United Nations Environment Programme

Terminal Evaluation of the GEF project
Regional (Ethiopia, Kenya, Mali): Conservation of *Gramineae* and Associated Arthropods for Sustainable Agricultural Development in Africa

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ACKNOWLEDGEMENTS

LIST OF ACRONYMS

AC	Assistant Coordinator
CBD	Convention on Biological Diversity
CC	Country Coordinator
EA	Executing Agency (ICIPE)
EARO	Ethiopian Agricultural Research Organization
ELCI	Environment Liaison Centre International (NGO)
EOU	Evaluation and Oversight Unit
FAO	Food and Agriculture Organization of the United Nations
GBK	Gene Bank of Kenya
GEF	Global Environment Facility
IA	Implementing Agency (UNEP)
ICIPE	International Centre of Insect Physiology and Ecology (Kenya)
IER	Institute of Rural Economy (Institut d'Economie Rurale) (Mali)
INSORMIL	International Sorghum and Millet Programme
IPGRI	International Plant Genetic Resources Institute (now Bioversity International)
KARI	Kenyan Agricultural Research Organization
Logframe	Logical Framework
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
N / A	Not Applicable
NGO	Non-Governmental Organization
PC	Project Coordinator
PDF	Project Development Facility
PIR	Project Implementation Review
PRA	Participatory Rural Appraisal
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP-DGEF	United Nations Environment Programme Division of the Global Environment Facility
URG	Unité Ressources Génétiques (gene bank) of IER

1. **EXECUTIVE SUMMARY**

1.   This medium-sized GEF project had the goal of documenting the diversity of *Gramineae* and associated insects in different selected agro-ecosystems and socio-economic surroundings, and their adjacent natural habitats in Ethiopia, Kenya and Mali; to understand the relationships between certain grasses and insects; and to develop and promote the practical application of this knowledge in self-regulatory pest management and sustainable agriculture.

2.   The two main objectives of the project were (a) to identify and implement conservation and management measures necessary to prevent loss of biodiversity of certain *Gramineae* and their associated insects; and (b) to conserve these valuable genetic resources in and around agro-ecosystems in Ethiopia, Kenya and Mali for self-regulatory pest management and sustainable agriculture. The total budget was US$ 2,536, 950, with US$ 972,000 funded by the GEF Trust Fund.

3.   The project started in 2001, about six years after the original project proposal (before the PDF-A phase) was prepared and submitted to the GEF (Table 1). It is recommended to have a faster process for approval or rejection of projects, because after so much time the project - and especially a research project - may be outdated. In the case of this project, by the time it was approved, the situation, both environmental and individual / personnel wise had changed, and for instance the original proposers were busy with different activities and interests. Thus the project started under less than ideal conditions and had a late start.

4.   The project was prematurely terminated in Ethiopia, on 31 December 2004, because of (a) several difficulties encountered in the communication between the second Assistant Co-ordinator (AC) and the first Country Co-ordinator (CC) (who also claimed not to have received from the AC the supplies needed for the project); (b) the documentation by the Executing Agency (EA) of mismanagement - both scientific and financial - by the first CC in Ethiopia; and (c) correspondence lost / misplaced by the Executing Agency (EA) regarding the acceptance of the contract for the second CC in Ethiopia, and subsequent interruption of communication with EARO.

5.   In Mali the project was operationally closed on 31 December 2005, with encouraging results.

6.   Based on the evidence gathered throughout the Terminal Evaluation, good results were obtained in Kenya, as described below, where the project was operationally closed in September 2006, and the overall rating of the project, according to the GEF six points scale, was Moderately Satisfactory. Overall the project was a positive exercise, and generated useful outputs, in spite of the many difficulties and problems encountered, and although the results of these experiments conducted on the grass-rows technology cannot be considered conclusive. In Mali, results of the tests with the grass-rows technology were only partial, but, interestingly, relevant catalytic effects were generated in that country. Anyhow, this should be considered a pilot exercise, also requiring validation of the results. The approach was original and environmentally sound. Social and cultural aspects were considered and local

agricultural practices taken into account and integrated in the technology proposed. The project was welcomed enthusiastically by the farmers who were involved in the implementation of the activities, and gave rise to a lot of interest in other farmers, institutions and general public.

7.   Especially in Kenya, the project documented and assessed the diversity, distribution and relationship of grasses and insects in and around the selected agro-ecosystems and this information has been disseminated to national governmental and NGO Agricultural Institutions, university and technical-college libraries, National Museums of Kenya (Nairobi), Department of Agriculture officers at District and Division levels, extension officers, interested parties, and wider public.

8.   Wild grasses that may act as reservoirs of key pest and beneficial insects and those that may protect and promote arthropod diversity (most of the on-farm grasses) were identified and biodiversity losses that could lead to ecosystem instability, such as further loss and pest outbreaks were publicised.

9.   Conservation interventions for important grasses and associated insects were developed and promoted. Best practices for conservation of *Gramineae* and associated insect diversity were identified and disseminated. Four species of wild grasses were selected, and mainly utilized and recommended for use by farmers in maize, sorghum and millet fields. These were *Panicum maximum* Jacq*., Pennisetum purpureum* Schumach*., Hyparrhenia rufa* (Nees) Stapf*,* and *Andropogon gayanus* Hochst.

10.   The capacity of national agricultural research and extension systems in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects was strengthened, and training in identification, collection and preservation of germplasm and specimens of plant and insects conducted.

11.   The project raised public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity in general and of agro-ecosystems in particular.

12.   However, in spite of the two no-cost extensions (total of two years) to the project, that was conducted over a total period of five years instead of the three planned in the Project Document, not all the objectives revised in 2004 were achieved.

13.   The project faced several problems that limited its performance. The project design was overambitious, especially considering the large research component, and the planned studies on Arthropods were then restricted to insects, and then further to stem borers only. The management structure was undefined in the Project Document, and the implementation arrangements weak.

14.   Also, the arrangements made at the beginning of the project with the partner organizations were not suitable to assure continued participation of project staff throughout implementation and sustainability of the outputs. The project largely relied on temporary staff, hired *ad hoc* for the project. The turnover of staff was high in all the participating countries and the situation was particularly serious in Ethiopia, where more than half of the staff trained by the project quitted the job during the

implementation. Appropriate administrative arrangements (e.g. type of contracts and adequate salaries) and institutional agreements at the beginning of the project could have avoided, or at least limited to a large extent these problems.

15.   In Kenya three ACs followed one another in the management and coordination of the project at regional level. This caused problems for the implementation of the project, delays and loss of the institutional capacity built. These important changes in project management inevitably affected the implementation of the project, delaying activities and reducing efficiency, performance, and delivery of outputs. Regular project meetings were not held.

16.   Also, the EAs could have identified field sites that were easier to reach and supervise (since they were available), especially by the Country Coordinators (especially in Mali), who visited the field sites few times per year. The distance and difficulty of access probably contributed to discouraging more frequent trips by supervisors. It is recommended that, in future projects, easy to reach and supervise experimental field sites, if available, are identified.

17.   In order to succeed, this kind of projects - although requiring very specialized (scientific) skills, require also - in the same individual - a combination of additional skills, and in particular considerable management skills, experience in administration, knowledge of the region, and preferably work experience in the countries involved. If the above mentioned work experience is absolutely not available, it is essential that an initial in-depth briefing and continued support is provided by experienced personnel of the institution. The ToR for the key staff should be included in the Project Document and this, besides facilitating the start-up of the project, would also be a guarantee for the success of implementation.

18.   Pilot projects requiring field experimental work and dealing with not validated studies, like in the case of this project, should preferably be conducted in one country first. This would facilitate management and supervision, and contain costs. Costs for supervision - which also this project showed to be essential to avoid failure - are unnecessarily high in case far away countries are to be coordinated / supervised. In this project this led (or at least largely contributed, in combination with the in-country mismanagement by the first CC in Ethiopia - documented by the EA - and other factors) to the exclusion of one country (Ethiopia) and the lack of meaningful field data for field experiments for another (Mali). For instance, different habitats for conducting the studies on the grass-rows technology could have been identified within the same country (e.g. Kenya offers a variety of habitats that would have been sufficient at this stage) and then the technology could have been exported after validation.

19.   Projects should not be too ambitious, but focussed on specific objectives, realistically achievable within the project lifetime. This would avoid recurrent - inefficient - exercises of no-cost extensions to manage to achieve at least some of the planned outputs for a project.

20.   When planning the duration of a project, it should also be considered that the nature of research work does not allow rapid results. In addition, studies in agriculture are dependent on field seasons (often meaning years, if there is one growing season per

year), climate conditions, and additional factors - such as in the case of this project drought and other problems - may require additional time. Therefore at the project design stage, when deciding the duration of the project, it is preferable to foresee an additional year (set) of data, rather than risking to have an unsuccessful project because the time was too short and sufficient data were not obtained.

21.   The procedure used by the Implementing Agency (IA) should allow the verification / approval of expenses prior to the purchase - eventually above a certain ceiling, in order to prevent undue expenditures rather than having to reject equipment already purchased (e.g. as it happened to the project for USD 11,908 for motorbikes). During the implementation the EA was free to use the funds and verification by the IA took place only after the purchases.

22.   Also, the IA should not only verify that expenses do not exceed the planned budgets, and that funds are used for the corresponding activities as planned, but also that the arrangements by the EA are adequate, e.g. that salaries are adequate and attractive to prevent staff quitting the job during implementation.

23.   Since the operational closure of the project - in September 2006 - all the non-expendable items of equipment still with the EAs (ICIPE and IPGRI - in the inventory of the project) should have been transferred to local governmental institutions. Since in the Project Document it was not stipulated otherwise, it is recommended that such items are transferred (donated) by UNEP to the local governmental institutions involved in the project (e.g. KARI, GBK, and Museums of Kenya).

24.   All the specimens of insects and plants should be urgently deposited by ICIPE and IER in national Museums / central collections, both in Kenya and Mali, as stipulated by the Project Document.

25.   All copyrights established on the materials produced by the project (e.g. ICIPE on publications) should be urgently transferred to local governments.

26.   The institutions that participated in the project should (a) continue the sensitization and dissemination of the grass-rows technology to farmers; and (b) complete the experiments validating the technology using normal size plots (fields) and integrating the technology in suitable farming systems.

27.   The project did not make adequate provisions for the Terminal Evaluation - that was known to be mandatory since inception of the project - and this limited the time available for the travel and the evaluation in general, and created various difficulties to the mission. In the future it should be made sure that a specific budget line is reserved for this purpose.

28.   It is recommended to conduct the Terminal Evaluation before the end of the project. This would be important for follow-up actions / programmes, and also to be able to conduct the evaluation under good conditions, considering that often also key project staff is non-permanent and may not be available for interviews and to provide information after the end of the project.

2. INTRODUCTION AND BACKGROUND

The project

29.   The overall goal of the project was to document diversity of *Gramineae* and associated insects in different selected agro-ecosystems and socio-economic surroundings, and their adjacent natural habitats in Ethiopia, Kenya and Mali; to understand the relationships between certain grasses and insects; and to develop and promote the practical application of this knowledge in self-regulatory pest management and sustainable agriculture.

30. The main objectives were:

   a. To identify and implement conservation and management measures necessary to prevent loss of biodiversity of certain *Gramineae* and their associated insects, and

   b. To conserve these valuable genetic resources in and around agro-ecosystems in Ethiopia, Kenya and Mali for self-regulatory pest management and sustainable agriculture.

31. The expected outcomes from this project included:
   a. Diversity, distribution and relationship of grasses and insects in and around selected agro-ecosystems assessed;
   b. Wild grasses that may act as reservoirs of key pest and beneficial insects and those that may protect and promote arthropod diversity identified;
   c. Complementary conservation of important grasses and associated insects developed and promoted;
   d. Best practices and lessons learned on conservation of *Gramineae* and associated insect diversity made available and their adoption evaluated;
   e. Capacity and capability of national agricultural research and extension systems and non-governmental organizations in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects strengthened.
   f. Public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity increased.

32.   The project relates to GEF Operational Program Number 1, Biodiversity: Arid and semi-arid ecosystems.

Executing Arrangements

33.   The International Centre of Insect Physiology and Ecology (ICIPE) based in Kenya, was the Executing agency of the project at regional level and provided regional coordination and implementation support to the national Executing agencies.

34.   Bioversity International - that according to the Project Document was also an EA - was to oversee and implement the germplasm conservation component. Farmers were to test and demonstrate new approaches.   The Environment Liaison Centre International (ELCI), an NGO that collaborates with ICIPE on biodiversity

conservation issues implemented the farmer surveys in the three countries. National Institutions in the participating countries wished to build their capacities through training, and through the identified and catalogued reference collections resulting from the proposed surveys that were housed in their institutions. Apart from the documentation activity, it was agreed that a team of social scientists needed to be assembled from the national programs and collaborating agencies to advise on the farm- and community-level extension work.

35.   The national executing agencies for each country were:

 Mali:
- The Institute of Rural Economy

 Kenya:
- Kenya Agricultural Research Institute (KARI)
- Crop Plant Genetic Resources Centre - Genebank of Kenya (GBK)
- The national Museums of Kenya

Ethiopia:
- Ethiopian Agricultural Research Organization (EARO)
- The national herbarium of the University of Addis Ababa
- The Ministry of Agriculture

Budget

36.   The total budget was US$ 2,536, 950, with US$ 972,000 funded by the GEF Trust Fund and in-kind co-funding from: Ethiopia US$ 75,900, Kenya US$ 106,700, Mali US$ 76,050, ICIPE US$ 272,000, IPGRI US$ 295, 800, Kew Gardens US$ 600,000, Natural History Museum, London US$ 100,000, NGOs US$ 29,000. For the PDF-A phase an additional US$ 9,500 in co-financing was used.

The Terminal Evaluation

37.   The project on Conservation of *Gramineae* and Associated Arthropods for Sustainable Agricultural Development in Africa was approved by the GEF on 30 July 2001 and started on 28 September 2001. Although it was terminated in Ethiopia on 31 December 2004 and it was operationally closed in Mali on 31 December 2005 and in Kenya on 30 September 2006, in October 2007 - over a year later - the project was still financially open because of delays in the finalization of outputs.

38.   This terminal evaluation was conducted during the end of October and the beginning of November 2007, over a year, about two years, and three years after the operational closure of the project in Kenya, Mali and Ethiopia, respectively. This delay was at the origin of several constraints and made it very difficult, or impossible, to interview most of the staff of the project, that at the time the evaluation took place had already left the institutions, or was abroad, or moved to other jobs, and anyway was not available.

39.   During the Terminal Evaluation the first two Assistant Coordinators (AC) were not available since they terminated their appointment and were working abroad for other jobs, and the third (last) Assistant Coordinator was available only part of the time, because currently busy with another project, and for instance was not able to accompany the mission during the field visits. The Assistant Coordinator was the key person for the project since in practice the AC played the main role in its management.

40.   Also, the lack of adequate funds for the evaluation limited the time for the mission and the countries / locations to visit. For instance, it was not possible to visit Ethiopia, one of the participating countries being evaluated.

41.   The Evaluation Mission visited the field locations and the agro-ecological zones where the experiments with the technology proposed were conducted: three Districts of Kenya (Suba, Busia, and Machakos) and two of Mali (Mopti and Sikasso).

3. **SCOPE, OBJECTIVE AND METHODS**

Purpose

42.   The objective of this terminal evaluation was to determine the extent to which the project objectives were achieved, or are expected to be achieved, and assess if the project has led to any other positive or negative consequences. The extent and magnitude of possible project impacts to date - if any - was considered, as well as the likelihood of future impacts. The evaluation also assessed project performance and the implementation of planned project activities and planned outputs against actual results.

43.   The evaluation focused on the following main questions:

Has the project*:*

- Documented and assessed the diversity, distribution and relationship of grasses and insects in and around the selected agro-ecosystems? Has this information been effectively disseminated?

- Identified wild grasses that may act as reservoirs of key pest and beneficial insects and those that may protect and promote arthropod diversity? Have the biodiversity losses that could lead to ecosystem instability, such as further loss and pest outbreaks been publicised?

- Developed and promoted community-based conservation interventions for important grasses and associated insects?

- Made 'best practices' for conservation of *Gramineae* and associated insect diversity available and evaluated their adoption?

- Strengthened the capacity and capability of national agricultural research and extension systems and non-governmental organizations in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects?

- Raised public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity?

Evaluation Criteria

44. This terminal evaluation was conducted as an in-depth evaluation using a participatory approach.

The findings of the evaluation are based on the following:

- A desk review of project documents including, but not limited to:
  The Project Document, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF, annual Project Implementation Review reports) and relevant correspondence;
  Technical reports prepared by consultants;
  Terminal report;
  Other related material produced by the project staff or partners; and
  Relevant material published by the project.

- Interviews and e-mail communication with project management and technical support including the institutions involved in the implementation of the project which include: The International Centre of Insect Physiology and Ecology (ICIPE) in Nairobi and Mbita Point; Bioversity International (formerly International Plant Genetic Resource Institute - IPGRI) in Nairobi.   National executing agencies such as: the Ethiopian Institute of Agricultural Research, Addis Ababa, Ethiopia (e-mail communication); the Institute of Rural Economy, Bamako, Mali; the Crop Plant Genetic Resources Centre, Gene Bank of Kenya (GBK) in Nairobi; Kenya Agricultural Research Institute; The National Museums of Kenya.

- Interviews and Telephone interviews with intended users (farmers, associations and institutions) for the project outputs and other stakeholders involved with this project. These interviews were combined with an e-mail questionnaire.

- Interview, e-mail and telephone communication with the UNEP/DGEF project task manager and Fund Management Officer, other relevant staff in UNEP dealing with Biodiversity-related activities, and relevant GEF Secretariat staff.

- Field visits to project staff and sites.

4. **PROJECT PERFORMANCE AND IMPACT**

45.   The project started in 2001, about six years after the original project proposal (before the PDF-A phase) was prepared and submitted to the GEF (Table 1). The time required for the process leading to the approval of the project seems excessive, especially for the research nature and the kind of project. In the case of this project, by the time it was approved, the situation, as a whole and individual / personnel wise had changed, and for instance the original proposers - who were supposed to be deeply involved in the implementation of the project - were busy with different activities and interests. Thus the project started under less than ideal conditions. Table 1 provides the chronology of the main stages of the project.

Table 1. Project Timeline

YEAR	DATE	STAGE
1995		**First Project Proposal submitted to the GEF**
1996	26 March	Revised Project Proposal submitted to the GEF
1997	6 November	Revised Project Proposal submitted to the GEF
1998	October	Started PDF-A
1999	December	Completed PDF-A
2001	30 July	Project Approval by the GEF
	28 September	**Project Inception**
2004	30 September	Expected Project Completion
		First Budget Neutral Extension
	31 December	**Termination of the project in Ethiopia**
2005	30 September	Second Budget Neutral Extension
	31 December	**Operational closure of the project in Mali**
2006	30 September	**Operational Closure of the Project in Kenya**
2007	15 June	Finalized Terminal Report
	30 September	Completed most Outputs

46.   The project was prematurely terminated in Ethiopia, on 31 December 2004 (Table 1; where anyway some activities were conducted, as detailed in the following sub-chapters, and in Tables 2 and 3), because of:

a) several difficulties encountered in the communication between ACs and CCs (the latter also claimed not to have received the necessary supplies needed for the project from the AC);

b) the documentation presented by the EA describing mismanagement of the first CC in Ethiopia, showing financial irregularities and reporting, scientific data actually obtained from other similar experiments;

c) correspondence from EARO was misplaced by the EA, regarding the acceptance of the contract for the second CC (identified by EARO to replace the first CC), and subsequent interruption of communication with EARO.

47.   Surprisingly, a critical decision regarding the nature and structure of the project itself, such as the exclusion of a member country from the project, was taken unilaterally (although there had been contacts among the parties) by the EA. A letter informing the UNEP / DGEF Task Manager of the decision taken was sent by the Director of Research and Partnership of ICIPE on 29 October 2004. Although at the time there had been discussions among the stakeholders about the problems that the project was encountering in Ethiopia, a different management approach and procedure would have seemed appropriate. For instance, a solution could have been devised through the Steering Committee, or a Mid-Term Review could have been organized.

48.   In Mali the project was operationally closed on 31 December 2005 and in Kenya on 30 September 2006.

A. Attainment of objectives and planned results.

49.   The project experienced considerable delays in its execution and most of the activities were not conducted or completed as initially planned; nor were they finalized within the three year lifetime initially foreseen by the project. These were the reasons why in 2004, UNEP project Task Manager suggested that a new logframe, indicators and workplan, and a detailed management structure be established in order to more efficiently finalize the project.

50.   Table 2 refers to the logframe and revised indicators prepared in 2004, and analyzes the extent to which the objectives and results of the project were met in Kenya, Mali and Ethiopia. Two no-cost extensions of the project were then approved and the project had a total duration of five years, until 30 September 2006, but with most of the outputs finalized during June and July 2007, and some are currently still pending (see below, section *C: Achievement of outputs and activities*). The Terminal Report was finalized on 15 June 2007 and the results of the final financial audit have not been delivered, yet.

51.   The outcomes of the project were different in Kenya, Mali and Ethiopia, because of the different situation and developments of the project in each country, as described in other sections of this report. The outcomes were particularly good in Kenya, where many efforts were made to build technical capacity, collect germplasm, document and characterize biodiversity of native grasses and associated insects, conduct field studies and activities (also including vulnerable groups), identify best agricultural practices, and disseminate results. Promising results were obtained, although the project had to

overcome several problems, was delayed, and suffered from a high turnover of staff, also at management level in the EAs. Limited results were obtained in Mali, also because local administrative problems (not under the control of the project) delayed of one year the availability of funds and the beginning of the activities, and climatic conditions, the data for one field season having been compromised by drought. The details for each outcome are provided in Table 2.

Table 2. Achievement of Goal, Objective and Outcomes (with indictors revised in 2004)

Project Goal, Objectives and Outcomes	Indicators	Evaluation Findings
Goal To document diversity and associated insects in different selected agroecosystems and socio-economic surroundings, and their adjacent natural habitats in Ethiopia, Kenya and Mali; to understand the relationships between certain grasses and insects; and to develop and promote the practical application of this knowledge in self-regulatory pest management and sustainable agriculture.	Diversity of *Gramineae* and their associated arthropods in selected agroecosystems (including adjacent natural habitats) and socio-economic surroundings documented.	Diversity of *Gramineae* and their associated arthropods in selected agroecosystems and socio-economic surroundings was observed and documented, although the arthropods were essentially limited to insects and within insects to stemborers. Specimens were not always well preserved and most of them were not deposited in Museums - as planned in the Project Document - or other central collection centres. All the insect specimens are still at field stations, both in Kenya and Mali. All plant specimens in Mali have not been removed from the field stations as well (Mopti and Sikasso). Having them in Museums would be important not only for their proper preservation, but also for convenience and the full availability of the data. In Kenya the evaluation mission asked to see the plant specimens collected for the project, but they could not be located at the Herbarium, National Museums of Kenya (Nairobi). The botanists met at the National Museum in Nairobi did not know where the plant specimens of the project were and one of the botanists who worked more closely on the project had been moved to another location. It is not clear if the specimens were misplaced or lost. Also, the Director of the Herbarium was met, but he was new on the job

		and did not know about the project. There is the risk that large part of the information collected will not be available after the project.
	Self-regulatory pest management and sustainable agricultural practices utilizing diversity of *Gramineae* and associated arthropods developed, applied and evaluated in participating countries.	Self-regulatory pest management and sustainable agricultural practices utilizing diversity of *Gramineae* and associated arthropods were developed, applied and partially evaluated in participating countries. Although the information collected showed a promising potential of the technology identified, it did not allow conclusive results, especially for large scale applications. Limited results were obtained in Mali. In Kenya the promising results obtained need to be validated by further experiments, e.g. to demonstrate the real impact of the grass rows technology on the production of the crop, and identify the agricultural practices and proportion grasses / crop for use on a large scale. In Mali the results were limited because the experiments were conducted only during one year (growing season) and there was a problem because proper control plots were not used. Farmers showed interest, but so far only very limited adoption in both countries. In order to be effectively adopted, the technology should be: (a) completely validated and experimented on normal field scales; (b) integrated, with a holistic approach, in local (specific) farming systems and proper farming practices; and (c) adequately disseminated to local communities to overcome cultural and social barriers (e.g. economic aspects favouring crops that may not be suitable for the conservation of the environment and grass-rows

		technology; traditions in agricultural practices; extended family holdings which determine agricultural choices by the members of the family, although some of them might have different, e.g. modern and environment-oriented views).
Objective To identify and implement conservation and management measures necessary to prevent loss of biodiversity of certain *Gramineae* and their associated insects, and to conserve these valuable genetic resources in and around agroecosystems in Ethiopia, Kenya and Mali for self-regulatory pest management and sustainable agriculture.	Utilization by at least 300 farmers in each participating country of the best practices developed for self-regulatory pest management and sustainable agriculture.	The number of 300 farmers was not attained. Sixty farmers in Kenya and 30 in Mali utilized the best practices identified for self-regulatory pest management and sustainable agriculture. The approach was identified as best practices, but the specific crop, species of wild grasses to use and methodology have to be adapted, fine tuned and validated under local conditions.
	Preservation of key arthropods, grassland flora, and indigenous agricultural management systems that promote self-regulatory pest management and sustainable agriculture.	It is not possible to affirm that to date the project had a meaningful impact, because of its limited implementation of the proposed technology in time (one - two years) and space (few farmers on the global scale). However, the project has sensitised farmers, stakeholders, institutions and policy makers in this regard, established the foundations for further developments, and will likely have an impact in the future. If adopted on a large scale, it will have the desired positive impact on the environment and in particular on the preservation of key arthropods, grassland flora, and indigenous agricultural management systems that promote self-regulatory pest management and sustainable agriculture.
	Agreements with policymakers and linkages with national programs to address further implementation.	The project did not establish formal agreements with policymakers, but it received the interest of technical staff (staff of relevant Ministries and of the institutions involved in the project, both at individual and institutional

		level) and institutions, and it was reported that both technical staff and policy makers showed interest in the project, and mentioned that in future programmes they will consider the best practices identified by the project. Furthermore, the national executing agency of the project in Mali, the Institute of Rural Economy (IER), who was satisfied with the approach and the promising results of the project, is involved in the formulation of the national agricultural policy.
Outcome 1. Diversity, distribution and relationship of grasses and insects in and around selected agroecosystems.	Documentation and dissemination of information, within 3 years.	Information was documented and disseminated in Kenya and to a lesser extent in Mali, through various media throughout the six years, except the databases of grasses and Arthropods to be published, that were not completed. The information produced by the project was disseminated to national governmental and agricultural NGOs, university and technical-college libraries, National Museums of Kenya, Department of Agriculture officers at District and Division levels, extension officers, interested parties, and wider public.
Outcome 2. Wild grasses that may act as reservoirs of key pests and beneficial insects and those that may protect and promote arthropod diversity identified.	Documentation of ecological roles of key grasses and arthropods in and around graminaceous agroecosystems, within two years. Publicizing biodiversity losses that could lead to ecosystem instability, such as further loss and pest outbreaks, within	Wild grasses acting as reservoirs of key pests and beneficial insects and those that may protect and promote arthropod diversity were identified. Biodiversity losses that could lead to ecosystem instability, such as further loss and pest outbreaks, were publicized through popular radio / television programmes, brochures, and

	three years.	field days.
Outcome 3. Complementary conservation of important grasses and associated insects developed and promoted.	Documentation of indigenous conservation activities in at least 3 communities per country, within 6 months.	Indigenous conservation activities were documented in Ethiopia, Kenya and Mali. Interview data from farmers on the indigenous uses of wild grass species showed that most farmers were familiar with a wide range of indigenous grass species, had local names for most of them, and knew of a range of uses for many, the most important of which were roof thatching and foddering.
	Feedback and discussion on novel conservation trials from 3 communities per country, within 2 years.	Discussions of project staff with local communities were held in 2006. The communities expressed their interest in the technology used.
Outcome 4. Best practices and lessons learned on conservation of *Gramineae* and associated insect diversity made available and their adoption evaluated.	Publication and dissemination of guidelines and recommendations from community to national levels, within 3 years.	Guidelines and recommendations on best practices on conservation of *Gramineae* and associated insect diversity were published in 2006. Nevertheless, as previously mentioned, the model was identified as best practices, but the specific crop, species of wild grasses to use and methodology has to be adapted, fine tuned and validated under local conditions. A key for the identification of stem borers of wild grasses of Kenya, and associated parasitoids, was published as a manual in 2007. The adoption of best practices was not evaluated, because premature considering the delay in the implementation of the activities of the project and the preliminary results obtained. As mentioned in the text, since the field experiments with the

		grass-rows technology took place only during one year in Mali (where field trials were conducted during a second year, but data were not obtained because of drought) and two years in Kenya, it is premature to evaluate their adoption. Nevertheless the results obtained were promising.
Outcome 5: Capacity and capability of national agricultural research and extension systems and non-governmental organizations in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects strengthened.	Thirteen scientists trained in grass and arthropod identification in each country, within 2 years. Database of grass germplasm available in a variety of media, at the completion of the project.	Training was conducted in grass and arthropod identification in Mali during 2002, in Ethiopia during 2003 and in Kenya during 2002 and 2003 to collect, prepare and curate *Gramineae* and associated insects. Notions of preliminary identification of insects were also provided. One scientist and six technicians were trained in Kenya; three scientists and 12 technicians in Mali; and one scientist and 15 technicians in Ethiopia. The database of grass germplasm was not finalized (details are provided in the text and in Table 3, Activity 1.7).
Outcome 6. Public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity increased.	A variety of media and programmes used to increase public awareness, over project duration. Input into national and international biodiversity planning sessions, each year. Compilation of an electronic directory of project participants and interested agencies by March 2004.	Some programmes to increase public awareness were produced (e.g. radio and television programmes, brochures, and field days), but not at all levels (e.g. not in schools). Input into national and international biodiversity planning sessions, each year, did not materialize because of lack of time. An electronic directory of project participants was prepared in 2003.

B. Assessment of Sustainability of project outcomes.

52.   Germplasm deposited in national gene banks of Kenya and Mali will be maintained by those institutions and therefore those outputs will be sustainable.

53.   The grass-rows technology is easy to implement and sustainable, utilizing wild grasses that occur naturally in the areas and requiring little input (only labour) from farmers.

54.   The existence itself of the project - and its results - sensitized scientists, extension agents, research and extension institutions, the general public (mainly in Kenya), and policy makers on the importance of the specific conservation and agricultural issues dealt with.

55.   In this sense the outputs produced contributed to awareness and built knowledge and least triggered processes that in the future should orient policy makers and institutions to build in the same direction, and be sustainable.

56.   End users, in this case farmers, showed interest during the project and to some extent adopted the technology of grass-rows proposed, but to be truly sustainable at that level and widely adopted on the territory, continued (and increased) involvement of local research and extension institutions will be necessary, also through a wide scale and capillary process of information and technical support to farmers. The interventions should be conducted on the two fronts: research and extension. On the research front, the technology is very simple and the institutions involved in the project - and possibly others - should continue its validation under local conditions and larger (normal size) fields. This can be done on the land of research institutions at field stations, at practically no cost (as it is already partially done at least at one location in Mali (Mopti)). Particular attention should be given to integrate the grass-rows technology in local farming systems. On the extension front, they should continue and expand the dissemination, and also help to change the attitude of some farmers in regard to projects, i.e. not to rely on continued external help. Only in this way the outcomes of the project will be sustainable an will have an impact on local agriculture.

57.   If the databases on the germplasm of grasses collected, species of grasses identified and deposited in herbaria, and species of associated arthropods their parasitoids, will not be finalised, this could affect negatively the sustainability of the outcomes of the project.

C. Achievement of outputs and activities.

58.   The project produced information and built institutional capacity, particularly in Kenya and Mali, that will allow better informed decision making and represent the basis for future actions for the preservation of biodiversity in agro-ecosystems and for sustainable agriculture, with special emphasis on smallholders and poor farmers.

59.   The approach used for the conservation of *Gramineae* and associated Arthropods proved to be suitable for, and compatible with, most of local agricultural and social

conditions and practices, but the original design of the project was overoptimistic and later the focus of the project had to be restricted to insects, and within insects to stemborers, in order to achieve outputs within project lifetime (also including extensions) and funds.

60.   For that reason, although the methodologies used were sound for (a) assessing the diversity, distribution and relationship between grasses and insects in and around the selected agro-ecosystems; and (b) identifying acceptable best practices and promoting community-based conservation interventions for important grasses and associated insects, the scope of the project had to be reduced.

61.   Also, the project faced many problems that limited its performance and prevented the achievement of all the outputs it initially planned to obtain. It experienced considerable delay in its implementation and the originally planned outputs had to be revised in 2004 in order to have a realistically achievable plan during the time left. Even then, the project needed two extensions (of one year each).

62.   The main reasons for the delays were: (a) a late start-up of the project; (b) an overoptimistic project design, that was initially planned (in the initial project proposal) to last for five years and then adapted to a three year duration in the Project Document (which was then extended to a five year duration anyway); (c) imperfect project design, which did not have a detailed management structure and an adequate and clear budget; (d) high turnover in project management (three ACs, scientist in charge at in Bioversity International, and other staff of EA) and in project staff in general (e.g. more than half of the staff trained by the project in Ethiopia left during implementation); (e) limited involvement in the project by the Project Coordinator, who did not participate in the day-to-day management of the project, but delegated it to assistants; (f) drought during the year 2002, especially in Ethiopia and Mali; and (g) technical reasons in Mali, where bank transfer problems delayed receiving the funds for the activities to conduct and activities started one year later.

63.   The project achieved most of the revised outputs planned in 2004 and most of which were finalized during June and July 2007, although some important outputs were not (some are currently still pending, e.g. the databases, see below). The Terminal Report was finalized on 15 June 2007 and the final financial audit has not been delivered, yet. Table 3 shows the details of the achievements for each activity.

64.   The quality of the outputs produced was in general good, although some of the initial reports prepared by consultants could have been better (in terms of language, presentation, and content; and should have included the title of the project and the credit to the funding Agency) and the collections of insects, plants and germplasm better curated.

65.   The excellent quality of the scientific publications and the extension booklets produced in Kenya will facilitate the dissemination of the good practices identified. Besides useful publications produced by the project for practitioners on the identification of native wild grasses, also publications for specialists on the taxonomy of local insects were completed, and they will represent the foundation for future studies in agriculture, entomology, biodiversity, ecology and other related fields. The indications for the management of wild *Gramineae* - the grass-rows technology - that

were obtained from the studies conducted by the project have the potential for application in other countries and locations and for scaling up. For instance, the promising results obtained so far in Mali were recently discussed by IER with the International Sorghum and Millet Programme (INSORMIL) and a similar approach is planned to be used in the near future for further studies by INSORMIL.

66. However, scaling up and widespread adoption of the best practices will be possible only after the studies will be: (a) completed and validated, considering the initial stage of the studies, which have been conducted in the field for only one to two years; and (b) then validated under local conditions in other countries.

67. The main outputs not finalized are: (a) the databases for germplasm collected and available in genebanks; (b) the databases for the wild grasses identified; (c) the databases for the insects associated with the wild grasses – phytophagous and their parasitoids (pests and beneficial insects, respectively); (d) depositing insect specimens in museum collections and expand collections; (e) depositing herbarium specimens in museum collections and expand collections; and (f) the computerized identification key for both vegetative and reproductive stages of key grasses of Ethiopia, Kenya and Mali, that was prepared on CD-ROM, but it appears to not be generally compatible with most operating systems. Apparently, specific attention to this aspect was not given during its preparation, nor adequate tests were conducted at the end of the process.   Also, to date the CD-ROM was not distributed, because material protected by copyright was used to prepare the key (pictures of plants), and the authorization for the use of the pictures of plants has not yet been received from the copyright owners. Paper copies and on-line versions (as per logframe) of the identification key were not produced.

68. Regarding the finalization of the databases, the involvement in the project of the second EA (Bioversity International, formerly IPGRI) appeared insufficient, in particular after the first two years of project life. Among other activities, Bioversity International was in charge of the production of the above mentioned databases. Also, reports were not produced by Bioversity International and the issue of the databases has been pending for years. When the evaluation mission met the two EAs, both of them could not say exactly why the databases were not finalized, each attributing the responsibility to the other agency. However, it appears that it would take less than a day to finalize these databases, once a server has been identified and the data (currently with ICIPE) are available.   This was combined with a lack of communication and follow-up from ICIPE's side, that had the overall responsibility for the execution and management of the project.

69. Apparently the communication with partners from ICIPE, regarding all project matters, stopped in September 2006, at the (formal) operational closure of the project, and the activities (including reporting) in Mali stopped in December 2005.

70. Copyrights were established by ICIPE on publications produced by the project (i.e. books and websites) and they should be transferred to the competent institutions of national governments (i.e. KARI, GBK, and IER).

Table 3. Status of activities (with indictors revised in 2004)

Activities	Indicators	Evaluation Findings
1.1. Systematically sample in selected agroecosystems to assess diversity of tall grasses and associated borer pest insects and their parasitoids and compare the diversity with areas where intensification and mechanisation of agriculture has not occurred.	All sampled grasses, and majority of sampled insects identified by September 2004.	Specimens of grasses were identified. In Kenya 46 species of grasses were identified and deposited in the East Africa Herbarium in Nairobi (National Museum of Kenya); 14 species of grasses were identified in Ethiopia and deposited in herbaria in Addis Ababa and at the Melkassa Agricultural Research Centre, Nazareth; 27 species of grasses were identified in Mali., but left at the IER field stations in Mopti and Sikasso, since there is not a national herbarium in Bamako. Insect specimens collected in Kenya were identified at least at Genus level but the main focus was restricted on stem borers only. Sixty-eight species of stemborers were identified (33 species of Coleoptera, 10 of Diptera, and 25 of Lepidoptera). Fifty-three species of parasitoids were identified.
	By March 2005, grass and insect species in intensive agricultural sites and uncultivated sites compared and analysed.	Grass and insect species - of stemborers - in agricultural sites and uncultivated sites were compared and analysed.
1.2. Classify all grasses and insects collected and deposit them in herbaria or museums.	Herbarium and museum holdings of each country expanded with new grass and insect collections on a continuous basis throughout the first two years and completed by December 2004.	There was limited impact on Museum holdings. Specimens were usually properly mounted, but not always well preserved and most of them were not deposited, or clearly located in Museums, or other national collections. There is therefore, the risk that a large part of the information collected will not be available (damaged, destroyed by insects or moulds, lost, or not easily reachable) after the project.

		Also, insect collection at one of the two sites (Mopti) in Mali was badly infested and damaged by insects, and most specimens were destroyed.
1.3. Collect grass germplasm for deposition into national genebanks.	By December 2004, gene banks of each country will hold new collections of wild and landrace grass germplasm.	Grass germplasm was collected and deposited into national genebanks in Ethiopia, Kenya and Mali. However, the specimens in Mali (at URG) were not properly preserved (not permanent ink on the envelopes, being erased by condensation and manipulation), nor organized in storage (all envelopes mixed in large plastic bags) and the list of specimens not properly finalized (hand-written and the collection date missing for all 2003 collections).
1.4. Strengthen capacity in each country to collect, curate, and identify *Gramineae* and associated insects.	By Sep 2002, capacity of three scientists from each country strengthened in national germplasm programs for collecting wild *Gramineae* and associated insects.	Training of scientists / technical staff was conducted in Mali during 2002, in Ethiopia during 2003 and in Kenya during 2002 and 2003 to collect, prepare and curate *Gramineae* and associated insects. Notions of preliminary identification of insects were also provided. One scientist and six technicians were trained in Kenya; three scientists and 12 technicians in Mali; and one scientist and 15 technicians in Ethiopia.
	These scientists / technical staff will train at least 10 others in their countries by December 2003.	For convenience, scientist and technicians were trained together during the initial training (the number of staff trained is reported above).
1.5. Capture targeted data from existing collections of *Gramineae* and associated insect specimens in Africa and abroad as needed to support the goals.	By December 2004, a report on temporal and spatial changes in *Gramineae* and associated arthropods compiled and made available to users.	Very limited baseline data on *Gramineae* and associated insect specimens were available and it was not possible to prepare a report on temporal and spatial changes in *Gramineae* and associated arthropods.

1.5.1. Analyze collection dates and locality data for changes over time and space.		Same as 1.5. above
1.6. Develop computerized identification tools for both vegetative and reproductive stages of key grasses in paper copy, on CD-ROM and on-line on Internet for use by scientists in national programmes, building on the foundation currently existing at Kew Gardens in the UK and in regional floras.	By September 2004, identification tools available in paper copy, CD-ROM and on Internet for grasses in both vegetative and reproductive stages.	A computerized identification key for both vegetative and reproductive stages of key grasses of Ethiopia, Kenya and Mali was prepared on CD-ROM. However, it appears to not be generally compatible with most operating systems. Apparently, specific attention to this aspect was not given during its preparation, nor adequate tests were conducted at the end of the process. Also, to date the CD-ROM was not distributed, because material protected by copyright was used to prepare the key (pictures of plants), and the authorization for the use of the pictures of plants has not yet been received by the copyright owners. On-line versions of the identification key were not produced. A primer for identification of grasses in Kenya was produced.
1.6.1. Facilitate access by national programs and non-specialists to these user-friendly guides to African grasses.		The above mentioned primer was distributed.
1.7. Develop a computerized database of key *Gramineae*-associated insects on CD-ROM and on Internet, as well as in paper copies. The database will	Update and exchange of information on the database of *Gramineae* associated insects in use by September 2004.	A computerized database of key *Gramineae*-associated insects on Internet was started in the early stages of the project, but it was not finalized. Some of the staff involved in entering the data left Bioversity International and somehow this issue does not seem to have been adequately followed-up by Bioversity International and ICIPE

build on the existing GPPIS database at FAO, which will continue to maintain and disseminate the information.		during years. Only part of the data were entered in the database. Also, at present it is not yet clear who should be in the future the host of the website. According to some stakeholders it should be ICIPE and according to others the GEF. CD-ROM and paper copies were not produced. The databases were not completed. Also both EAs (ICIPE and Bioversity International) confirmed that only a very preliminary and incomplete version of the website was prepared and they do not know who will be its permanent host (Bioversity International does not have the resources to host it and thinks that ICIPE should complete and host it, whilst ICIPE thinks that it should be on the GEF site)
2.1. Analyze data sampled, to identify key pest and beneficial insects that are associated with both cultivated and wild tall grasses in selected agro-ecosystems, and their ecological roles.	Harmful and beneficial insects that shared cultivated and wild host plants (grasses) identified and documented in targeted areas by December 2004.	Harmful and beneficial insects that shared cultivated and wild host plants (grasses) were identified and documented in targeted areas in Ethiopia, Kenya and Mali. The results were published in 2006 and 2007. Studies on their ecological roles were limited to stem borers.
2.2. Through targeted laboratory rearing experiments, identify insects that are specific to wild tall grasses, but are alternate hosts or prey of natural enemies that are important in controlling crop pests.	Information on self-regulatory pest control and sustainable agricultural practices using *Gramineae* and associated insects made available to national programmes by March 2005.	Information on self-regulatory pest control and sustainable agricultural practices using *Gramineae* and associated insects was made available to national programmes of the Ministries of Agriculture in Kenya and Mali during 2006 and 2007. In laboratory experiments, the pupal parasitoid *Pediobius homoeus* (*Eulophidae*), natural enemy of the

		crop pest *Chilo partellus,* parasitized and completed its development on the wild grass-specific stem borer *Peoriinae* cf. gen. nov. sp. nov. Therefore this *Peoriinae* stem borer may be a suitable alternate hosts for *P. homoeus* in nature.
2.3. Through targeted field experiments, assess the potential of insects on wild *Gramineae* to become pests of cultivated crops, or to become endangered, if the wild grass hosts are eliminated.	Information on potential new pest problems and loss of biodiversity in wild grasslands identified by June 2005. Disseminate this information to relevant national agencies by June 2005.	Two species belonging to *Cerambycidae* and *Curculionidae* in the laboratory showed the potential to become pests of cultivated cereals and could represent important elements of an early warning system. However, time and funds did not allow to conduct field experiments to confirm these indications, also because of the difficulties encountered by the project and the high turnover of personnel.
3.1. Baseline information on community-based in situ conservation activities gathered.	Information base of models of in-situ *Gramineae* / insect conservation practices expanded and available as brochures and / or booklets by December 2003.	Information on community-based in situ conservation activities was gathered, but not published.
3.2. Communities in each country consulted for input on how they see integrating new agro-biodiversity practices into their farming system.	Three communities surveyed willing to test new agro biodiversity practices pinpointed in each country by December 2003.	In Kenya Participatory Rural Appraisals (PRA) surveys were conducted in three Districts (Suba, Busia and Machakos), involving a total of 312 farmers. In Ethiopia PRA were initiated for selected groups of peasant communities but had no follow-up and no full report was submitted. In Mali PRA approach was used in interviews to farmers during farmer field days, involving a total of 90 farmers.
	Three communities willing to test new agro-biodiversity methods pinpointed in	Three communities were identified in Kenya and two in Mali for conducting experiments on new agro-biodiversity methods, and conducted the trials for

	each country within nine months.	the project.
3.3. Communities test and provide feedback on adoption of new practices, to act as case studies of barriers / potentials to conserving agro-biodiversity within farming systems, and to provide on-site, participatory demonstration to other stakeholders.	Three case studies from each country on community adoption of new agro biodiversity practices documented by September 2005.	The feedback from communities was limited and in general a proactive attitude was not observed. Particularly low interest (although some farmers said to be interested) was shown in practice for the project especially by the farmers in the cotton growing area of Southern Mali, as it seemed not to be compatible with the practices used for cultivation of cotton (with a lot of chemical inputs), and could not compete with the cultivation of cotton in that relatively rich area. (because of the low economic value of other crops)/ In south Mali social and extended family pressure seem to have further discouraged the alternative practices proposed by the project, for the fear that these would withhold manpower from other higher income generating activities / crops.
3.4. Educational material on new agro-biodiversity techniques, along with feedback from communities, discussed and disseminated on a broad scale.	At least 100 community leaders and extension specialists conveyed to demonstration sites in each country within three years.	Done within 5 years.
	Brochures or booklets on new agro-biodiverse techniques prepared and disseminated to 100 community leaders and extension specialists in each country within two years.	Brochures and booklets on new agro-biodiverse techniques were prepared after 6 years and their distribution is currently in progress.
	At least 10 community discussions with feedback on new technological ideas documented in each country within two years.	Some community discussions were held. The use of the grass-rows technology was discussed also during farmer field days. No other feed-back was received. The grass-rows technology has been and is currently still being disseminated.

4.1. Collate information from Outcomes 2 and 3, which incorporates baseline activities with new technologies and farmers' responses to them, to synthesize guidelines for best practices and lessons learned.	A report on guidelines and recommendations on practices and lessons learned in each country available in paper copy and on the internet and disseminated to at least 30 government and scientific institutions, NGOs per community by June 2005.	A report on guidelines and recommendations on general practices and lessons learned in each country was prepared and disseminated in paper copy, but not on the internet. However, as explained in table 2, outcome 4 these practices still need to be validated.
4.2. Guidelines and recommendations for best practices published and disseminated to communities and up to highest national levels.	Guidelines and recommendations disseminated as 4 different brochures to 1,000 farmers and to at least 200 extension specialists, scientists, NGOs, and national policy makers in each country by Jun 2005 to September 2005.	Guidelines (one brochure) and recommendations were published in 2007 and are being disseminated.
4.3. Adoption of best practices evaluated, including socio-economic surveys.	One baseline survey initiated in each country site during the first project year completed by December 2003, and socio-economic evaluation of adoption initiated and completed by June 2005. Each country conduct survey of uptake taken yearly from years 2-5 after end of project.	The field studies were only conducted during year four and five of project execution, and it was not possible to evaluate adoption, yet. To be conducted, as per Project Document.
5.1. Conduct short-term training courses to enhance taxonomic expertise of	Two training courses on collection, identification and use of *Gramineae* and insects	Training of scientists / technical staff was conducted in Mali during 2002, in Ethiopia during 2003 and in Kenya during 2002 and 2003 to collect,

national scientists in collection, identification and use of *Gramineae* and insects in environmental monitoring and sustainable agriculture systems.	conducted for three scientists in each country during the first year, who will then train 10 representatives of national agencies in each country completed by December 2003.	prepare and curate *Gramineae* and associated insects. Notions of preliminary identification of insects were also provided. One scientist and six technicians were trained in Kenya; three scientists and 12 technicians in Mali; and one scientist and 15 technicians in Ethiopia. Further training delivered by the scientists trained was not conducted because technicians were trained during the initial training together with the scientists) (*see also Activity 1.4*).
5.2. Develop a database of *Gramineae* germplasm available in the target countries on paper, CD-ROM and on Internet, to enhance exchange of information on African *Gramineae* germplasm, and to enhance access by many different users through a diversity of media.	Provide in paper copy, on CD-ROM, and on internet a current database on *Gramineae* germplasm in the target countries to all stakeholders by December 2004.	The database of grass germplasm was not finalized (details are provided in the text and under Activity 1.7).
6.1. Undertake a focused public awareness campaign, from the field to highest government levels, using the following vehicles: • Brochures on the importance of *Gramineae* and insects;	Four brochures developed on the importance of grasses and their associated insects in each country by March 2005.	One brochure was produced for the participating countries in English, French and four local languages of Mali (i.e. Bambara, Senufo, Dogon and Peulh).

• Other media coverage, including a website attached to the ICIPE institutional site;		A website for the project was created.
• Local radio programmes on the benefits to agriculture of conserving *Gramineae* and insect diversity, and on best practices to achieve conservation;	One radio programme per country during 2004 and 2005.	Broadcast media coverage was conducted in Kenya only, but with broad coverage in the country on grass-rows technology, and grass uses and conservation. In Kenya radio and television programmes were produced. Citizen Radio and Television produced radio and television programmes in 2005 and 2006, and during 2006 Kenya Broadcasting Corporation (KBC) in television news and a documentary.
• Farmers' field days and exhibitions in each country;		On average one to two farmer's field days were held in the participating districts in Kenya and Mali.
• Community workshops in each country.	Three community workshops, farmer's field days and exhibitions in each country by September 2005.	Workshops were not done because of lack of time. Field days were conducted (one per year).
• One focused field session per country for biodiversity planners and key personnel at the national level responsible for setting policy and planning direction, with opportunity for roundtable discussion on incorporating research results into biodiversity planning.	One focused field session per country for biodiversity planners and key personnel at the national level responsible for setting policy and planning direction by March 2005.	A seminar presentation was made on the topic of the project as a side event during the renaming ceremony of the Mbita field station of ICIPE. Senior government officials (Minister of Agriculture, Minister of National Development) and representatives of the Donor community, universities and the scientific community attended the seminar.
• Targeted input from ICIPE and IPGRI staff into international processes, through participation in the Subsidiary Body on Scientific and	Input by ICIPE and Bioversity International in national and international biodiversity planning sessions during 2004-2005.	Activity not conducted. The project was overambitious and did not have enough time and resources for all activities. Also the high turnover of personnel (also amongst its management) complicated its implementation.

Technical Activities meetings alternating with the Conference of Parties to the Convention on Biological Diversity meetings. The techniques will also be featured in the discussions surrounding reducing the use of persistent organic pesticides, into which ICIPE has input.		
6.2. Networking of project collaborators and other interested parties facilitated by an electronic directory of scientists working on diversity of *Gramineae* and associated insects.	An electronic directory of individuals working on diversity of *Gramineae* and associated arthropods, with their e-mail addresses, produced and made available on internet by March 2004.	The directory of individuals working on diversity of *Gramineae* and associated arthropods was prepared.
6.3. Monitor and evaluate progress of project.	Timely and satisfactory supervision and reporting.	Conducted to some extent.

D. Catalytic role.

71.   In spite of the difficulties and shortcomings in Mali, it has to be acknowledged that in this Country, the project was capable to generate catalytic effects on sustainable and environmentally friendly agricultural practices for the conservation of *Gramineae*. In particular, studies similar to those conducted for this GEF project were initiated in a programme on rice in Sikasso area, using wild grasses (*Paspalum* sp.), in the context of biological control strategies against rice pests (e.g. *Orseolia oryzivora*, Diptera: Cecydomyiidae).

72.   In Mali there are further examples of catalytic outcomes that suggest an increased likelihood of sustainability, such as the fact that farmers realized that a grass species

(*Andropogon gayanus*) is also effective against soil erosion and this will increase its protection and use by farmers. Farmers showed similar interest in Kenya for alternative uses of wild grasses, in addition to the impact of the proposed technology on crop yields.

E. Assessment of Monitoring and Evaluation Systems.

73.   The Monitoring and Evaluation (M&E) System in the Project Document was rather weak and apparently GEF requirements were different at the time this project was approved. During the first three years quarterly reports were produced. A revised system was established in 2004 and it facilitated monitoring results and tracking the progress made towards achieving project objectives. In addition to the quarterly reports, the format of which was revised, also annual reviews were planned, a new logframe was prepared, and specific management, supervision and reporting responsibilities were assigned. Funding for M&E appeared not to be sufficient, both for EA and IA, especially during the second half of the project, which also had a two year extension.

74.   After 2004 the quality of quarterly reports improved, although they were sometimes incomplete in some sections (*see also Section J. Implementation Approach, and K. UNEP Supervision and Backstopping*) and not very detailed.

75.   Long-term monitoring (2 - 5 years after the end of the project, *Activity 4.3*) is envisaged in the Project Document and it will be important for the national institutions to evaluate adoption of the proposed grass-rows technology, and allow planning and responding to local needs.

F. Preparation and Readiness

76.   The project document was too ambitious, and although the objectives and components of the project were clear, and the overall design was scientifically sound, it was difficult to complete the project within the three years timeframe. This was due to the nature of the project, that was regional, with pilot activities, largely experimental which therefore needed to wait for the research results before the technology identified could be adopted.

77.   Also, the distance amongst the countries involved was probably not adequately taken into account in the project design, and this unnecessarily complicated supervision and coordination, as well as increased the costs, therefore reducing its cost-effectiveness.

78.   In addition, the project had an indefinite management structure and other shortcomings (see *J. Implementation Approach,* below), underwent many changes in project management (staff), and faced difficulties that further delayed its implementation. This is why the focus of the project had to be narrowed down and, even so, only some of the outputs were achieved at the end of it.

79.   The project also started late and several activities were delayed as explained in section C.

G. Country ownership / driveness

80.   The project was relevant to national development and environmental priorities and was effective in communicating biodiversity information. This will allow informed decisions and the preparation of sound environmental and agricultural national agendas in the future. The governments actively participated in the implementation of the project through KARI, IER and EARO. The commitment appeared to be high at country level in regard to conservation matters and to their inclusion in environmentally friendly and sustainable agricultural practices.

H. Stakeholder participation / public awareness

81.   The level of involvement of the relevant stakeholders in the implementation of the project could have been better. Farmers were consulted, but it appears that the degree of information-sharing and consultation among implementing partners was rather limited. Regular project meetings among stakeholders were not held.

82.   The capacities of the institutions and counterparts mentioned in the Project Document appeared to be suitable to the implementation of the project. Nevertheless some of them were never involved (e.g. IITA), while others were only marginally involved (e.g. Bioversity International, referred to as EA in the Project Document, but actually only kind of sub-contracted by ICIPE at the initial stages of the project to conduct some training and produce databases) and was not involved in other aspects of the implementation of the project. In this sense, and in the absence of regular meetings among stakeholders, and of a regular two / multiple-way flow of information, the stakeholders did not really feel fully involved and did not fully benefit from the project beyond the initial capacity building stage.

83.   Dissemination of the information produced by the project was good in Kenya, where it was addressed to various kinds of public, and conducted to some extent also in Mali, where brochures were produced in French and leaflets in four local languages.

84.   The project took into account vulnerable groups, e.g. women, by involving them in the agricultural activities and other activities that were particularly suitable to them, e.g. weavers groups organised in two Districts of Kenya, Suba and Busia. Unfortunately, after an enthusiastic interest of farmers, their creation of co-operatives in Suba (17 members) and Busia (21 members) Districts, and the successful initial training conducted by an NGO (Ziwa Creations, from Kisumu), the NGO then had to interrupt its activities because of credits problems. Two companies from Kisumu (another NGO, Green Development Group, and a private business, Hyacinth Crafts) were then contracted to resume the weaver activities, but they did not perform according to the agreement with the farmers. They did not routinely collect, sell and return to the farmers part of the profit made from the articrafts sold.

85.   Although encouraged by the project, women participation at the farmers' meetings could have been higher, but this was not really under the control of the project, as it was operating under the local culture and social habits. These social / cultural aspects, however, should have been specifically addressed at the project design stage.

86.   Appropriate stakeholders were identified for the project, but communication problems arose between EA and EARO (second Assistant Coordinator with first and second Country Coordinators in Ethiopia) and various administrative shortcomings (e.g. administration arrangements, type of contract established with staff - personal and not through EARO; the mail misplaced regarding the supposed resignations of the CC) led to the impossibility of solving the problems and the premature termination of activities in one country (Ethiopia, as explained above).

I. Financial Planning

87.   Financial controls appeared to be effective, but suffered from the lack of clarity and transparency of project budget (see *J. Implementation Approach*, below). Careful financial planning and strict adherence (as far as possible) to the planned budgets did not appear to have been used, as described in the following chapter (*J. Implementation Approach*, below). A clear and transparent budget would have allowed a truly effective management. For instance, besides facilitating the implementation of the activities, this would have also allowed the IA to realize not only if expenses met or exceeded planned budgets, but also if the salaries of the staff (independently established by the EA) were adequate and if in general the activities received adequate resources too.

88.   Also, the procedure of the IA for verification/approval of expenses prior to the purchase - eventually above a certain ceiling - should have prevented undue expenditures rather than having to reject equipment already purchased (as it happened to this project for USD 11,908 for motorbikes - not foreseen in the project design - that for some reason are in the inventory of the project in the Terminal Report, and should be removed from the final inventory). The IA realized about that purchase only after having received the last inventory, some time after the purchase was completed.

89.   According to the yearly audits conducted from 2002 to 2006, proper books of accounts were kept and the financial statements are correct.

90.   Final audit not received, yet, as of November 2007.

91.   The breakdown of co-financing is provided in Annex III and the breakdown of final actual costs is provided in Annex IV.

J. Implementation approach

92.   The Project Document foresaw an implementation mechanism through two EAs, ICIPE and Bioversity International, but the project was then actually implemented by ICIPE alone.

93.   The project design was overambitious and with several major flaws and shortcomings, such as the lack of a management structure, which did not clearly identify the key positions and roles for the implementation of the project and did not include any

Terms of Reference (ToR). As explained in the following paragraph, the Project Document did not present a clear and adequate budget for implementation. Besides the missing substance, the format and editing of the Project Document was also poor, without page numbering, nor a table of contents. The Project Document was difficult to use as a working document.

94. The budget presented in the Project Document was unclear and also cryptic (e.g. using numbers and letters, instead of spelling out activities). Also, (a) it did not identify separate budget lines, nor make adequate provisions for key activities of the project, such as for international travel for coordination and supervision; (b) no specific budget was allocated for monitoring and evaluation activities; (c) it did not identify the salary of key individuals, such as the Country Coordinators (that instead were split and charged to various budget lines that were supposed to fund specific personnel and activities); and (d) in general budget lines were not specific, including the budget line for the salary of the Project Coordinator (PC), that was actually used for the Assistant Coordinator (AC) (and taking funds from several budget lines of activities). In all quarterly reports since 1 October 2003 the salary of the PC and AC were missing, although both names were reported, whilst all salaries of national staff were reported.

95. In the original budget the salary of the PC was identified in a specific budget line, but since the second year (2002) to the end of the project (2006 inclusive) it was split to other budget lines, so it was not possible to identify it. No reason was provided for this. This led to a lot of confusion and inefficiencies in the management. Adequate allocations to specific activities / budget lines would have allowed the availability of adequate funds for specific activities, such as for travel required for coordination and supervision, and would have likely prevented discoveries of problems by the management when it was too late - e.g. in Mali, where the field data collected were unsuitable for meaningful analysis and comparison. All this coupled with an easy management of the budget, using funds from other budget lines as needed (and subsequent need for budget revisions), reduced the funds available for other activities that had actually been planned.

96. Also the costs for the Terminal Evaluation were not identified in the budget, and limited funds were available in the end for the evaluation, posing several constraints in terms of time and travel. Since the inception of the project it was known that the Terminal Evaluation was compulsory, and adequate provisions should have been made for it.

97. In general, the project suffered from a high turnover of staff, that led to loss of knowledge, ownership, capacity previously built by the project, delays in implementation and difficulties - at management level - arising from gaps / transition periods, different management styles, lack of full historical knowledge of the facts and people involved in the project, field sites and previous events, personal relationships, higher costs for travel and repeated visits of sites; ways of dealing with existing problems; and other similar inconveniences.

98. A detailed management structure for the project was finally established in 2004, which, compatibly with the existing situation, identified three key positions for the management of the project: (1) the Project Coordinator (a staff member of the EA and not paid by the project), having the overall responsibility of project management and

for reporting (the only position foreseen in the Project Document for the overall management of the project and therefore originally supposed to take care also of day-to-day management); (2) the Assistant Coordinator (AC), in practice managing day-to-day activities and assuring regional coordination; and (3) three Country Coordinators (CC), one in each country, for the implementation of the activities at country level.

99.   In 2004 a Steering Committee was also established for the project, with a chair, 10 members and three observers (*see Annex V for details*). This would have been very useful for the implementation of the project, also in consideration of the serious difficulties encountered in the implementation (in particular in Ethiopia), but the Steering Committee never met and this tool was not used.

100.   The management structure outlined in 2004 was never really implemented and a certain ambiguity in responsibilities and roles in project management persisted until the end of the project. The Steering Committee was not implemented, and in general the management arrangements remained as before. Also the last PIR (2007) still mentioned a weak management structure of the project. For instance, the Project Coordinator acted rather as an advisor for general issues, especially scientific, and related to major problems encountered; but was not deeply involved in the management of the project itself.

101.   Three Assistant Coordinators followed one upon the other during the implementation of the project: Hannah Nadel - from November 2001 to July 2002; Alberto Barrion - from January 2003 to July 2004; and Robert Copeland - from November 2004 to October 2006 (since at the time of the Evaluation Mission the previous AC had moved to other parts of the world, it was not possible to ascertain the exact reasons for their resignations).

102.   The changes in the individuals working as Assistant Coordinators, who left the position during the execution of the project, besides causing delays in the implementation, led to a lack of historic memory, and weak ownership and governance that persisted until the end of the project. In general the attention of management was given mainly to scientific issues, rather than to administrative, communication and coordination matters.

103.   The funds available for travel apparently did not allow the AC foreign travel to the participating countries as needed for supervision and coordination purposes.

104.   It also appears that the IA Task Manager did not have sufficient financial resources for the travel required for the overall supervision of the project (as she was able to travel only once: to visit Ethiopia at the time there were the above mentioned problems in that country - and never went to Mali, during the five year duration of the project).

105.   The degree of partnership in implementation arrangements appeared to be limited.

K. UNEP Supervision and Backstopping

106.   UNEP / DGEF provided useful guidance and backstopping, especially with the suggestion of the management structure and revised monitoring and evaluation system

in 2004, although this would have been better if originally incorporated in the Project Document, or at least established at the beginning of the project. The preparation of minutes of meetings and in particular of these key meetings would have been desirable. Closer involvement in field and implementation activities in general, and at least one visit to Mali would have also been desirable.

107. Remarks on the shortcomings in the budget were described in the previous chapter (*J. Implementation approach*).

108. Quarterly reports were sometimes incomplete (e.g. the salaries of international staff, the amount of contracts with ELCI and all budget codes are missing in all quarterly reports since 1 October 2003 until the end of the project; parts of progress of implementation Tables are missing; sometimes some annexes were missing too).

109. The third quarterly report for the year 2002 was not provided to the evaluation mission, neither in hard copy, nor in electronic form.

110. Considering the serious problems that were encountered by the project, a Mid-Term Evaluation - often conducted also in the absence of problems - would have been desirable.

5. CONCLUSIONS AND RATINGS

111. Overall the project was a positive exercise, and generated useful outputs, in spite of all the difficulties and problems it encountered. The approach was original and environmentally sound. In general social and cultural aspects (e.g. agricultural practices) were adequately considered, although some aspects - for instance the involvement of women - could have been specifically addressed in the design of this project. Local agricultural practices were taken into account by the project and integrated in the technology proposed.

112. Outputs were of particularly good quality in Kenya, although the results of the experiments conducted on the grass-rows technology cannot be considered conclusive. That technology favours natural biological control, is easy to implement, practically at no cost, is environmentally friendly and sustainable. In Mali results of the tests with the grass-rows technology were only partial, but, interestingly, relevant catalytic effects were generated. At any rate, this should be considered a pilot exercise, also requiring validation of the results.

113. The project faced several problems that limited its performance. Overall communication, coordination and supervision by EA during implementation showed deficiencies, especially in communicating with Ethiopia, where this contributed (although local responsibilities were identified as well) to the premature termination of the project (some results were initially obtained) and to the poor results of the grass-rows experiments in Mali.

114. The quality of the technical reports initially produced (during 2003 - 2004) by consultants and NGOs could have been better, as they failed to have a date and did not

give credit to the funding institution supporting the project (no mention at all of GEF or any institution, or - normally - referring to the project as *ICIPE project*, or *ICIPE/IPGRI project*, or *ELCI project*).

115.   It is surprising that a critical decision regarding the nature and structure of the project itself, such as the exclusion of a member country from the project, was taken unilaterally by the EA. In this regard, a letter informing the UNEP / DGEF Task Manager of the decision taken by the EA was sent by the Director of Research and Partnership of ICIPE on 29 October 2004.

116.   Although at the time there had been discussions among some of the stakeholders about the problems that the project was encountering in Ethiopia, a different management approach and procedure would have seemed appropriate.

117.   The project design had several shortcomings, some of which serious.   It was overambitious, especially considering the regional nature and the large research component, and - during the implementation - the planned studies on Arthropods had to be restricted to insects and further to stem borers only. The management structure was not defined in the Project Document, and the implementation arrangements weak. The project was actually delegated to an Assistant (Regional) Coordinator, who also assured day-to-day management, with supervision and coordination of the activities in the three participating countries.

118.   Also, the arrangements made at the beginning of the project with the partner organizations were not suitable to assure continued participation of project staff throughout implementation and sustainability of the outputs.   The project largely relied on temporary staff. Turnover of staff was high in all the participating countries and the situation was particularly serious in Ethiopia, where during the implementation more than half of the staff trained by the project quitted the job shortly after having received the training. Appropriate administrative arrangements (e.g. type of contracts and adequate salaries as all staff had been hired specifically for this project) and institutional agreements at the beginning of the project could have avoided, or at least limited to a large extent these problems.

119.   In Kenya three Assistant Coordinators, who one after the other took- over the project's overall management.   These important changes in project management inevitably affected its implementation and delayed activities.

120.   At the time the third Assistant Coordinator was hired, another reorientation of the project was conducted and a narrower focus for the project was identified, in order to achieve at least part of the objectives of the project in the project time left.

121.   In spite of the two no-cost extensions to the project (two years), that was conducted over a total period of five years instead of the three years as initially planned in the Project Document, not all the objectives were achieved.

122.   The involvement of Bioversity International (formerly known as IPGRI) was limited, while in the Project Document it appeared as one of the two main EAs. Bioversity International did not produce any report throughout the duration of the project (throughout the five years). Also, the person in charge of the project at Bioversity

International changed three times, besides other staff, and involvement apparently faded with time. In the revised organigram for the project prepared in 2004, Bioversity International disappeared from project's management altogether. As a result of which the preparation of databases, that were one of the major contributions that Bioversity International was supposed to provide to the project, was not finalized.

123. IITA, mentioned in the Project Document among the participating institutions, was never involved in the project.

124. The choice of the EA seems to have been appropriate, the institution having adequate capacity, resources and experience and presence in the country. However, human resources, largely represented by temporary or *ad hoc* staff, hired specifically for this project, showed many limitations, the most serious being the lack of continuity in the position. Many among the staff quitted the job during the implementation, including those occupying key positions such as the Assistant Coordinator, who were actually implementing the activities of the project on a day-to-day basis. The project had three of such Assistant Coordinators (AC) during its life.

125. Personnel matters were also not always implemented properly by EA (for instance in Ethiopia the contract with the first CC was established on an individual basis, not through EARO; - and in the case of the AC different types of contracts were established during the project for the same job i.e. visiting scientist as well as AC, and TORs did not have clearly defined responsibilities). This caused serious problems to this project and eventually contributed to the exclusion of one country (Ethiopia) from the project. It is recommended that the procedures to be used for recruitment by the EA be discussed and agreed upon with the IA in advance, before execution. IA should not rely exclusively on the execution by the EA.

126. The EAs could have identified field sites that were easier to reach and to supervise, especially by the Country Coordinators (particularly in Mali), who visited the field sites few times per year. The distance and difficulty of access probably contributed to discourage more frequent trips.

127. The Country Coordinator in Mali had many other responsibilities, assignments and travel in addition to this project, while a person exclusively assigned to the project would have been desirable. Probably such a person was not available at IER, especially in terms of English language skills required for reporting and other communication, being a Francophone country.

128. Finally, the project did not make adequate provisions for the Terminal Evaluation although it was known to be mandatory since inception of the project. This limited the time available for the travel and the evaluation in general, and created various difficulties to the mission. In the future it should be made sure that a specific budget line is reserved for this purpose.

Table 4. Overall ratings

Criterion	Evaluator's Summary Comments	Evaluator's Rating	EOU Rating
A. Attainment of project objectives and results (overall rating) **Sub criteria (below)**	The objective and results were partially attained (as described in Table 1 and descriptive above). Also, one of the participating countries (Ethiopia) was excluded from the project during implementation.	MS	**EOU agrees with the evaluator**
A. 1. Effectiveness	The objective and results were partially attained.	MS	
A. 2. Relevance	The project was highly relevant to the focal area / strategies of the operational programme, and to the priorities if the countries involved.	HS	
A. 3. Efficiency	Shortcomings in project design, problems encountered during implementation and delays reduced the efficiency of the project. Also, the involvement of far away countries complicated supervision, increased costs, and reduced cost-effectiveness.	MU	
B. Sustainability of Project outcomes (overall rating) **Sub criteria (below)**	Part of the outcomes are final and sustainable. Other outcomes being still preliminary and needing validation / adoption, do not allow fully sustainability at present.	ML	**EOU agrees with the consultant**
B. 1. Financial	Experiments on larger size plots could be completed by the institutions involved without a particular need for external funding.	ML	
B. 2. Socio Political	Continued actions of extension services and dissemination will be necessary.	ML	
B. 3. Institutional framework and governance	Informed decisions will be possible. Institutions showed interest in the technology proposed by the project and are planning to use the same approach in future projects.	ML	
B. 4. Ecological	Risks for sustainability are intensive agriculture, inappropriate agricultural practices, and lack of integration of the grass-rows technology in compatible farming systems.	ML	
C. Achievement of outputs and activities	Outputs and activities were partly achieved (as detailed in the description above).	MS	**EOU agrees with the consultant**
D. Monitoring and Evaluation (overall rating) **Sub criteria (below)**		MS	**The report describes too many flaws/weaknesses in the monitoring procedures and EOU noticed lack of strong communication capacity amongst EA and IA with Mali during the evaluation (MU)**

Criterion	Evaluator's Summary Comments	Evaluator's Rating	EOU Rating
D. 1. M&E Design	The M&E system was rather weak, but it was improved in 2004 and allowed better monitoring.	MS	
D. 2. M&E Plan Implementation (use for adaptive management)	The M&E system was improved in 2004, but it was not sufficient implement the necessary corrective measures decided to improve project management.	MS	
D. 3. Budgeting and Funding for M&E activities	Budgeting and funding M&E activities was not adequate, especially considering the two-year extension of the project.	MS	
E. Catalytic Role	Promising results were obtained in this regard (especially in Mali).	MS	EOU agrees with consultant
F. Preparation and readiness	Project overambitious, late start-up.	MU	EOU agrees with consultant
G. Country ownership / drivenness	The project was relevant to national development and environmental agendas. The countries were committed and participated in the execution of the project (KARI for Kenya and IER for Mali).	MS	EOU agrees with consultant
H. Stakeholders involvement	Stakeholder participation could have been better and better coordinated.	MU	EOU agrees with consultant
I. Financial planning	Suffered from poorly designed budget, complicated by the turnover of staff and extensions of the project, with changes in workplans. Controls could be improved.	MU	EOU agrees with consultant
J. Implementation approach	The implementation mechanism outlined in the Project Document was partly followed. Several serious shortcomings were observed in the Project Document. Steering Committee later established, but never implemented.	U	EOU agrees with consultant
K. UNEP Supervision and backstopping	The first Task Manager (2001 and 2002) did not note on time and adequately amend serious problems in project execution. Appropriate guidance was provided by the second Task Manager (2003 to date).	MS	EOU agrees with consultant
OVERALL RATING		MS	Moderately Unsatisfactory

6. LESSONS LEARNED

129.   In order for a project of this sort to succeed, a combination of skills is needed. Apart from the specific scientific skills, excellent management and administration skills are also essential. Knowledge of the region, and preferably work experience in the countries involved are also needed. Including the Terms of Reference for the key staff in the Project Document, facilitates the start-up of the project and guarantees the success of the implementation of the project. This is an important lesson for the future.

130.   Another important lesson from this project, that may be useful in other contexts and particularly critical for research work, arises from the dramatic loss of trained staff during its implementation. This not only affected the implementation of the project, but also had a very negative impact on the institutional capacity building and on the sustainability of project outcomes. In order to preserve the institutional capacity built,

in the future, the staff of the project should as far as possible be permanent personnel seconded from the Executing Agency, possibly governmental. In this way the capacity built will remain with the institution, which will thus be able to continue the activities.

131. Pilot projects requiring field experimental work and dealing with non-validated studies, like in the case of this project, should preferably be conducted in one country first. This would facilitate management and supervision, and contain costs. If multiple countries are involved in a project of this kind, costs for supervision and management will necessarily be high. In this project this contributed (in combination with the in-country mismanagement by the first CC in Ethiopia and other factors) to the exclusion of one country (Ethiopia) and the lack of meaningful field data for another (Mali). Different habitats for conducting the studies on the grass-rows technology could have been identified within the same country (e.g. Kenya offers a variety of habitats that would have been sufficient at this stage) and then the technology could have been exported after validation.

132. This project had two budget-neutral extensions. These extensions, that should be exceptions and not the rule, unfortunately happen relatively frequently in projects, and usually lead to serious problems for the implementation of the projects concerned. Although they may help minimize the possible risk of the project not being able to achieve its intended outcomes, no-cost extensions imply diverting resources originally allocated for different purposes and therefore reducing the efficiency of projects. In order to avoid this, projects should not be too ambitious, but focussed on specific objectives, realistically achievable within the project lifetime. This would avoid recurrent - inefficient - exercises of no-cost extensions to manage to achieve at least part of the planned outputs for a project.

133. When planning the duration of a project, the fact that the nature of research work in this field does not allow for rapid results to be obtained should also be considered. In addition, studies in agriculture are dependent on field seasons (often meaning years, if there is only one growing season per year in that part of the world), particular climate conditions, including the risk of unexpected climate situations such as a drought, may require additional time. Therefore at the project design stage, when deciding the duration of the project, it is preferable to foresee an additional year (set) of data, than risking to have an unsuccessful project (that luckily was not the case for this project) because the time was too short and sufficient data were not obtained.

7. RECOMMENDATIONS

134. This project was completed and therefore these recommendations of the Terminal Evaluation do not refer to actions to be taken for this specific project - except for some pending outputs and one activity foreseen in the Project Document (*Activity 4.3*), but are suggestions - as the previous chapter Lessons Learned - for future similar projects.

135. In spite of the difficulties faced by this specific project and persons involved, the type of project and the approach used showed to be of high interest and effective for the conservation of biodiversity, also contributing to develop sustainable and innovative

agricultural practices. The high value of these types of projects should be fully appreciated and encouraged in the future.

136.   It would also be desirable that after the end of the project, individual responsibility is maintained within UNEP to make sure that pending outputs and activities are completed, including the activities that the Project Document foresaw to be completed after the end of the project (e.g. *Activity 4.3*). Also, UNEP - GEF should promote actions and projects to build on the results obtained by this project and enhance this approach in future programmes.

137.   The initial proposal for the project was submitted to the GEF in 1995 and the project was approved by the GEF on 30 July 2001 (Table 1). As previously discussed (Chapter 4), a faster process for approval or rejection of projects is therefore recommended to the GEF Secretariat, as the project may be outdated and the people no longer working in the proposing offices or organizations, and difficulties will most certainly emerge during implementation.

138.   The procedure used by the IA should allow for the verification and approval of expenses prior to the purchase - eventually above a certain ceiling, in order to prevent undue expenditures rather than having to reject equipment already purchased (e.g. as it happened to this project for USD 11,908 for motorbikes - *see Chapter 4.I Financial planning*). During the implementation the EA was free to use the funds and verification by the IA took place only after purchases.

139.   The IA should not only verify that expenses do not exceed the planned budgets, but also that funds are used for the activities planned and the arrangements by the EA are adequate, e.g. that salaries are adequate and attractive to prevent staff quitting the job during implementation.

140.   Since the operational closure of the project - in September 2006 - all the non-expendable items of equipment still with the EAs (ICIPE and IPGRI - in the inventory of the project) should have been transferred to local governmental institutions. It is recommended that such items are transferred (donated) by UNEP to the local institutions involved in the project (e.g. KARI, GBK and Museums of Kenya).

141.   All the specimens of insects and plants collected by the project - still at field stations in Kenya and Mali - should be urgently deposited by ICIPE and IER, to the care of a responsible scientist / curator, in national Museums and central collection stations (e.g. National Museums of Kenya and IER) and officially documented / traceable, both in Kenya and Mali, as stipulated by the Project Document.

142.   The germplasm collections in Mali (URG of IER) should be properly managed: permanent ink should urgently be used to replace the current writings of the accession numbers, dates, plant species and other passport information on the envelopes for preservation of seeds (currently being erased by condensation and manipulation); and properly stored (currently all envelopes are mixed in large plastic bags). The list of specimens should be finalized, in particular the information should be entered in an electronic database (currently hand-written) and the collection date should be mentioned for all 2003 collections.

143.   It would be very important for the project and its sustainability, that essential outputs, such as the databases for germplasm collected and deposited in genebanks, and the databases for the wild grasses identified and insects associated, be finalized by ICIPE and Bioversity International as soon as possible. Considering the advanced stage of the work, it should take less than a day to do this.

144.   The authorization of the copyright holder (FAO) for the use of the pictures contained in the computerized identification key prepared by the project for grasses of Ethiopia, Kenya and Mali should be obtained by ICIPE as soon as possible. Also, ICIPE should make sure that the CD-ROM is compatible and works with most operating systems.

145.   All copyrights established on the materials produced by the project (e.g. ICIPE on publications) should be urgently transferred to national (beneficiary) governments (e.g. KARI, GBK and IER).

146.   The institutions that participated in the project should: (a) continue the sensitization and dissemination of the grass-rows technology to farmers; and (b) complete the experiments validating the technology using normal size plots (fields) and integrating the technology in suitable farming systems.

147.   It would be desirable to involve the Faculty of Agriculture of the universities of the country considered, and its students, in this kind of projects in the future. The extent and exact modalities should be identified on a case by case basis. This would be of mutual interest, and would benefit to the implementation of the project and also contribute to the dissemination of results and their sustainability.

148.   Finally, it is recommended that Terminal Evaluations are carried-out slightly before the end of the project. This would be important for future actions / programmes, and also to be able to conduct the evaluation under good conditions, considering that often also key project staff is non-permanent and may not be available for interviews and to provide information after the end of the project.

ANNEXES

ANNEX I: TERMS OF REFERENCE

Terminal Evaluation of the UNEP GEF project
"Conservation of *Gramineae* and Associated Arthropods for Sustainable Agricultural Development in Africa"
GF/1030-01-05

1. PROJECT BACKGROUND AND OVERVIEW

Project rationale

Sustainable grassland resource management can be fostered primarily by the utilization in rural farms of wild grasses and associated insects in indigenous or novel techniques that control pests or otherwise increase crop yields. The valuing of these species-level resources for agriculture and increased human welfare can set the stage for extension to conservation of grassland ecosystems by virtue of grassland potential for harbouring additional useful species and as outright *in situ* sources for proven beneficial species and races. Grassland conservation can further be promoted through increased awareness among the public and national planners about the importance of their native diversity and through guidelines on best practices and lessons learned for conservation and utilization of native grasses and insects. The project, to the extent that it identifies best practices, seemed to be inherently sustainable- farmers were looking for ways to reduce the costs of inputs. It was important to consider how these practices add to or reduce existing workloads, and complement or compete with existing, culturally valued practices. The project did not aim to introduce any new practice or plants with which farming communities are not aware of. Selection of any such practice was through participatory approaches.

The overall goal of the project was stated as: '*to document diversity of Gramineae and associated insects in different selected agro-ecosystems and socio-economic surroundings, and their adjacent natural habitats in Ethiopia, Kenya and Mali; to understand the relationships between certain grasses and insects; and to develop and promote the practical application of this knowledge in self-regulatory pest management and sustainable agriculture*.'

The main objectives were stated as:

1. To identify and implement conservation and management measures necessary to prevent loss of biodiversity of certain *Gramineae* and their associated insects, and

2. To conserve these valuable genetic resources in and around agro-ecosystems in Ethiopia, Kenya and Mali for self-regulatory pest management and sustainable agriculture.

The expected outcomes from this project included:
1. Diversity, distribution and relationship of grasses and insects in and around selected agro-ecosystems assessed;
2. Wild grasses that may act as reservoirs of key pest and beneficial insects and those that may protect and promote arthropod diversity identified;

3. Complementary conservation of important grasses and associated insects developed and promoted;
4. Best practices and lessons learned on conservation of *Gramineae* and associated insect diversity made available and their adoption evaluated;
5. Capacity and capability of national agricultural research and extension systems and non-governmental organizations in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects strengthened.
6. Public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity increased.

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 International Centre of Insect Physiology and Ecology (ICIPE) based in Kenya, was the Executing agency of the project at regional level and provided regional coordination and implementation support to the national Executing agencies: Ethiopian Agricultural Research Organization (EARO*;* The Institute of Rural Economy, Ministry of Agriculture, Mali; *The* National Crop Plant Genetic Resources Centre, Genebank of Kenya (GBK), Kenya Agricultural Research Institute.

IPGRI (now known as *Biovirsity*) was to oversee and implement the germplasm conservation component. Farmers were to test and demonstrate new approaches. The Environment Liaison Centre International (ELCI), an NGO that collaborates with ICIPE on biodiversity conservation issues implemented the farmer surveys in the three countries. National Institutions in the participating countries wished to build their capacities through training, and through the identified and catalogued reference collections resulting from the proposed surveys that were housed in their institutions. Apart from the documentation activity, it was agreed that a team of social scientists needed to be assembled from the national programs and collaborating agencies to advise on the farm- and community-level extension work.

The national executing agencies for each country were:

Mali
- The Institute of Rural Economy

Kenya
- Crop Plant Genetic Resources Centre - Genebank of Kenya (GBK)
- Kenya Agricultural Research Institute
- The national Museums of Kenya

Ethiopia
- The Institute of Biodiversity Conservation and Research

- The national herbarium of the University of Addis Ababa
- The Ministry of Agriculture

However, the project activities in Ethiopia were stopped on 26 Aug 2005 due to lack of scientific integrity and quality of data and poor fund management

<u>Project Activities</u>
The project duration was initially 48 months starting October 2001, which was later revised and project activities were completed at 30 September 2006, making a total duration of 60 months. However all expected project outputs were delivered by July 2007

The project had twenty components:
1) Systematically sample in selected agro-ecosystems to assess diversity of tall grass and associated boring pest insects and their parasitoids and compare the diversity with areas where intensification and mechanization of agriculture has not occurred;
2) Identify all grasses and insects collected and deposit them in herbaria or museums;
3) Collect grass germplasm for deposition into national gene banks;
4) Strengthen capacity in each country to collect, curate and identify *Gramineae* and associated insects;
5) Capture targeted data from existing collections of *Gramineae* and associated insect specimens in Africa and abroad as needed to support the goals;
6) Analyze collection dates and locality data for changes over time and space;
7) Develop computerized identification tools for both vegetative and reproductive stages of key grasses in paper copy, on CD-ROM and online on the internet for use by scientists in national programs, building on the foundation currently existing at Kew Gardens in the UK and in regional floras;
8) Facilitate access by national programs and non-specialists to these user-friendly guides to African grasses;
9) Develop a computerized database of key *Gramineae*-associated insects on CD-ROM and internet, as well as in paper copies. The database will build on the existing GPPIS database at FAO, which will continue to maintain and disseminate information;
10) Analyze sampling data to identify key pest and beneficial insects that are associated with both cultivated and wild tall grasses in selected agro-systems, and their ecological roles;
11) Through targeted laboratory rearing experiments, identify insects that are specific to wild tall grasses, but are alternate hosts or prey of natural enemies that are important in controlling crop pests;
12) Through targeted field experiments, assess the potential of insects on wild *Gramineae* to become pests of cultivated crops, or to become endangered, if the wild grass hosts are eliminated;
13) Baseline information on community-based in situ conservation activities gathered;
14) Communities in each country consulted for input on how they see integrating new agro-biodiverse practices into their farming system;
15) Communities test and provide feedback on adoption of new practices, to act as case studies or barriers/potentials to conserving agrobiodiversity within

farming systems, and to provide on-site participatory demonstration to other stakeholders;

16) Educational material on new agro-biodiverse techniques, along with feedback from communities, discussed and disseminated on a broad scale;

17) Collate information from outcomes 2 and 3 which incorporates baseline activities with new technologies and farmers' responses to them, to synthesize guidelines for best practices and lessons learned;

18) Guidelines and recommendations for best practices published and disseminated to communities and up to highest national levels;

19) Conduct short-term training courses to enhance taxonomic expertise of national scientists in collection, identification and use of *Gramineae* and insects in environmental monitoring and sustainable agriculture systems;

20) Develop a database of *Gramineae* germplasm available in the target countries on paper, CD-ROM and on Internet, to enhance exchange of information on African *Gramineae* germplasm and to enhance access by many different users through a diversity of media.

Budget

The total budget was US$ 2,536, 950, with US$ 972,000 funded by the GEF Trust Fund and in-kind co-funding from; Ethiopia US$ 75,900, Kenya US$ 106,700, Mali US$ 76,050, ICIPE US$ 272,000, IPGRI US$ 295, 800, Kew Gardens US$ 600,000, Natural History Museum, London US$ 100,000, NGOs US$ 29,000. For the PDF-A phase an additional US$ 9,500 in co-financing was used.

TERMS OF REFERENCE FOR THE EVALUATION

1. Objective and Scope of the Evaluation

The objective of this terminal evaluation is to determine the extent to which the project objectives were achieved, or are expected to be achieved, and assess if the project has led to any other positive or negative consequences. If possible the extent and magnitude of any project impacts to date will be documented and the likelihood of future impacts will be determined. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results. The evaluation will focus on the following main questions:

Has the project*:*

- Documented and assessed the diversity, distribution and relationship of grasses and insects in and around the selected agro-ecosystems? Has this information been effectively disseminated?

- Identified wild grasses that may act as reservoirs of key pest and beneficial insects and those that may protect and promote arthropod diversity? Have the biodiversity losses that could lead to ecosystem instability, such as further loss and pest outbreaks been publicised?

- Developed and promoted community-based conservation interventions for important grasses and associated insects?

- Made 'best practices' for conservation of *Gramineae* and associated insect diversity available and evaluated their adoption?

- Strengthened the capacity and capability of national agricultural research and extension systems and non-governmental organizations in monitoring, protecting, and promoting biodiversity of *Gramineae* and associated insects?

- Raised public awareness at all levels (including school children, farmers, and the wider scientific community) of the importance and values of biodiversity?

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:

- A desk review of project documents including, but not limited to:
  The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
  Notes from the Steering Group meetings.
  Other related material produced by the project staff or partners.

Relevant material published by the project or available via the web.

- Interviews with project management and technical support including the institutions involved in the implementation of the project which include: The International Centre of Insect Physiology and Ecology (ICIPE) with its headquarters in Nairobi and its field station in Addis Ababa. The International Plant Genetic Resource Institute (IPGRI) with its Africa headquarters based in Nairobi. National executing agencies such as: The Institute of Biodiversity Conservation and Research, Addis Ababa, Ethiopia; The National Herbarium at the University of Addis Ababa, Ethiopia; The Ministry of Agriculture, Addis Ababa, Ethiopia; The Institute of Rural Economy, Bamako, Mali; Crop Plant Genetic Resources Centre, Genebank of Kenya (GBK); Kenya Agricultural Research Institute; The National Museums of Kenya (see Annex 6 for list of contact names and details);

- Interviews and Telephone interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries and international bodies. The Consultant shall determine whether to seek additional information and opinions from representatives of donor agencies and other organisations. As appropriate, these interviews could be combined with an email questionnaire.

- Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP dealing with Biodiversity-related activities as necessary. The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.

- Field visits to project staff and sites

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 judgements about project performance.

3. Project Evaluation Parameters
The success of project implementation will be rated on a scale from 'highly unsatisfactory' to 'highly satisfactory'. In particular the evaluation shall **assess and rate** the project with respect to the eleven categories defined below:[1]

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[1] However, the views and comments expressed by the evaluator need not be restricted to these items.

A. Attainment of objectives and planned results:

1. *Effectiveness:* Evaluate how, and to what extent, the stated project objectives have been met, taking into account the "achievement indicators". The analysis of outcomes achieved should include, *inter alia*, an assessment of the extent to which the project has directly or indirectly assisted policy- and decision-makers to apply information supplied by this project in their land resource management In particular:
    ▪ Evaluate the immediate impact of the project on national conservation and management measures necessary to prevent loss of biodiversity of certain *Gramineae* and their associated insects as valuable genetic resources in and around agro-ecosystems in Ethiopia, Kenya and Mali for self-regulatory pest management and sustainable agriculture
    ▪ As far as possible, also assess the potential longer-term impacts 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 from the *Gramineae* project at the national and international scales?

2. *Relevance*: In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies and country priorities? Ascertain the nature and significance of the contribution of the project outcomes to the CBD and the wider portfolio of the GEF.

3. *Efficiency*: Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost-effectiveness? Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Did the project build on earlier initiatives, did it make effective use of available scientific and / or technical information. Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

B. Assessment of Sustainability of project outcomes:

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, e.g. stronger institutional capacities or better informed decision-making. 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. In this case, sustainability will be linked to the continued use and influence of scientific models and scientific findings, produced by the project.

Four aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, and ecological (if applicable) 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 any required financial resources will be available to sustain the project outcomes/benefits 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 was 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? While responding to these questions consider if the required systems for accountability and transparency and the required technical know-how are in place.

- *Ecological.* Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes. For example, construction of dam in a protected area could inundate a sizable area and thereby neutralizing the biodiversity related gains made by the project or, a newly established pulp mill might jeopardise the viability of nearby protected forest areas by increasing logging pressures; or a vector control intervention may be made less effective by changes in climate and consequent alterations to the incidence and distribution of malarial mosquitoes.

C. 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 a) assessing the diversity, distribution and relationship between grasses and insects in and around the selected agro-ecosystems b) identifying acceptable 'best practices and promoting community-based conservation interventions for important grasses and associated insects

- Assess to what extent the project outputs produced have the weight of scientific authority / credibility, and usability necessary to raise public awareness and encourage widespread adoption of such best practices.

D. Catalytic role:

The terminal evaluation will also describe any catalytic or replication effect of the project. 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). Specifically:

- Do the recommendations for management of graminaea coming from the country studies have the potential for application in other countries and locations?

If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out.

E. Assessment of Monitoring and Evaluation Systems:
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 Terminal Evaluation will assess whether the project met the minimum requirements for 'project design of M&E' and 'the application of the Project M&E plan' (see minimum requirements 1&2 in Annex 4). GEF projects must budget adequately for execution of the M&E plan, and provide adequate resources during implementation of the M&E plan. Project managers are also expected to use the information generated by the M&E system during project implementation to adapt and improve the project.

- **M&E design.** Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators (see Annex 4) and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified
- **M&E plan implementation.** A Terminal Evaluation should verify that: an M&E system was in place and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period (perhaps through use of a logframe or similar); annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings; that the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs; and that projects had an M&E system in place with proper training for parties responsible for M&E activities.
- **Budgeting and Funding for M&E activities.** The terminal evaluation should determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.
- **Long-term Monitoring.** Is long-term monitoring envisaged as an outcome of the project? If so, comment specifically on the relevance of such monitoring systems to sustaining project outcomes and how the monitoring effort will be sustained.

F. Preparation and Readiness

Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place?

G. Country ownership / driveness

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 providing and communicating biodiversity information that catalyzed action in participating countries to improve decisions relating to the conservation and management of the focal ecosystem in each country.
- Assess the level of country commitment to the generation and use of biodiversity indicators for decision-making during and after the project, including in regional and international fora.

H. Stakeholder participation / public awareness

Did the project involve the relevant stakeholders through information sharing, consultation and by seeking their participation in project's design, implementation, and monitoring and evaluation? For example, did the project implement appropriate outreach and public awareness campaigns? Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the design, implementation and evaluation of project activities? Were perspectives of those that would be affected by decisions, those that could affect the outcomes and those that could contribute information or other resources to the process taken into account while taking decisions? Were the relevant vulnerable groups and the powerful, the supporters and the opponents, of the processes properly involved? Specifically the evaluation will:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders in each participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- 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.

I. 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 IA and EA).
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.
- The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNEP/DGEF Fund Management Officer of the project (table attached in Annex 1 Co-financing and leveraged resources).

J. 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: Steering Group; (2) day to day project management in each of the country executing agencies and UNEP

K. UNEP Supervision and Backstopping

- 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.

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. <u>Evaluation report format and review procedures</u>

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 provide information on when the evaluation took place, the places visited, who was involved and be presented in a

way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in section 3 of this TOR. ***The ratings will be presented in the format of a table*** with brief justifications based on the findings of the main analysis.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. The evaluation report shall be written in English, be of no more than 50 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 evaluation aspects (A - F above).

v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project 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, based on established good practices that have the potential for wider application and use. Lessons may also be derived from problems and mistakes. The context in which lessons may be applied should be clearly specified, and lessons should always state or imply some prescriptive action. A lesson should be written such that experiences derived from the project could be applied in other projects or at portfolio level;

vii) **Recommendations** suggesting *actionable* proposals for improvement of the current project. In general, Terminal Evaluations are likely to have very few (perhaps two or three) actionable recommendations.

Prior to each recommendation, the issue(s) or problem(s) to be addressed by the recommendation should be clearly stated.

A high quality recommendation is an actionable proposal that is:
1. Feasible to implement within the timeframe and resources available
2. Commensurate with the available capacities of project team and partners
3. Specific in terms of who would do what and when
4. Contains results-based language (i.e. a measurable performance target)
5. Includes a trade-off analysis, when its implementation may require utilizing significant resources that would otherwise be used for other project purposes.

viii) **Annexes** include Terms of Reference, list of interviewees, documents reviewed, brief summary of the expertise of the evaluator / evaluation team, a

summary of co-finance information etc. Dissident views or management responses to the evaluation findings may later be appended in an annex.

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 and provides them to the evaluators for their consideration in preparing the final version of the report.

All UNEP GEF Evaluation Reports are subject to quality assessments by UNEP EOU. These incorporate GEF Office of Evaluation quality assessment criteria and are used as a tool for providing structured feedback to the evaluator (see Annex 3).

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) 7623387
> Fax: (254-20) 7623158
> Email: segbedzi.norgbey@unep.org

> With a copy to:

> Shafqat Kakakhel, Officer-in-Charge
> C/O Carmen Tavera
> UNEP/Division of GEF Coordination
> P.O. Box 30552-00100
> Nairobi, Kenya
> Tel: + 254-20-7624153
> Fax: + 254-20-7624041/4042
> Email: carmen.tavera@unep.org

> Marieta Sakalian
> UNEP/DGEF Programme Management /Liaison Officer, Biodiversity
> FAO Headquarters
> TCAP Unit , D708
> Viale Delle Terme di Caracalla
> 00153 Rome
> Italy

Tel: +39 06 5705 5969
E-mail 1: Marieta.Sakalian@unep.org
E-mail 2: Marieta.Sakalian@fao.org

Anna Tengberg
UNEP/GEF SPO Biodiversity (acting)
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.tenberg@unep.org

The final evaluation report will be printed in hard copy and published on the Evaluation and Oversight Unit's web-site www.unep.org/eou. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website. In addition the final Evaluation report will disseminated to: The relevant GEF Focal points, Relevant Government representatives, UNEP DGEF Professional Staff, The project's Executing Agency and Technical Staff. The full list of intended recipients is attached in Annex 5.

6. <u>Resources and schedule of the evaluation</u>
This terminal evaluation will be undertaken by an international evaluator contracted by the Evaluation and Oversight Unit, UNEP. The contract for the evaluator will begin on 5th of October 2007 and end on 31 December 2007 (25 days spread over 3 months). After an initial telephone briefing with EOU and UNEP/GEF, the evaluator will travel to Kenya and Mali (14 days of travel and 5 days desk study). The evaluator will submit a draft report no later than 19th of November 2007 to 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. Comments to the final draft report will be sent to the consultant by 4 December 2007 after which, the consultant will submit the final report no later than 31 December 2007.

In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluator 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 agronomy or plant biology. The consultant should have the following minimum qualifications: (i) experience in entomology; (ii) experience with management and implementation of multi-country projects and in particular with targeted research projects in developing countries; (iii) experience with project evaluation. Knowledge of UNEP programmes and GEF activities is desirable. Good understanding of French and <u>fluency in oral and written English is a must.</u>

7. <u>Schedule Of Payment</u>

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 **<u>NOT</u>** inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

<u>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.</u>

CONTACT LIST FOR ALL PROJECT MAIN STAKEHOLDERS

Organization	Name	Phone number	E-mail address
ICIPE	Dr. Ian Gordon	+254 20 8561309	**igordon@icipe.org**
Bioversity International, Sub-Saharan Africa United Nations Avenue, Gigiri PO Box 30677 00100 Nairobi Kenya	Dr. Mikkel Grum, Senior Scientist	+254 20 7224505	m.grum@cgiar.org
Ethiopia Ethiopian Agricultural Research Organization (EARO) Nazareth/Melkassa Research Center	Mr. Difabachew Belay (Project coordinator before the project closed)	Tel. +251 2 112186	difabachewbelay@yahoo.com
Mali Scientifique des cultures irriguées Institut D'Economie Rurale B.P. 258 Rue Mohamed V, Bamako	Mme DIARISSO Niamoye YARO Coordinator	+223 2 22 26 06 / 23 19 05	niamoye.yaro@ier.ml
Kenya KARI, Kakamega Kitale	Dr. Francis Muyekho Centre Director	+ 254 734 766684	fmuyekho@yahoo.com

ANNEX II: LIST OF PERSONS MET

UNEP - DGEF Nairobi
Carmen Tavera, Division of GEF Coordination
Takehiro Nakamura, Division of GEF Coordination
Marieta Sakalian, project Task Manager
Sandeep Bhambra, project Fund Manager (FMO)

UNEP Nairobi
Segbedzy Norgbey, Director EOU
Cristina Battaglino, EOU
Michael Spilsbury, EOU

KENYA
Ian Gordon, Chair of the Steering Committee of the project, Head of Environmental Health
        Division, ICIPE Nairobi
Zeyaur Khan, Regional Project Coordinator, ICIPE Mbita Point
Robert Copeland, Assistant Regional Project Coordinator, ICIPE Mbita Point
Jimmy Pittchar, Consultant in Social Sciences for the project, ICIPE Mbita Point
Francis Muyekho, Country Coordinator for the project in Kenya, KARI, Kakamega
Silos Ouko, Project technician, ICIPE Mbita Point
Mikkel Grum, Project Coordinator for germplasm component of the project (2003),
        Bioversity International, Nairobi
Josephine Osea, Bioversity International, Nairobi
Dionysius Kiambi, Project Coordinator for germplasm component of the project (2002),
        formerly Bioversity International (now ICRISAT), Nairobi
Geoffrey Mwachala, Director of the Herbarium, National Museums of Kenya, Nairobi
David Okebiro, Botanist, Herbarium of National Museums of Kenya
Zachary Mathamia, Director, National Gene Bank of Kenya, Nairobi
Peterson Wambugu, Scientist, National Gene Bank of Kenya, Nairobi
Augusta Abate, Assistant FAO Representative (the FAO Representative was abroad), Nairobi
Michael Odera, FAO Biodiversity Coordinator, Nairobi

MALI
Nyamoye Diarisso, Country Coordinator for the project in Mali, Institute of Rural Economy
        (IER), Bamako
Marc Wajnsztok, Director of UNDP Services, Bamako
Bino Teme, General Director of IER, Bamako
Amadou Sidibé, Head of the Genetic Resources Unit (URG) of IER, Bamako
Brahima Dembelé, Scientist, Genetic Resources Unit (URG) of IER, Bamako
Karim Traore, Scientific Coordinator for rainfed crops, IER Bamako
Bourema Dembelé, Scientific Director of IER, Weed Specialist, IER Bamako
Ibrahima N'Diaye, Scientific Coordinator for forest and fisheries resources, IER Bamako
Amaga Kodio, Fisheries Programme Leader, IER Mopti
Kabirou N'Diaye, Agronomist, IER Bamako
Modibo Haidara, General Director of the National Centre of Scientific Research and
        Technology (CNRST), Bamako

Dontigui Samaké, CNRST Bamako
Lassine Diarra, Ecologue, IER Bamako
Amadou Kodio, Local Coordinator for the project, Director of the Regional IER Centre in
        Mopti
Boubacra Sangaré, principal project technician, IER Mopti
Odiaba Samaké, Head of Farming Systems, IER Mopti
Abdoulaye Hamadoun, Local Coordinator for the project, Director of the Regional IER
        Centre in Sikasso
Pefoungo Konaté, project Research Assistant, Agronomist IER Sikasso
Haronna Yossi, Forest Resources Progamme Leader, Sikasso

Farmers:
Philip Mbai, project farmer in Machakos, Kenya
Benson Nzoka, project farmer in Machakos, Kenya
Clement Akuloba, , project farmer in Busia, Kenya
Wilson Samba, Assistant Chief of Sublocation and project farmer in Busia, Kenya
Benedict Kusinye, project farmer in Busia, Kenya
Daniel Agenda, project farmer in Gwassi, Kenya
Daniel Oppiolore, project farmer in Gwassi, Kenya
Clement Nyamita, project farmer in Gwassi, Kenya
Joice Akelo, project farmer in Gwassi, Kenya
Gusmane Guindo, Chief of the Tougumé village, Mali
Allaye Guindo project farmer in Tougumé, Mali
Isyaka Guindo project farmer in Tougumé, Mali
Issauf Ballo, project farmer in Fencolo (Sikasso), Mali
Abdoulaye Koné, project farmer in Fencolo (Sikasso), Mali
Seybou Zoné, project farmer in Fencolo (Sikasso), Mali
Ouman Traoré, project farmer in Fencolo (Sikasso), Mali
Diakalia Ballo, project farmer in Fencolo (Sikasso), Mali
Adama Sanogo, project farmer in Zaragoulou (Sikasso), Mali
Tidiani Sanogo, project farmer in Zaragoulou (Sikasso), Mali
Aly Traoré, project farmer in Zaragoulou (Sikasso), Mali
Allassane Traoré, project farmer in Zaragoulou (Sikasso), Mali
Siaka Djounthé, project farmer in Zaragoulou (Sikasso), Mali
Nouhoum Djanthé, project farmer in Zaragoulou (Sikasso), Mali

ANNEX III: CO-FINANCING

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:**	September 2001	**To:**	September 2006		(Requested extension up September 2006)		
Reporting Period *(to be done annually)*:	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
National:								
Ethiopia/EARO	0			75,900	75,900	50,600	Support to project development (Steering Committee participation, technical inputs to development of project methodologies, development of full proposal); build national planning team; field studies and local stakeholder consultation focusing on site selection.	

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001	**To:**	September 2006			(Requested extension up September 2006)		
Reporting Period *(to be done annually)***:**	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
Kenya/KARI	0			106,700	106,700	106,700	Support to project development (Steering Committee participation, technical inputs to development of project methodologies, development of full proposal); capacity building of national partners; provision of seconded staff to the project; use of natural parks as natural grassland sites for the experimet;field studies and local stakeholder consultation focusing on site selection.	

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001 **To:** September 2006					(Requested extension up September 2006)		
Reporting Period (to be done annually)**:**	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
Mali/IER Bamako	0			76,050	76,050	76,050	Support to project development (Review Committee participation, technical inputs to development of project methodologies, development of reports); build national working team; use of field stations and site directors participation in field studies and local stakeholder consultation focusing on site selection.	
	0							
International:	0							

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001		**To:**	September 2006		(Requested extension up September 2006)		
Reporting Period *(to be done annually)*:	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
ICIPE	0			272,000	272,000	272,000	Overall project and financial management, planning and full participation in Steering Committee meetings; oversight of national partner processes; compile and synthesize project development information (background information, directory of experts, site selection results, training needs, all aspects of full project design), identification of stemborers and parasitoids	

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001 **To:** September 2006					(Requested extension up September 2006)		
Reporting Period *(to be done annually)***:**	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
IPGRI				295,800	295,800	295,800	Database design and development; training national staff in germplasm collection, preservation, and handling; staff participation in planning and review workshops	
KEW GARDENS, UK				600,000	600,000	600,000	Loan of herbaria collections of gramineae from Kenya, Ethiopia and Mali	
NATURAL HISTORY MUSEUM , LONDON				100,000	100,000	100,000	Provision of literatures for taxonomic identification of grass collected insects	

Terminal Evaluation: Conservation of Gramineae and Associated Arthropods

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001	**To:**	September 2006			(Requested extension up September 2006)		
Reporting Period *(to be done annually)***:**	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	
NGOs/**Hyacin Craft & Green Development**				29,000	29,000	29,000	Generation of baseline data for grass conservation in three countries of Kenya, Mali and Ethiopia; sharing of initial finding through reports	
PDF-A								
KARI/Kenya				4,500	4,500	4,500		
IER Bamako Mali				3,000	3,000	3,000		
EARO Ethiopian				2,000	2,000	2,000		
Total	0	0	0	1,564,950	1,564,950	1,539,650	0	

Name <u>Mr. Roger Finan</u>

Signature _____

All amounts in US dollars

Title of Project:	Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa							
Project Number:	MSP: GF / 2711 - 01 -4345							
Name of Executing Agency:	ICIPE							
Project Duration:	**From:** September 2001	**To:** September 2006				(Requested extension up September 2006)		
Reporting Period *(to be done annually)***:**	July 2004-September 2006							
Source of Cofinance	**Cash Contributions**			**In-kind Contributions**				**Comments**
	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Budget original (at time of approval by GEF)	Budget latest revision	Received to date	Received to date	

Title: <u>DIRECTOR FINANCE & ADMINISTRATION</u>   Date:_____

ANNEX IV: LIST OF FINAL EXPENDITURES

			2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
Project Personnel													
KENYA													
	1101	Scientist/Field Technician for grasses	-	11,553	3,950	95	-	68	15,666	15,598		(68)	15,598
	1102	Scientist/Field Technician for insects	-	4,745	8,458	7,409	-	(488)	20,124	24,617		4,493	24,617
	1103	Germplasm Manager	-	-	40	78	852	6,000	6,970	118		(6,852)	118
	1104	Driver/Tech.	-	2,315	2,433	5,472	2,276	3,676	16,172	16,445		273	16,445
	1105	Scientist: Outcome 2, Activity A	-	3,422	2,770	1,510	2,102		9,804	8,280		(1,524)	8,280
	1106	Technician: Outcome 2, Activity A	-	-	1,780	3,646	-		5,426	5,426		0	5,426
	1107	Field Technician	-	-	4,434	1,669	159		6,262	6,262		(0)	6,262
	1108	Field Labor	-	-	2,363	1,467	2,325	135	6,290	5,955		(335)	5,955
	1109	Scientist: Outcome 2, Activity B	-	3,408	3,864	4,367	7,388	(116)	18,911	18,911		(0)	18,911
	1110	Technician: Outcome 2, Activity B	-	763	5,237	5,792	2,365	(190)	13,967	13,967		0	13,967
	1111	Scientist: Outcome 2, Activity C	-	-	7,183	6,081	-		13,264	14,109		845	14,109
ETHIOPIA									-			-	-
	1112	Scientist/Field Technician for grasses	-	8,400	7,600	206	4,320		20,526	20,526		-	20,526
	1113	Scientist/Field Technician for insects	-	1,584	-	7,944	-		9,528	9,528		(1)	9,528
	1114	Germplasm Manager	-	-	-	-	-		-	-		-	-
	1115	Driver	-	-	1,676	-	-		1,676	1,676		-	1,676
	1116	Technician: Outcome 2, Activity A	-	3,795	-	752	-		4,547	4,547		0	4,547
	1117	Field Technician	-	-	1,000	2,623	-		3,623	3,623		-	3,623

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expenditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
1118	Field Labor	-	-	1,000	-	700		1,700	1,700		-	1,700
1119	Scientist: Outcome 2, Activity B	-	-	-	2,979	-		2,979	2,715		(264)	2,715
1120	Technician: Outcome 2, Activity B	-	-	-	2,497	114		2,611	2,611		-	2,611
1121	Scientist: Outcome 2, Activity C	-	-	-	5,255	-		5,255	4,991		(264)	4,991
MALI					-			-			-	-
1122	National Coordinator/Team Scientist	-	-	-	-	3,600		3,600	3,600		-	3,600
1123	Scientist/Field Technician for grasses	-	-	-	1,368	432		1,800	2,963		1,163	2,963
1124	Scientist/Field Technician for grasses	-	-	-	-	-		-	900		900	900
1125	Scientist/Field technician for insects	-	-	-	-	3,600		3,600	3,600		-	3,600
1126	Scientist/Field technician for insects	-	-	-	-	1,857		1,857	3,920		2,063	3,920
1127	Scientist/Field technician for insects	-	-	-	-	1,800		1,800	1,800		-	1,800
1128	Germplasm Manager	-	-	-	-	900	1,800	2,700	900		(1,800)	900
1129	Germplasm Manager	-	-	-	-	900	1,800	2,700	900		(1,800)	900
1130	Germplasm Manager	-	-	-	-	900	1,800	2,700	2,963		263	2,963
1131	Technician: Outcome 2, Activity A	-	-	-	2,000	-		2,000	3,000		1,000	3,000
1132	Field Technician	-	-	-	2,000	2,000	3,842	7,842	7,842		-	7,842
1133	Scientist: Outcome 2, Activity B	-	-	-	2,000	2,000	4,277	8,277	5,277		(3,000)	5,277
1134	Technician: Outcome 2, Activity B	-	-	-	-	5,000		5,000	5,000		-	5,000
1135	Scientist: Outcome 2, Activity C	-	-	-	-	-		-	2,000		2,000	2,000
ICIPE/ IPGRI								-			-	-
1136	Staff: Outcome 1/Activity	-	-	594	4,168	-		4,762	4,762		-	4,762

Terminal Evaluation: Conservation of Gramineae and Associated Arthropods

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
	I											
1137	Staff: Base-line surveys	-	49	109	-		18	176	158		(18)	158
1138	Staff: Post Project uptake surveys	-	-	-	-	-	-	-	288		288	288
1139	Computer Programmer	-	-	-	-		6,794	6,794	-		(6,794)	-
1140	Staff: Outcome 5/Activity B	-	-	-	1,616		6,069	7,685	1,685		(6,000)	1,685
1141	Staff: Outcome 6/Activity A	-	-	1,388	3,721	-	44	5,153	9,766		4,613	9,766
1142	Staff: Outcome 6/Activity B	-	-	-	-	-		-	-		-	-
1143	Project Coordinator	-	37,035	29,276	23,079	19,422	24,957	133,769	150,077		16,308	150,077
1144	Staff: Outcome 6/Activity A (databasing)	4,000	-	145	8,626	16,665	1,667	31,103	20,771		(10,332)	20,771
1145	Staff: Outcome 4/Activity A-B (publication & dissemination)	-	-	-	173	109	-	282	282		-	282
1146	Staff:outcome 3.3				18,152	-		18,152	27,152		9,000	27,152
1147	Technician for grass:outcome 3.3				4,674	2,812	579	8,065	8,674		609	8,674
1148	Technician for insects:outcome 3.3				7,341	8,839	4,091	20,271	10,841		(9,430)	10,841
1149	Technician for identification/sorting					-	-	30	30	1,475	1,445	1,475
1150	Staff:outcome 3.4						5,484	5,484	3,854		(1,630)	3,854
1199	**Sub-total**	**4,000**	**77,069**	**85,300**	**138,760**	**93,437**	**72,337**	470,903				
	Consultants											
ICIPE/IP GRI												
1201	Consultant: To write up Best Practices	-	3,000	18,737	9,099	4,733		35,569	35,569		(0)	35,569
1202	Scientist: Outcome 1/Activity E - F	-	-	1,389	1,539	2,078	1,992	6,998	3,861		(3,137)	3,861
1203	Data Collector	-	-	-	-	-		-	-		-	-
1204	NMK Scientist	-	10,000	1,187	-	8,823	354	20,364	11,382		(8,982)	11,382

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		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
1205	Graphic Designer	-	-	822	256	-	6,668	7,746	1,078		(6,668)	1,078
1206	Social Scientist: Outcome 3B			5,433	6,006	-	238	11,677	21,939		10,262	21,939
1207	Social Scientist Data Collector			2,341	2,000	892	-	5,233	7,341		2,108	7,341
1208	Grass/Insect Identification Service			2,437	1,418	1,233		5,088	5,151		63	5,151
1299	**Sub-total**	**-**	**13,000**	**32,346**	**20,318**	**17,759**	**9,252**	**92,675**				
Travel on Official Business												
KENYA												
1601	Staff Travel: Outcome 1/Activity A-D		10,438	5,173	3,544	1,890	745	21,790	21,686		(104)	21,686
ETHIOPIA								-			-	-
1602	Staff Travel: Outcome 1/Activity A-D		9,823	2,029	-	403		12,255	12,255		-	12,255
MALI								-			-	-
1603	Staff Travel: Outcome 1/Activity A-D		-	1,491	8,515	16,543	5,273	31,822	31,822		-	31,822
1604	National Co-ordinator Travel		-	-	433	-		433	433		-	433
ICIPE/IPGRI								-			-	-
1605	Staff Travel: Outcome 1/Activity A-D	406	9,603	4,338	2,309	-		16,656	17,371		715	17,371
1606	Staff Travel: Base-line surveys		4,808	937	6,171	82		11,998	16,916		4,918	16,916
1607	Staff Travel: Monitoring & Evaluation		-	206	89	-		295	3,295		3,000	3,295
1608	Staff travel:best practice test/monitoring				2,750	-	430	3,180	3,750		570	3,750
1609	Staff Travel: Outcome 3.4, 4.2, 6.1, 6.3						8,600	8,600	211		(8,389)	211
1699	**Sub-total**	**406**	**34,672**	**14,174**	**23,811**	**18,918**	**15,048**	**107,029**				

Terminal Evaluation: Conservation of Gramineae and Associated Arthropods

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expenditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
								-				
Component Total		**4,406**	**124,741**	**131,820**	**182,889**	**130,114**	**96,637**	670,607				
								-				
Subcontracts								-				
KENYA								-				
2201	Identification services: NMK, Ethiopia NH, PPRI, CABI, NHM		1,172	4,083	2,839	202	21	8,317	12,094		3,777	12,094
2202	Local NGO- to implement targeted education and grass conservation project		-	1,067	5,841	2,062	492	9,462	9,462		0	9,462
ETHIOPIA								-			-	-
2203	Identification services: NMK, Ethiopia NH, PPRI, CABI, NHM		-	-	4,054	-		4,054	4,054		-	4,054
2204	Local NGO- to implement targeted education and grass conservation project		-	-	14,505	-		14,505	14,505		0	14,505
MALI			-					-			-	-
2205	Identification services: NMK, Ethiopia NH, PPRI, CABI, NHM		-	-	-	2,627	1,589	4,216	2,747		(1,469)	2,747
2206	Local NGO- to implement targeted education and grass conservation project		-	-	14,550	-		14,550	16,019		1,469	16,019
ICIPE/IPGRI								-			-	-
2207	British Museum - Nye data		-	-	-			-			-	-
2208	Kew Gardens		-	-	-		1,127	1,127			(1,127)	-

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
2209	FAO - GPPIS		-	-	-			-			-	-
2210	International Conservation NGO		-	-	-			-			-	-
2211	Wren Media - for radio show		-	-	-			-			-	-
2212	NGOs: Outcome 4/Activity A-B		-	-	-			-			-	-
2213	NGOs: Outcome 4/Activity C		-	-	-			-			-	-
2214	Insect Identification Services		12	776	103	2,365	3,256		3,263		7	3,263
2215	Grass Key and Identification Services		-	-	8,000	-	8,000		8,000		-	8,000
2216	Webpage Development and Maintenance		1,937	2,182	1,624	2,760	8,503		5,743	(2,760)		5,743
2217	Radio programs		-	23	4,411	429	4,863		4,863		-	4,863
2218	NGO: Grass utilization for livelihood			840	693		1,533		1,533		-	1,533
2219	NGO: Grass weaver for livelihood			1,196	-	1,121	2,317		2,317		-	2,317
2220	Systematic scientist: to write the guide on grass stemborers & natural enemies			-	-		-		0		-	-
2221	Scientific illustrator for insects			-	-		-				-	-
2222	Data entry services					-		-		0	-	-
2299	**Sub-total**	**-**	**1,172**	**7,099**	**46,806**	**19,722**	**9,904**	84,703				
								-				
Component Total		**-**	**1,172**	**7,099**	**46,806**	**19,722**	**9,904**	84,703				
								-				
Group Training								-				
ETHIOPIA								-				-

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
3201	Computer Analysis Techniques		-	276	-			276	276		-	276
3202	Rearing and Bioassay Techniques		-	-	180			180	180		-	180
MALI			-					-			-	-
3203	Computer Analysis Techniques		-	-	478	-		478	478		(0)	478
3204	Rearing and Bioassay Techniques		-	-	-	93		93	93		-	93
ICIPE/IPGRI								-			-	-
3205	Workshop		15,748	3,048	90			18,886	18,885		(1)	18,885
3206	Grass ID training session		10,358	5,944	1,249	-		17,551	17,551		0	17,551
3207	Arthropod training session		2,376	10,428	53	-		12,857	12,857		(0)	12,857
3299	**Sub-total**	**-**	**28,482**	**19,696**	**2,050**	**93**	**-**	50,321				
								-				
Component Total		**-**	**28,482**	**19,696**	**2,050**	**93**	**-**	50,321				
Expendable Equipment												-
ICIPE/IPGRI												-
4101	Delta Computer Program		-	150	-			150	150		-	150
4102	Storage Boxes		5,047	4,553	-			9,600	9,600		-	9,600
4103	Field Inputs		-	8,296	4,486	704	274	13,760	13,486		(274)	13,486
4199	**Sub-total**	**-**	**5,047**	**12,999**	**4,486**	**704**	**274**	23,510				
Non-expendable Equipment												
KENYA												
4201	Lab Equipment		5,842	961	-			6,803	6,803		-	6,803
4202	Field Collecting Equipment		4,749	901	(54)	422		6,018	6,018		-	6,018
4203	Computer		123	71	-	139	139	472	437		(35)	437
ETHIOPIA								-			-	-

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expenditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
4204	Lab Equipment		1,021	-	-	-		1,021	1,021		-	1,021
4205	Field Collecting Equipment		110	244	2,457			2,811	2,811		-	2,811
4206	Computer		1,000	-	-			1,000	1,000		-	1,000
MALI								-			-	-
4207	Lab Equipment		-	790	-			790	790		-	790
4208	Field Collecting Equipment		-	-	1,462	2,017	594	4,073	4,073		-	4,073
4209	Computer		-	-	-			-			-	-
ICIPE/IPGRI								-			-	-
4210	Computer		3,915	1,823	3,591		6,500	15,829	15,829	11,908	(11,908)	3,921
4299	**Sub-total**	**-**	**16,760**	**4,790**	**7,456**	**2,578**	**7,233**	38,817				
								-				
Component Total		**-**	**21,807**	**17,789**	**11,942**	**3,282**	**7,507**	62,327				
Operation and Maintenance of Equipment												
KENYA												
5101	Vehicle running/maintenance	13	8,972	5,486	1,586	4,572	4,557	25,186	25,332	4,557	(4,411)	20,775
ETHIOPIA								-				-
5102	Vehicle running/maintenance		1,707	6,772	4,233	-		12,712	12,712		0	12,712
5199	**Sub-total**	**13**	**10,679**	**12,258**	**5,819**	**4,572**	**4,557**	37,898				
Reporting Costs												
ICIPE/IPGRI												
5201	Publication and Dissemination: Outcome 4/Activity A-B		-	511	4,364	9,347	(7,277)	6,945	9,600		2,655	9,600

		2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
5202	Production of brochures & education material: Outcome 6/Activity A		-	1,087	5,976	202	6,327	13,592	22,640		9,048	22,640
5203	Dissemination: Outcome 6/Activity A		524	3,411	2,362	1,084	3,660	11,041	13,850		2,809	13,850
5299	**Sub-total**	**-**	**524**	**5,009**	**12,702**	**10,633**	**2,710**	31,578				
Sundry												
KENYA												
5301	Shipping of insects and grasses	15	837	1,148	-	-		2,000	1,986		(14)	1,986
ETHIOPIA								-			-	-
5302	Shipping of insects and grasses		-	261	129			390	390		-	390
MALI								-			-	-
5303	Shipping of insects and grasses		-	-	-	-	31	31	31		-	31
5299	**Sub-total**	**15**	**837**	**1,409**	**129**	**-**	**31**	2,421				
								-				
Evaluation								-				
ICIPE/IPGRI								-				
5501	Staff Travel: Monitoring & Evaluation			1,477	192	-		1,669	2,473		804	2,473
5599	**Sub-total**	**-**	**-**	**1,477**	**192**	**-**		1,669				
								-				
Component Total		**28**	**12,040**	**20,153**	**18,842**	**15,205**	**7,298**	73,566				
		4,434 188,242	196,557	262,529	168,416	121,346	941,524	946,066	16,465	(11,923)	929,601	
	Audited expenditures	4,953	188,239	196,556	261,998	170,861	**Awaited**					
	Difference	(519)	3	1	531	(2,445)						
	SUMMARY											
	KENYA	28	58,339	61,402	51,342	26,754	15,039	212,904				

	2001	2002	2003	2004	2005	2006	Recorded in UNEP a/cs as at Dec 2006	ICIPE stmt, 240907	Expen-ditures not accepted by UNEP	Final adjustments to be done in 2007	Final expenditures
ETHIOPIA	-	27,440	20,858	47,814	5,537	-	101,649				
MALI	-	-	2,281	32,806	44,269	21,006	100,362				
ICIPE/IPGRI	4,406	102,463	112,016	130,567	91,856	85,301	526,609				
GRAND TOTAL	**4,434**	**188,242**	**196,557**	**262,529**	**168,416**	**121,346**	941,524				

ANNEX V: INTERNATIONAL STEERING COMMITTEE (ISC)
(established in 2004)

Chair:

Dr. Ian Gordon
Head
Environmental Health Department
International Centre of Insect Physiology and Ecology (ICIPE)
P.O. Box 30772, Nairobi, Kenya
E-mail: igordon@icipe.org

Members:

1. Dr. Ahmad Hassanali
    Head
    Behavioral and Chemical Ecology Department
    International Centre of Insect Physiology and Ecology (ICIPE)
    Nairobi, Kenya

2. Dr. Charles Omwega
    Assistant Coordinator
    Stemborer Biological Control Programme
    International Centre of Insect Physiology and Ecology (ICIPE)
    Nairobi, Kenya

3. Dr. Zeyaur R. Khan
    Principal Scientist & Project Leader   **[note: Project Coordinator]**
    International Centre of Insect Physiology and Ecology (ICIPE)
    Mbita, Kenya

4. Dr. Alberto T. Barrion
    Research Scientist and Head   **[note: Assistant Coordinator]**
    Biosystematics Unit,
    International Centre of Insect Physiology and Ecology (ICIPE)
    Nairobi, Kenya

5. Dr. Mikkel Grum
    Scientist, Genetic Diversity
    International Plant Genetic Resources Institute (IPGRI)
    Nairobi, Kenya

6. Dr. Marieta Sakalian
    Task Manager/Biodiversity
    United Nations Environment Programme(UNEP)
    Division of Global Environment Facility (DGEF)
    Nairobi, Kenya

7. Dr. Francis N. Muyekho
    Kenya Country Coordinator
    Kenya Agricultural Research Institute (KARI) and
    International Centre of Insect Physiology and Ecology (ICIPE)
    Mbita, Kenya

8. Dr. Niamoye Yaro
    Mali Country Coordinator
    Institute Economic Rurale (IER)
    Bamako, Mali

9. Dr. Emana's replacement
    Ethiopia Country Coordinator
    Ethiopian Agricultural Research Organization (EARO)
    Addis Ababa, Ethiopia

10. Dr. Getachew Tikubet
    Liaison Officer
    International Centre of Insect Physiology and Ecology (ICIPE)
    P.O. Box 17319, Addis Ababa, Ethiopia

Observers:

1. Dr. Bino Teme
    Director General
    Institute Economic Rurale (IER)
    Bamako, Mali

2. Dr. Zackary Muthamia
    OIC, Crop Plant Genetic Research Centre
    National Genebank of Kenya,
    Kenya Agricultural Research Institute
    Nairobi, Kenya

3   Director
    Ethiopian Agricultural Research Organization (EARO)
    Addis Ababa, Ethiopia

The International Steering Committee (ISC) has the overall responsibility for providing support and guidance for the strategies, management procedures and plan of actions developed to implement the multi-country UNEP/GEF funded project on "Conservation of Gramineae and Associated Arthropods for Sustainable Agricultural Development in Africa." The ISC evaluates and review project outputs and advice the PMU on courses of action that will ensure full project implementation

The role of the ISC is to:
- Assist the PMU in developing linkages with other projects, thus ensuring the wider impact of project work.

- Provide overall guidance for project implementation..
- Review implementation of project components as defined in the project workplan, project objectives based on earmarked indicators and performance targets through the evaluation of reports (quarterly or annual), records of meetings and other relevant documents concerning the project.
- Review and tract annual workplan implementation and provide technical advise.
- Review quarterly and annual budget expenditures and co-financing.
- Assist in overseeing inputs of stakeholders from both international and national levels, and monitor that project obligations and outputs are accomplished and delivered on time.
- Provide policy guidance on good partnership among stakeholders in both international and national levels in achieving project impact.