assistants and data capturers, 50% of regional country visits, 50% of national herbarium expendable equipment, computer equipment). It was a significant technical activity of the project.

Using rough calculations of the proportion of expenditure for central coordination and administration, compared to national expenditure (which is assumed to include training and publications), the following are seen:

	1998 costs	**% total**	**2004 costs**	**% total**
Central expenditure	1,045,707	22.5	994,092	21.3
National expenditure	3,610,293	77.5	3,665,605	78.7
TOTAL (USD)	4,656,000	100.0	4,659,698	100.0

The table shows that the proportion of expenditure going to national level, whether directly or indirectly, was three times that going to running the PMU and overall project costs, and significantly better (i.e. more national) than for many other regional projects.

3.2.2 MONITORING AND EVALUATION

Apart from the internal annual reports based on the logframe prepared by the national and regional offices, the project prepared UNDP Annual Project Reports (APR) and GEF/UNDP Project Implementation Reports (PIR) following the formats required in a timely and satisfactory fashion. UNDP did not have any issues of concern regarding project monitoring and evaluation.

A Mid-term Review was undertaken in 2001 in addition to two project Tripartite Reviews, while an internal Terminal Review was conducted in 2004. Similar reports were prepared for the USAID/IUCN ROSA NETCAB funding. All funds were audited annually by the appointed NBI auditors.

3.2.3. MANAGEMENT BY UNDP COUNTRY OFFICES

UNDP was responsible for the clearance and delivery of the project vehicles in-country and facilitated transactions of funds in Namibia. Some UNDP offices were actively involved and interested in project activities and participated in National Working Groups (e.g. Namibia, Malawi, Botswana, South Africa). In South Africa, the UNDP office provided good support to the regional office. The GEF/UNDP Regional Coordinator provided timely and practical guidance for the project.

[19] Rounding errors

UNDP has been implementing a series of projects in the region and there was room for learning from each other's experiences. However, this opportunity was not well exploited, and room for strengthening linkages between projects was not provided. In Lesotho, for example, there was limited interaction between the SABONET project and other GEF/UNDP projects even though they were being implemented by similar organizations. But in Malawi there was a lot of synergy developed between different projects as the National Biodiversity Committee was hosted by the SABONET participating institution.

The links in some countries between the project framework and UNDP offices (e.g. Zimbabwe and Lesotho) were weak. In some instances, the UNDP national office should have played a more proactive role to help resolve some of the bottlenecks in national project implementation and assist National Coordinators to remove barriers in disbursement of funds (e.g. Botswana). Even though local UNDP were represented on the National Working Group, only some were committed (e.g. Namibia), whereas staff turnover in other national UNDP offices (e.g. Malawi) affected continuity.

3.2.4 COORDINATION

The project was very well managed with a very effective and functional Regional Office manned by three competent and highly qualified Regional Coordinators over the project lifetime. Even though there was staff turnover, this did not hinder progress as the structures and operational guidelines were well defined at the beginning of the project and relevant institutional support structures within the host institution were in place. It was easy for the new officers to take over and continue to run smoothly.

The principle decision-making body within the SABONET project was the regional SABONET Steering Committee (SSC), which was constituted of the National Coordinators from the ten participating countries and chaired by the head of the NBI, Prof. Brian Huntley, for the entire project. The SSC met initially at least twice a year to review annual work plans and budgets, assess progress in project implementation, evaluate and make recommendations on the quality of training programmes and internships developed, as well as ensure that the best candidates received training support. It also reviewed financial arrangements with the funding agencies and facilitated linkages and collaboration with similar activities in the region. Further, they sought to ensure that there was an adequate balance of resource allocation and use, and reviewed their ToRs from time to time.

In spite of the language barrier (Angola and Mozambique being Lusophone and the rest of the countries Anglophone), the SSC was very fortunate in having consistent able leadership of the Chair who also was bilingual and able to clarify many issues, having had background experience in one of the Lusophone countries (Angola). The SSCs were also attended by the GEF/UNDP Regional Coordinator, Dr Alan Rodgers who provided clarity and guidance on GEF/UNDP financial and policy matters and enabled the SSC to take appropriate decisions. These resulted in effective and transparent informed deliberations of great benefit for project implementation.

At the national level, the SABONET coordinating institution (usually the National Herbarium or a university Department of Botany) was identified and its head appointed as the National Coordinator. The institution provided administrative support for project implementation. A National Working Group was constituted, comprising representatives from key stakeholder institutions, including the UNDP, Ministry/Departments of Environment, Forestry, Agriculture and relevant NGOs, and chaired by the National Coordinator. Its main role was to oversee and coordinate national project implementation and make recommendations to the SSC, review annual work plans, monitor and ensure balance in allocation of funds to the various project activities and evaluate progress in achieving the capacity building and institutional strengthening targets. This worked effectively in a few countries but less so in others, which was attributed to the fact that some NWG members did not appreciate or understand the role of taxonomy well enough and were not keen, while others were not consistent in attendance. In a few cases, members from other institutions expected funding support to be spread to other partners and were disappointed when this was not forthcoming. Most notably, human factors (institutional rivalry and personality differences) affected efficient working of some of the NWGs.

3.2.5 OPERATIONAL ISSUES

Efforts were made in the initial stages to streamline SABONET priority activities as needed with national/institutional activities and projects based on guidance and support in-country from the NWG and the SSC. However, due to the specific overall objectives and logframe being developed before most of the CBD POW and emerging NBSAPs, MDGs, etc, there wasn't sufficient flexibility to allow countries to steer SABONET activities towards national needs. In instances where the National Working Groups were not effective, there was limited input from stakeholders in-country to enhance country ownership and drivenness. The imbalance between country resources, institutional capability and manpower affected the ability and willingness of countries to meet specified project outputs. For example, countries with small herbaria that were under-resourced, such as Lesotho, Swaziland and Botswana, the ability to mainstream and absorb SABONET activities was greatly limited compared with the larger more established national herbaria with diverse programmes and staff, such as those in South Africa, Namibia and Zimbabwe. A two-tier approach in defining expected outputs may have allowed flexibility to ensure country drivenness and ownership so that smaller countries could have focused on capacity building while the larger institutions focused on delivery of selected outputs.

3.3 PROJECT RESULTS

3.3.1 ATTAINMENT OF OBJECTIVES

An analysis on the achievement of the proposed project outputs outlined in the Project Document is presented, and a rating on the achievement of specific activities is given in Annex 4.

EXPECTED OUTPUT 1: Trained professional southern African plant taxonomists, horticulturists and plant diversity specialists

The SABONET project has largely achieved its broad objective of building the regional human, infrastructural and institutional capacity. Various publications outline the progress and outcomes achieved by the SABONET project (Siebert *et al*. 2001, Willis and Huntley 2001, Huntley *et al*. 2002, Willis & Huntley 2001, Siebert & Smith 2003, Willis & Smith 2004, Siebert & Smith 2004) as well as the two project flagship publications, namely *SABONET News* (23 issues) and *SABONET Report Series* (42 issues planned, 8 in press). Siebert & Smith (2004) in their paper[20], outline 23 successes from the project.

Various training courses were developed in-house based on priorities identified by the Steering Committee and recommendations made by the National Working Groups and participating institutions. The project ran a total of 22 in-house regional dedicated training courses using local resources and expertise in the fields of herbarium management (3), database management (7), plant identification of various taxonomic groups (5), environmental impact assessment (1), cycad conservation (1), botanical drawing (1) and field courses (1). Sixteen of these courses were held in South Africa, while six were held in other countries in the region.

Four courses were held at the national level, (Namibia - Grass identification and PRECIS Computer course, Zambia-Herbarium Management and EIA, and South Africa - Cycad Conservation Course). Various Red listing courses were held at the national level to develop red lists and supported in part by USAID/IUCN ROSA through NETCAB funding.

[20] Siebert S. J. & Smith G. F. Lessons learned from the SABONET Project while building capacity to document botanical diversity in Southern Africa. Taxon 53 (1): 119-126.

Priorities for postgraduate training were based on institutional needs. Of the 22 MSc students sponsored by the project, 19 have completed their studies and three are due to complete by the end of the year (2005). Three recipients of SABONET scholarships excelled in their MSc degrees with distinction and two have proceeded to PhD registration. Sixteen BSc Honours registered, 14 completed, while one student (Angola - Portuguese speaking) who was enrolled at the University of Cape Town discontinued due to language problems and the other individual from Botswana left the University of Witwatersrand (Johannesburg, South Africa) due to personal reasons. Eleven students (Botswana, Lesotho, Malawi, South Africa, Swaziland and Zambia) completed a combination of BSc Honours and MSc degrees in taxonomy and conservation studies.

The summary of statistics on formal capacity building is presented in the table below.

Country	Number of recipients of degree scholarships	Number of participants[21] in regional courses (ratio Male/Female)	Number of regional courses attended	Number of internships
Angola	2	7 (2/5)	16	4
Botswana	2	18 (12/6)	21	12
Lesotho	3	12 (10/2)	18	3
Malawi	3	19 (17/2)	22	6
Mozambique	1	15 (9/6)	19	8
Namibia	4	13 (3/10)	21	9
South Africa	3	36 (22/14)	21	21
Swaziland	1	8 (6/2)	17	2
Zambia	3	32 (21/11)	23	4
Zimbabwe	4	26 (16/10)	22	6
Total	26	186 (118/68)	200	75

A total of 186 participants attended the regional courses of which just over one third (37%) were female. While the project made efforts to ensure gender balance, this was constrained in part by prevailing institutional structure and establishment. The male: female ratio varied between countries. In addition, the number of persons repeatedly attending courses varied between the countries, as countries with small herbaria and limited staff had the same people attending most of the courses.

In the second phase of the project, 75 internships were held within the region between herbaria and botanical gardens to strengthen the technical and research skills base depending on the specific institutional needs and priorities. The internships also involved expert visits to other institutions to provide technical support/training based on specific requests such as training in horticulture and nomenclature as well as in-country internships between different institutions (Botswana, South Africa).

EXPECTED OUTPUT 2: Formal establishment of a collaborating Southern African Botanical Diversity Network

The SABONET project has provided an excellent model for networking at a regional level. The project has actively strengthened networking within the 17 regional herbaria and 22 botanical gardens in the 10 countries. In order to strengthen communication, the project installed email and Internet connectivity within all the participating institutions.

[21] These included resource persons in the countries where the regional courses were held,such as Botswana, Malawi, South Africa, Zambia and Zimbabwe.

A network newsletter was published quarterly, with a mailing list of 905 people worldwide. A total of twenty-three issues have been published. Regional and national technical project publications were produced as part of the SABONET Report Series. Out of a total of 42 approved reports, 33 have been produced and 8 are in press. Nineteen of these reports were national publications. These included national checklists and family treatments for grasses (Botswana, Namibia, Zimbabwe, Lesotho, Angola and Swaziland); Pteridophytes (Swaziland) and Bryophytes (Zimbabwe). To enhance the sharing of field based skills and expertise, two regional field trips bringing together experts from the region were conducted, the Nyika Expedition (March/April 2000)(SABONET Report No. 31) and the southern Mozambique Expedition (November/December 2001).

A dedicated SABONET website was developed and hosted by WildNet Africa (http://www.SABONET.org). A regional Steering Committee was established and initially met twice a year, with 15 meetings held to date and one planned at the end of the project. National Working Groups were established and worked effectively in some countries such as Namibia but less so in others (e.g. Zimbabwe and Malawi). The website is not currently active as the Project is seeking a new website host to maintain it as an archive.

EXPECTED OUTPUT 3 – Electronic information system on the region's plant diversity.

Computer hardware and software were purchased for all herbaria, and computer networks put in place. Due to continual need for upgrading, newer computers were purchased in the latter phases of the project to cope with changing software requirements for higher operating speed and RAM. One regional computer-training course was held at the beginning of the project (1997) and six database management courses were held in Pretoria (5) and Windhoek (1). A PRECIS Specimen Database User Guide has been produced and an updated PRECIS Manual is ready and due for printing as SABONET Report No. 41. National training courses were held as needed, and various country visits were made by the Regional Database Coordinator/SABONET IT Manager to troubleshoot, carry out national training, and install and upgrade software.

The SABONET project set out to establish a regional electronic information system on plant diversity. At the beginning of the project, it was agreed that the SANBI-developed PRECIS Specimen Database software would be installed and used by all the regional herbaria. A total of 5,030,710 specimens are now databased regionally on the PRECIS Specimen Database. Of the ten countries, only Namibia was able to database all its collections with 81,211 specimens databased, even though they had initially starting databasing their collection using a different database (BRAHMS-Botanical Research and Herbarium Management System) and had to start all over again using the PRECIS system. During the 2004/2005 period, the existing PRECIS databases have been migrated to the open-source MySQL platform to allow for greater flexibility, interoperability and stability, as well as easier interface with the newer Microsoft XP and Microsoft 2000 given that the earlier database structure was based on Microsoft 1997.

Apart from Namibia, the computerisation process was only partially completed in most countries. The slow speed in computerisation was attributed to various technical problems such as computer crashes, loss of data due to poor backingup practices, technical difficulties in software and hardware handling, need for translation of labels into common language and down time due to continued revisions and updates of the software and operating systems. The PRECIS software was under continual development and needed various upgrades with support only available from SANBI. In addition, staff selected locally to manage databases were not IT experts, hence the Regional Database Coordinator often did not have a local equivalent and was overburdened with routine queries. This impacted negatively on the training investment, minimising benefits, compromised the ability to troubleshoot locally leading to many lost man-hours and frequent downtime.

Outputs of these databases have included publication of the Namibian Plant Checklist (SABONET Report No. 7), national checklists of grasses (e.g. Zimbabwe, Lesotho, Namibia, Botswana) and Trees of Botswana. In order to ensure that the project demonstrated utility of the database at a regional level, the Mid-term Review recommended that the project focus on one non-controversial plant group of both economic and conservation value, thus the Poaceae (grasses) were selected to generate a regional output. Thus, the latter phase of the project database activity shifted to the computerisation of Poaceae with a better success rate. All the institutions managed to database 100% of their Poaceae collections except Botswana, Lesotho, Mozambique and Swaziland.

The progress in database activity by country is presented below.

Country	Number of specimens in national collection	% computerised	No. of Poaceae specimens	% computerised
Angola	36,000	31	1,826	100
Botswana	31,000	35	2,794	74
Lesotho	39,690	79	3,860	95
Malawi	100,000	45	3,334	100
Mozambique	122,000	21	9,206	74
Namibia	81,211	100	11,414	100
South Africa	1,800,000	51	116,464	100
Swaziland	8,103	93	727	85
Zambia	25,000	67	2,281	100
Zimbabwe	500,000	21	18,629	100
Total	2,743,004	46	170,535	98

However, there is a need for a sustainable exit strategy on databases. A good example is the MoU being developed between Namibia and South Africa on data access and management. This model could be extrapolated to other countries at regional and bilateral level. A lack of continued support from SANBI, the main home of PRECIS will strongly limit further development of databases within the countries and thus a commitment from SANBI to provide follow-up support will be essential.

EXPECTED OUTPUT 4 – Production of regional human and infrastructural inventories.

The southern African taxonomic, herbarium and botanical gardens needs assessments were undertaken. Lists of experts by country, gender, institution, area of expertise, region and country were produced on plant taxonomic expertise (SABONET Report No. 10) and needs assessment for both herbaria and botanical gardens (Report No. 6 and Report No. 11 respectively). Later revisions and updates[22] were produced as SABONET Report Series Nos. 1, 2, 8 and 12.

In order to meet human needs, an elaborate capacity building programme was set up in line with output 1. However, to strengthen the institutional capacity and meet the infrastructural needs identified for each of the ten countries, herbarium cabinets, computers and peripherals, microscopes and freezers were purchased. For field work, a Toyota Hilux 4x4 diesel double cab vehicle, camping equipment, cameras and GPS units were also purchased through SABONET and as a result of this the project conducted 109 national field collecting expeditions during the project phase.

[22] The Southern African National Herbaria: Status Reports, 1996 (1997); Index herbariorum: southern African supplement (1997,1999); and Action plan for southern African botanical gardens (2001) respectively.

Horticultural staff paid by SABONET were placed in national botanical gardens based on the needs identified (Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe)[23]. Computer hardware and software were purchased for the respective botanical gardens and in a few rare cases, botanical gardens equipment were purchased such as lawn mowers for Lesotho.

EXPECTED OUTPUT 5 – Plant diversity evaluations and monitoring within the region.

The activities under this output were modified subsequent to the Mid-term Review. The initial focus was to strengthen habitat level botanical studies and GIS mapping. However, a similar project, SECOSUD[24], funded by the Italian government through SADC and implemented through the SABONET participating institutions was initiated during the project phase with a key objective of GIS mapping of plant resources in the region. These activities were therefore cancelled by the Mid-term Review and a new focus on delivering specific outputs, thus development of national red lists, identification of Important Plant Areas and defining end-user needs in order to tailor taxonomic products opted for.

With additional support from the USAID/IUCN ROSA NETCAB support and using the SABONET framework, the SABONET project organised national red listing workshops using the IUCN red listing criteria in all the ten countries and developed draft national red lists. Through a series of consultations with the National Coordinators and stakeholders, the IUCN Species Survival Commission and the IUCN Red Listing Committee, the southern African plant Red Lists were produced in one volume edited by Janice Golding (2002). A total of 4,098 assessments were made, with the following categories allocated at the regional level.

Extinct	32
Extinct in the Wild	1
Critically Endangered	138
Endangered	230
Vulnerable	1018
Near Threatened	361
Least Concern	1,130
Data Deficient	1,188
Endemics	1,962

Namibia had the highest number listed (1,152) and these are being refined in a new initiative post SABONET. The data on Red Data List Species for Angola however was not available at the time of publication.

In the final stages of the project, as a means of demonstrating the utility of the project outputs in meeting broader national objectives and CBD obligations such as to the recently agreed Global Strategy for Plant Conservation Target 5[25], three Important Plant Area (IPA) Workshops were held in Namibia, South Africa and Mozambique and a regional IPA workshop held in South Africa prior to national IPA workshops. Countries with incomplete checklists and databases were constrained in reviewing and identifying IPAs at a national level. There are plans to follow up IPA workshoprecommendations in Namibia. In addition, a regional IPA assessment proposal has been submitted to the Darwin Initiative Fund (UK). However, in

[23] However, this is still a major constraint in many of the botanical gardens as some have lost these staff due to death (2 in Zimbabwe and 2 in Malawi) and others have moved on (Malawi) while some have left for further training (Botswana).
[24] The SECOSUD project engaged staff to database and map plant resources of useful plant species in the region, starting with herbarium specimens. Staff were engaged and activities started including a GIS training course held in South Africa. However, this project has not been completed and there is no clear indication if there will be further activity.
[25] Target 5: Protection of 50% of the most important plant areas for plant diversity assured.

most countries, the linkages with the *in situ* conservation agencies were still weak and this has limited the uptake of findings and recommendations.

The concept of national end-user workshops was adopted within the logframe after the Mid-term Review. End-user workshops were therefore held in all the SABONET countries and a summary of the findings are presented in SABONET Report No. 29[26]. In Namibia, the end-user workshop was broadened to include the end-user needs for the biosystematics community (see Irish, J. 9 (Ed.) 2003). The workshops looked at the needs of both the internal and external consumers of taxonomic information and products, and made recommendations on how the herbaria can respond to these needs locally.

EXPECTED OUTPUT 6 – Development of a regional botanical gardens conservation strategy.

In order to build the capacity within the botanical gardens in the region, the Botanical Gardens Management Course (Pretoria, South Africa 2001) and Botanical Gardens Horticultural Course (Durban, South Africa, April 2002) were held. A total of 23 internships, linked to the threatened plant programmes of the respective gardens, were conducted for selected botanical gardens in the region. For example, Namibia's National Botanic Garden and the Karoo Desert National Botanical Garden in South Africa exchanged staff with a focus on the propagation and conservation of succulent plants, accompanied by joint field trips while Botswana and the Natal National Botanical Garden, South Africa focused on horticultural skills.

The Threatened Plants Programmes were developed in the latter phase of the project linked to the International Agenda for Botanic Gardens in Conservation and national red lists developed as part of the SABONET project in 22 gardens in the region. Diverse projects suited to the local needs were developed e.g. *Hoodia* propagation as a component of a wider community based conservation initiative in Namibia; conservation education and awareness programme on the local taxa with cultivation of indigenous taxa in the Harold Porter National Botanical Garden in South Africa; and development of the 'Garden of Extinction' in Kirstenbosch National Botanical Garden, South Africa. The TPP has been an effective vehicle in linking the SABONET project with a wider range of stakeholders at the national level. In Namibia, the *Hoodia* project has effectively built linkages to the policy makers and local communities, dealing with broad issues such as Access and Benefit Sharing, provision of alternative incomes, livelihoods and land use forms. In addition, the project addressed biological issues as plant propagation protocols and threatened species management.

A regional Botanical Gardens Workshop was held in March 2001 with a follow up in November 2002 (SABONET Report No. 22). SABONET co-hosted (with Durban Botanic Gardens) the first African Botanic Gardens Congress in Durban, South Africa in November 2002 (SABONET Report No. 22); conducted a series of workshops on red listing, propagation and botanical gardens management at the Congress and published the Congress Proceedings. SABONET has been continually involved in the network by presenting articles and information to the electronic newsletter (African Botanic Gardens Network Bulletin) that has been developed and is maintained by Botanic Gardens Conservation International (BGCI).

3.3.2 OVERALL ASSESSMENT

One can evaluate SABONET and its activities / impacts at four different levels: individual (or human), institutional, national, and regional.

Individual level (training courses, MSc, PhD, etc). SABONET did very well; a large number and wide range of people were trained, and in a number of topics relevant to botany. People were happy with the

[26] Herbaria in SABONET countries: building botanical capacity and meeting end-user expectations.

training, although some wanted more taxonomically-orientated courses. But this enhanced capacity is mobile, it needs to be used to be effective, and to be retained at institutions to realise its potential. A core critical mass of taxonomists has been established in the region and taxonomic institutions resources have been increased. The staff are more equipped with the state of the art techniques and skills, have been exposed to others in the region, and their scope of understanding of national, regional and international perspectives has been greatly enhanced. In addition, many of the SABONET trained staff have been promoted to senior positions in Mozambique, Malawi, Zimbabwe, Botswana, Namibia and Zambia.

Institutional level (equipment, contract staff, trained staff, databases, vehicle, email). SABONET provided a lot, opened doors, and gave the institutions many of the missing "tools" to carry out their work. The major objective of building capacity of plant systematists and horticulturists (in part) has been achieved. But only some of the national institutions managed to use this added capacity to take themselves forward. In some cases staff were not retained; a functioning national database was only achieved in three countries; real engagement with users of botanical information (i.e. where compromise and two-way communication takes place) also only occurred in some countries, whilst in others the institutions' mandate precludes much involvement (e.g. university teaching herbaria). Overall, in South Africa, Namibia and Mozambique increased capacity seemed to lead to changes and greater relevance of the botanical institution (hence, hopefully, greater resourcing in future).

The retention of SABONET trained staff is going to be a continuing challenge for some countries. For example, all the postgraduate staff trained by SABONET in Zimbabwe have moved on (one to head the National Gene Bank in Zimbabwe and the other to the position of Curator of the National Herbarium in Namibia). While the capacity is still available at the regional level, the SABONET objective at institutional level has not been met, as there is still a need for a new capacity building investment. The opposite is true in Malawi where the key SABONET trained staff have gone on for higher degree training. There has been loss of trained staff due to other reasons (e.g. death). At a regional level, there is going to be a continued need for additional capacity building in biodiversity informatics and horticulture, in addition to plant taxonomy and conservation. However, SABONET has put in place appropriate linkages to pursue this in the long term.

Botanical gardens are still greatly understaffed in all the countries except South Africa. In Namibia, for example, there are no dedicated senior staff positions in the garden, vacant positions within other sections of the institute currently are frozen and herbarium staff are expected to handle botanical garden responsibilities as well. Malawi does not have any trained horticultural staff whereas key staff in Zimbabwe have left for further studies.

In the long term, the lack of an enabling environment, visionary leadership and poor salaries are issues that seriously affect staff retention and these have to be addressed in the long-term if benefits are to accrue from the SABONET investment.

National level (bringing botanists together in-country, working as a team or developing partnerships, getting botany onto the conservation/development agenda). Although SABONET may have provided the confidence and network support, this did not seem to actually result in many partnerships, cooperation, or greater involvement with government policy (e.g. CBD, GSPC) or conservation activities. Circumstances were probably different for each country and have to do with a multiplicity of factors such as institutional leadership and positioning, limited number of other persons or agencies available in-country, lack of champions, as well as institutional mandates. Some of these were beyond the control of the SABONET project.

International or **regional level** (i.e. ability to speak with one voice, loudly and confidently, in international fora, international project profile). SABONET has been very successful at this level. It is known and referred to in many global biodiversity fora and at international meetings, always as a success story of networking and bringing botany out. This was due to the promotional activities of the Regional

Secretariat, the GEF, and good publicity. At a regional, SADC, level, this has perhaps not been so apparent, and although plants are perhaps closer to being on the table through SABONET, the individual countries do not always pull together. The project has been more successful at the international level than was expected, and as successful at the regional level as could reasonably be expected.

TABLE OF SUMMARY ASSESSMENT / SCORING[27]

Review Finding	**Score**
Implementation approach	Highly Satisfactory
Country Ownership and drivenness	Medium Satisfactory
Stakeholder participation and involvement	Medium Satisfactory
Replication approach	Satisfactory
Cost effectiveness	Highly Satisfactory
Management arrangements	Highly Satisfactory
Financial Planning	Highly Satisfactory
Monitoring and evaluation	Highly Satisfactory
Management by UNDP country offices	Satisfactory
Coordination	Highly Satisfactory
Attainment of Objectives	Highly Satisfactory

3.3.3 SUSTAINABILITY AND FUTURE ACTIVITIES

SABONET has been winding down for the last two years; the Secretariat input and energies also reflect this. South Africa has moved beyond SABONET, moved onto other projects – not least the change to SANBI. Namibia is busy refining the SABONET outputs in targeted activities related to IPAs, end-user workshops and a revised plant Red List. The Millennium Seed Bank project in Botswana, Namibia and South Africa has provided a link for SABONET follow up. However, in the most participating institutions, not much thought has been given to the next steps.

A few questions could clarify the issue of sustainability, which is obviously integral to GEF-funded projects.

1. Has SABONET given previously marginalised taxonomic institutions a stronger mandate, a stronger voice, a stronger sense of their role within the country? Has it changed the institutions' own voice, confidence or impact? It seems that so many institutions have participated, but not greatly enhanced their vision, their horizons or their sustainable capacity. Visits across the region suggest that, at least in some countries, botanical institutions and botanists will withdraw back. Yet in others there is a seed of cooperation and a confidence about relevance germinating. The question now is: how can that be nurtured, and how can botanists across the region continue to be self-supporting as well as grow? Is it up to a few self-selected individuals, or is there anything GEF or other donors can be approached to do that will help? What could the role of SANBI be in this regard?

2. Has taxonomy been "mainstreamed" into conservation or the development process? In some countries, botanical institutions have become more relevant. In countries without a strong national or central herbarium, e.g. Botswana, Zambia, there is a greater risk of marginalisation. There is a risk of becoming irrelevant to conservation and development, especially the herbarium sections of botanical institutions or activities.

3. How sustainable are the databases developed by the SABONET project? Can these databases be: (a) updated nomenclaturally, (b) added to systematically and regularly, (c) kept running without extensive

[27] NS-Not Satisfactory, MS-Medium Satisfactory, S-Satisfactory, HS- Highly Satisfactory

backstopping from SANBI or a similar institution, and (d) can staff trained in database management be retained? In some countries the databases are fully functional and usable, in the sense that they can be interrogated and useful comprehensive answers obtained (e.g. South Africa, Namibia). One cannot fully exploit this potential with a half-functional or half-completed database. The value of computerised data is clear, has been well demonstrated by the project and is of great value to wider users, especially conservationists.

4. But if the value of database outputs is central to the utility of botanical institutions, can they retain their gained relevance given limited future resources? Would the institutions be able to give a reasonable list of species present in an area, or national distribution of a taxon? The reality of what is required to run and maintain a database will only come home in a year or two after SABONET resources and support have gone. There is a threat of some databases at smaller institutions being orphaned – the database will become non-functional. Perhaps we should learn from other initiatives such as IABIN and GBIF, link closely to African Plants Initiative (API) and African Plants Checklist (APC) as well other regional initiatives such as SEPASAL, MSB and PROTA, as a means of consolidating institutional information management systems. This will allow more targeted conservation and a stronger context to gain additional project funding, whether for research or practical conservation activities.

5. Given the differing state of specimen databasing, the differing quality-control (especially taxonomic identifications and accuracy of geo-referencing), and the limitations in data sharing and intellectual property rights (IPR), are we still some way from allowing botany to speak more powerfully in the region and becoming more relevant to national conservation and development concerns? A great potential strength of SABONET, still not realised, is the linking together of the databased plant specimen collections. Some countries, e.g. South Africa, are large enough to have an "internal market" for botanical information. In others, e.g. Botswana and Swaziland, the "internal market" is too small, and the individual herbarium collections become less relevant to development.

6. Red Data Lists - What is the next step? There was a much wider range of people involved in the Red Listing process, in many countries, than with other SABONET activities. It provides a good entry point into conservation, but only few institutions seem to be undertaking any revision of their Red Lists, clarifying species which are uncertain, checking actual status in the field, or getting them onto conservation agendas and into conservation agencies. The essential good points about the Red Listing process under SABONET should be identified, articulated, disseminated and built upon.

7. Is Southern Africa in a better state as regards plant conservation? How has plant conservation benefited from SABONET? If so, where and in what aspects? If not, why not. The project provided a wide range of appropriate training. There was a good range of participants, a good range of topics, good gender balance and a good geographical spread. Although it is recognised that SABONET was primarily a capacity-building project, and must be judged accordingly, these questions are relevant in developing appropriate linkages and local relevance.

8. How can botanical institutions actually think and act regionally in practice? And what needs to be done to keep any flames of hope among project participants and institutions alive, keep them networking, building up and sharing better datasets, and gaining greater influence in conservation and economic development? A paradigm shift is needed for some institutions to effectively maximize on project outputs and resources. Targeted institutional capacity building may be needed with a focus on building institutional capacity to raise funds and develop new proposals.

9. What is the SABONET legacy? How can that be articulated; how can it be shown in a meaningful and lasting way that SABONET has lifted up botany – in southern Africa, in Africa, or in the GEF-UN system? There is a need for some review publications and dissemination of lessons learned to a broader audience.

The key issues to be addressed in relation to sustainability can be summarised as follows:

- Databases –
  - How do we ensure continual institutional IT support?
  - How do we ensure completion of pending specimen database activities?
  - How do we build on, refine and maintain quality and utility of these databases?
  - Can we define appropriate access and data sharing policies?
  - What opportunities and options are there for linkages at the regional and international level to add value and increase robustness within the context of acceptable national, regional and international legal and policy frameworks?
- Staff retention – how do the national institutions ensure that the benefits from the SABONET investment give good returns and are not lost?
- Staff mentoring post-SABONET – are there options to maintain high staff morale and motivation through a mentorship programme, especially for the recently trained staff that need to gain further experience? This could be a means of sustaining the SABONET spirit.
- Network sustenance – How do we maintain the established SABONET network ensuring value and purpose, and not just maintain it for its own sake, and keep up the regional support network using expertise available in the region?
- Publications – Many publications, e.g. checklists, red lists, IPA and end-user workshop recommendations have been produced by SABONET. How do we ensure their uptake and deliver similar high quality and relevant inputs into national processes?
- Linkages – What is the legacy of SABONET at the national level (e.g. linkages of botanical institutions to local communities, NGOs and consultants, in-country sectoral and development priorities, regional and international conventions)?
- End-users – How do herbaria and botanical gardens redefine themselves to become more locally relevant, engage end-users proactively and attract continued support?
- What next – What requirements are there for the development of new projects at national/bilateral/regional level to address the next steps, the gaps, and pending activities linked to conservation and sustainable use through a range of other donors?

IV RECOMMENDATIONS

4.1 FOLLOW UP AND REINFORCEMENT OF INITIAL BENEFITS

Many successes have emerged from the SABONET project. There is a need to build on these, and to ensure that potential gaps are filled and pending activities completed.

The recommended follow-up actions to be undertaken include the following:

Databases:

- Follow up to finalize the MoU on data sharing between Namibia's National Botanical Research Institute and SANBI. This could be used as a potential model for regional/bilateral data sharing agreements if found appropriate.

- SANBI needs to clarify its role and what potential support might be available to participating institutions concerning the PRECIS Specimen Database development, future upgrades, troubleshooting and training. The SABONET National Coordinators should communicate their expectations clearly and agree modalities. It would be worthwhile to have some formal institutional agreement, which would be valid post-SABONET.

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- Institutions that have not completed databasing their specimens should set SMART[28] targets on this activity and seek additional funding to complete it.

Red Lists:

- Review national Red Lists, update them and disseminate results to the relevant agencies, especially those working on *in situ* and *ex situ* conservation.

End-user workshops

- Follow up on recommendations of the end-user workshops at national level.

- Strengthen partnerships developed during the project.

- Explore ways and means to build linkages to relevant sectoral and national policies by working closely with the relevant agencies.

- Build linkages to the GTI and GSPC focal points and join forces to define and push forward a locally relevant national plant conservation and sustainable use agenda.

[28] Simple, Measurable, Achievable, Realistic, Time bound.

4.2 PROPOSALS FOR FUTURE ACTIVITIES

Exit Strategy

The SABONET project has been a great success and it is vital that an exit strategy for the project is clarified. **This is the responsibility of the Steering Committee that has been the overall decision-making body of the project.**

The **national institutions** need to mainstream SABONET gained resources and capacity. Recommended follow-on activities include the following:

- Establish linkages to potential funding organizations such as the Belgian GTI focal point for internships
- Explore new sources of funding at local, regional and international levels and pursue them.
- Seek and clarify potential partnerships and linkages at the national and regional level that may be useful in soliciting funds, and use these to develop new projects or programmes.
- Carry out strategic reviews to identify their strengths and relevance, e.g. to relevant thematic programmes and policy frameworks such as invasive species, useful plants and medicinal plants, which they could focus on to demonstrate relevance, ensure sustainability and attract local and regional support.
- Strengthen linkages between botanical gardens and Botanic Gardens Conservation International and the African Botanic Gardens Network, whilst herbaria should strengthen linkages to BioNET International and AETFAT.

At regional level, the **Steering Committee** needs to:

- Outline the linkages and legacy of the SABONET project in relation to the API and APC, and to other related projects such as MSB, SEPASAL, GBIF, PROTA , BGCI's African Small Grants Programme.
- Agree on pragmatic options for sustaining the SABONET network.
- Update the SABONET website and build links to national participating institution websites.[29]

[29] The national participating institutions may take turns in maintaining the regional communication through a list server.

4.3 THE SABONET LEGACY: SPECIFIC RECOMMENDATIONS.

1. Each National Coordinator should produce a document on outlining how the project has benefited the institution, country and region, including linkages to CBD (especially GTI, GSPC, IAS, PA), UNCCD, CITES and other environment and sustainable development agreements, and circulate this to relevant stakeholders especially the CBD focal points.

2. Collaborating institutions should compile the outcomes of the SABONET project in the context of the GTI and GSPC, present these to the CBD focal points and request that these be included in the country national reports.

3. Since the GTI is due for an in-depth review of progress in implementation at COP 8 (March 2006, Brazil) the SABONET Regional Office should produce a paper summarizing the experience of SABONET in implementing the GTI as a component of this review for Southern Africa. This paper can be submitted by the GTI focal point of one of the participating institutions as an information document to SBSTTA 11. (Some of the SABONET national coordinators are GTI focal points and could facilitate this, e.g. Botswana, Malawi and SANBI).

4. In order to ensure long-term access to the excellent documents produced by SABONET and share experiences in building capacity for taxonomy at national and regional level, the SABONET Regional Office should compile a CD-ROM/DVD of all electronic outputs (within acceptable copyright limits) and disseminate these. Copies should be made available to the CBD Secretariat and BioNET International libraries, amongst others. Consultations with the latter and the GTI officer may provide further guidance. Any freely accessible electronic documentation should also be availed to the Clearing House Mechanism of the CBD.

5. Hard copies of all available literature should be disseminated to all key libraries to ensure continued access long after SABONET closes.

6. A strategy for database updates and long-term maintenance should be formulated to avoid the in-country datasets being orphaned and abandoned, or worse still have the wheel re-invented through other funding mechanisms. Discussions with relevant stakeholders and links to the African Plants Initiative and GBIF may provide some alternative scenarios.

V LESSONS LEARNED

Lessons Learned In Design

1. In designing projects such as SABONET that aim to deliver taxonomic products, it is important to define users of such products from the onset. In the case of SABONET, was the limited uptake of the project outputs by potential end-users because such agencies: (a) intrinsically do not use or wish to use botanical information, (b) wish to use the information but the procedures and opportunity costs are just too excessive, (c) find that the products they are given are inappropriate, or (d) are just not aware of what information and knowledge can be given, and botanical institutes are not making a wider audience aware of what they can provide? These are fundamental questions that perhaps should have been asked when SABONET was being developed, but certainly need to be asked in any future support to the botanical sector or in designing similar projects.

2. There is also a need to have a clearer vision of where botanical institutes fit within the broader conservation / education / economic development framework. The institutional positioning needs to be adequately clarified in order to develop a clear delivery chain of project outputs as well as address real needs in the local context. Has SABONET made stakeholders more aware of the users and relevance of botanical institutions or botanical information across the region?

3. In planning regional projects, it is important to take into account the national/institutional mandates and recognise differences in institutional capacities and capabilities, as well as dynamics. One option is to choose those institutions/countries with shared attributes, priorities and capabilities in order to address similar objectives. However, this is limiting and does not offer learning opportunities. The alternative is to deliberately select those with disparate attributes and capacities/capabilities but deliver different outputs. For example, while the focus for some institutions with similar capacities and priorities may be on developing checklists, the output for others with different capabilities and needs may be to put in place the capacity to develop checklists. This allows felt needs to be met rather than perceived needs, which in the latter case often compromise the achievement of overall project outputs. If the logframe is innovatively and flexibly designed, different subsets of countries/institutions could be selected to meet different objectives or outputs based on their strengths, abilities and needs, and ultimately address a higher-level regional goal.

4. The PRECIS database and specimen entry was not only one of the major activities of SABONET, but also the one upon which many of the secondary products were based. To have a project with a number of products predicated on a large more-or-less sophisticated database, with cleaned-up data, was rather ambitious. Perhaps, in hindsight, it was too ambitious given: (a) the limited previous exposure to databases, (b) the lack of IT skills in institutions, the limited backup and supervision available, (c) the continual changes in technology, (d) the lack of managerial support from higher up, and (e) in many cases the lack of vision or clear understanding as to the power and capacity such a database gives to an institution or to botany in a national framework.

5. In any future project predicated on databases more attention needs to be given in project structure to: (a) basic and broadly-based IT training, (b) local IT support services (c) dedicated regional IT staff forming part of the regional office team to provide support on software problems and development; (e) a staggered set of database outputs (i.e. realistic and fundamental outputs vs. optional by-products); and (f) interoperable and distributed networks where feasible. Given that information requirements are often quite basic, the database that stores the information might also be quite basic and simple in structure. IT-capacitated institutions or countries could go to a higher level, but smaller herbaria or less-capacitated institutions could still consistently produce useful outputs.

Lessons Learned For Regionality

6. There is a lot of strength and momentum to be gained from regional projects. The SABONET momentum could be attributed to its focused yet complex regional mandate. A strong central vision and a diverse range of institutions with similar aspirations, even though with differing abilities and capacities, created different roles for each player. The strengths and weaknesses of each institution were internalized by the large network. The larger institutions felt needed and valued with a useful contribution to make, while the smaller institutions felt they were beneficiaries and needed to stay on board. There was less institutional rivalry and competition as the institutions had different capacities and capabilities. **However**, large regional projects with different institutional mandates, capacities and priorities, working on an often marginalized thematic area such as taxonomy and plant conservation, are best implemented under the leadership of a champion who has a passion for the subject area.

7. Regionalism was beneficial but may need to build in adaptive management to ensure that true needs are met at a national level. Flexibility in implementation is important, as long as there remains a clear vision of where the project and activities are going. SABONET was product or output-focused, not process-focused. Instead of endless permutations of workshops and recommendations, its outputs were tangible. The workshops and seminars were used solely as a means to prioritising actions and achieving consensus and not an end in themselves. However, a strong focus on taxonomy isolated some stakeholders. There is therefore a need to have a strong project focus but use adaptive management to respond to changing needs.

Lessons Learned For Implementation

8. A project needs a strong regional Secretariat, based in a strong institution with able and qualified staff. But the Project Management Unit has to be small and focused on delivery of outputs.

9. Good communication, both internally within the project and externally, is beneficial. Widespread dissemination of activities and results – multiple forums, multiple countries, multiple media, multiple messages - is necessary.

10. During the implementation phase, a transparent Steering Committee with visionary strong leadership is an asset when supported with effective national working groups. When coupled with timely support from an implementing agency (in this case, NBI) whose personnel have a flair for detail, good technical understanding of the subject matter, good knowledge of local circumstances and constraints, the recipe for a successful project is in place. Therefore careful consideration with regard to the set up and role of National Working Groups has to be made.

11. The appointment of Heads of institutes or departments as National Coordinators guarantees institutional buy-in, with additional resources (human and infrastructural) potentially available. However, in the case of SABONET, some National Coordinators were overwhelmed and a dedicated project officer was needed to strengthen the ability of national institutions to manage projects.

ANNEX 1: TERMS OF REFERENCE

Introduction

The Monitoring and Evaluation (M&E) policy at the project level in GEF/UNDP has four objectives:

i) to monitor and evaluate results and impacts
ii) to provide a basis for decision making on necessary amendments and improvements
iii) to promote accountability for resource use; and
iv) to document, provide feedback on, and disseminate lessons learned.

A mixture of tools is used to ensure effective project M&E. These might be applied continuously throughout the lifetime of the project—for example periodic monitoring of indicators—or as specific time-bound exercises such as mid-terms reviews, audit reports and final evaluations.

In accordance with GEF/UNDP M&E policies and procedures, all regular and medium-sized projects supported by the GEF should undergo a final evaluation upon completion of implementation. A final evaluation of a GEF-funded project (or previous phase) is required before a concept proposal for additional funding (or subsequent phases of the same project) can be considered for inclusion in a GEF work programme. However, a final evaluation is not an appraisal of the follow-up phase.

Final evaluations are intended to assess the relevance, performance and success of the project. It looks at early signs of potential impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. It also identifies/documents lessons learned, and makes recommendations that might improve design and implementation of other GEF/UNDP projects.

The SABONET Project

The SABONET Project's main objective was to develop a strong core of professional botanists, taxonomists, horticulturists and plant diversity specialists within the ten countries of southern Africa (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe) competent to inventory, monitor, evaluate and conserve the botanical diversity of the region in the face of specific development challenges, and also to respond to the scientific and technical needs of the Convention on Biological Diversity (CBD). It was composed mainly of staff working in herbaria and botanical gardens in southern Africa. It aimed to reach the following set of goals and objectives—all part of the SABONET logistical framework:

1 Trained professional southern African plant taxonomists and plant diversity specialists.
  1.1 Staffing needs determined and appropriate staff placed in national herbaria.
  1.2 Training needs of professional southern African plant taxonomists and plant diversity specialists identified.
  1.3 Develop training courses as a participatory process and formalised within the region.
  1.4 Regional training courses implemented.
  1.5 National/sub-regional training courses implemented.
  1.6 Short-term internships and professional exchange of personnel between institutions in order to develop technical skills and outputs.
  1.7 Postgraduate and graduate (needs-driven) support for national herbarium staff at tertiary institutions.
  1.8 Improve and develop managerial skills for institutional development.
2 Formal establishment of a collaborating Southern African Botanical Diversity Network.
  2.1 Project Steering Committee appointed and functioning.
  2.2 Appointment of Project Coordinator, Assistant, Financial Officer, Regional Information Technology staff.
  2.3 Identify role players for the National Working Groups.
  2.4 Establish and support functional National Working Groups in each participating country.
  2.5 Publication of a Network Newsletter.

2.6 Production of regional and/or national publications.
2.7 At least two regional/sub-regional collaborative field surveys and collecting expeditions undertaken in under-surveyed areas within the region.

3 Electronic information systems on the region's plant diversity developed and functioning, which document the region's botanical diversity.
3.1 Purchasing of computer hardware and software in national herbaria.
3.2 Training of herbaria staff in information technology and the development and use of database(s) through regional and national training courses.
3.3 Computerisation of plant specimens stored in national herbaria.
3.4 Continual upgrading and improvement of the information technology functions in national herbaria to allow effective database output.
3.5 Communication between national herbaria through electronic means (electronic mail, Internet and other forms of communication).
3.6 Development and maintenance of a dedicated SABONET web site.

4 Production of regional human and infrastructural inventories.
4.1 Preparation of human resource expertise inventories.
4.2 Preparation, distribution, collation and analysis of questionnaires to determine the available infrastructure and facilities amongst botanical institutions within the region.

5 Plant diversity evaluations and monitoring within the region.
5.1 Database leads to maps of plant species distributions by region, country, province or ¼ degree grid.
5.2 Digitised vegetation maps of major vegetation types, biomes and ecosystems within the region.
5.3 Production of relational databases in GIS formats (forms bulk of SECOSUD-linked activity).
5.4 National field collecting expeditions (lead to national reports and improving people's skills in report writing, amongst others) – including bilateral expeditions.
5.5 Production of national flora checklists; herbarium specimen checklists.
5.6 Linkages developed between national herbaria and institutions with responsibility for plant conservation to promote multidisciplinary conservation e.g. end-user workshops.
5.7 Identification and refinement of botanical hot-spots, centres of diversity and plant endemism within the region.
5.8 Identification of priority taxa for inclusion in ex situ living collections within botanical gardens of the region (see Output 6) as part of the Threatened Plants Programme.
5.9 Identification of under-surveyed areas.
5.10 Evaluation of the conservation status of selected vegetation types/ecosystems/biomes per country and region.

6 Development of capacity in southern Africa to initiate a regional botanical gardens conservation strategy.
6.1 Botanical gardens needs assessment conducted and the results published.
6.2 Regional workshops to discuss regional botanical gardens needs assessment report and networking of southern African botanical gardens.
6.3 Co-opt botanical garden representatives onto National Working Groups.
6.4 Appropriate staff placed in National Botanical Gardens.
6.5 Purchasing of computer hardware and software in national botanical gardens; linking of botanical gardens to e-mail.
6.6 Technical workshop to develop threatened plant conservation programmes in botanical gardens.
6.7 Implement threatened plant programmes in 20 southern African botanical gardens linked to the International Agenda for Botanic Gardens in Conservation.
6.8 Exchange staff skills and expertise between botanical gardens; exchanges linked to the threatened plant programmes in each specific garden.
6.9 Contribution to the African Botanic Garden Network (ABGN).
6.10 Develop and implement training courses as identified in the Regional Gardens Workshop.
6.11 Conduct 1-day National Workshops to discuss proposed threatened plant programmes with various stakeholders.

6.12 Regional monitoring team established to evaluate threatened plant programmes in southern African botanical gardens.

After a Mid-term Review in January/February 2001, it has been decided that the following logistical framework objectives should be cancelled: 5.2, 5.3, 5.10 and 6.11.

Objectives of the Evaluation
This evaluation has been initiated by the GEF/UNDP Task Manager. It is undertaken as part of the standard GEF/UNDP M&E process.

The evaluation should assess the success of the SABONET Project in terms of:

- Attainment of objectives:
  - How well did the SABONET Project achieve its set logistical framework objectives?
  - What has its impact been at National and Regional level, in terms of its main objective to develop a strong core of professional botanists, taxonomists, horticulturists and plant diversity specialists within the ten countries of southern Africa (Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe) competent to inventory, monitor, evaluate and conserve the botanical diversity of the region in the face of specific development challenges, and also to respond to the scientific and technical needs of the Convention on Biological Diversity (CBD)?
  - What tangible outputs did the SABONET Project deliver; for example publications?
  - How well did the SABONET Project deliver and complete specific activities indicated in the logistical framework—for example, training courses/workshops to enhance botanical knowledge in participating institutions?
- Project achievements according to GEF Project Review Criteria (*see Appendix 1 for explanation of terms):
  - Implementation approach
  - Country ownership and drivenness
  - Stakeholder participation and public involvement
  - Sustainability
  - Replication approach
  - Financial planning
  - Cost-effectiveness
  - Monitoring and evaluation.
- This evaluation must include **ratings** on the following criteria:
  - Achievement of objectives (the extent to which the Project's environmental and development objectives have been achieved).
  - The implementation approach (how well the implementation of the Project has been executed).
  - Stakeholder participation/public involvement (to what degree these parties were involved in the project).
  - Sustainability (how long and to what degree the achievements of the Project can be sustained into the future).
  - Monitoring and evaluation (how well the Project adhered to the M&E process, and how accurate previous assessments were).

Use the above statements as guidelines to present and analyse your main findings and any key lessons that could be learned from the SABONET Project. Include examples of best practices for future projects in the country and region. If there are any differences of opinion or disagreements between the findings of the evaluation team, any internal or external assessments, and/or the GEF recipient organisations, one or more annexes should be attached to the Terminal Evaluation Report that explain these differences. Note that the Terminal Evaluation is not an appraisal of any possible follow-up phases of the Project.

The main stakeholders of this evaluation are:

- The GEF family from the GEF Council, through the GEF Secretariat, the GEF Implementing Agency, staff from the GEF/UNDP headquarters, and UNDP Country Office staff.
- Staff from the participating institutions in all of the participating countries, including:
  - Angola: LUAI
  - Botswana: GAB, UCBG, PSUB
  - Lesotho: ROML, SNPH, MASE
  - Malawi: MAL
  - Mozambique: LMA, LMU
  - Namibia: National Botanical Research Institute (NBRI) = WIND
  - South Africa: South African National Biodiversity Institute (SANBI) = PRE, NH, NBG
  - Swaziland: SDNH
  - Zambia: UZL
  - Zimbabwe: SRGH
- Any government agencies, local communities or private individuals that were (or are going to be) directly or indirectly affected by the activities of the SABONET Project, including members of the National Working Groups.

The main purpose of this evaluation is to provide an accurate appraisal of the SABONET Project that will adequately inform the above stakeholders on the value and success (or not) of this Project.

Products Expected from the Evaluation

A comprehensive report including the following aspects are expected from the evaluating officers:

- An *Executive Summary* containing a brief description of the Project; the context and purpose of the evaluation, and the main conclusions, recommendations and lessons learned.
- An *Introduction* that states the purpose of the evaluation, the key issues addressed in the evaluations, the methodology of the evaluation, and the structure of the evaluation.
- A section on *The Project and its development context* that describes the Project's start and its duration, the problems that the Project seek to address, the immediate and development objectives of the project, the main stakeholders in the Project, and the results expected from the Project.
- A comprehensive discussion on *Findings and Conclusions* that should inform on the following issues:
  - Project formulation (implementation approach, country ownership and , stakeholder participation, replication approach, cost-effectiveness, UNDP comparative advantage, linkages between the Project and other interventions within the sector, indicators of success, and management arrangements).
  - Implementation (financial planning, monitoring and evaluations, management by the UNDP country offices, and coordination and operation issues).
  - Results (attainment of objectives, sustainability, and contribution to upgrading skills of the national staff).
- A section dealing with your *Recommendations* that should include corrective actions that might be taken for the design, implementation, monitoring and evaluation of the Project, the actions that are required to follow-up on or reinforce the initial benefits from the Project, and proposals for future directions underlining main objectives.
- Also include a summarising discussion on the *Lessons learned*, including best and worst practices in addressing issues relating to relevance, performance, and success.
- Lastly include the following information as *Annexes*:
  - Terms of Reference
  - Itinerary
  - List of persons interviewed
  - Summary of visits to participating institutions

- List of documents reviewed
- The questionnaire used and a summary of the results obtained from this questionnaire.

Methodology or Evaluation Approach

The evaluation team should include the following sources of information in the evaluation process:

- Documentation review (desk study):
  The SABONET Regional Office will provide the evaluation team with all issues of the SABONET Report Series and the SABONET News that have been published, as well as with manuscripts that are close to publication at the time of the Terminal Evaluation. Copies of material used during training courses that have been held under the auspices of SABONET will also be provided. The evaluation team should review and assess the value, usefulness, and quality of these materials.
- Field and Office Visits and Interviews (may include group discussions/debates with staff):
  The evaluation team will visit at least one participating institution in each of the ten participating countries (either singly or as a team), and hold interviews with the National Coordinators and/or other staff of the institution that had been affected or included in the SABONET Project.
- Questionnaires:
  The evaluation team will compile a questionnaire that should be completed by at least the National Coordinator of each participating country. The results of the completed questionnaires should be included and discussed in the Terminal Evaluation Report.
- Any other techniques that the evaluation team deem necessary to obtain and analyse the required information.

Evaluation Team

The evaluation team will consist of two members:

- *Stella Simiyu* (SCBD/BGCI Program Officer, Global Strategy for Plant Conservation, c/o IUCN Eastern Africa Regional Office, Nairobi, Kenya) — Team Leader
- *Jonathan Timberlake* (Biodiversity Foundation for Africa, Bulawayo, Zimbabwe)

ANNEX 2: ITINERARY

DATE (2005)	ACTIVITY
18th Feb.	**Regional Office**, **South Africa**; Christopher Willis, Gideon Smith
19th Feb	Travel to Namibia
21st Feb	Meetings, NBRI , **Windhoek**, **Namibia**
22nd Feb	Travel to Harare, Zimbabwe
23rd Feb	Meetings, National Herbarium & Botanic Garden, **Harare, Zimbabwe**
24th Feb	Travel to Zomba, Malawi
25th Feb	Meetings at NHBG, **Zomba**, **Malawi**
26th Feb	Travel to Gaborone, Botswana
28th Feb	University & National Herbarium, **Gaborone**, **Botswana**
28th Feb	Travel to Cape Town
1st March	Meetings, Kirstenbosch & Harold Porter National Botanical Gardens, **South Africa**
1st March	Travel to Pretoria
2nd March	Meeting with National Working Group, **South Africa** and Trevor Arnold
3rd March	Meeting, Stefan Siebert and preparation of draft report
4th March	Draft report presentation

ANNEX 3: LIST OF PERSONS INTERVIEWED

Maputo, Mozambique
Ms Helena **Mutemba**, Programme Assistant - Environment & Natural Resources, UNDP Maputo
Mr Miguel **Castanha**, Programme Officer - Environment, UNDP, Maputo
Dra Ana **Candido**, Botanical Garden, Department do Botanica, INIA, Maputo
Ms Annae **Senuoro**, Botanical Garden, Dept. of Botany, Universidade Eduardo Mondlane, Maputo
Dra Felicidade **Munguambe**, Head, Environmental Impacts Section, MICOA, Maputo
Ms Sara **Simango**, Centro do Experimentaçao Florestal, Direccao Nacional de Florestas e Fauna Bravia, Maputo
Mr Eduardo **Massingue**, Centro do Experimentaçao Florestal, Direccao Nacional de Florestas e Fauna Bravia, Maputo
Mr Hilario **Machava**, Jardim Tunduru, Maputo City Council, Maputo
Dra Samira **Izidine**, Head, Departament do Botanica, INIA, Maputo
Dr Calane **da Silva**, previous Head, Departament do Botanica, INIA, Maputo (now Deputy Director, INIA)
Dra Filomena **Barbosa**, Head, Dept of Botany, Universidade Eduardo Mondlane, Maputo

Windhoek, Namibia
Dr Gillian **Maggs-Kölling**, Head, National Botanical Research Institute, Windhoek
Ms Colleen **Mannheimer**, Botanist SEPASAL, and previously SABONET-employed curator, National Botanical Research Institute, Windhoek
Ms Sonja **Loots**, In situ Conservation officer, National Botanical Research Institute, Windhoek
Dr John **Irish**, Project Coordinator Biodiversity Database Project, Windhoek
Ms Midori **Paxton**, UNDP, currently seconded as Project Coordinator, National Protected Areas Project (GEF), Ministry of Environment & Tourism, Windhoek
Mr Steve **Carr**, Project Coordinator, *Hoodia* Project, Botanic Gardens, National Botanical Research Institute, Windhoek
Dr Erika **Maass**, Senior Lecturer, Dept. Biology, University of Namibia, Windhoek
Ms Barbara **Curtis**, Project Manager, Tree Atlas Project, National Botanical Research Institute, Windhoek
Ms Silke **Rügheimer**, Researcher, Botanic Gardens, National Botanical Research Institute, Windhoek
Ms Esmerialda Klaassen, Database Manager, National Herbarium of Namibia, National Botanical Research Institute, Windhoek.

Harare, Zimbabwe
Ms Nozipo **Nobanda**, Head of Institute, National Herbarium and Botanic Garden, Harare
Mr Christopher **Chapano**, Data Capture Technician, National Herbarium and Botanic Garden, Harare
Mr Soul **Shava**, Environmental Education Officer/Head of Botanic Gardens, National Herbarium and Botanic Garden, Harare
Mr Claid **Mujaju**, Head of Seed Services and National Gene Bank, Agricultural Research, Harare
Dr Shadrack **Mlambo**, Director of Research, AREX, Harare
Dr Shakkie **Kativu**, Lecturer, Department of Biological Sciences and Tropical Resources Masters Programme, University of Zimbabwe, Harare

Zomba, Malawi
Prof James **Seyani**, General Manager, National Herbarium & Botanic Gardens of Malawi, Zomba
Dr Zacharia **Magombo**, a/Assistant Director and Head of Herbarium, National Herbarium & Botanic Gardens of Malawi, Zomba
Mr Gerard **Meke**, Principal Forestry Research Officer, Forestry Research Institute of Malawi, Zomba
Mr Mphamba **Kumwenda**, Head of Botanic Gardens, National Herbarium & Botanic Gardens of Malawi, Zomba
Ms Elizabeth **Mwafongo**, Research Officer (doing MSc), National Herbarium & Botanic Gardens of Malawi, Zomba
Mr Donald **Mpalika**, Data Entry Clerk/IT Specialist, National Herbarium & Botanic Gardens of Malawi, Zomba
Ms Gladys **Msekandiana**, Assistant Scientific Officer (doing MSc), National Herbarium & Botanic Gardens of Malawi, Zomba
Mr Maxwell **Mwamwanya**, Herbarium Technician, National Herbarium & Botanic Gardens of Malawi, Zomba
Mr Austin **Chikumba**, Foreman, Botanic Gardens, National Herbarium & Botanic Gardens of Malawi, Zomba
Mr Edwin **Kathumba**, Chief Technical Assistant, National Herbarium & Botanic Gardens of Malawi, Zomba

Dr Augustine **Chikuni**, Programme Officer, Norwegian Embassy (formerly SABONET Coordinator for Malawi), Lilongwe (telephone interview)

Gaborone, Botswana
Ms Soso **Lebekwe-Mweendo**, Director, Botswana National Museum, Gaborone
Dr Bruce **Hargreaves**, Head of Natural History, Botswana National Museum, Gaborone
Ms Monika **Kabelo**, Herbarium Assistant, Botswana National Museum, Gaborone
Ms Queen **Turner**, Head of National Herbarium, Botswana National Museum, Gaborone
Ms Dolina **Malepa**, Head of Environmental Research & Monitoring Division, Ministry of Environment, Wildlife & Tourism, Gaborone
Mr Mbaki **Muzila**, i/c of Herbarium, Department of Biological Sciences, University of Botswana, Gaborone
Dr Moffat **Setshogo**, Senior Lecturer & alternate SABONET National Coordinator, Department of Biological Sciences, University of Botswana, Gaborone
Mr Nonofo **Mosesane**, Head of Botanic Garden & SABONET National Coordinator, Botswana National Museum, Gaborone

Pretoria, South Africa
Prof Gideon **Smith**, Director of Research & Scientific Services, SANBI, Pretoria
Mr Christopher **Willis**, Director of Botanic Gardens (former Regional Coordinator of SABONET; 1996 to 2000), SANBI, Pretoria
Ms Yolande **Steenkamp**, SABONET Regional Coordinator (2003 to 2005), SANBI, Pretoria
Mr Trevor **Arnold**, Database Manager/PRECIS development, SANBI, Pretoria
Dr Ashley **Nicholas**, University of Durban-Westville, Durban
Dr Terry **Trinder-Smith**, Bolus Herbarium, University of Cape Town
Mr Robert **Scott-Shaw**, Kwa-Zulu Natal Nature Conservation
Prof Snowy **Baijnath (retired)**, University of Durban-Westville, Durban
Prof Brian **Huntley**, Chief Executive Officer, SANBI, Cape Town
Dr Stefan **Siebert**, Lecturer in Botany (previous Regional Coordinator of SABONET; 2000 to 2003), University of Zululand, Richards Bay
Prof B.-E. **Van Wyk**, Department of Botany, University of Johannesburg, Johannesburg
Ms Ronell **Klopper**, African Plant Checklist project, SANBI, Pretoria
Dr Marinda **Koekemoer**, Curator of National Herbarium, SANBI, Pretoria
Dr Patrick **Phiri**, Lecturer and SABONET National Coordinator, University of Zambia, Lusaka, Zambia
Dr Esperança **Costa**, Lecturer and SABONET National Coordinator, Augustino Neto University, Luanda, Angola
Dr Koos **Roux**, Compton Herbarium, SANBI, Cape Town

Cape Town, South Africa
Mr Augustine **Morkel**, Estate Manager, Kirstenbosch National Botanical Garden, SANBI, Cape Town
Mr Werner **Voigt**, Horticulturist, Kirstenbosch National Botanical Garden, SANBI, Cape Town
Mr Philip **Le Roux**, Curator, Kirstenbosch National Botanical Garden, SANBI, Cape Town
Dr Ted **Oliver**, former Curator of Compton Herbarium (retired), SANBI, Cape Town
Mr Ian **Oliver**, Curator of Karoo Desert National Botanical Garden, SANBI, Worcester
Mr Anthony **Hitchcock**, Nursery Manager/Threatened Plants Programme, Kirstenbosch National Botanical Garden, SANBI, Cape Town
Ms Antonia **Xaba**, Curator, Harold Porter National Botanical Garden, SANBI, Betty's Bay
Ms Berenice **Carolus**, Horticulturist, Harold Porter National Botanical Garden, SANBI, Betty's Bay
Ms Jane **Forrester**, Horticulturist/Interpretation, Harold Porter National Botanical Garden, SANBI, Betty's Bay

ANNEX 4 – SUMMARY OF FINDINGS AGAINST ACTIVITIES

ACTIVITIES	REGIONAL	SCORE
1. Trained professional southern African plant taxonomists and plant diversity specialists	16 BSc (Honours) registered, 14 completed, 22 registered for MSc, 19 completed, 3 will complete in 2005 1 student (Angola) discontinued at UCT due to language problems and the other student from Botswana left the University of the Witwatersrand due to personal reasons. 11 students (Botswana, Lesotho, Malawi, South Africa, Swaziland and Zambia) completed a combination of BSc and MSc degrees.	**HS**
1.1 Staffing needs determined and appropriate staff placed in national herbaria	Done. Needs determined and appropriate staffing put in place. Staff trained by SABONET absorbed by institutions, promoted and moved to key positions (head of herbarium in Botswana, head of botany in Mozambique, head of National Gene Bank in Zimbabwe) though some have left due to various reasons (South Africa, Namibia, Zimbabwe and Mozambique)	HS
1.2 Training needs of professional southern African plant taxonomists and plant diversity specialists identified	Done. Herbarium and botanical gardens needs assessments done and published as SABONET Reports No. 6 and 11 respectively.	HS
1.3 Develop training courses as a participatory process and formalised within the region	Various training courses developed in-house based on priorities identified by the Steering Committee to meet needs identified at institutional level. For each training course, proposals were submitted by the national Coordinators and selected by consensus. All courses were held within the region using local expertise and examples. A total of 26 courses were held with a total of 186 participants at 13 different institutions/locations.	HS
1.4 Regional training courses implemented	A total of 22 courses ran with a focus on Herbarium Management (3), Botanical Gardens Management (2), Database Management (7), Plant identification of various taxonomic groups (5), Environmental Impact Assessment (1), Threatened Plant Conservation (1), Botanical Drawing (1) and Field Course (Miombo-1). Location - (South Africa -16, other countries 6)	HS
1.5 National/sub regional training courses implemented	Four courses were held at a national level (Namibia - Grass identification and PRECIS Computer course, Zambia-Herbarium Management and EIA and South Africa - Cycad Conservation Course). Various Red listing courses were held at national level to develop red lists and supported in part by IUCN ROSA through NETCAB funding. 186 participants, of which 37% were female. Gender balance constrained in part but prevailing institutional structure and establishment. Gender balance varied male: female ratio e.g. Namibia 3: 10 vs. Malawi 17:2. Also balance between institutions involved varied e.g. Angola - 19 courses, 6 people, one institute cf Botswana 30 courses, 7 institutions.	S
1.6 Short-term internships and professional exchange of personnel between institutions (up to a maximum of three months) in order to develop technical skills and outputs	75 internships within the region between herbaria and botanical gardens were completed, with participation by all countries. Technical and research skills shared and developed. Angola (4), Botswana (12), Lesotho (3), Malawi (6), Mozambique (8), Namibia (9), South Africa (21), Swaziland (2), Zambia (4) and Zimbabwe (6). The internships involved expert visits to other institutions to provide technical support/training based on specific requests such as training in horticulture and nomenclature (South Africa) as well as in-country internships between different institutions (South Africa).	HS
1.7 Postgraduate and graduate (needs-driven) support for 24 national herbarium staff at tertiary institutions	Postgraduate training undertaken based on institutional needs. 22 MSc degrees sponsored by the project, 19 completed, 3 to be completed by the end of 2005. Three recipients excelled in their MSc degrees, two have proceeded to PhD registration.	HS
1.8 Improve and develop managerial skills for institutional development	Limited focus on managerial training except in Zimbabwe and regional training course for herbarium and botanical gardens managers that focused on management skills.	MS
2. Formal establishment of a collaborating Southern African Botanical Diversity Network		
2.1 Project Steering Committee appointed and functioning	Project Steering Committee in place. Meetings held quarterly bringing together the National Coordinators. The Coordinators presented their proposals for activities, equipment, training etc. and these were either approved or rejected by consensus. A strong dedicated, consistent chairmanship (Prof. Brian Huntley - CEO, SANBI) and Secretariat through the project period ensured success.	HS
2.2 Appointment of Project Coordinator, Assistant, Financial Officer, Regional Information Technology staff	Project Co-ordinator appointed, three during the project time; Administrative Assistant, Financial Officer and Regional IT staff appointed. Regional IT staff and Project Co-ordinator retained as SANBI staff.	HS
2.3 Identify role players for the National Working Groups	National Working Group appointed at national level. However, roles not clearly defined. Working group only used effectively in Namibia to review project progress at national level and provide technical support; in other cases e.g. Zambia - working group used to passively receive reports and in other cases, working group hardly met (Zimbabwe and Malawi).	MS and NS
2.4 Establish and support functional National Working Groups in each participating country	Working groups only functional in some countries e.g. Namibia. Adequate support not provided to enable National Coordinators to sustain this activity. Some were overloaded with similar committees (Zimbabwe) and others overwhelmed by institutional responsibilities on which SABONET was added (Malawi).	MS and NS
2.5 Publication of a Network newsletter	DoneRegular newsletters produced. Wide circulation (905) no. of mailing list, wide readership and used as a marketing and communications tool for SABONET locally, regionally and internationally. A useful tool for networking and was the main medium of communication between the various SABONET stakeholders.	HS
2.6 Production of regional and/or national publications	41 publications (34 published to date, 8 not yet at the printers) prepared by SABONET. 19 of these were national publications mainly national checklists and dedicated family treatments such as for grasses (e.g. Botswana, Namibia, Zimbabwe, Lesotho, Angola, Swaziland), pteridophytes (Swaziland) and bryophytes (Zimbabwe). Publication of Malawi Checklist pending and this likely to be published as part of the SABONET Report Series but with alternate funding.	S
2.7 At least two regional/sub-regional collaborative field surveys and collecting expeditions undertaken in under-surveyed areas within the region. Reduced to two by recommendation of the Midterm Review.	Two regional collaborative surveys undertaken; to (a) the Nyika National Parks of Malawi and Zambia (SABONET Report Series No. 31) and (b) southern Mozambique.	HS
3. Electronic information systems on the region's plant diversity developed and functioning which document the region's botanical diversity		

3.1 Purchasing of computer hardware and software in national herbaria	Computer hardware and software purchased for all herbaria, and computer networks in place. Due to continual need for upgrading, newer computers purchased in the latter phase of the project to cope with newer software requirements for higher operating speed and higher RAM. With increase in numbers of accessions and changes in three upgrades in Microsoft Access during the project phase, a new platform for the PRECIS database, open source MySQL has been installed for all the countries. Recently, three computers bought by the SABONET project were stolen but there are plans to replace them by the local government budget. Fortunately, all the data had been backed up.	HS
3.2 Training of herbaria staff in information technology and the development and use of database(s) through regional and national training courses	One regional computer training course held at the beginning of the project (1997) and six database management courses held in Pretoria (5) and Windhoek (1). A PRECIS Specimen Database user guide produced as a number in the SABONET Report Series and updated PRECIS Manual ready and due for printing as SABONET Report No. 41. National training courses held as needed and various country visits made by the Regional Database Coordinator to trouble shoot, carry out national training and install/upgrade software. However, in some instances, training impact compromised by calibre of staff leading to heavy demand on the time of the Regional Database Coordinator to deal with hardware trouble shooting, that could have been easily handled locally if the right calibre of staff were in place.	HS
3.3 Computerisation of plant specimens stored in national herbaria	Computerisation complete in some countries, and not in others. Focus shifted to the computerisation of Poaceae. Main setbacks: staff selected to manage databases not IT competent, mainly focus on data entry clerks, regional database Coordinator did not in all circumstances have a local equivalent, affecting impact of training; this leading to common oversights such as lack of frequent back ups and ensuring that most current anti-virus packages are installed. Staff turnover also a challenge in some institutions; need for a sustainable exit strategy; an MoU is being developed between Namibia and South Africa on data access and management but this not the case with the other participating countries. Lack of continued support from SANBI, the main home of PRECIS will strongly constraint further development of databases within the countries. A commitment from SANBI to provide follow up support CRITICAL. S*ee Appendix*	MS
3.4 Continual upgrading and improvement of the information technology functions in national herbaria to allow effective database output	Done. Database migrated from MS Access to MySQL to allow greater flexibility in the use of the database and interoperability especially to allow interface with newer Microsoft XP and Microsoft 2000 given that earlier database was based on Microsoft 1997.	
3.5 Communication between national herbaria through electronic means (electronic mail, Internet and other forms of communication)	Done. , All herbaria with internet facilities, and costs met by SANBI. However, sustainability in some countries limited post SABONET due to limited institutional operating budgets.	HS
3.6 Development and maintenance of a dedicated SABONET web site	Done. Website created. Website a useful tool for communication and publicity. Plans in place for SABONET website to be sustained.	HS
4. Production of regional human and infrastructural inventories		
4.1 Preparation of human resource expertise inventories	Done. Presented in SABONET Report No. 10: Plant taxonomic expertise: An Inventory of Southern Africa and herbarium needs assessment and botanical garden needs assessment outputs (SABONET Report No. 6 and 11 respectively).	HS
4.2 Preparation, distribution, collation and analysis of questionnaires to determine the available infrastructure and facilities amongst botanical institutions within the region	Done. SABONET Report No. 6 and 11, the needs assessment for herbaria and botanical gardens respectively. Related outputs include the Southern Africa national Herbaria: Status Report 1996, Index Herbariorum: southern African supplement 1997,1999 and Action Plan for southern African botanical gardens (SABONET Report Nos, 1, 2, 8 and 12 respectively).	HS
5. Plant diversity evaluations and monitoring within the region		
5.1 Database leads to maps of plant species distributions by region, country, province or ¼ degree grid	Selectively done by some countries but not prioritised at regional level by the SABONET project especially after the Mid-term Review. Herbaria in some countries focus primarily on taxonomy (e.g. Zimbabwe) and have no capacity to carry out mapping/GIS activities while others e.g. Namibia historically have a vegetation studies section and could incorporate this activity linked to its other programmes e.g. Tree Atlas of Namibia project.	MS
5.2 Digitised vegetation maps of major vegetation types, biomes and ecosystems within the region CANCELLED by Midterm Review	CANCELLED by Mid-term Review.	
5.3 Production of relational databases in GIS formats. CANCELLED by Midterm Review (to SECOSUD)	CANCELLED by Mid-term Review.	
5.4 National field collecting expeditions (lead to national reports and improving people's skills in report writing, amongst others) - including bilateral expeditions	National field collection trips prioritised in some countries e.g. Namibia, especially to undercollected areas and in collaboration with other internal programmes and projects as well as those related to the botanical gardens Threatened Plants Programme. However, in some countries, e.g. Zimbabwe, minimal field collecting activity too place.	MS
5.5 Production of national flora checklists; herbarium specimen checklists	Done. e.g. Namibia, Zimbabwe, Zambia and Botswana with completed checklists published/in process of publication as SABONET Report Series. Other family checklists published e.g. grasses and trees.	S
5.6 Linkages developed between national herbaria and institutions with responsibility for plant conservation to promote multidisciplinary conservation le. end-user workshops	Concept of end-user national workshops adopted within the logframe after the Mid-term Review. Purpose and potential outputs not very well understood by the various national Coordinators. End-user workshops held in all the SABONET countries except Malawi. In the nine countries(Swaziland, Zimbabwe and Zambia) did not really have interactive sessions with the end-user community to identify their needs; used these as fora to inform the end-users about what they can provide. In Namibia, the workshop was broadened to include the end-user needs for the biosystematic community. The workshops looked at the needs of both the internal and external consumers missing the opportunity to clearly define the clients appropriately and have them define their needs. Ultimately, the final conclusions comprised internal/structural needs of the taxonomic community rather than the specific needs/products and processes required by the institutions responsible for plant conservation.	NS
5.7 Identification and refinement of botanical hot-spots, centres of diversity and plant endemism within the region	IPA workshops used as main tool to achieve this objective. Three IPA workshops held in Namibia, South Africa and Mozambique. A regional IPA workshop held in South Africa prior to national IPA workshops. For countries with incomplete checklists and pending database completion constrained in reviewing and identifying IPAs at a national level. National efforts in place to follow up IPA workshops in Namibia. Plans in place also to undertake a regional IPA assessment through a proposal submitted to the Darwin Initiative Fund (UK). Linkages with *in situ* conservation agencies still weak and uptake of findings in IPA workshops. This exacerbated by perception of the role of herbaria in the different countries by the national Coordinators.	MS

5.8 Identification of priority taxa for inclusion in ex situ living collections within botanical gardens of the region (see Output 6) as part of the Threatened Plants Programme	Done. Priority taxa based on national needs identified and included in the Threatened Plants Programme. The TPP has been an effective vehicle in linking the SABONET project with a wider range of stakeholders at the national level. In Namibia, the *Hoodia* project has effectively built linkages to the policy makers and local communities, dealing with issues as broad as Access and Benefit Sharing, provision of alternative incomes, livelihoods and land use forms. In addition, the project addresses biological issues as plant propagation protocols and threatened species management.	S
5.9 Identification of under-surveyed areas (e.g. for Poaceae)	Done in some countries e.g. Namibia and Botswana, while others e.g. Zimbabwe did not prioritise this activity citing large backlogs of non-curated specimens that were priority.	
5.10 Evaluation of the conservation status of selected vegetation types/ecosystems/biomes per country and region. CANCELLED by Midterm Review	CANCELLED by the Mid-Term Review.	
6. Development of a regional botanical gardens conservation strategy		
6.1 Botanical gardens needs assessment conducted and the results published	Botanical gardens needs assessment completed and findings compiled as SABONET Report Series No. 11 and action plan produced as a follow up (SABONET Report No. 12).	HS
6.2 Two regional workshops to discuss (a) regional botanical gardens needs assessment report and networking of southern African botanical gardens, and (b) progress made in the implementation of threatened plant programmes	Part of this aspect done back to back with the inaugural African Botanic Gardens Congress (November 2002).	S
6.3 Co-opt botanical garden representatives onto National Working Groups	Botanical gardens representatives co-opted onto the national working groups in Namibia, Malawi, South Africa.	MS
6.4 Appropriate staff placed in National Botanical Gardens	Horticultural staff paid by SABONET placed in national botanical gardens where the needs were identified. Some of these trained through short internships and short courses. However, this is still a major constraint in many of the botanical gardens, as some have lost these staff due to death (2 in Zimbabwe and 1 in Malawi) and others have moved on after the project having received training (Malawi), while some have left for further training (Botswana).	S
6.5 Purchasing of computer hardware and software in national botanical gardens; linking of botanical gardens to e-mail	Depending on institutional structure, hardware and software have been put in place. In some instances such as Zimbabwe and Namibia, the staff offices are physically situated in the same building as herbaria so no separate hardware and software acquisition arrangements made.	S
6.6 Technical workshop to develop threatened plant conservation programmes in botanical gardens	A review committee was put in place to review the proposals submitted for threatened plants programmes within the different botanical gardens.	S
6.7 Implement threatened plant programmes in 20 southern African botanical gardens linked to the International Agenda for Botanic Gardens In Conservation	Threatened plants programmes developed that were linked to the International Agenda for Botanic Gardens in Conservation and national red lists developed as part of the SABONET project. Diverse projects suited to the local needs developed e.g. *Hoodia* propagation as a component of a wider community based conservation initiative in Namibia.Conservation education and awareness on the local taxa with cultivation of indigenous taxa with horticultural potential in Harold Porter National Botanical Garden in South Africa, and development of the 'Garden of extinction' in Kirstenbosch National Botanical Garden, South Africa.	S
6.8 Exchange staff skills and expertise between botanical gardens; exchanges linked to the threatened plant programmes in each specific garden	Done for selected botanic gardens, e.g. Namibia and Karoo Desert National Botanical Garden in South Africa with a focus on the propagation and conservation of succulent plants, accompanied by joint field trips; internships between Botswana and Natal National Botanical Garden, South Africa and Malawi and Pretoria National Botanical Garden.	HS
6.9 Contribution to the African Botanic Garden Network (ABGN)	SABONET co-hosted the inaugural African Botanic Gardens Congress, published the proceedings of the Congress and conducted a series of workshops on red listing, propagation and botanical gardens management prior to the Congress. SABONET has been continually involved in the network by presenting articles and information to the electronic newsletter that has been developed and is maintained by BGCI.	S
6.10 Develop and implement training courses as identified in the Regional Gardens Workshop	Botanical Gardens Management Course (Pretoria, South Africa, 2001) and Botanical Gardens Horticultural Course (Durban, South Africa, April 2002)	S
6.11 Conduct 1-day National Workshops to discuss proposed threatened plant programmes with various stakeholders	An internal review process used to review the various proposals on a case-by-case basis by each botanical garden and local efforts to engage their stakeholders but the formal activity was cancelled.	MS
6.12 Regional monitoring team established to evaluate threatened plant programmes in southern African botanical gardens	Cancelled.	

ANNEX 5: LIST OF DOCUMENTS REVIEWED

1. Golding J. Ed. 2002. Southern African Plant Red Data Lists. Southern African Botanical Diversity Network Report No. 14. Pretoria. 238 pp.

2. Huntley, B. 1996. The Long walk to GEF. 1st Meeting of the SABONET Committee. Pretoria, 3 pp.

3. Irish J. Ed. 2003. Namibia's Biosystematic Needs: Proceedings of the Namibian Biosystematics End-user Workshop, Windhoek, 24-25 September 2002. Biosystematics Working Group, Windhoek. 57 pp.

4. SABONET, 1998. Inventory, evaluation and monitoring of botanical diversity in southern Africa: A regional capacity and institution building network (SABONET). GEF/UNDP Project Document. Southern African Botanical Diversity Network Report No. 4. Pretoria. 73 pp.

5. SABONET 2005. SABONET PROJECT: 2004 FINANCIALS. Southern African Botanical Diversity Network Report Internal Report. Pretoria.

6. SABONET 2005. SABONET TERMINAL REVIEW 17th February to 4th March 2005. Southern African Botanical Diversity Network Internal Report. Pretoria. 246 pp.

7. SABONET 2005. Internal Review of the SABONET Project. Southern African Botanical Diversity Network Internal report.

8. SANBI 2004. Newsletter of SANBI's Plant Conservation Projects. The South African National Biodiversity Institute, Issue 1, September 2004.

9. Siebert, S. J. & Smith G.F. 2004. SABONET's support, activities and achievements in South Africa. South African Journal of Science 99: 303-304.

10. Siebert S.J. & Smith G.F. 2004. Lessons learned from the SABONET project while building capacity to document the botanical diversity of Southern Africa. Taxon 53 (1): 119-126.

11. Smith G.F. 2004. The African Plants Initiative: a big step for continental taxonomy. Taxon 53 (4): 1023-1025.

12. Smith T.J., Smith G.F. & Steenkamp Y. 2004. Herbaria in SABONET countries: building botanical capacity and meeting end-user expectations. Southern African Botanical Diversity Network Report No. 29. SABONET. Pretoria. 39 pp.

13. Timberlake, J.T. & Paton A. 2001. Mid Term Review of the Southern African Botanical Diversity Network, GEF/UNDP Project Number RAF/97/G33. 42 pp.

14. Willis, C.K. & Smith G.F. 2004. The Global Strategy for Plant Conservation: implications for succulent plant conservation in Southern Africa. Aloe 41: 6-15.

15. Zulu, J.N. , Chuba D.K. & Phiri P.S.M. 2003. Impact of SABONET programmes in Zambia. Proceedings of the SABONET End-user Workshop held in the Senate Chamber at the University of Zambia Great East Campus, Lusaka , Zambia, 1 st February 2003. 51 pp.

ANNEX 6a: HERBARIUM QUESTIONNAIRE

TRAINING

1. How many people have been trained? Breakdown by type of training.

2. Training courses - how many have attended? How many in-country, how many outside?

3. Where are the people that were trained now?

INSTITUTIONAL

4. What equipment and facilities were obtained through SABONET ? How have they been used?

5. How has your institution's capacity been increased by SABONET ? How have you demonstrated this?

6. What collaboration have you had, at working level, with other botanists in-country?

7. What collaboration or exchanges have you had, at working level, with other botanical institutions through SABONET? How useful have these been?

8. What will happen to the herbarium, now that SABONET is finishing?

9. National field trips - how many did you carry out ? To where ? What has been their impact?

10. Staff turnover and retention - what has this been in your institution? What have been the reasons ? What is the effect?

PROJECT MANAGEMENT

11. Support from Project Management staff at NBI - how frequent has this support or visits been ? Has the PMU been efficient ? What sorts of problems have there been, and have they been resolved efficiently?

12. What about support over the last two years with the project running down and a high staff turnover?

13. Have you felt that your requirements have been adequately addressed? And if not, in what way?

14. Has the institutional base of SABONET in South Africa, specifically in such a strong institution as NBI, been a problem? If so, why ? And how could this have been overcome?

DATABASE + LISTS

15. PRECIS database. How many specimens from your institution have been entered ? What percentage of the herbarium ? What prioritisation was given; which groups?

16. How has the data from PRECIS database been used?

17. What about technical problems. Have these been readily overcome?

18. How have you used computerisation ? What have been the benefits?

19. How will you maintain the database and add in ? Is it worth it?

20. Plant mapping - what has been done so far? What plans?

CONSERVATION

21. Red Data Lists - how valuable has this been ? How has it been used, and by whom?

22. What about differences in the approach between this and e.g. PRECIS and training?

23. What plans do you have to update or revise the RDLs?

24. Have you looked at specific RDL taxa in more detail in light of these findings?

PUBLICATIONS

25. SABONET newsletter - have these been useful ? In what way ? What about quality - has it improved, or gone down?

26. SABONET publications - which have been the most useful ? Why ? Which have not been useful?

27. What would be the most useful future publications?

USERS

28. Users workshop - who were the users represented ? How many participated?

29. What were the main conclusions or findings from your national workshop?

30. National Steering Committee - who is on it ? What representation is there, what sort of people or angles ? What user bodies were involved ? What has been their input ? How useful have these been?

31. In what way has the National Steering Committee changed project activities in-country?

32. What products have been produced for local users ? What has been their reaction to these products?

33. Participation in international field trips - what was your institutions role ? What did your institute get out of it?

BOTANICAL GARDENS

34. Botanical Gardens - how many have been supported ? What assistance did they get?

35. What effect has this support had on the status of the gardens ? Are they now more used?

36. Now that SABONET is ending, what sources of support are there for botanical gardens?

FUTURE

37. What are your thoughts on a possible SABONET 2 ? Is it viable to have a regional or multi-country project ? Any bilateral initiatives in the pipeline?

38. Momentum and resources are presumably going to be less now. Is that a problem ? If so, why?

ANNEX 6b. QUESTIONNAIRE SENT TO ALL NATIONAL COORDINATORS

COUNTRY	
INSTITUTION	
National Coordinator	
SABONET Staff (Please indicate name, qualification and role)	

1. BUDGET

1.1 Were the funds sufficient for all the planned activities? Yes/No
(Specify constraints and how this affected achievement of project objectives.)

2. TRAINING AND CAPACITY BUILDING

2.1 Staff needs and status

	No. of Staff at beginning of project	No. of Staff needs (from needs assessment)	No. of Staff at end of Project	No. of staff trained by SABONET
Taxonomists				
Horticulturists				
Technical staff –Herbarium				
Technical staff – data entry				
Others (specify)				

2.2. **What training have the staff received? Please indicate courses/training/internships, duration, location and type of qualification**

Name	Gender (M/F)	Course and location	Qualification

2.3 What constraints were faced in implementing the capacity building component of the project?

2.4 Are all the SABONET trained staff in position? Yes/No
If not, please give reasons

2.5 Has staff performance and outputs improved following SABONET training? Yes/No
(Please indicate e.g. if they have new responsibilities, published, undertaken new research etc.)

2.6 Have SABONET trained staff been promoted to strategic/senior positions after training? Yes/No
Please give details.

3.0 PROJECT IMPLEMENTATION AND COORDINATION

3.1 What was the role of the National Working Group?

Approving proposals for project activities – Yes/No
Providing Peer Review for project outputs – Yes/No
Providing technical support for the SABONET project – Yes/No
Champion for the Project in other national/international fora – Yes/No
Channel for project outputs to policy formulation processes – Yes/No
Other (Please specify)

3.2 **Did the National Working Group add value to the project implementation process at national level? Yes/No**

If the National Working Group was an impediment, please suggest practical options that would have been more favourable to your country situation.

3.4 **Was the support received from the Regional coordinator appropriate?**
Please explain.
3.5 **Was the location of the Regional office appropriate?** Yes/No
Comment:
3.6 **Were the staff appointed at the regional office suitably qualified and competent?** Yes/No
Comment:
3.7 **Was the recruitment policy for the project staff at regional and national level appropriate and transparent?**
Yes/No
Comment
3.8. **Was the set up for national coordination appropriate?** Yes/No
Comment.
3.9 **Was the SABONET Steering Committee effective?** Yes/No
Please elaborate.

3.10 **Please explain the role and contribution of the CBD and GEF national focal points during the project phase?**

3.11 **Was there sufficient support and guidance from your local UNDP office**?
Please explain.

4 INFORMATION MANAGEMENT

4.1 Does the institution have adequate computer hardware and software? Yes/No
Please indicate current gaps and needs?

4.2 Do you maintain an institutional website? Yes/No
4.3 Is your website link to the SABONET website and other regional partners? Please elaborate.

4.3 How many specimens have been databased? Indicate number and % of your total collection?

4.4 Are all the red list taxa databased? Yes/No
Please indicate percentage databased.
4.5 What constraints and challenges have been faced in databasing?
4.6 What are the future plans for the database post-SABONET?
4.7 Have the SABONET database outputs been linked to any other relevant databases in your institution? Yes/No. Explain.

4.8 Is the national checklist complete? Yes/No

4.9 Please list some of the current users of the database, red list and national checklist.

5. BOTANICAL GARDENS:

5.1 Do(es) the botanical garden(s) have appropriate and adequate staff? Yes/No
Please elaborate indicating gaps and needs.

5.2 Has the botanical garden implemented a threatened plants conservation programme? Indicate key highlights.

5.3 What are the planned activities post-SABONET such as to address gaps and needs highlighted by the botanic gardens needs assessment in your institutions?

6. LINKAGES AND PARTNERSHIPS

6.1 To what national processes and programmes has the project contributed to?

6.2 Please list the strategic partnerships developed and stakeholders that have participated in implementing the project at national level.

6.4 What project exit strategy is in place at institutional and national level? Please explain.

6.5 Are there any pending project activities? If any, please indicate how they will be followed up.

6.6 What new project stakeholders have come on board after inception e.g. local communities, private sector, other ministries, NGO s etc?

6.7 Following the end user workshops, are there any plans to streamline the activities of the herbarium and botanical gardens to make taxonomy more relevant and taxonomic products easily accessible? Yes/No. Please elaborate

6.8 What were the main shortcomings of the SABONET project?

(a) At institutional level.

(b) At national level

(c) At regional level

6.10 What were the main strengths of the SABONET project,

(a) At institutional level

(b) At national level

(c) At regional level

6.11 How has the project contributed to regional and international level processes and agreements? SADC, NEPAD processes, CBD, UNCCD etc. Please explain.

7. ANY OTHER COMMENTS

Thank you for completing this questionnaire.