

REPORT

Terminal evaluation of the UNEP GEF project “Community Based Management of On-farm Plant Genetic Resources in Arid and Semi-Arid Areas of Sub-Saharan Africa” GF/2010-01-14

EVALUATION AND OVERSIGHT UNIT

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Executive Summary

Introduction

Traditional local cultivars, also known as ‘landraces’ or farmers’ varieties contribute significantly to sustainable food production, human nutrition and household income generation for the resource poor farmers in marginal agricultural areas including arid and semi-arid zones. Yet, pressures to concentrate on high yielding modern varieties have resulted in a growing genetic erosion of local landraces. This, in addition to the inability of modern *ex-situ* methods by the world-wide network of genebanks and botanical gardens to conserve the dynamic processes of crop evolution and farmers’ knowledge of crop selection and maintenance inherent in the development of local cultivars, make it imperative to place greater emphasis on conservation of landraces *in-situ* within farms.

The overall goal of the “*Community-based management of On-farm plant genetic resources in arid and semi arid areas of Sub-Saharan Africa*” project was to improve the effectiveness of traditional farming systems for conservation of biodiversity of local and global importance. The purpose was to develop models for enabling environments for effective contribution of traditional farming systems in biodiversity conservation and measures to maintain and promote wider adoption of viable systems. The project achieved its main objectives in initiating actions that will lead gradually towards national policy environment ensuring landraces conservation on farm.

Main conclusions

Some of the immediate results of this project on the traditional farming systems are i) the new perspective under which they are now being viewed by everyone: the farmers and their communities as well as the other stakeholders; ii) the unveiling of their importance for the survival of the landraces and iii) the readiness of the farmers to maintain best practices or even adopt/adapt new ones and improve the traditional farming systems.

Farmers in various communities in arid and semi-arid areas of Sub-Saharan Africa conserve on-farm landraces of local and global importance through an array of practices under traditional farming systems. This has been confirmed through participatory surveys, discussions/exchanges/analysis and seed fairs.

The maintenance of a diversity of landraces is the result of a diversity of community-based plant genetic resources management practices, each of which often contributes to the conservation of only one or two landraces. Indeed, it is this diversity of practices by communities across Africa, often strongly rooted in tradition, which drives landrace conservation and which must be maintained to ensure the on-farm conservation of these landraces.

Although the project quantified and ranked practices in each case study with some clearly having more impact than others, any attempt to promote individual traditional community-based practices as being ‘best’ is likely to lead to an overall erosion of landraces.

This project has been an eye-opener to policy makers on the role of traditional farming systems in the conservation of valuable crop landraces. It also demonstrated the willingness of the lawmakers to pursue policy reforms that could create the enabling environments for the conservation of biodiversity of global importance.

Generally, specific uses of landraces, determined “best practices” that led to their conservation. For example the main reasons for the farmers to conserve landraces include: their use for food, taste, and feed, building material, beverage, markets (income), their cultural value and health (nutrition and medicinal).

The project activities enabled the implementing countries to develop some essential capacity to assess and conduct on-farm conservation of landraces; to assess and evaluate risks of genetic erosion in landraces of local and global interest. It also enabled them to review ways to, or/and take action to, mitigate genetic erosion - such as initiating conditions for enabling policy environments to arrest the trend in favour of the promotion of conservation.

The project fell short in making adequate provision for a proper monitoring and evaluation system in its early design, which could have, among other things; i) helped ease the tracking of project progress and performance; ii) ensure sufficient resources were allocated for annual and mid term reviews and an end of project wrap-up meeting to take stock of achievements and clarify the way forward.

Indeed, the project has raised high expectations in the traditional farming communities. Its expected long term impacts will depend on what follow up is done by the various implementing countries.

Overall Project Ratings

Aspects	Ratings
1. Attainment of objectives and planned results:	S
2. Achievement of outputs and activities:	S
3. Cost-effectiveness:	MS
4. Financial Planning:	MS
5. Impact:	MU
6. Sustainability:	MS
7. Stakeholder participation / public awareness:	S
8. Country ownership / drivenness:	S
9. Implementation approach:	MU
10. Replicability:	MS
11. Monitoring and Evaluation:	U

Lessons learned

1. Projects gained tremendously with an elaborated Monitoring and Evaluation plan agreed upon during project design and identification phase. M & E plans should be accorded higher priority at both strategic and operational levels. Reporting alone could be tedious and tasking although vital for informing on the project performance while mitigating the deficiency of the project design.

2. A “project development” stage would allow for thorough preparation for the full project implementation phase especially when the project identified is large. That would also help in

checking the project design, and reducing the risk of implementation delays and the need for extension at the end of the implementation period. Also during that phase communication and reporting protocols and commitments are defined and agreed upon; realistic resource planning, budgeting and project accountability are determined. Owing to the size of the project a passage through such a stage would have ensured that all products developed are finalized.

3. There are obvious advantages in maintaining continuous links with known communities and build upon the working relationship that had been previously developed in other projects. The project searched for appropriate case study sites in a very strategic and practical manner. Priority was accorded to sites where the communities had previously hosted similar projects which were finishing or were still on-going. Cases studies developed in 'PLEC communities' wherever possible led to rapid appropriation of the '4-square methodologies' (that illustrates the status of the landraces on farm), a better understanding, thus had a faster project implementation pace and a better ownership.

4. Avoiding the promotion of any single farmers' practice as being the "best" is a sound principle to apply for the conservation of on-farm genetic diversity. Although the project quantified and ranked practices in each case study, and some clearly had more impact than others, any attempt to promote individual traditional community-based practices as being 'best' is likely to lead to an overall erosion of landraces. Some of these practices are amenable to adaptation and commercialization in ways that fit well with modern society and can contribute to improving livelihoods by, for example, improving nutrition or enabling survival in exceptional and difficult circumstances. Others are less amenable to acceptance in modern societies, such as landraces that are believed to keep away evil spirits, or sustained by other traditional beliefs that may conflict with modern trends. Indeed creating an environment that recognizes, appreciates, respects and learns to build on the positive aspects of landraces and all the practices that lead to their conservation is probably the overarching best practice that can be achieved through policy adaptation.

5. Research that is intended to benefit farmers and other consumers must put emphasis on farmers' and consumers' needs and preferences and must begin with understanding the real situation on the ground. The project methodological framework offers a more focused way of getting baseline information/data on what makes farmers to want to continue keeping certain varieties. It could allow breeders of new varieties and those carrying out seed distribution projects to understand farmers and society's needs and preferences before embarking on "un-focused" breeding work or wholesale seed distribution.

6. The benefits in terms of 'ownership' of new ideas and initiatives from early involvement of policy makers, private sector and NGOs are immediate and great. In this way these stakeholders will also gain the same understanding and experience as the scientists and the farmers. As tricky or difficult as this may seem, national teams should involve/engage policy makers, NGOs and private sector (for marketing and seed services) at an early stage. Their representatives should be involved right at the onset of the project activities such as in the surveys, in capacity building exercises, in the restitutions and analysis, long before policy discussions.

Main Recommendations

The Urgent Publication of project results and findings.

1. Bioversity International (IPGRI) should ensure that all remaining documents containing results and findings be systematically finalised and published without further delays. This is the case among others of the book on “Landrace Conservation in Africa” by Bioversity International and the various partners and the book on “Domestication of Yams of West Africa” by the joint teams of Ghana and Benin.

2. Bioversity International should take the opportunity of a related regional meeting in the near future, to include a wrap up session on this project, associate other countries to share experience and review possible follow-up activities.

Support for a follow up expanded programme

3. Bioversity International, in partnership with FAO and in the framework of the Global Plan of Action (GPA on food and Agriculture Genetic Resources), should assist the countries in the region approach other sponsors and UNEP/GEF to set up as soon as possible a follow up programme/project to be implemented in a stepwise manner to cover:

- i) other traditional crop varieties especially those suspected to be under threat in the same area of the present project;
- ii) all traditional crop resources in arid and semi-arid areas in the countries as well as beyond to determine the level and nature of genetic erosion in each of the crop and take the appropriate measures to salvage them from disappearing ;
- iii) vulnerable traditional crops in other countries in Sub-Saharan Africa and elsewhere and
- iv) to expand on the application of the policy harmonisation and implementation framework in all countries. Policy components should be developed and expanded to test the various canvas/models established in Benin, Ghana Malawi or elsewhere, for policy development, modification or harmonization in order to develop enabling environments for on-farm conservation of landraces in improved traditional farming systems
- v) continue to develop the required capacity for the programme at all levels, through the use and strengthening of appropriate training and research institutions (adoption and refining of relevant curricula).

4. UNEP/GEF should undertake an impact study (at a later date), in the implementing countries, in conjunction with the national agencies and the communities to assess the impacts of this project (also needs assessment at that time).

Others

5. A strong and well funded management /coordination structure is recommended especially for a project that involves countries in several sub-regions. This should be carefully crafted in the project design and also be the responsibility of the executing institution. A large scale multi-country project such as this one required such a robust coordination mechanism with steering committees and sub-regional coordinators, to stimulate/support exchanges and collaboration within and between the various countries and sub-regions.

6. The responsibility of national plant genetic resources centres should also include monitoring of the situation /presence of farmers’ varieties/landraces in the communities and the need, if any, for re-introduction of resources in a given area. Seed fairs could help in that exercise.

They should be regularly organized, especially in all vulnerable farming areas as a strategy for conservation and with prices as incentives to active farmers.

Acronyms and Abbreviations

DEA	
GPA	
IFAD	International Funds for Agricultural Development
INRAB	
IPGRI:	International Plant Genetic resources Institute now Bioversity International
GEF	Global Environment Facilities
M&E	Monitoring and Evaluation
MGHiE	
NPGRC	National Plant Genetic Resource Centre
PGRFA	Plant Genetic Resources for Food and Agriculture
PLEC	People, Land Management and Environmental Change
SDC	Swiss Development Co-operation
UDS	University for Development Studies
UNEP	United Nations Environment Programme

Photos: Above, discussions in Benin with the project team and below with two yam growing communities in Ghana.

A) INTRODUCTION

1. Project background and Overview

Traditional local cultivars, also known as ‘landraces’ or farmers varieties contribute significantly to sustainable food production, human nutrition and household income generation for the resource poor farmers in marginal agricultural areas including arid and semi-arid zones. Yet, pressures to concentrate on high-yielding modern varieties have resulted in growing genetic erosion of local landraces.

This, in addition to the inability of modern *ex-situ* methods by the world-wide network of genebanks and botanical gardens to conserve the dynamic processes of crop evolution and farmers’ knowledge of crop selection and maintenance inherent in the development of local cultivars, make it imperative to place greater emphasis on conservation of landraces *in-situ* within farms.

An attempt to provide some answers to questions such as a) what is the extent and distribution of the genetic diversity maintained by farmers over space and over time?; b) what are the processes used to maintain genetic diversity on-farm?; c) who maintains genetic diversity within farming communities? d) what factors (market, non market, social, environmental) influence farmers decisions on maintaining traditional cultivars? calls for: 1) a better understanding of the farming systems; 2) a greater recognition of the role of indigenous knowledge ; 3) integration into mitigative programme of all stakeholders, especially farmers who are the primary custodians and managers of crop genetic resources in farms and 4) modification of policies impacting on agro-biodiversity at all appropriate levels (local, national and regional).

Less than ten percent of land managed by small farmers in Sub-Saharan Africa is used for the production of modern varieties. While wild-gathered biodiversity and pasture provide an important contribution, the local cultivars or farmers varieties continue to provide the core component of sustainable crop production.

The linkage between diversity and food security provided the rationale for enhancing the availability and use of local crop varieties in the fragile ecosystems of arid and semi-arid regions of Sub-Saharan Africa.

The overall goal of the “***Community-based management of On-farm plant genetic resources in arid and semi arid areas of Sub-Saharan Africa***” project was to improve the effectiveness of traditional farming systems for conservation of biodiversity of local and global importance. The purpose was to develop models for enabling environments for effective contribution of traditional farming systems in biodiversity conservation and measures to maintain and promote wider adoption of viable systems.

The main objectives were:

1. To develop a framework for analysis of ‘best practices’ for conservation of crop landraces on-farm;

2. To develop a framework that links best practices for conservation of crop landraces on-farm to decision-making and policy;
3. To build capacity in the application of both frameworks in influencing policies that impact on-farm conservation of landraces;
4. To establish/ catalogue/ determine 'best practices';
5. To replicate 'best practice' where possible.

The project which relates to UNEP/GEF Operational Program Number 1: Biodiversity, arid and semi-arid ecosystems, was executed at regional level by the International Plant Genetic Resources Institute (IPGRI, now Bioversity International), in collaboration (at national level) with the Institut National de Recherche Agricole du Benin (INRAB), Institut d'Etudes et de Recherche Agricoles (INERA) Burkina Faso, University of Ghana (UoG), the National Genebank of Kenya (NGBK), the National Plant Genetic Resources Centre in Chitedze (NPGRC) Malawi, Institut d'Economie Rurale (IER) in Mali, the National Agricultural Research Organization (NARO) Uganda and the Dept. of Agricultural Research and Extension (AREX, former DRSS) Zimbabwe.

The project had thirteen components, listed as:

- 1) Create project management framework in partner countries, with links and interfaces to relevant projects, formal and informal institutions and farmers, through consultations, meetings and establishment of required partnerships and memoranda of understanding. As part of this process, a stakeholder analysis and public involvement plan was to be refined as a first step to ensure a bottom up participatory process.
- 2) Hold series of in-country public awareness meetings;
- 3) Recruit consultants to develop and draft initial proposed methodology and framework for conducting case studies through wide consultation with partners (Project Development);
- 4) Organize National consultations in case study countries to discuss draft and further develop methodologies descriptors and indicators for conducting case studies;
- 5) Organize a regional workshop for all participating project countries to harmonise methodologies for conducting case studies;
- 6) Conduct surveys to determine the status of on-farm conservation, the players involved, and interventions proposed, but focusing primarily on identifying best practices for on-farm conservation of traditional varieties, and the policies that impact on in-situ conservation on-farm;
- 7) Initiate and/or support actions by communities and farmers to enhance performance of local cultivars for improved livelihoods of farmers through use of local crop cultivars, including reintroduction of 'lost' cultivars from genebanks, where appropriate and possible;
- 8) Hold wide consultations with policy-makers and stakeholders, particularly the farming communities, to evaluate the current situation regarding policy related to traditional knowledge and systems and their impact on landraces and agrobiodiversity;

- 9) Analyse country situations and results of pilot activities to identify best practices for conservation and use of farmers' varieties in agricultural production systems;
- 10) Convene international meetings to present and debate best practices (to be held in conjunction with IPGRI's global project on in-situ conservation);
- 11) Hold policy level meetings to sensitise policy-makers and to identify and detail approaches to supporting the integration of traditional knowledge into national policies and plans;
- 12) Recruit consultants to develop and test framework that links best practices' for conservation of crop landraces on-farm to decision-making and policy;
- 13) Develop national capacity through training in use of frameworks, and strengthen appropriate institutional arrangement to ensure sustainability of these systems.

The total budget allocated to the project was US\$ 2,050,000, with US\$ 750,000 funded by the GEF Trust Fund and co-funding from; IFAD US\$500,000, Netherlands US\$ 500,000, SDC (Switzerland) US\$ 300,000 and in kind contributions from National counterparts.

2. Scope and objective of the Evaluation

The objective of this terminal evaluation is to assess project performance and the implementation of planned project activities and outputs against actual results and to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts.

3. Methodology

The evaluation was commissioned by UNEP's Evaluation and Oversight Unit and carried out by Franck Attère between 4 February and 30 April 2007. The methodology used followed, as closely as possible, the guidelines provided by the terms of reference for the evaluation (Annex 1)

This evaluation included visits, interviews and a desk study. Visits were organized to two implementing West African countries namely Ghana and Benin during 4-14 February and later to Kenya (March 2007).

In general, the period of visits was not ideal because this was the middle of the dry season and there were no activities in the field for both rice and yam. Although the yam growing communities could be found on their sites, the rice ones had dispersed and migrated southwards in search for casual employment /jobs.

Similarly, at the University of Ghana in Legon and the University of Development Studies in Tamale, classes had resumed and it became difficult to have a meeting, at short notice, with the lecturers involved in the implementation of the project. In Benin, the project's focal person was on his way out for a long term mission. He nevertheless delayed his departure to take part in the discussions for the evaluation.

Interviews/discussions were held with IPGRI staff involved in the project based in Kenya as well as in Benin, especially the project coordinator, and also with UNEP/GEF staff in charge of biodiversity activities. The national focal point for Uganda who was visiting Nairobi in

March 2007 was also interviewed. Telephone interviews/discussions were held with the national project focal points of Malawi and Zimbabwe as well as with the UNEP/GEF project task manager now based in Rome.

A desk review of project documents, which included various reports such as the quarterly monitoring reports, project outputs, publications, newspaper articles, financial reports, national documentation provided during the visits and even a video cassette provided by IPGRI on the banana case study in Uganda, was carried out by the consultant.

In Ghana, the evaluator was first briefed at the University of Ghana (Legon) by the national focal point Prof. Edwin Gyasi, who was also the consultant who developed the methodology and framework for analysis of best practices. The evaluator then proceeded to Tamale in Northern Ghana to meet Dr Gordana Kranjac-Berisavljevic' MGHIE, the local coordinator of the project and her team of lecturers and research fellows at UDS.

After a briefing/discussion on the project activities and results obtained in Ghana, the group visited a site where two communities were engaged in the case study on yam. The evaluator had the opportunity to interact with the farmers in the communities. Later on the way back to Accra from Tamale, the evaluator visited the National Plant Genetic Resource Centre (NPGRC) in Bunso.

In Benin, series of discussions were held with the project management team and the IPGRI focal point at the IPGRI office in Cotonou, whereas in Kenya the evaluator spent some time with the national focal point at the Genebank of Kenya (GBK) located at the KARI Muguga research station, in the outskirts of Nairobi.

B) EVALUATION FINDINGS: PERFORMANCE AND IMPACT

1. Attainment of objectives and planned results

The project duration was initially 36 months starting December 2001. Due to some delays at the initial stage, this was revised and extended to be completed in April 2006, for a total duration of 53 months.

Immediate objectives

For decades farmers in arid and semi arid areas of Sub-Saharan Africa have used traditional farming practices to produce food and other related products for the subsistence of their communities. Nothing, or rather little, was known about these practices especially in relation to biodiversity conservation and particularly the conservation of landraces/farmers' varieties e.g. what were the landraces in use (types, numbers state, etc)?; what was happening to them (loss or gain of genetic stock, extinction, etc)?; why was this happening (impact of traditional farming systems, etc)?; what was being done to mitigate or improve the situation (enabling policy environment, etc)?

The project was to develop models for enabling environments for an effective contribution of traditional farming systems in biodiversity conservation and measures to maintain and promote wider adoption of viable systems.

Through case studies, the project analysed farming systems in semi-arid ecosystems in Benin, Burkina Faso, Ghana, Kenya, Malawi, Mali, Uganda and Zimbabwe, focussing on how these systems supported the conservation of landraces of local and global significance.

The project synthesized “best practices” which incorporated landraces into farming systems and biodiversity conservation strategies. It also attempted to harmonize national policies that support sustainable on-farm conservation of agricultural biodiversity in such a way that the best practices remain a viable means of conserving landraces on-farm.

Develop a framework for analysis of best practices for conservation of crop landraces on-farm

In the past there was no known framework for analysis and comparison of best practices especially for conservation of landraces on-farm.

As stipulated in the project document a consultant was hired to take up the challenge of developing the framework for farmer evaluation of practices for landraces. This was finalized jointly with the project coordinator tested and fine tuned with the participation of the country teams involved in the implementation of the project.

On the one hand, the farmer determines what makes the practice the ‘best one’ and bases his/her choices from a survival strategy or utilitarian point of view. On the other hand, the scientists on the project primarily judge how effective the practices are in conserving agrobiodiversity at different levels. The project attempted to reconcile the two views in developing frameworks for the determination of “best practices”.

A framework for analysis of best practices for conservation of crop landraces on-farm has been developed as part of the project and is based on an inter-disciplinary scientific base of conservation theory, methods and applications. It is available to the global community, for on-farm conservation of agricultural biodiversity, particularly focusing on landraces.

The method developed involves three basic steps with farmers: i) the participatory extent and distribution analysis (also known as the four square or cell analysis), which aims at identifying the rare landraces, their traits and possible practices for landrace conservation; ii) evaluation of the importance of practices for the survival or maintenance of rare landraces; iii) evaluation of the contribution of these practices to three basic livelihood strategies for which farmers often use: risk minimization, resource use optimization and diverse end uses, including commercialization.

Regional and national meetings were held for learning and sharing of the methodology and results/experiences. Landraces distributions as well as surveys/collecting were also carried out as per the project document.

The methodology can be considered a best practice in itself and has been used successfully in all the project implementing countries although at the beginning it was difficult for most stakeholders in many of the countries to understand properly the concept and what was expected. However, in the case of Ghana, it seems that uptake of the methodology was easier for the communities earlier involved in the PLEC project.

As a result of the project and in addition to the important recognition of the role of traditional farming systems and farmers in the conservation of crop plant genetic resources of local and global importance, the understanding of traditional farming systems in/and the management of landraces/farmers varieties have tremendously increased among researchers, students and later among policy/decision makers in the implementing countries.

The case studies have established, verified and confirmed that effective traditional farming systems do conserve agro-biodiversity on-farm in the arid and semi arid zones of Sub-Saharan Africa through a number of best practices on crops such as yam and rice (Ghana), yam and cowpea (Benin), banana and sorghum (Uganda), sorghum and Maize (Kenya) as well as sorghum cultivation in Malawi and Zimbabwe. However, these have shown some limitations due to biases towards modern varieties and prejudice against traditional varieties.

Another interesting outcome is that the methodology helped everyone: the farmers, the researchers, and the policy-makers as a powerful detector of genetic erosion. Not much was known of genetic erosion. Another interesting outcome is that the methodology helped everyone: farmers, researchers, and policy-makers as a powerful detector of genetic erosion. Not much was known of genetic erosion although some FAO national reports on the status of plant genetic resources (for the Global Plan of Action) mentioned that it was occurring in several crops. The 'four square' analysis gave farmers illustrative ideas of what was happening to the production levels of their varieties, whereas to the researchers it was the knowledge of numbers, scale and extent of genetic erosion of local crops/cultivars that can be assessed in selected areas, in addition to the risk of extinction of the varieties and the possibility to establish some distribution maps for local cultivars, and the mitigating measures taken. This was a powerful message and an eye-opener to the policy-makers. It was a convincing starting point to encourage on-farm conservation of local landraces

Reports have been produced on the status of genetic erosion of crop landraces in selected areas in Benin, Ghana, Kenya, Mali, Malawi, Uganda and Zimbabwe. Distribution maps were also available for landraces of rice and yam in Ghana as per the project document.

In Malawi, the project was also seen as a more focused way of getting baseline information/data on what makes farmers retain certain varieties. This fact should force breeders of new varieties and those carrying out seed distribution projects to take time to understand farmers' and society's preferences and needs before embarking on unfocused breeding work or wholesale seed distribution.

Develop a framework that links 'best practices' for conservation of crop landraces on-farm to decision-making and policy

Attaining this objective seemed more difficult than the first one. There had been no previous work or initiatives linking best practices on landrace manipulation on-farm to policy making processes. This was primarily due to inadequate understanding within the biodiversity community on how to promote mainstreaming of on-farm conservation of agricultural biodiversity into policy and practice for economic development and poverty reduction. This probably explained why other objectives were targeted before engaging in this one.

As planned in the project document, a consultant was recruited to assist with the development of a methodology/a framework that links best practices for conservation of crop landraces on-

farm to decision-making and policy. Through lessons learnt from several other projects around the world, such as the IPGRI global on-farm project, and the DfID/Darwin Initiative project on “*Options for Supporting On-farm Conservation of Agricultural Biodiversity in Eastern and Southern Africa*”, a draft framework was developed and tested by most of the implementing countries during policy-makers’ workshops as per the original project plan. Benin and Ghana developed earlier their own methodology, based on their own experiences, to establish successfully the links between best practices and policy-making.

Thus a framework that links best practices for conservation of crop landraces on-farm, to decision-making and policy has been developed and needs to be fully used. Most importantly, the process for integrating traditional knowledge on landraces into national policies has been initiated in all of the implementing countries.

Benin, Ghana, Kenya, Malawi, Mali and Zimbabwe have also begun the process of integrating traditional knowledge on landraces in national policy initiatives. As was expected, public awareness events on indigenous knowledge along with some publications and information products were made available to concerned parties.

Build capacity in the application of both frameworks in influencing policies that influence on-farm conservation of landraces

There was no capacity to influence policies that impact on on-farm conservation of landraces. Capacity development has been carried out throughout project implementation as stipulated in the project document and was targeted at researchers, extension staff, farmers and policy makers.

Framework development and use.

Initial training exposure was provided to researchers during the development of the framework for evaluating best practices: consultations in Benin (22 people), Burkina Faso (28), Ghana (21), Kenya (34), Mali (26) and Uganda (18); regional workshop on the methodology in Nairobi (16 people-subset of above); methodology field workshop in Ghana (12 people from Ghana, 2 from Benin and 2 from Mali).

Later training within the project has focused particularly on the application/use of the methodology and was targeted at the individuals who carried out the surveys. Thus two teams comprising 4-6 people have been trained in each country (Benin, Burkina Faso, Ghana, Kenya, Mali, Malawi, Uganda, and Zimbabwe, a total of 16 teams) through specific training workshops and field visits. Five separate training sessions have been held in Ghana (December 2000), Uganda (April 2003), Kenya (April 2003), Mali (May 2003) and Malawi (August 2003).

These teams have all implemented the work and all implementing countries have demonstrated, through case study reports, that they have the capacity to implement the framework.

During the project implementation period, approximately two to three thousand farmers and 150-200 extension workers participated in the use of the methodology. Thirty policy-makers in Benin, 24 in Ghana and 15 in Kenya have been exposed to the methodology, strengthening support for the framework.

The project stimulated the participation of stakeholders and beneficiaries in the development of the methodological frameworks. Through training, knowledge was imparted for the use and application of these methodologies to determine best practices and to see how best policy agendas can be influenced. The results of this “learning by doing” process are indicators of capacity built in the different countries

Institutional development

The University of Ghana (Legon), the University of Development Studies (Tamale, Ghana), University of Mali and the University of Abomey-Calavi (Benin) have incorporated the framework and some outcomes of the project in their teaching curricula. A student has obtained a DEA in agriculture using the methodology and the project concept in his studies at the University of Abomey-Calavi in Benin.

Students at the Centre for Agro-Pastoral Training in Gao, and some primary schools, also in Mali, were trained in the use of the framework to assess best practices.

For policy change

Further training activities were undertaken after the development of the framework to link best practices to policy. These various policy level meetings, held to discuss policy options, have done much to create awareness among policy-makers and have generated high interest at all levels of policy-making from local to national authorities, as well as heads of institutions involved in the project. This was also due to the powerful message sent by the survey, through the use of the methodological framework.

Farmer communities have gained increased capacity to use available agricultural diversity as part of local and national development strategies. Participation of farmers in the development of the methodology, the knowledge gained through training on use of the framework, and in application of the methodology to determine best practices and how best to influence policy agendas, contributed to the development of capacity.

The analytical capacity of decision-makers has been strengthened in the application of both frameworks in influencing policies that positively impact on on-farm conservation of landraces. Thirty (30) policy-makers in Benin and 24 in Ghana have been exposed to the methodology, strengthening support for the framework. In Benin, Ghana and Mali, researchers have shown an increased capacity to influence policy-makers. Policy in these countries has become notably more sensitive to the issues related to landraces during the project period.

Capacity was developed and has increased greatly in Benin, Ghana and Mali, while it has increased significantly in Kenya, Malawi, Uganda and Zimbabwe. The capacity of some of the national plant genetic resources programmes to enhance their support for on-farm conservation was further strengthened during the project implementation.

Determine/establish/ catalogue best practices

Compendiums of best practices on on-farm conservation of landraces had not previously existed. Through field surveys, analysis and further verification, the participating countries implemented sixteen case studies and analysed the decision-making environment and best practices. This resulted in various publications as per the project’s requirements.

Two case studies were identified and implemented in each country. Ghana looked at yam cultivation systems and domestication, and African rice (*Oryza glaberrima*). Benin worked on yam cultivation and domestication, and cowpea cultivation systems, while Burkina Faso targeted the African rice and Bioversity International's global on-farm project.

The Kenya country component worked in Tharaka and Suba districts on sorghum and pearl millet. Uganda had a banana case study site in Mbirizi, Masaka District and on land use/sorghum in Mwizi, Mbarara District. Malawi studied sorghum on-farm conservation and participatory breeding in cowpea. Zimbabwe identified and worked on case studies of sorghum landrace conservation in Tsholotsho and Murehwa districts.

These case studies led to the completion/establishment of catalogues of best practices confirming that communities, through traditional farming systems, conserve landraces on-farm thus providing analysis of effectiveness of community-based practices with global applicability that address the conservation of agro biodiversity on-farm. The project evaluated between 20-25 traditional community-based plant genetic resources management practices in farmer evaluations in each of the sixteen case studies.

These practices were ranked and scored and over half have been found to make important contributions to landrace conservation. Exact numbers depend on how practices are classified, e.g. without brewing, a number of specific varieties of sorghum, millet and banana would disappear, but brewing is practiced differently in different crops, so should it be treated as one or three practices?

The catalogue elaborated will provide detailed descriptions of these different levels (at least 20 practices). An equal number (10-15 in each country) of quite distinct practices emerged from the policy level work carried out in all countries. Thirteen on-farm practices were published in Bioversity International's newsletter for sub-Saharan Africa, while 6 were published in Geneflow 2004 magazine.

Cross-country analysis of good and best practices for conservation and use of farmers' varieties in agricultural production systems was conducted and will result in a book synthesizing best practices for "Landrace conservation in Africa" which will soon be published thus crystallizing best practices identified and lessons learnt, with a view to promoting their uptake into national strategies, plans and policies in the participating countries and throughout the world.

Replicate 'best practices' where possible

Best practices were identified, tested and catalogued in the participating countries. This was communicated to a wide audience as part of the project strategy to up-scale best practices and there was good evidence from the project in Benin that policy makers were particularly keen to hear the stories and were able and willing to create the policy environment that will enable replication.

Public awareness activities were essential for this and were seen as a means to help scale up interventions. In addition to the seed fairs, various publications were produced from the project results by each of the implementing countries as well as a video production on the

case study on Banana in Uganda. A special issue of the IPGRI SSA newsletter focusing on issues of landrace conservation in Africa was published in 2005 towards furthering this objective. Earlier, the 2004 issue of Geneflow magazine contained six articles prepared from the work of the project.

As a result, programmes are being developed in all eight countries for replicating the best practices identified by the project, by expanding to new areas, impacting on policy and disseminating experiences and eventually leading to viable management strategies for the on-farm conservation of farmers' varieties. Already in Benin, the national research institute, INRAB, has extended the surveys considerably beyond the project sites using the same methodology which is also being used by Benin students in other parts of the Northern region on other species and in other communities.

Experiences from the project in Mali are already being used in other projects such as the "Système project of Rural Production (SPR) 33" funded by SYNGENTA which relied heavily on the methodology developed. In addition, support actions by communities and farmers to enhance performance of local cultivars for improved livelihood of farmers through the use of local crop cultivars have started, particularly in Mali where 20 fora for interaction among farmers, development workers and researchers on plant genetic resources were initiated.

Mali, Burkina Faso and Niger have obtained US\$1,300,000 in funding to expand the on-farm work. Uganda has developed a programme on pests and diseases as part of a global project and activities on neglected and underutilized species. Kenya is developing a proposal to study traditional seed systems. Malawi and Zimbabwe are developing a proposal on on-farm conservation in collaboration with Zambia and South Africa.

However all practices may not be widely replicable because they are very specific to certain crops and/or certain communities as was found in Uganda. Thus, few traditional community-based plant genetic resources management practices will have global applicability and that an important global lesson is the local specificity and diversity of practices that must be taken into account for effective conservation. Global best practices are emerging from the work on policy and project interventions.

Best practices will be extended and implemented at the local level. These may include organization of community genebanks and seed fairs, improved national genebank/farmer interaction, farmer-led domestication of wild plants and participatory plant breeding, etc.

Development objective

The overall development objective identified for the project is the improvement of the effectiveness of traditional farming systems for conservation of crop landraces of local and global importance.

The project generated much attention/interest in their farming practices, due in part to the highly participatory nature of the field activities of the project, has boosted the confidence of the farmers in the participating communities and resulted in them expressing increased willingness/interest in matters concerning the improvement of their farming systems such as improvement of soil fertility, improved resistance to pest and diseases, availability of rare/disappearing/extinct landraces, new farming technologies/implements, better access to markets and even improved storage facilities.

Taking the above into consideration and the progress made in assisting the farmers in resolving most of these concerns/issues that are now emerging as major results/outcomes of the project, one could say that the development objective will be realized gradually. This is in order, considering that often, development objectives are projected in a longer term and assessed along specific projects as well as some other more generic indicators.

2) Achievement of outputs and activities

The project undertook and achieved all the major activities planned and implemented in the partner countries as shown in table 1.

Table 1 Project activities

<u>ACTIVITIES</u>	<u>STATUS</u>
1. Create project management framework in partner countries, with links and interfaces to relevant projects, formal and informal institutions and farmers, through consultations, meetings and establishment of required partnerships and memoranda of understanding. As part of this process a stakeholder analysis and public involvement plan will be refined as a first step to ensure a bottom-up participatory process.	<u>Done</u>
2. Hold a series of in-country public awareness meetings	<u>Done in all the countries</u>
3. Recruit consultants to develop and draft initial proposed methodology and framework for conducting case studies through wide consultation with partners. (Project development)	<u>Done</u> A Framework for the analysis of best practices has been developed, tested and applied in all eight project countries. The framework has been widely adopted by several training and research institutions
4. Organise national consultations in case study countries to discuss, draft and further develop methodologies, descriptors and indicators for conducting case studies	<u>Done in all the implementing countries</u>
5. Organise a regional workshop for all participating project countries to harmonise methodologies for conducting case studies.	<u>A regional workshop was organized in Nairobi to harmonize methodology and a regional one for training and testing was conducted in Tamale</u>
6. Conduct surveys to determine the status of on-farm conservation, the players involved, and interventions proposed, but focusing primarily on identifying best practices for on-farm conservation of traditional varieties and the policies that impact on <i>in situ</i> conservation on-farm.	<u>Done in all the implementing countries</u>
7. Initiate and/or support actions by communities and farmers to enhance	<u>Initiated in all implementing countries</u>

performance of local cultivars for improved livelihood of farmers through use of local crop cultivars.	
8. Hold wide consultations with policymakers and stakeholders, particularly the farming communities, to evaluate the current situation regarding policy related to traditional knowledge and systems and their impact on landraces and agro biodiversity.	<u>Done in all the implementing countries</u> <u>For example one such consultation was held in Parakou in Benin and brought together local authorities policy makers parliamentarians, farmers and several other stakeholders.</u>
9. Analyse country situations and results of pilot activities to identify best practices for conservation and use of farmers' varieties in agricultural production systems.	<u>Done:</u> Every participating country has produced compendium of the best practices in some form. A catalogue of good and/or best practices in the form of a book on "Landrace Conservation in Africa" is in preparation.
10. Convene international meeting to present and debate best practices (to be held in conjunction with IPGRI's global project on <i>in situ</i> conservation)	<u>An International workshop was held in Nairobi and brought together the implementing countries as well as some of the <i>in-situ</i> conservation global project partners</u>
11. Hold policy level meetings to sensitise policy makers and to identify and detail approaches to supporting the integration of traditional knowledge into national policies and plans	<u>Held in each implementing country</u>
12. Recruit consultants to develop and test framework that links best practices for conservation of crop landraces on-farm to decision-making and policy	<u>Done.</u> A conceptual framework that links best practices for conservation of crop landraces on-farm to decision-making and policy was developed and tested
13. Develop national capacity through training in use of frameworks, and strengthen appropriate institutional arrangements to ensure sustainability of these systems	Capacity of stakeholders (farmers, research and extension staff, students and policy makers) has significantly increased as a result of the project in the eight participating countries.

It is a credit to the project management and national implementing teams that the project was able to achieve as much as it did despite some financial constraints and other logistic difficulties such as late processing of MoUs in some countries, slow identification of case study sites in others and the whole issue of managing eight collaborating countries stretching from Mali in West to Zimbabwe in Southern Africa. The main outputs of the project can be summarized as follows (Some have been detailed in the previous section):

a). A conceptual framework for analysis of best practices for conservation of crop landraces on-farm. There was no tool for analysis of best practices for the conservation of landraces in traditional farming systems. A Framework for the analysis of best practices has been developed, tested and applied in all eight project countries. The framework has been widely adopted by several training and research institutions and has been found to be scientifically sound (early use/experiences from lecturers and students involved in the project at the University of Tamale and University of Abomey-Calavi). The peer reviewed manuscript

organized by Bioversity International is ready for publication. The framework allows translating the empirical language of traditional knowledge of the farmers into a more scientific language that facilitated analysis of the traditional systems which in turn has been beneficial to the farmers.

b). A catalogue of good and/or best practices in the form of a book on “Landrace Conservation in Africa”. In the past there was no compendium of best practices. Each section of the book is written by a different set of authors and concentrates on different aspects of the project. IPGRI staff and partners continued to work together to write and review it to ensure a product that is accurate and consistent in voice and style, and the chapters are brought together into a coherent whole. Every participating country, however, has produced compendium of the best practices in some form.

c). A conceptual framework that links best practices for conservation of crop landraces on-farm to decision-making and policy was developed. There were no links between best practices and policy options in the past. This has been developed tested and applied in most of the implementing countries. It benefited from the experience of projects such as the global “in-situ project”. The manuscript is also ready for publication.

d). Adequate capacity built in influencing policies that impact on on-farm conservation of landraces. Capacity of stakeholders has significantly increased as a result of the project in the eight participating countries. Capacity was built among farmers, research and extension staff, students, even among policy-makers and this has begun to influence policy dispositions in some of the countries. For example, as a result of the implementation of this project, some decisions were made by some of the implementing countries such as Benin to set up a committee in Parliament on natural resources which was trained in readiness for influencing national policy development for conservation, including landraces conservation. Generally in Benin Ghana and Mali researchers have shown an increased capacity to influence policy-makers. Policy in these countries has become more sensitive to the issues related to landraces during the project period. For example it has been easy for the University of Benin in collaboration with the national agricultural research Institute to expand the research on landraces to most of the Northern provinces and for Plant Genetic Resources Research Centre in Bunso, Ghana to plan the same activities on Landraces in the southern regions of the county

e). Application of “good” or “best” practices replicated/extended in the participating countries.

All the participating countries have developed new activities that incorporate best practices for landrace conservation and have implemented these beyond the areas covered by this project. Kenya, Uganda and Malawi have developed new activities to promote marketing of neglected and under-utilized crops and varieties. Kenya is developing a proposal to study traditional seed systems. Uganda has developed a programme on pests and diseases as part of a global project and activities on neglected and underutilized species. Malawi and Zimbabwe are developing a proposal on on-farm conservation in collaboration with Zambia and South Africa. Zimbabwe has conducted a major drive on Seed Diversity Fairs.

f). Enhanced communication channels between projects, farmers, decision-makers, formal and informal institutions with regular updates and exchange of information.

During project implementation, communication channels were enhanced in a number of ways. Projects developed systematic dialogue on landrace conservation including surveys and feedback sessions in all eight countries. This information was further conveyed to decision-makers through reports, meetings and public awareness activities involving interaction among farmers, project staff and decision-makers in all countries.

These events have contributed to the development of other platforms such as Diversity Field Fora in Mali and Burkina Faso, parliamentary committee meetings on agriculture in Benin, and Innovation Platforms in Malawi. The methodologies for interacting with farmers have also been adopted directly for other projects in at least Mali, Benin, and Ghana.

Other outputs, as per the indicators in the project document and log frame include:

g). Status reports on genetic erosion of local crop cultivars in selected areas in partner countries.

The situation of genetic erosion in landraces was largely unknown. Following the use of the four-square methodology and analysis of the best practices, all eight countries were able to assess the scale and extent of genetic erosion of local crop cultivars in the project sites. This led to the elaboration of limited distribution maps for local cultivars in Ghana. The situation of some neglected crops has also been well established. Some countries have embarked on the collection of genetic material which was being seriously eroded for ex situ conservation in genebanks.

h). Present state of knowledge of on-farm conservation in partner countries synthesized and best practices analysed and made accessible to all stakeholders.

Each country has synthesized the state of knowledge of on-farm conservation. Presentation of the results to stakeholders has taken a number of forms: feedback sessions to farmers, peer reviewed scientific papers, and presentations at meetings, workshops with policy-makers, public awareness events, newsletter articles etc.

i). Best approaches/models for integration of traditional knowledge into national agricultural policies/plans/strategies made available.

The project developed a document detailing an approach to engage policy-makers in landrace conservation issues. The approach was employed in the project countries to develop specific action plans for integrating traditional knowledge and landrace conservation into national policy instruments.

j). National management frameworks for the implementation of on-farm conservation strategies strengthened.

Since national management frameworks for the implementation of on-farm conservation are influenced by many considerations, it is difficult to judge the precise influence of the project on these activities. The National Genebank of Kenya specifically began on-farm conservation work under this project and has continued to implement on-farm activities.

FAO and IPGRI supported the implementation of a framework to monitor the implementation of national conservation activities in Ghana, Kenya and Mali. Although this took place under

another project, the capacity of key stakeholders to implement this had been significantly strengthened through this project.

k). Process for placing national policies on integrating traditional knowledge on landraces initiated.

All eight countries have initiated the process of integrating traditional knowledge on landraces into national policies by holding national workshops with policy-makers, farmers and project staff that produced action plans for integrating relevant considerations in national policy. Adoption of new policies is very dependent on ‘windows of opportunity’ and alignment of multiple factors.

The project was being implemented when some of the countries were involved in the discussions for the formulation or review of national biodiversity or environmental policies. Progress is clearly being made in most of the eight countries in terms of influencing the formulation of landrace conservation-friendly policies through the inputs provided from the project to these policy processes. However, it remains difficult to gauge to what extent the project is responsible for influencing such processes. For example, Kenya has for the first time developed a joint food and nutrition security strategy during the project implementation period and this was one of the policies that the project meeting chose to target, so it contributed greatly, but other projects and programmes in Kenya have also contributed to this development.

3. Cost effectiveness

The activities planned and assigned to each national team were completed and, with the exception of Burkina Faso, these were realised on time and within the allocated budget. As mentioned earlier, due to the commitment and dedication of the national project teams but also because of the additional contribution of the national institutions and several other contributors to the programme (such as IFAD, the SDC, and Netherlands) the project activities were completed. Indeed, the allocated budget alone would not have enabled the countries to accomplish all the tasks envisaged: public awareness, framework adaptation, surveys, training, analysis, feedback, collecting reports and some publications.

According to the signed MoU, most implementing countries received directly from the project coordination an average of US \$ 35,000) with the exception of Zimbabwe which received US \$ 15,400 and Malawi US \$ 29,070. The allocations for field activities were regarded as too low by many of the countries such as Benin, Ghana and Mali. It is to be noted that specific funds were allocated for the recruitment of the two main consultants to the project. The project budget allocated by the donors was exhausted (see annex 3 of the report). While making judicious use of the funds received, all the countries in addition, contributed the time of many scientists over the three years of the project. This was estimated to be often as much as three scientists with over 30% of their time per year. In addition, farmers, extension workers and many other university and agricultural research institutions staff members contributed their time and skills. All the countries provided vehicles for the work, only charging fuel costs to the project.

There was overall good value for money. The no cost extension at the end was mostly for finalising the information products generated by the project: to put them in the proper formats and distribute them to the various audiences at national and international levels. It was also to allow Burkina Faso (BF) which experienced some project management problems leading to a change of national project focal point, to catch up. The delays in BF were due to some internal institutional and leadership conflicts which hindered progress. The team in charge was unable to develop the project activities required. This finally ended with a late change of national coordinator and lead institution.

Several technical presentations and scientific papers, of high standard, deriving from the findings of the project were prepared and submitted for publication during the course of the project. Some of these publications are still pending.

Although provision was not made to provide enough money to set up and operate a monitoring system according to recent GEF standard, through national contributions various project committees were set up and were functional to oversee and coordinate the implementation of the activities in all the countries.

4. Financial planning

The financial standards and procedures applied in the course of the implementation of the project were quite high as demonstrated by the regularity and timeliness of the financial reports and audits and also in the way the Zimbabwean situation was handled. Indeed there was a delay in allowing Zimbabwe to initiate the implementation of the project because of the high cost due to the exchange rate applied at the time. But this was resolved after some official negotiations and a favourable rate was agreed upon for the dollar. So the national team at the Department of Research and Specialist Services was able to successfully implement the project activities in an otherwise difficult monetary context.

A number of countries experienced some delays in the receipt of funds resulting in some delays in project implementation, especially at the early stage of the project. Indeed, during the first quarter of 2003 signing of LoAs and subsequent transfer of funds was reported as being a slow process, especially for the Francophone countries. For example Burkina Faso reported during 2003 late receipt of funds which had delayed their field operations. However, in several cases, the collaborating institutions had initiated activities ahead of the availability of the finance, thus ensuring minimum disruption of the pace of the project.

Delays were also due to the level of preparedness/readiness in some countries, compounded in some cases, by inappropriate internal arrangements in their banking transactions. For example, in Benin when the funds were received the project coordinator had to travel for more than five hundred kilometres before gaining access to the funds because the project base was located far from the exchange/banking centre, resulting in further delays in accessing the project funds. Delays could have also been a result of new national policies for handling donor funds.

5. Impact

Most of the impacts of the project are expected in the future and are to be measured in the long term. They will derive from policies that will be enacted as the result of project activities influencing national legislations. The project time is too short for most impacts to be measured immediately especially those contributing in influencing or changing the policy context.

As stated earlier, the major and long term impact of this project will be the fulfilment of its development objective which will be fully achieved through the satisfaction of most of the needs/requirements of the communities deriving from or as a result of the implementation of the components of the project. A long term impact on diversity conservation issues is expected. Some of the implementing countries such as Zimbabwe expect that one of the long-term impacts will lead to the enactment of legislation that will protect the gains of traditional knowledge and the conservation of the local biodiversity against Genetically Modified Organisms (GMOs).

6. Sustainability

The project has undoubtedly raised great awareness among the farmers' communities, the scientific communities and the policy-makers in the implementing countries. It has also generated considerable scientific and technical capacity.

Farmers are becoming more conscious of the gains in terms of increased livelihood and are ready to continue to improve their farming systems and their conservation practices.

Institutional

It is expected that support for government institutions involved in on-farm conservation research/practice will crystallize, by making it a part of their core activities. This is being attempted in some of the countries. Currently most of those institutions are involved in the project and have significantly boosted their capacity. That alone is an appropriate condition for additional support from the state. For example, the University of Ghana (Legon), University of Mali and the University of Abomey-Calavi (Benin) have incorporated the methodological framework as well as certain outcomes of the project into their curriculum. This will enable them to receive additional funding/budget for training more students in the coming years in the appropriate departments.

Regular organization of agricultural seed fairs is already adopted by some countries as a way to monitor the status of landraces.

In Benin, a permanent parliamentarian's forum involved in landraces conservation issues will be established as part of the section on natural resources. In addition, the project has already expanded to other parts of the country and on other species in a bid to replicate the scientific gains and approaches. The project has shown the farmers the potential of some of the resources in term of commercialisation and gains. Access to more land and other farming inputs in order to boost the production are issues they want authorities to address.

Financial

In addition to funds being allocated to universities to strengthen their teaching capacity and influence the policy environment, funds have been allocated to national conservation institutions such as the National Plant Genetic Resource Research Centre (NPGRRC) in Ghana. Indeed a visit at the Centre in Bunso revealed that the centre will be implementing a similar project in the arid areas in the southern part of the country as well as in the forest zones using the same methodological framework developed and making use of the lessons learned and the experiences of the national scientists involved.

In Benin, additional funds are being used for expansion of the project in other areas in the northern region. Also, crop conservation and research institutions in the implementing countries are planning to organize and host seed fairs more frequently.

Environmental

Creating an environment that is conducive for the perpetuation of optimum cultivation and conservation of landraces on-farm, will also ensure the maintenance of a diversity that has contributed to the ecological stability of the traditional farming environment. There is an ecological disbenefit to consider if that traditional farming environment was to be replaced with the high yielding but high input (fertilizers) modern crop genetic resources.

7. Stakeholder participation / Public Awareness.

The main stakeholders in this project are the farmers and farmer-based organizations, custodians of the resources, who derive their livelihood from the manipulation of landraces. The implementing institutions had to engage them fully in order to understand properly how their traditional farming systems work and together with them look for ways to improve these systems.

A fully participatory approach was then needed. The methodological framework designed and used for most of the activities of the project (consultations, surveys, analysis and verifications) was fully participatory and was easily appropriated by the farmer communities.

For the methodology to be effective and well used in the shortest time possible, it was decided that the executing institutions will preferably engage the communities they knew already, that were involved in the PLEC project or were involved in a similar on-farm/ *in-situ* project. Indeed, this made the interactions much easier and quicker.

The search for the appropriate case study brought some delays in the initiation of the project in some of the countries (Malawi, Kenya, Mali, Zimbabwe), but was very beneficial at a later stage. Farmers, staff of research and training institutions and all other stakeholders were fully engaged in the project. But it was observed that the involvement of the policy makers varied from institution to institution and from country to country.

It is worth noting the active participation/involvement of the national crop genetic resources conservation centres and in a few instances their leadership role (Uganda, Benin, Malawi, and Zimbabwe), or their conspicuous absence (Ghana).

Public awareness activities were conducted throughout the implementation period with the various meetings organized at local, national and regional levels involving the many stakeholders concerned including decision and policy makers.

In addition to these meetings, there were several publications for national and international audiences, newspaper articles, scientific and technical papers, interviews, seed fairs as well as a few country to country exchanges, (Benin –Ghana) and a video production (Uganda).

All these contributed in pushing forward the project, towards achieving its objectives. It was noted that in the various countries only a few NGOs were involved in the project.

8. Country ownership / Drivenness

Generally the degree of country ownership varied from country to country. Where there have been earlier association with the communities in projects such as PLEC or Global on-farm project in countries such as Ghana and Uganda, the adoption of project activities especially during the survey period was faster and ownership of the process was deeper than where there was no previous contacts or dealings.

However, in all the implementing countries the project outcomes and results have begun to influence the actions of the farmers, in the communities associated as well as the activities and decisions of all the other stakeholders.

The reviews, discussions and analysis of the status of the diversity on the resources/the landraces being “case studied” on-farm generally determined the actions taken by the farmers such as the upgrade of their yam (barns) conservation facilities (observed in Ghana), their willingness to improve their cultural techniques, the desire to participate in expositions and/or obtain old varieties seen at seed fairs or exchange more seeds.

Similarly, teaching institutions are adapting their curriculum to train more students and teach according to new perspectives as per the outcomes of the project (University of Ghana, University of Abomey-Calavi in Benin). The research and production institutions and their personnel are also doing the same: collection by the researchers from the national genebanks of rare, endangered or disappearing landraces (genetic erosion); the assessment of the status of other genetic resources (in the same or other areas) using the methodology established, in order to take the appropriate measures for their conservation, etc.

The project national advisory committees played a key role in each of the countries in coordinating the various activities and ensuring good governance. They were also instrumental in ensuring the integration of the project in national programmes and policy. In view of the outcomes of the project components, technical working groups ensured that research objectives were properly focused.

In most implementing countries there has been an opportunity to influence the national policy environment with the incorporation of policies in favour of the conservation of landraces on-farm. For example, in Uganda the project implementation coincided with the formulation of national Plant Genetic Resources for Food and Agriculture (PGRFA) policies. The project had the opportunity to provide input considered to be directly from the farmers on issues of conservation of landraces on-farm based on the findings of the project.

In Kenya, the review of the seed act which was on-going benefited from the findings of the project with the suggestion that the conservation of the landraces be incorporated in the seed Act. It was also an opportunity to propose the review of the status of the Genebank in the research system: it should be semi-autonomous.

Following public awareness events and policy workshops, policy-makers and other authorities have shown willingness to discuss and have policies on landraces incorporated in the appropriate national policy documents. This is the case in many countries such as Ghana or Benin where appropriate committees are being established in parliament and will take up this issue.

9. Implementation Approach

The project was implemented according to the planned log frame which was revised later in December 2003. All activities have been fielded in all the countries. Although slow at the initial stage in some of the countries, things progressed at a relatively good pace especially after the establishment of the methodological framework for analysis of best practices.

The project coordination/management team at IPGRI has been in regular communication with the UNEP/GEF project Management Officer to ensure that UNEP/GEF rules/procedures and priorities incorporated at the time of the project design were respected. Modifications (retrofitting) to adjust to new/current GEF rules or project needs were quite difficult. The project was far into the implementation phase and most of the newly adopted rules by GEF could not apply.

Such a large project was designed with a weak coordination mechanism without sub-coordinators or steering committees, (neither at regional nor at national levels), making project coordination, reporting and governance the responsibility of IPGRI. There were no funds allocated to the establishment of regional steering committees and an overall steering/coordination committee as per current GEF procedures.

In addition, the only monitoring system in place at the onset of the project was the quarterly reporting by the project coordinator. Annual project implementation review (PIR) was added towards the end of the project (2003) with no funds set aside for these either. Reporting was a tedious exercise. The log frame as per the project identification and in the project document was used as a tool for the implementation as a monitoring tool to track implementation status, delivery of project outputs and achievement of project objectives.

The team at IPGRI has also been in regular contact with the national implementing agencies and the national focal persons in order to advise on the implementation of the project which had not made provision for the establishment of a steering committee. The project coordinator had to travel often to the 8 project countries.

With the exception of Ghana and Benin, interactions between countries were limited. This was mostly due to financial constraints. Regional interactions were only possible and limited during the regional workshops on the two methodological frameworks in Nairobi and the technical regional training workshop in Tamale.

In order to provide more efficient support to the West African participating countries and as an adaptive management measure, the project recruited the focal point of Mali as a sub-regional consultant. He was instrumental in resolving the internal crisis in Burkina Faso mostly due to the inability of the local project team to develop the project activities. The project coordination team at IPGRI in Nairobi could then give effective support to the East and Southern African implementing countries and handle the difficult circumstances in which the project was initiated in Zimbabwe. A financial agreement was reached and a project account was opened at an exchange rate that permitted the partner agency to deliver the activities within the budget allocated to the country.

10. Replicability

It was evident that the opportunities for replication of the findings of the project in similar socio-economic context existed. Many of the crops under consideration are indigenous or diversified in the region. Considering that the genetic variability in landraces of domesticated crops is essential material for breeding, it is of utmost importance to know the status (genetic erosion, conservation) of all resources that contribute to livelihood of the peoples of the region. The project has great potential for all the so-called neglected crops where production could be boosted after the analysis of their status is done using the established methodology.

Several similar projects are being prepared in all the implementing countries.

- In Benin, the project has extended the best practices surveys to all Northern provinces, with students researching on the status of other resources in other communities.
- Kenya has initiated the preparation of a project on traditional seed systems.
- Burkina Faso, Mali and Niger have obtained a substantial grant to expand their *in-situ* project
- In Ghana, the plant genetic resources centres are planning for a systematic on-farm conservation programme using the methodology now established by the project. This will eventually be extended to four agro-ecological zones of the country and will serve as a back up for the ex-situ conservation programme.

However certain practices may be of very local application and will not be replicable elsewhere. The policy framework that sustains these practices may be of regional or even global interest but they may not be accepted by all communities.

Benin, Ghana, Kenya, Malawi, Mali and Zimbabwe have begun the process of integrating traditional knowledge on landraces in national policy initiatives leading to national decision making strategies on PGR at policy levels in accordance with article 6b of the CBD on which the GEF is required to take action. The farmers expect that this may protect them from the invasion of GMOs

11. Monitoring and evaluation

The project was initially designed without an elaborated monitoring and evaluation (M&E) plan. With a good M&E plan the project would have been well equipped to easily track performance towards the achievement of the objectives, hence the ease in production of good

progress reports. It would have also ensured that any abnormality in project implementation was identified at the earliest stage and rectified/adjusted immediately and properly, allowing the project to follow the course planned and set.

However a number of elements such as the stringent reporting requirement (4 reports per year in addition to financial reports) imposed on all the participating teams and which was very tasking to the project management team in general, and the coordinator at IPGRI in particular, helped monitor more or less closely the development of activities in all the countries and mitigate the absence of current type of monitoring system. This also helped in the mitigation of difficult situations, which are usually inherent to this type of multi-states project.

In addition, the recruitment of the two consultants who developed the frameworks and the focal point of Mali who assisted in West Africa allowed the project management team to concentrate on other specific actions and carefully plan the trips to the implementing countries.

Some of the findings especially concerning the attainment of project objectives and achievement of outputs and activities of the performance implementation review (PIR) conducted towards the end of the project implementation and reported at the end of the project are similar to the ones in this report.

(C) CONCLUSIONS

Considering the major requirements of the terms of reference of this evaluation, some of the immediate impacts of this project on the traditional farming systems are i) the new perspective under which they are now being viewed by everyone: the farmers and their communities as well as the other stakeholders; ii) the unveiling of their importance for the survival of the landraces and iii) the readiness of the farmers to maintain best practices or even adopt/adapt new ones and improve the traditional farming systems.

Farmers in various communities in arid and semi-arid areas of Sub-Saharan Africa conserve on-farm, landraces of local and global importance, through an array of practices under traditional farming systems. This has been confirmed through participatory surveys, discussions/exchanges/analysis and seed fairs. This is a good recognition that farmer's knowledge (indigenous knowledge), is disappearing fast.

The maintenance of a diversity of landraces is the result of a diversity of community-based plant genetic resources management practices, each of which often contributes to the conservation of only one or two landraces. Indeed it is this diversity of practices by communities across Africa, often strongly rooted in tradition, which drives landrace conservation and which must be maintained to ensure on-farm conservation of these landraces which in many ways ensure the maintenance of ecological integrity.

Although the project quantified and ranked practices in each case-study and some clearly had more impact than others, any attempt to promote individual traditional community-based practices as being 'best' is likely to lead to an overall erosion of landraces.

Best practices are likely to be applicable at the policy and project implementation level, where the most important practice may be creating an environment that is appreciative and supportive of the diversity of practices existing on-farm in relation to conservation of landraces

This project has been an eye-opener to the policy-makers on the role of the traditional farming systems in the conservation of valuable crop landraces and also showed the willingness of lawmakers to pursue policy reforms that could create the enabling environments for the conservation of biodiversity of global importance.

Most of the project objectives and outcomes were attained through the completion of the planned activities and outputs in all the 8 participating countries, sometimes in very difficult implementing contexts (political, social and limited financial).

The participating countries contributed in the development of a methodological framework for the analysis of best practices for on-farm conservation of landraces by the farming communities. This facilitated and clarified the understanding of the role of farmers' traditional farming systems in the conservation of landraces.

For the most part, “use” determined “best practices” that led to the conservation of the traditional crop varieties. The main reasons why farmers conserve landraces include; food, taste, use for feed, building material, beverages, markets (income), and their cultural and health (nutrition and medicinal) values.

The project helped assess the degree of genetic erosion in the crop species used in the case studies and led to swift actions by i) the conservation centres, in term of collection and documentation and ii) by the policy-makers in terms of initiating conditions for enabling policy environments to arrest the trend and in view of the promotion of conservation.

The project activities enabled the implementing countries to develop the critical capacity needed to assess and conduct on-farm conservation of landraces; to assess and evaluate risks of genetic erosion in landraces of local and global interest and review ways or/and take action to mitigate it.

At the initial stage of the project difficulties in getting documents in French slowed down the establishment of some initial activities in the Francophone implementing countries, resulting in frustration.

Major public awareness products such as the joint publication on “West African Yam resources” by Benin and Ghana and the major publication on Conservation of land races are yet to be completed.

The project fell short in making provision for a proper monitoring and evaluation system in its early design, which could among other things: i) have helped ease the tracking of project progress and performance; ii) genuinely reduced the financial pressure and make provision for annual and mid term reviews and also facilitated an end of project wrap-up meeting to take stock of achievements and clarify the way forward. It could have benefited more if it was possible to adapt all the new GEF rules (operationally and financially)

Indeed, the project has raised high expectations in the traditional farming communities. Its expected long term impacts will also depend on what follow up is given to it by the various implementing countries.

TABLE 2 Overall ratings table

Criterion	Evaluator's Project Rating	EOU Rating	Evaluators Comment
Attainment of objectives and planned results.	Satisfactory (5)	Satisfactory	A framework for analysis of best practices for conservation of crop land developed as part of the project. Through lessons learnt from several world, a draft framework was developed and tested/ by most of the in policy-makers' workshops. Capacity development has been carried out implementation and was targeted at researchers, extension staff, farmers. Ghana, Kenya, Malawi, Mali and Zimbabwe have begun the process of knowledge on landraces in national policy initiatives leading to national strategies on PGR at policy levels in accordance with article 6b of the required to take action. While policy-makers have been engaged the the policy initiatives in these countries cannot be ascertained from the Although mechanisms to achieve it are in place it will take a longer time environment.
Achievement of outputs and activities	Satisfactory (5)	Satisfactory	The outputs planned were accomplished and activities appear to have expected. There was discussion of the quality of outputs and its usefulness researchers. There also seems to be some evidence of its influence on ascertained as attributable solely to the project.
Cost-effectiveness	Moderately Satisfactory (4)	Moderately Satisfactory	The project has achieved a lot. The average of \$35,000 provided to each country could not have been enough to carry out all the activities. With the funds received, the countries in addition, contributed the time of a with over 30% of their time per year, in addition to farmers, extension institutions' staff time and skills. Countries provided vehicles for the contributions, various project committees were setup and were functioning activities. There was overall value for money.
Impact	Moderately Unsatisfactory (3)	Moderately unsatisfactory	Appreciation of the importance of traditional system for landrace conservation status of genetic erosion and state of neglected crops. Project to generate
Sustainability (sub-criteria)¹	Moderately Satisfactory (4)	Moderately Satisfactory	The project has raised awareness among the farmers' communities, the the policy makers, in the implementing countries. It has also generated technical capacity. Regular organization of agricultural seed fairs is a countries as a way to monitor the status of landraces. However, institutional conservation and research is only expected to crystallize.
Financial	MS		Funds have been allocated to National Conservation Institutions such to embark on conservation of landraces in the southern part of Ghana
Socio Political	MS		In Benin, a permanent parliamentarian's forum involved in landraces considered for establishment.
Institutional framework and governance	MS		Institutional support for on-farm conservation and research is only expected Government to provide additional funding to teaching institutions to documentation of institutional support having materialized.
Ecological	MS		Awareness for the creation of an environment that is conducive for the cultivation and conservation of landraces on-farm will ensure the maintenance contributed to ecological stability as opposed to the replacement by high input resources.
Stakeholders Participation	Satisfactory (5)	Satisfactory	Farmers, staff of research and training institutions and all other Stake in the project. But it was observed that the involvement of the policy institution to institution and from country to country.
Country ownership	Satisfactory (5)	Satisfactory	Adoption of the project activities was very strong in most of the countries already expanded programme activities beyond pilot test sites. The project committees played a key role in each of the countries in coordinating

¹ Rating scale for sustainability sub-criteria; Highly Likely = 6, Likely = 5, Moderately Likely = 4, Moderately Unlikely = 3, Unlikely = 2, Highly Unlikely = 1, and not applicable = 0

Criterion	Evaluator's Project Rating	EOU Rating	Evaluators Comment
			ensuring good governance. They were also instrumental as well as po integration of the project in national programmes and policy. Funds v of activities in other parts of some of the countries.
Implementation approach	Moderately Unsatisfactory (3)	Moderately Unsatisfactory	The project was designed with a weak coordination mechanism witho committee, neither at regional nor at national levels, making project o governance the responsibility of IPGRI, the executing agency. Thereo disbursement of funds and as a result, delays in project implementation stage of the project. The project log frame was used as a tool for pro regional coordinator was recruited to assist in West Africa.
Financial planning	Moderately satisfactory (4)	Moderately satisfactory	There were problems with financial disbursement resulting from lack internal financial arrangements and banking systems in some countri problems in countries like Zimbabwe where the exchange rate was hi project development. In Benin project base was more than 500Kms f receiving project funds resulting in delays in accessing the funds.
Replicability	Moderately satisfactory (4)	Moderately Satisfactory	The potential for replication of this project seems to be very good. S project proposals have been developed but the actual replication that be limited to Benin. It is not clear whether the Grants obtained for the Bukina Faso and Niger can be attributed to this project or to the in-si
Monitoring and Evaluation	Unsatisfactory (2)	Moderately unsatisfactory	There absence of the existence of a coherent M&E systems at the ons in adaptive management. The report notes regular progress reporting evaluator indicates lack of easy tracking of performance towards acco and identification of bottleneck. <i>EOUcomments:the rating was how thought was a rather convoluted argument. While M&E was not ade design the evaluation notes a stringent reporting requirement (4 repor financial reports) imposed on all the participating teams and which w management team in general, and the coordinator at IPGRI in particu less closely the development of activities in all the countries and miti type of monitoring system. This also helped in the mitigation of diffi usually inherent to this type of multi-states project. That argument sh the lack of adequate elaboration of an M&E system at the design stat</i>
Effective M&E system in place (Indicators, baselines, etc.)	Unsatisfactory (2)		It is not clear from the report that the project logframe was used as a implementation and how this was adapted during project implementa reports were received with regularity but with difficulty because of a mechanism and this constrained oversight and monitoring.
Information used for adaptive management	Unsatisfactory (2)		There was no little discussion of adaptive management-oblique refero reporting with difficulty and issues associated with financial disburse countries.
Overall Project Rating	M Satisfactory	Moderately Satisfactory	

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2,

Highly Unsatisfactory = 1, and unable to assess = 0.

(D) LESSONS LEARNED

The following are some of the lessons learned by the project team during the implementation of this project.

1. Projects gained tremendously with an elaborated Monitoring and Evaluation plan agreed upon during project design and identification phase. So, M & E plans should be accorded higher priority at both strategic and operational levels. Reporting alone could be tedious and tasking although vital for informing on the project performance while mitigating the deficiency of the project design.
2. A “project development” stage would allow for thorough preparation for the full project implementation phase especially when the project identified. is large. That would also help in checking the project design, and reducing the risk of implementation delays and the need for extension at the end of the implementation period. Also during that phase communication and reporting protocols and commitments are defined and agreed upon; realistic resource planning, budgeting and project accountability are determined. This project, because of its size would have benefited tremendously from a passage through such a stage which would have insured that all products developed are finalized. Could be restated as a lesson??
Currently a finding
3. There are obvious advantages in maintaining continuous links with known communities and build upon the working relationship that had been previously developed in other projects. The project searched for appropriate case study sites in a very strategic and practical manner. Priority was accorded to sites where the communities had previously hosted similar projects which were finishing or were still on-going. Cases studies developed in ‘PLEC communities’ wherever possible led to rapid appropriation of the ‘4-square methodologies’ (that illustrates the status of the landraces on farm) by the communities, a better understanding, thus had a faster project implementation pace and a better ownership.
4. Avoiding the promotion of any single farmers’ practice as being the “best” is a sound principle to apply for the conservation of on-farm genetic diversity. Although the project quantified and ranked practices in each case study, and some clearly had more impact than others, any attempt to promote individual traditional community-based practices as being ‘best’ is likely to lead to an overall erosion of landraces. Some of these practices are amenable to adaptation and commercialization in ways that fit well with modern society and can contribute to improving livelihoods by, for example, improving nutrition or enabling survival in exceptional and difficult circumstances. Others are less amenable to acceptance in modern societies, such as landraces that are believed to keep away evil spirits, or sustained by other traditional beliefs that may conflict with modern trends. Indeed creating an environment that recognizes, appreciates, respects and learns to build on the positive aspects of landraces and all the practices that lead to their conservation is probably the overarching best practice that can be achieved though policy adaptation.
5. Research that is intended to benefit farmers and other consumers must put emphasis on farmers’ and consumers’ needs and preferences and must begin with understanding the real situation on the ground. The project methodological framework offers a more focused way of getting baseline information/data on what makes farmers to want to continue keeping certain varieties. Its could allow breeders of new varieties and those carrying out seed distribution

projects to understand farmers and society's needs and preferences before embarking on "un-focused" breeding work or wholesale seed distribution.

6. The benefits in terms of 'ownership' of new ideas and initiatives from early involvement of policy makers, private sector and NGOs are immediate and great. In this way these stakeholders will also gain the same understanding and experience as the scientists and the farmers. As tricky or difficult as this may seem, national teams should involve/engage policy makers, NGOs and private sector (for marketing and seed services) at an early stage. Their representatives should be involved right at the onset of the project activities such as in the surveys, in capacity building exercises, in the restitutions and analysis, long before policy discussions.

7 Creating an environment that is appreciative and supportive of the diversity of practices existing on-farm in relation to conservation of landraces is key. Indeed creating an environment that recognizes, respects and learns to build on the positive aspects of landraces and all the practices that lead to their conservation is probably the overarching best practice that can be achieved through policy adaptation.

(E) RECOMMENDATIONS

The valuable lessons learned as a result of the successes and difficulties encountered during the course of the implementation of this project suggested the following recommendations:

Urgent publication of project results and findings

A number of information products have been generated by the project such as technical papers, video productions and books. They were being prepared by Bioversity International as well as the various country teams and some have already been published. Since there is an urgent need to continue feeding policy and decision makers on the outcomes of the project, it is recommended that:

1. Bioversity International (IPGRI) should ensure that all remaining documents containing results and findings be systematically finalised and published without further delays. This is the case among others of the book on "Landrace Conservation in Africa" by Bioversity International and the various partners and if funds are available the publication of the book on "Domestication of Yams of West Africa" by the joint teams of Ghana and Benin, in as much as he could be complementary to the one published by CIRAD-IPGRI on Biodiversity and Domestication of Yams in West Africa with emphasis on Preservation and other value added practices on farm.

2. Bioversity International should take the opportunity of a related regional meeting in the near future (follow up phase), to include a wrap up session on this project to properly conclude it, share experience and also take the opportunity to associate other countries.

Support for a follow up expanded programme

Traditional cultivars as we know and confirmed by the project are the sources of livelihood to millions of farmers, not only in arid or semi-arid parts of Sub-Saharan Africa but also in many

parts of the world characterized by low income and poverty. These farmers' varieties are in farming systems that are continuously under various types of pressures often resulting in their disappearance or them being under serious threat of genetic erosion and risk of extension.

They are also the same genetic resources that constitute the invaluable reservoirs for the breeding of improved varieties throughout the world. Considering the importance of the outcomes of this project, there is a need to accompany it with a follow up programme made of several projects that will expand the scope but also seek to assist the farmers in resolving most of their concerns that have emerged as a result of the project and aim at increasing the competitiveness of the landraces in order to improve their living standards.

While recognizing that a number of joint-projects are being fielded or in preparation, it is recommended that:

3. Bioversity International, in partnership with FAO and in the framework of the Global Plan of Action (GPA on food and Agriculture Genetic Resources), should assist the countries in the region approach other donors including UNEP/GEF to set up as soon as possible a follow up regional programme with related projects to be implemented in a stepwise manner to cover:

- vi)** other traditional crop varieties especially those suspected to be under threat in the same area of the present project;
- vii)** all traditional crop resources in arid and semi-arid areas in the countries as well as beyond to determine the level and nature of genetic erosion in each of the crop and take the appropriate measures to salvage them from disappearing ;
- viii)** vulnerable traditional crops in other countries in Sub-Saharan Africa and elsewhere and
- ix)** to expand on the application of the policy harmonisation and implementation framework in all countries. Policy components should be developed and expanded to test the various canvas/models established in Benin, Ghana Malawi or elsewhere, for policy development, modification or harmonization in order to develop enabling environments for on-farm conservation of landraces in improved traditional farming systems
- x)** continue to develop the required capacity for the programme at all levels, through the use and strengthening of appropriate training and research institutions (adoption and refining of relevant curricula).

4. Bioversity International, UNEP/GEF and the implementing countries should undertake an impact study (at a later date), in the implementing countries, in conjunction with the national agencies and the communities to assess the impacts of this project (also needs assessment at that time).

5. A strong and well funded management /coordination structure is recommended especially for a project that involves countries in several sub-regions. This should be carefully crafted in the project design and also be the responsibility of the executing institution. A large scale multi-country project such as this one required such a robust coordination mechanism with steering committees and sub-regional coordinators, to stimulate/support exchanges and collaboration within and between the various countries and sub-regions.

6 The responsibility of national plant genetic resources centres should also include monitoring of the situation /presence of farmers' varieties/landraces in the communities and the need, if any, for re-introduction of resources in a given area. Seed fairs could help in that exercise. They should be regularly organized, especially in all vulnerable farming areas as a strategy for conservation and with prices as incentives to active farmers.

Annex 1

TERMS OF REFERENCE

**Terminal Evaluation of the UNEP GEF project
“Community-Based Management of On-farm Plant Genetic Resources in Arid and
Semi-arid Areas of Sub-Saharan Africa”
GF/2010-01-14**

1. PROJECT BACKGROUND AND OVERVIEW

Project rationale

In the last few decades, agricultural scientists responded to the threat of genetic erosion by developing a world-wide network of genebanks and botanical gardens for conserving useful genetic resources *ex situ*. These facilities could not conserve the dynamic processes of crop evolution and farmer's knowledge of crop selection and maintenance inherent in the development of local cultivars. These facilities also tended to be isolated from the communities and resource users that originally provided the material for *ex-situ* conservation. This project focuses on traditional local cultivars or farmers' varieties, embodying substantial diversity that continue to provide an essential component of sustainable crop production, household income and human nutrition for many of the world's poor. Less than 10% of land managed by smallholders in Sub-Saharan Africa is used for the production of modern varieties. While wild gathered biodiversity and pastures provide an important contribution, the local cultivars or farmers' varieties continue to provide the core component of sustainable crop production, household income and human nutrition for the world's poor. This linkage between diversity and food security provided the rationale for enhancing the availability and use of local crop varieties in the fragile ecosystems of arid and semi-arid regions of Sub-Saharan Africa. In order to mitigate on-farm genetic erosion and reduce pressure on fragile arid and semi-arid ecosystems, policy impacting on conservation of agro-biodiversity needed to be changed (influenced) at all relevant levels impacting on conservation of agrobiodiversity, and the integration of the formulated strategies into national Plant Genetic Resource plans and policies encouraged.

The overall goal of the project was to improve the effectiveness of traditional farming systems for conservation of biodiversity of local and global importance. The purpose was to develop models for enabling environments for an effective contribution of traditional farming systems in biodiversity conservation and measures to maintain and promote wider adoption of viable systems.

The main objectives were stated as:

6. To develop a framework for analysis of 'best practices' for conservation of crop landraces on-farm;
7. To develop a framework that links best practices' for conservation of crop landraces on-farm to decision-making and policy;
8. To build capacity in the application of both frameworks in influencing policies that impact on-farm conservation of landraces;
9. To establish/ catalogue/ determine 'best practices';

10. To replicate ‘best practice’ where possible.

Relevance to GEF Programmes

UNEP has a primary role in the GEF in catalysing the development of scientific and technical analysis and in advancing environmental management in GEF-financed activities. UNEP also provides guidance on relating the GEF-financed activities to global, regional and national environmental assessments, policy frameworks and plans and to international environmental agreements, conventions and policies. The project relates to GEF Operational Program Number 1, Biodiversity: Arid and semi-arid ecosystems.

Executing Arrangements

The project was executed by IPGRI in collaboration with the Institut Nationale de Recherche Agricoles du Benin (INRAB), Institut d’Etudes et de Recherche Agricoles (INERA) Burkina Faso, University of Ghana (UoG) Ghana, the National Genebank of Kenya (NGBK), the National Plant Genetic Resources Centre in Chitedze (NPGRC) Malawi, Insitut d’Economie Rurale (IER) in Mali, the National Agricultural Research Organization (NARO) Uganda and the Dept. of Agricultural Research and Extension (AREX, former DRSS) Zimbabwe.

Project Activities

The project duration was initially 36 months starting December 2001, which was later revised and extended to be completed in April 2006, making a total duration of 53 months.

The project had thirteen components:

- 14) Create project management framework in partner countries, with links and interfaces to relevant projects, formal and informal institutions and farmers, through consultations, meetings and establishment of required partnerships and memoranda of understanding. As part of this process, a stakeholder analysis and public involvement plan was to be refined as a first step to ensure a bottom up participatory process.
- 15) Hold series of in-country public awareness meetings;
- 16) Recruit consultants to develop and draft initial proposed methodology and framework for conducting case studies through wide consultation with partners (Project Development);
- 17) Organize National consultations in case study countries to discuss draft and further develop methodologies descriptors and indicators for conducting case studies;
- 18) Organize a regional workshop for all participating project countries to harmonise methodologies for conducting case studies;
- 19) Conduct surveys to determine the status of on-farm conservation, the players involved, and interventions proposed, but focusing primarily on identifying best practices for on-farm conservation of traditional varieties, and the policies that impact on in-situ conservation on-farm;
- 20) Initiate and/or support actions by communities and farmers to enhance performance of local cultivars for improved livelihoods of farmers through use of local crop cultivars, including reintroduction of ‘lost’ cultivars from genebanks, where appropriate and possible;
- 21) Hold wide consultations with policy makers and stakeholders, particularly the farming communities, to evaluate the current situation regarding policy related

- to traditional knowledge and systems and their impact on landraces and agro-biodiversity;
- 22) Analyse country situations and results of pilot activities to identify best practices for conservation and use of farmers' varieties in agricultural production systems;
 - 23) Convene international meetings to present and debate best practices (to be held in conjunction with IPGRI's global project on in-situ conservation);
 - 24) Hold policy level meetings to sensitise policy makers and to identify and detail approaches to supporting the integration of traditional knowledge into national policies and plans;
 - 25) Recruit consultants to develop and test framework that links best practices' for conservation of crop landraces on-farm to decision-making and policy;
 - 26) Develop national capacity through training in use of frameworks, and strengthen appropriate institutional arrangement to ensure sustainability of these systems.

Budget

The total budget was US\$ 2,050,000, with US\$ 750,000 funded by the GEF Trust Fund and co-funding from; IFAD US\$500,000, Netherlands US\$ 500,000, SDC (Switzerland) US\$ 300,000 and in kind contributions from National counterparts.

TERMS OF REFERENCE FOR THE EVALUATION

1. Objective and Scope of the Evaluation

The objective of this terminal evaluation is to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results.

2. Methods

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP/DGEF Task Manager, key representatives of the executing agencies and other relevant staff are kept informed and regularly consulted throughout the evaluation. The consultant will liaise with the UNEP/EOU and the UNEP/DGEF Task Manager on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be circulated to UNEP/DGEF Task Manager, key representatives of the executing agencies and the UNEP/EOU. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary revisions.

The findings of the evaluation will be based on the following:

1. A desk review of project documents including, but not limited to:
 - (a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
 - (b) Review of specific products including assessments, reports and publications, targeted information products.
 Other on-farm plant genetic resources related material

2. Interviews with project management (such as IPGRI, and in-country coordinators at the national research institutes).
3. Interviews and telephone interviews with farmers and community based organisations and other intended users for the project outputs in the region. As appropriate, these interviews could be combined with an email questionnaire.
4. The Consultant shall determine whether to seek additional information and opinions from representatives of donor agencies and other organisations (e.g. IFAD, Netherlands, and Switzerland) by e-mail or through telephone communication.
5. Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP dealing with conservation and plant genetic resources related activities as necessary. The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.

Key Evaluation principles.

In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the project's performance should be assessed by considering the difference between the answers to two simple questions "*what happened?*" and "*what would have happened anyway?*". These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In addition it implies that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgments about project performance.

3. Project Ratings

The success of project implementation shall be **assessed and rated** with respect to the eleven aspects defined below:

1. Attainment of objectives and planned results:

The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved or are expected to be achieved and their relevance.

- *Effectiveness*: Evaluate how, and to what extent, the stated project objectives have been met, taking into account the "achievement indicators". The following questions will be addressed:
 - a) What is the extent of the applicability and relevance of the knowledge gathered regarding the status of in situ conservation as a basis for the best practices framework?
 - b) To what extent has the project directly or indirectly affected the participating countries to develop national policies that support sustainable on-farm conservation of agricultural biodiversity /include in-situ conservation in national legislation? Include an assessment of capacity build in this regard and present evidence to support judgements and conclusions.
- *Relevance*: In retrospect, were the project's objectives, its design outcomes (original and/or modified) consistent with the focal areas/operational program strategies?

2. Achievement of outputs and activities:

- Delivered outputs: Assessment of the project's success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Assess the soundness and effectiveness of the methodologies used for the assessment and monitoring of genetic erosion of local crop cultivars in selected areas in partner countries as well as the development of management strategies.
- Assess to what extent the project outputs produced have the weight of scientific authority / credibility, necessary to influence policy makers in implementing on-farm conservation strategies.

3. Cost-effectiveness:

Cost-effectiveness assesses the achievement of the environmental and developmental objectives as well as the project's outputs in relation to the inputs, costs, and implementing time. It also examines the project's compliance with the application of the incremental cost concept. The evaluation will:

- *Efficiency*: Include an assessment of *outcomes* in relation to inputs, costs, and implementation times based on the following questions: Was the project cost-effective? How does the cost-time vs. outcomes compare to other similar projects? Was the project implementation delayed?
- Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources.
- Determine the extent to which scientific and technical information and knowledge have been incorporated within, and have influenced the execution of, the project activities.

4. Financial Planning

Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. Evaluation includes actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation should:

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted.
- Identify and verify the sources of co-financing as well as leveraged and associated financing (in co-operation with the Implementing Agency and Executing Agency).
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.
- The evaluation should also include: 1) Table of actual final project expenditures against activities (to be provided by the UNON/DGEF Fund Management Officer) 2) a breakdown of co-financing for the project prepared in consultation with the relevant UNON/DGEF Fund

Management Officer of the project (table attached in Annex 2 Co-financing and leveraged resources).

5. Impact:

- Evaluate the immediate impact of the project on: 1) traditional farming systems for conservation of crop landraces; 2) enhancing the enabling policy environments and harmonization of national policies that support sustainable on-farm conservation of agricultural biodiversity.
- As far as possible, also assess the potential longer-term impacts of setting priorities and presenting agreed actions for implementation, considering that the evaluation is taking place upon completion of the project and that longer term impact is expected to be seen in a few years time. Frame recommendations to enhance future project impact in this context. Which will be the major 'channels' for longer term impact? The evaluation should formulate recommendations that outline possible approaches and necessary actions to facilitate an impact assessment study in a few years time.

6. Sustainability:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives / or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced over time.

Five aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, ecological (if applicable), and replication. The following questions provide guidance on the assessment of these aspects:

- *Financial resources.* To what extent are the outcomes of the project dependent on continued financial support? What is the likelihood that financial and economic resources will be available such as the project outcomes/benefits will be sustained once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and market trends that support the project's objectives)? Was the project successful in identifying and leveraging co-financing?
- *Socio-political:* To what extent are the outcomes of the project dependent on socio-political factors? What is the likelihood that the level of stakeholder ownership will allow for the project outcomes/benefits to be sustained? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance.* To what extent are the outcomes of the project dependent on issues relating to institutional

frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for the project outcomes/benefits to be sustained? What is the relevance and applicability of the project's recommendations to farmers and other stakeholders such as community based organisations, national plant genetic resources programmes including NGO's, PGR centres and national Agricultural Research Institute, policy makers on PGR etc. While responding to these questions consider if the required systems for accountability and transparency and the required technical know how are in place.

- *Ecological.* The analysis of ecological sustainability may prove challenging. What is the likelihood that project achievements will lead to sustained ecological benefits?
- *Replication and catalysis.* What examples are there of replication and catalytic outcomes that suggest increased likelihood of sustainability? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources).

7. Stakeholder participation / public awareness:

This consists of three related and often overlapping processes: information dissemination, consultation, and “stakeholder” participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF- financed project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses. Particular attention should be paid to the level of participation by farmers.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of any various public awareness activities that were undertaken during the course of implementation of the project.

8. Country ownership / drivenness:

This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. The evaluation will:

- Assess the level of country ownership. Specifically, the evaluator should assess whether the project was effective in catalyzing action taken by: 1) farmers; 2) research institutions and NGOs; 3) Policy makers.

9. Implementation approach:

This includes an analysis of the project's management framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management. The evaluation will:

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable the implementation of the project.
- Evaluate the effectiveness and efficiency and adaptability of project management and the supervision of project activities / project execution arrangements at all levels (1) policy decisions (2) day to day project management: IPGRI.
- Assess the effectiveness of supervision and administrative and financial support provided by UNEP/DGEF.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.
- Assess whether the logical framework was used during implementation as a management tool and whether feedback from M&E activities more broadly was used for adaptive management.

10. Replicability:

- Assess whether the project has potential to be replicated, either in terms of expansion, extension or replication in other countries and/or regions and whether any steps have been taken by the project to do so and the relevance and feasibility of these steps.

11. Monitoring and Evaluation:

- The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation shall comment on how the monitoring mechanisms were employed throughout the project's lifetime and whether this allowed for tracking of progress towards project objectives and how the project responded to the challenges identified through these mechanisms. The tools used might include a baseline, clear and practical indicators and data analysis systems, or studies to assess results that were planned and carried out at specific times in the project.

The *ratings will be presented in the form of a table*. Each of the eleven categories should be rated separately with **brief justifications** based on the findings of the main analysis. An overall rating for the project should also be given. The following rating system is to be applied:

HS	= Highly Satisfactory
S	= Satisfactory
MS	= Moderately Satisfactory
MU	= Moderately Unsatisfactory
U	= Unsatisfactory

HU = Highly Unsatisfactory

4. Evaluation report format and review procedures

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Dissident views in response to evaluation findings may be appended in an annex. The evaluation report shall be written in English, be of no more than 40 pages (excluding annexes), use numbered paragraphs and include:

- i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
- ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities;
- iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;
- iv) **Project Performance and Impact** providing factual evidence relevant to the questions asked by the evaluator and interpretations of such evidence. This is the main substantive section of the report and should provide a commentary on all eleven evaluation aspects (A – K above).
- v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project (in the form of a table) against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative;
- vi) **Lessons learned** presenting general conclusions from the standpoint of the design and implementation of the project, based on established good and bad practices. Lessons must have the potential for wider application and use, and the context in which lessons may be applied should be specified. and lessons should state or imply some prescriptive action
- vii) **Recommendations** suggesting *actionable* proposals regarding improvements of current or future projects. They may cover, for example, resource allocation, financing, planning, implementation, and monitoring and evaluation. They should always be specific in terms of who would do what and provide a timeframe;
- viii) **Annexes** include a breakdown of: 1) final actual costs and 2) co-financing for the project prepared in consultation with the relevant UNON/DGEF Fund Management Officer of the project (table attached in Annex 2 Co-financing and leveraged resources); terms of reference, list of interviewees, and so on.

Examples of UNEP GEF Terminal Evaluation Reports are available at www.unep.org/eou

Review of the Draft Evaluation Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments, conducts a report quality assessment (see Annex 2), and provides them to the evaluators for their consideration in preparing the final version of the report.

5. Submission of Final Terminal Evaluation Reports.

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief, Evaluation and Oversight Unit
UNEP, P.O. Box 30552-00100
Nairobi, Kenya
Tel.: (254-20) 7624181
Fax: (254-20) 7623158
Email: segbedzi.norgbey@unep.org

With a copy to:

Olivier Deleuze, Officer-in-Charge
UNEP/Division of GEF Coordination
P.O. Box 30552-00100
Nairobi, Kenya
Tel: + 254-20-7624686
Fax: + 254-20-7624041/4042
Email: Olivier.Deleuze@unep.org

Marieta Sakalian
UNEP/GEF Task Manager Agrobiodiversity
United Nations Environment Programme (UNEP)
Division of GEF Coordination (DGEF)
PO Box 30552-00100
Nairobi, Kenya
Tel: 254 20 7624352
Fax: 254 20 7624041
Email: marieta.sakalian@unep.org

Anna Tengberg
Acting UNEP/GEF SPO Biodiversity
United Nations Environment Programme (UNEP)
Division of GEF Coordination (DGEF)
PO Box 30552-00100
Nairobi, Kenya
Tel: 254 20 7624147
Fax: 254 20 7624041

Email: Anna.Tengberg@unep.org

6. Resources and schedule of the evaluation

This final evaluation will be undertaken by an international evaluator contracted by the Evaluation and Oversight Unit, UNEP. The contract for the evaluator will begin 15 January 2007 and end on 12 March 2006 (1 month spread over 2 months) (3 days of travel, to Accra, and 17 days desk study). The evaluator will submit a draft report on 19 February 2006 to UNEP/EOU, the UNEP/DGEF Task Manager, and key representatives of the executing agencies. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary revisions. Comments to the final draft report will be sent to the consultant by 5 March 2007 after which, the consultant will submit the final report no later than 12 March 2007.

The evaluator will after an initial telephone briefing with EOU and UNEP/GEF travel to the Ghana and meet with project staff at the beginning of the evaluation. Furthermore, the evaluator is expected to travel to project sites in Kenya and meet with representatives of government agencies and organizations. In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluators should have the following qualifications:

The evaluator should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. The evaluator should be an international expert in agriculture and sustainable development and have the following minimum qualifications: (i) experience in agro-biodiversity issues; (ii) experience with management and implementation of projects and in particular with policy-related assessments that generate knowledge and information; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable. Field experience in sub-saharian Africa a must. Fluency in oral and written English and French is a must.

7. Schedule Of Payment

The consultant shall select one of the following two contract options:

Lump-Sum Option

The evaluator will receive an initial payment of 30% of the total amount due upon signature of the contract. A further 30% will be paid upon submission of the draft report. A final payment of 40% will be made upon satisfactory completion of work. The fee is payable under the individual Special Service Agreement (SSA) of the evaluator and IS **inclusive** of all expenses such as travel, accommodation and incidental expenses.

Fee-only Option

The evaluator will receive an initial payment of 40% of the total amount due upon signature of the contract. Final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is NOT inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

The evaluator will receive 40% of the SSA fee upon submission of draft report. Final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is NOT inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

Annex 1

OVERALL RATINGS TABLE

Criterion	Evaluator's Summary Comments	Evaluator's Rating
Attainment of objectives and planned results (overall rating) Sub criteria (below)		
Effectiveness (project objectives)		
Effectiveness (expected outcomes)		
Relevance		
Efficiency		
Achievement of outputs and activities		
Cost-effectiveness		
Impact		
Sustainability (overall rating) Sub criteria (below)		
Financial		
Socio Political		
Institutional framework and governance		
Ecological		
Stakeholders participation		
Country ownership		
Implementation approach		
Financial planning		
Replicability		
Monitoring and Evaluation (overall rating) Sub criteria (below)		
Effective M&E system in place (Indicators, baselines, etc.)		
Information used for adaptive management		
Overall Rating		

The following rating system should be applied: Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, and Highly Unsatisfactory. (see rating system to be applied to the 'sustainability' sub-criteria below)

RATING OF OUTCOMES

Outcomes are the likely or achieved short-term and medium-term effects of an intervention's outputs. Outputs are the products, capital goods and services which result from a development intervention; they may also include changes resulting from the intervention which are relevant to the achievement of outcomes and objectives. The terminal evaluation will make an assessment of the extent to which the project's major relevant objectives² were effectively and efficiently achieved or are expected to be achieved and their relevance. The ratings on the outcomes of the project will be assessed using the following criteria:

- A. **Relevance:** In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies?
- B. **Effectiveness:** Are the project outcomes as described in the TE commensurable with the expected outcomes (as described in the project document) and the problems the project was intended to address (i.e. original or modified project objectives)?
- C. **Efficiency:** Was the project cost – effective? How does the cost-time Vs. outcomes compare to other similar projects? Was the project implementation delayed?

RATING OF IMPACT

Impacts are positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended. For the GEF, environmental impacts are the main focus. Comments should provide information on the likelihood of achieving the impacts specified in the project document.

RATINGS OF PROJECT M&E

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project evaluation may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The ratings on the quality of the project M&E systems will be assessed using the following criteria:

- a. Whether an appropriate M&E system for the project was put in place (including capacity and resources to implement it) and whether this allowed for tracking of progress towards projects objectives. The tools used might have included a base line, clear and practical indicators and data analysis systems, or that studies to assess results were planned and carried out at specific times in the project.
- b. Whether the M&E system was used effectively for project management.

RATINGS ON SUSTAINABILITY

- A. Sustainability will be understood as the probability of continued long-term outcomes and impacts after the GEF project funding ends. The Terminal evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives /or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. See section F under 'Project evaluation criteria'.

Rating system for sustainability sub-criteria

Highly Likely = 6, Likely = 5, Moderately Likely = 4, Moderately Unlikely = 3, Unlikely = 2, Highly Unlikely = 1, and not applicable = 0

² The intended physical, financial, institutional, social, environmental, or other development results to which a project or program is expected to contribute.

Annex 2. Co-financing and Leveraged Resources

Co-financing (basic data to be supplied to the consultant for verification)

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
– Grants										
– Loans/Concessional (compared to market rate)										
– Credits										
– Equity investments										
– In-kind support										
– Other (*)										
–										
–										
–										
–										
–										
Totals										

* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Leveraged Resources

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

Annex 3

Table of actual final project expenditures against activities (to be provided by the UNON/DGEF Fund Management Officer).

Annex 4

Review of the Draft Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff provide comments on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report. General comments on the draft report with respect to compliance with these TOR, are shared with the reviewer.

Quality Assessment of the Evaluation Report

All UNEP GEF Terminal Reports are subject to quality assessments by UNEP EOU. These apply GEF Office of Evaluation quality assessment and are used as a tool for providing structured feedback to the evaluator.

GEF Report Quality Criteria	UNEP EOU Assessment notes	Rating
A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		
UNEP EOU additional Report Quality Criteria	UNEP EOU Assessment	Rating
G. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
H. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented?		
I. Was the report well written? (clear English language and grammar)		
J. Did the report structure follow EOU guidelines, were all requested Annexes included?		
K. Were all evaluation aspects specified in the TORs adequately addressed?		
L. Was the report delivered in a timely manner		

GEF Quality of the MTE report = $0.3*(A + B) + 0.1*(C+D+E+F)$
EOU assessment of MTE report = $0.3*(G + H) + 0.1*(I+J+K+L)$

Combined quality Rating = (2* 'GEF EO' rating + EOU rating)/3

The Totals are rounded and converted to the scale of HS to HU

Rating system for quality of terminal evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

Annex 2 Co-financing and Leveraged Resources

Co financing (Type/Source)	IA own Financing (US\$)		Government (US\$)		Other* (US\$)		Planned
	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants – IFAD (a)	500,000	771,785					500,000
– Grants – SDC (Switzerland) (b)	300,000	150,000					300,000
– Grants – Netherlands (c)	500,000	500,000					500,000
– Loans/Concessional							
– Credits							
– Equity investments							
– In-kind support (d)							
– Other							
I. Totals	1,300,000	1,421,785					1,300,000

(a) IFAD has provided this funding through three projects as part of this programme:

“Development of strategies for in situ conservation of crop genetic resources in semi-arid areas of Africa”
in (USD 73,785 spent in Mali and Zimbabwe)

“Enhancing farmer livelihoods through improved on-farm management of plant genetic resources” (USD
100,000 spent on Mali)

“Empowering Sahelian farmers to leverage their crop diversity assets for enhanced livelihood strategies”
(USD 598,000 spent on Mali and Burkina Faso)

(b) SDC provided funding to IPGRI staff supporting the project execution.

(c) The Netherlands has provided funding to the Burkina Faso component of the Project through the project
on “Strengthening the scientific basis of in situ conservation on-farm” (USD 169,935 on Burkina Faso).
They have also provided attributed funding to IPGRI that has supported part of the work in Ghana, Benin,
Uganda, Malawi and Kenya with approximately USD 340,000.

(d) In-kind contribution was not specified in the project budget. All the countries contributed the time of
many scientists over the three years of the project. We estimate this to be often as much as three scientists
with over 30% of their time per year. In addition, farmers, extension workers and many others contributed
their time. All the countries provided vehicles for the work, only charging fuel costs to the project.

Annex 3 Table of Overall project expenditures against activities

ANNEX 8: OVERALL PROJECT EXPENDITURE ACCOUNTS FOR SU Quarterly project statement of allocation (budget), expenditure and balance (Exp From 1 December 2001 to 31 December 2006

Project No. **UNEP/GEF PDF B Project is: GF/2711-01-4369**

Supporting Organization: **International Plant Genetic Res**

Project Title: **Community-Based Management of On-farm Plant Genetic Resources in Arid and Semiarid Areas of Sub-Saharan Africa**

Project commencing:

1-Dec-01

Project ending: **30-Apr-06**

Object of expenditure in accordance with UNEP Budget codes	Budget	Expenditure incurred								
		2001 Q4	2002 Q1	2002 Q2	2002 Q3	2002 Q4	2003 Q1	2003 Q2	2003 Q3	2003 Q4
	amount (2)									
1101 Project Coordinator - 36 w/m	225,000	0	18,750	18,750	18,750	18,750	18,750	18,750	14,000	15,3
1102 Project Assistant - 18w/m	51,400	0	2,033	2,033	2,034	2,033	2,033	2,033	2,033	2,0
1201 Develop methodologies and framework for case studies	14,989	0	0	2,250	0	6,750	0	1,000	0	1,0
1202 Travel & DSA costs for consultant	12,600	0	0	0	3,548	684	0	0	0	0
1301 Secretarial support	2,400	0	0	800	0	0	0	800	0	0
1302 Administrative officer	2,100	0	0	700	0	0	0	700	0	0
1303 Accounts assistant	2,100	0	0	700	0	0	0	700	0	0
1304 Drivers/messengers	1,500	0	0	500	0	0	0	500	0	0
1601 Travel & DSA costs for Project coordinator (8 countries per year)	41,039	0	1,538	49	6,530	9,716	0	705	2,536	4,1
2201 Surveys and case studies in 8 partner countries to link best practices for on-farm conservation of landraces to policy	228,161	0	0	0	0	15,400	0	38,500	0	62,1
3301 In-country public awareness meetings	20,000	0	0	0	14,810	0	0	0	0	0
3302 National consultations to draft methodologies	32,000	0	0	0	14,810	0	0	0	0	0
3303 Regional workshop to harmonise methodology	35,873	0	0	0	22,731	13,142	0	(215)	0	2
3304 International Meeting to present and debate 'best practices'	26,127	0	0	0	0	0	0	0	0	41,0
4101 Office supplies	600	200	0	0	200	(200)	200	0	0	0
4102 Library acquisitions	600	200	0	200	0	(200)	200	0	0	0
4103 Computer Software	1,000	0	0	772	(200)	(172)	200	0	0	0
4201 Computer	3,000	0	2,830	0	0	170	0	0	0	0
4202 Office furniture	1,500	0	0	0	0	1,500	0	0	0	0
4301 Office rent & maintenance	3,600	0	1,200	0	0	0	1,200	0	0	0
5101 Rental & maint. of computer equip.	600	0	200	0	0	0	200	0	0	0
5102 Rental & maint. of copiers	450	0	150	0	0	0	150	0	0	0
5103 Repair & maint. of vehicles & insurance	450	0	150	0	0	0	150	0	0	0
5104 Rental & maint. of other office equip	300	0	100	0	0	0	100	0	0	0
5105 Rental of meeting rooms & equip.	300	0	100	0	0	0	100	0	0	0
5201 Meeting proceedings & technical publications	14,411	0	0	0	0	0	0	0	0	0
5202 Pamphlets (including translation costs)	8,000	0	0	0	0	0	0	0	0	0
5203 Video	8,000	0	0	0	0	0	0	0	0	0
5204 Other PA materials (Guide to best practices)	6,000	0	0	0	0	0	0	0	0	0
5301 Communications (Tel/Fax/IVDN/postage)	2,120	700	0	700	0	(700)	700	0	0	0
5302 Network charges	3,780	1,260	0	1,260	0	(1,260)	1,260	0	0	0
99 Grand Total	750,000	2,360	27,052	28,714	83,213	65,613	25,243	63,474	18,569	125,5

ANNEX 8: OVERALL PROJECT EXPENDITURE ACCOUNTS FOR SU
 Quarterly project statement of allocation (budget), expenditure and balance (E
 From 1 January 2001 to 30 April 2006

Project No. UNEP/GEF PDF B Project is: GF/2711-01-4369

Supporting Organization: International Plant Genetic Resources In

Project Title: Community-Based Management of On-farm Plant Genetic Resources in Arid and Semi-arid Areas of Sub-Saharan Africa

Project commencing:

1-Dec-01

Project ending: 30-Apr-06

Object of expenditure in accordance with UNEP Budget codes		Unspent balance of budget allocation for year 2003	Expenditure incurred								
			2004 Q1	2004 Q2	2004 Q3	2004 Q4	2005 Q1	2005 Q2	2005 Q3	2005 Q4	2006 Q1
1101	Project Coordinator - 36 w/m	82,576	2,400	67,764	1,303	9,950	0	0	0	0	
1102	Project Assistant - 18w/m	34,419	0	0	0	6,600	0	0	6,535	16,859	
1201	Develop methodologies and framework for case studies	3,989	0	0	0	8,000	0	0	0	(308)	
1202	Travel & DSA costs for consultant	8,367	0	0	0	4,357	572	520	26	0	
1301	Secretarial support	800	0	800	0	0	0	0	0	0	
1302	Administrative officer	700	0	700	0	0	0	0	0	0	
1303	Accounts assistant	700	0	700	0	0	0	0	0	0	
1304	Drivers/messengers	500	0	500	0	0	0	0	0	0	
1601	Travel & DSA costs for Project coordinator (8 countries per year)	15,838	2,600	0	1,664	2,973	572	4,499	215	1,818	
2201	Surveys and case studies in 8 partner countries to link best practices for on-farm conservation of landraces to policy	112,138	30,800	15,400	24,478	28,460	0	2,536	0	634	
3301	In-country public awareness meetings	5,190	0	0	0	0	0	0	0	0	
3302	National consultations to draft methodologies	17,190	0	0	0	0	0	0	0	0	
3303	Regional workshop to harmonise methodology	0	800	0	0	0	0	0	0	0	
3304	International Meeting to present and debate 'best practices'	(19,036)	1,032	0	0	0	0	0	0	0	
4101	Office supplies	200	0	200	0	0	0	0	0	0	
4102	Library acquisitions	200	0	200	0	0	0	0	0	0	
4103	Computer Software	400	0	400	0	0	0	0	0	0	
4201	Computer	0	0	0	0	0	0	0	0	0	
4202	Office furniture	0	0	0	0	0	0	0	0	0	
4301	Office rent & maintenance	1,200	0	1,200	0	0	0	0	0	0	
5101	Rental & maint. of computer equip.	200	0	200	0	0	0	0	0	0	
5102	Rental & maint. of copiers	150	0	150	0	0	0	0	0	0	
5103	Repair & maint. of vehicles & insurance	150	0	150	0	0	0	0	0	0	
5104	Rental & maint. of other office equip	100	0	100	0	0	0	0	0	0	
5105	Rental of meeting rooms & equip.	100	0	100	0	0	0	0	0	0	
5201	Meeting proceedings & technical publications	14,411	29	0	0	0	0	0	0	0	
5202	Pamphlets (including translation costs)	8,000	0	0	0	0	754	3,266	0	0	
5203	Video	8,000	0	0	0	0	0	0	0	0	
5204	Other PA materials (Guide to best practices)	6,000	0	0	0	0	0	0	2,994	0	
5301	Communications (Tel/Fax/IVDN/postage)	720	0	720	0	0	0	0	0	0	
5302	Network charges	1,260	0	1,260	0	0	0	0	0	0	
99 Grand Total		304,462	37,661	90,544	27,445	60,341	1,899	10,821	9,770	19,003	

Annex 4 List of persons met and/or interviewed

Bioversity (IPGRI)

Dr. Mikkel Grum
 Ms. Julia Ndungu-Skilton
 Dr. Raymond Vodouhe
 Mr. Hubert Somessi

UNEP GEF

Ms. Marieta Sakalian
 Ms Anna Tengberg

Ghana

Prof. Edwin Gyesei UG Legon
 Prof. A. B. Asiedu UG Legon
 Dr. Gordana UDS Tamale
 Dr. Josuah Adam Yidana UDS
 Mr. Karim
 Dr. Aboagye Laurence NPGRC Bunso

Benin

Prof. Adam Ahanchede U Abomey Calavi
 Mr. Nasser Mohamed Baco INRAB
 Mr. Bello Saliou UAC

Kenya

Mr. Mutamia National Genebank of Kenya

Uganda

Mr. Wasswa Mulumba National Genebank of Uganda

Malawi

Mr. Laurence Pungulani

Zimbabwe

Dr. Claid Mujaju Genebank of Zimbabwe