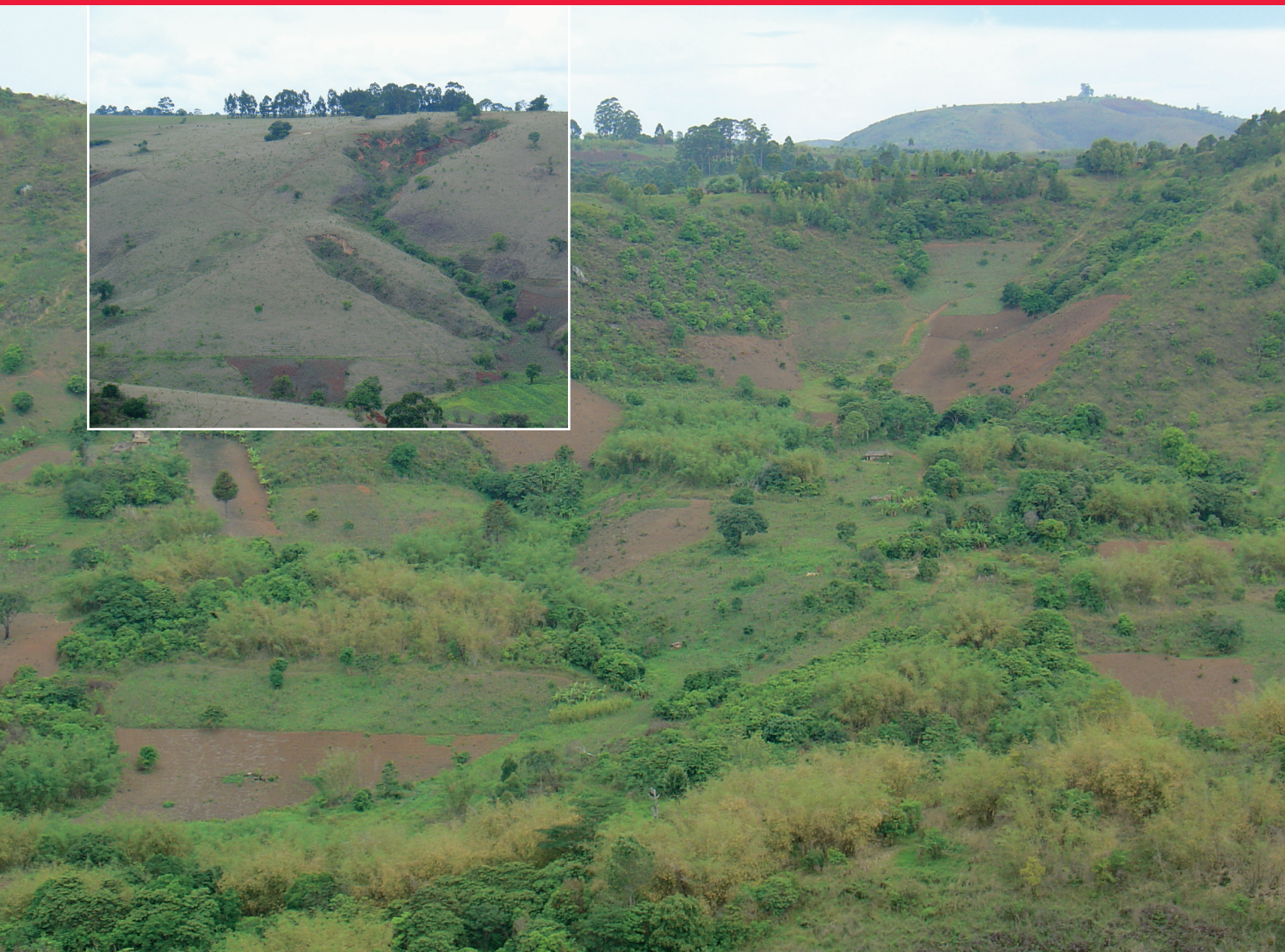




IMPACT EVALUATION OF HIMA
IRINGA REGION TANZANIA

evaluation

2007.04



Impact Evaluation of HIMA Iringa Region Tanzania

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- Part M Lupembe (Comparison)
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- Part S Lyasa (HIMA)

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List of Acronyms

<i>AEZ</i>	Agro-Ecological Zone
<i>AIDS</i>	Acquired Immune Deficiency Syndrome
<i>ASPS</i>	Agricultural Sector Programme Support
<i>CARE</i>	Cooperative Assistance for Relief Everywhere
<i>DADS</i>	District Agricultural Development Support
<i>DHS</i>	Demographic and Health Survey
<i>DKK</i>	Danish Krone
<i>GBV</i>	Gender-based Violence
<i>GoT</i>	Government of Tanzania
<i>HBS</i>	Household Budget Survey
<i>HH</i>	Household
<i>HS</i>	Holistic Study
<i>HIMA</i>	Hifadhi ya Mazingira (Protect the Environment) Natural Resources Conservation and Management Programme
<i>HIV</i>	Human Immunodeficiency Virus
<i>kg</i>	Kilogramme
<i>MEMA</i>	Matumizi Endelevu ya Mimitu ya Asili (Sustainable Utilization of Natural Forests)
<i>NGO</i>	Non-Governmental Organization
<i>NRM</i>	Natural Resource Management
<i>OOD</i>	Obstacles and Opportunities for Development
<i>PFM</i>	Participatory Forest Management
<i>PP</i>	Para-Professional
<i>PRA</i>	Participatory Rural Appraisal
<i>PCS</i>	Physical Catchment Survey
<i>PFM</i>	Participatory Forest Management
<i>RDE</i>	Royal Danish Embassy
<i>RFP</i>	Request for Proposals
<i>S&WC</i>	Soil and Water Conservation
<i>SSI</i>	Semi-structured Interview
<i>To</i>	Time Zero
<i>TNA</i>	Training Needs Assessment
<i>ToR</i>	Terms of Reference
<i>TSH</i>	Tanzanian Shilling
<i>UNICEF</i>	United Nations International Children's Emergency Fund
<i>WMF</i>	Women Mazingira Fund

DKK to TSH Historical Exchange Rate

	1995-97	1998-00	2001-02
Average	0.01025	0.01000	0.00902
High	0.01172	0.01132	0.01021
Low	0.00900	0.00863	0.00747

DKK to USD Historical Exchange Rate

	1995-97	1998-00	2001-02
Average	6.00	7.25	8.10
High	7.20	9.04	8.91
Low	5.32	6.04	7.11

Executive Summary

The Hifadhi ya Mazingira (Protect the Environment) Natural Resources Conservation and Management Programme in Tanzania (HIMA) promoted sustainable agricultural production, natural resource management (NRM), and forestry production among farmers, by utilizing participatory approaches that involved the local population and relevant “indigenous knowledge”. HIMA was integrated with, and implemented through, local government structures. A strong focus was brought to the support of capacity building and institutional sustainability. HIMA commenced in Iringa District 1990, was extended to Njombe and Makete Districts in 1992, and finally Mufindi and Ludewa Districts in 1998. HIMA terminated in all five districts at the end of 2002. As HIMA expanded there was a shift in scope from a conservation approach to an emphasis on crop and livestock productivity, and sustainable forest management. A focus on sustainable utilisation of natural resources remained throughout. The total HIMA budget was 208.5 million Danish Kroner (DKK) including the preparatory phase.

A consortium made up of Orbicon A/S from Denmark and Goss Gilroy Inc. from Canada conduct an impact evaluation of HIMA in 2006 to 2007. The evaluation was to determine HIMA’s impact on livelihoods, poverty, soil and water conservation, agriculture, forestry practices, village government, women’s empowerment, and governmental institutional strengthening. The period evaluated was from 1995 to 2002.

The Evaluation included the following major activities:

- A systematic review of the available HIMA data and documentation,
- A survey of 330 households (HHs) in 12 villages in Njombe District, a repeat of a baseline survey that was undertaken in 1996, creating a Panel Set of 189 HHs whose characteristics were measured twice as they participated in both surveys,
- Participatory Rural Appraisals (PRAs) in 13 randomly selected HIMA villages and six matched non-HIMA villages for comparison.

The Evaluation heard from over 175 interviewees and 33 focus groups. In addition to the 19 PRA village studies, site visits and field observations were carried out in an additional 32 villages across the Iringa region for a total of 51.

Major Findings and Conclusions

HIMA’s interventions are linked to increases in economic well-being and improved income that appear to be more substantial than regional and national comparators. The income increases can be attributed, to some extent, to HIMA influenced increases in crop production and yields and, to some degree, to changes in livestock prevalence and practices. HIMA influenced timber activities have also contributed to economic well-being.

Income and Economic Well-Being

The majority of surveyed HHs reported an increase in income and the majority of surveyed PRA villages also indicated positive improvements in income. Other positive changes with economic dimensions were increases in the consumption of crops, live-

stock ownership and diversity, size of landholdings, and timber ownership, together with a reduction in food insecurity. Access to, and the availability of water improved in HIMA villages. Taken together, these results paint a convincing picture of a general improvement both in economic well-being and in the quality of life in HIMA villages. These positive changes can be attributed to HIMA from the general findings of the PRA process and statistically significant correlation between increased yields of key crops and positive changes in income. These positive changes are unlikely to have happened to the degree they did without the HIMA intervention. National data shows that rural poverty has barely decreased over the last 15 years, which contrasts with the HIMA-related changes in income and economic well-being. When compared with non-HIMA villages, a greater proportion of HIMA villages had positive changes in income and economic well-being. These and the other positive HIMA influenced changes either did not occur in comparison villages or occurred at lower levels, or as a result of HIMA influence.

Livelihoods

HIMA achieved mixed results in the improvement and broadening of the livelihood base in the Iringa region. HIMA was most successful in the areas of timber production and animal husbandry. Combining with the successful regional timber industry, HIMA contributed to the expansion of timber production in many villages, including the livelihoods related to forest products and charcoal. HIMA also influenced expansion and diversification of animal husbandry, however, with out the widespread success of timber. With respect to non-timber livelihood activity, HIMA interventions were, in general, unsuccessful. The data showed that major livelihood programmes, such as beekeeping and fish farming, were not sustained beyond a few successful HHs. Timber related livelihood improvement would not have occurred in all these villages without HIMA, and the impact would not have been as large without HIMA introduced forestry management techniques. Animal husbandry, widely practised before HIMA and in non-HIMA villages, would probably not have been as diversified.

Crop Production

HIMA's interventions to increase crop production and productivity were broadly successful. For both indicators, increases were noted for all four major crops – maize, beans, wheat, and round potatoes. Yields per acre for maize and round potatoes increased by 58% and 46%, respectively; bean and wheat yields doubled, showing increases of 103% and 93%, respectively. Vegetables and other crops, such as sunflowers, were also successful in terms of yield increases and in sustained practices. Evaluation data showed that yield increases were due mostly to HIMA promoted improved varieties, and to a lesser extent to soil fertility and conservation measures. In the absence of external factors to improve productivity and production such as varieties, soil fertility and conservation measures, it appears likely that villages would not have experienced such improvements without HIMA interventions, especially in the context of decreasing average rainfall.

Given the predominance of the agriculture sector in generating HH income, these successes have been a major contributor to the HIMA story of increased income. However, HIMA's successes in promoting sustainable agriculture were less evident. The data shows a general shift to single cropping, lower use of soil fertility improvement measures, increased use of chemical fertilizer, and less fallowing. In addition, soil conservation measures have been neither widely replicated nor maintained.

Natural Resource Management

Villages successfully adopted HIMA NRM practices that both improved their income and conserved natural forest resources. The evaluation found increases in nurseries, self-managed woodlots, the availability and proximity of fuel wood, and access to water. There was also a drop in the dependence of natural forests for fuel wood and of water sources drying up, in a period of decreasing rainfall. Tree planting was continuing in most villages and bush fires are perceived to be less of a problem and to occur less frequently. Most of these changes would likely not have taken place in the absence of HIMA, or HIMA influenced/inspired programs. Without HIMA's intervention villages that were well suited for timber production would likely have continued and prospered, though perhaps not to the same extent or with the same levels of income improvement or sustainability.

Government Institutional Development

The strengthening of government capacity was an important area of intervention for HIMA. The evidence indicates that at the district level, HIMA had improved capacity in terms of planning, multi-disciplinary teamwork, and the use of new technology. However, this benefit tended to be at the level of the individual rather than organizationally based. In addition, following HIMA's conclusion in 2002, extension service performance appears to have dropped.

Community Capacity and Governance

At the village level the Evaluation found many positive changes influenced by HIMA. Village government had improved in all HIMA PRA villages and women's political participation had increased. Village planning capacity was also higher in HIMA versus non-HIMA villages. Environmental governance was more mixed with many villages having functioning environment committees but only half with by-law enactment and enforcement. HIMA was also less successful with regard to paraprofessionals (PPs). Only in a minority of villages were PPs continuing to carry out tasks originally envisaged by HIMA. Instead, PPs had taken on entrepreneurial ventures or other positions. Many of these changes would likely have occurred without HIMA as they were found in all of the comparison villages. However, women's political participation would likely not have been as positive without HIMA intervention.

Gender Equality

HIMA interventions had some success in the area of gender equality coinciding with a period of broad social change in Tanzania. Women's participation in governance, community organizations, HH decision-making, and in the economic sphere, have all shown some improvement in villages. There has also been some movement towards a more equitable division of tasks between women and men. However, women's economic empowerment has been much less successful. Without HIMA intervention, or gender equality programs from other development organizations, it is likely that many HIMA villages would not have experienced these gender equality improvements.

Sustainability and Replication

As a result of HIMA interventions, high potential for, or actual, sustainability was found in the following areas: timber production, use of improved seed and new varieties, tree planting, natural forest management, district infrastructure, village government engagement, women's political participation, community group operations, village planning, and some gender equality gains, such as the division of labour. Areas of significant replication, either within HIMA villages or extended to non-HIMA villages, included animal

husbandry, timber production, improved seed and new varieties, water source protection, nurseries, tree planting, natural forest management, district infrastructure provided by HIMA in order to provide services to non-HIMA villages, village governance processes within HIMA villages, and gender equality changes.

Design and Delivery

At the district and divisional levels, HIMA demonstrated a successful model for cross-sector collaborations. Today, in several districts, a modified but nevertheless workable version is still being implemented. Although HIMA had the courage to experiment with new approaches it often failed to learn from mistakes or poorly conceived strategies. There was a lack of a robust and systematic feedback loop to inform project managers on performance, especially at the outcome level. A tendency to provide the same package of interventions to villages irrespective of their contexts and needs, meant that resources were often not applied in the most effective way. The phase-out strategy was poorly planned and too short, which cast an unnecessary shadow over many of HIMA's notable achievements. A workable model that would have allowed districts with limited resources, to continue their support of villages moving towards HIMA's development objectives, was not successfully developed.

Lessons Learned

- Success is increased by coupling interventions with local growth areas identified through in-depth context analysis. HIMA was most successful when it recognized and then built on areas with the potential for good growth such as timber.
- Success is enhanced by adopting a private sector approach that embodies a clear, market-driven strategy. Had there been an earlier focus on the private sector, HIMA would have been more successful, such as with the shift from centralized to individual nurseries. An early market-driven strategy would have provided entrepreneurs with access to information on existing markets for their new products and exchanges with experienced mentors.
- New or innovative livelihood interventions require additional support over a longer timeframe in contrast to livelihood practices that are already familiar to the villagers. When a pioneering and inherently supply driven practice, such as fish-farming, is introduced, the provision of an accompanying appropriate design and an adequate level of resources are essential.
- In order to ensure that unsuccessful interventions do not make the participants worse off, it is critical that the capacities of targeted beneficiaries are “understood” to the extent of recognizing the degree of risk they can realistically absorb. In-depth analysis of the economic circumstances is needed to understand how, and if, participants can overcome difficult periods such as droughts, floods, and other unforeseen events beyond their control, especially in the context of inadequate follow-up.
- Results are enhanced where there is a realistic understanding about the poverty reduction potential of livelihood interventions, and when the central focus is placed on the needs and priorities of the “real poor”. Entrepreneurial activities are often appropriate for people with surplus resources, an affinity for business, and an ability to address inherent risks. Expecting a trickle down effect to poorer segments is optimistic and probably unrealistic.

- Cheap, simple, and easy-to-maintain interventions are more sustainable. A clearer focus on this lesson throughout the HIMA period may have brought about a greater degree of replicability. Expectations of how much replication can take place should be a guiding factor as it may have been too much to expect that activities like fish farming could have been broadly replicated.
- Monitoring and data collection is more effective when focused on results, in addition to administrative control, and when data is fed into planning with an emphasis on learning. HIMA's monitoring system focused more on control than the actual quality and relevancy of training and advice. Opportunities for learning and adjusting approaches and strategies were often missed.
- Research is most useful when there are explicit mechanisms to feed data on context and local conditions into programming and decision-making processes. It seems that many HIMA surveys were put to little use after they were completed, partially due to a lack of these mechanisms, the exception perhaps being studies on varieties.
- Results are improved and sustainability is enhanced when support is used to strengthen existing structures rather than used to build parallel structures. For a time HIMA processes worked separately and in parallel with government, which improved performance but was not conducive to long-term capacity building.
- Sustainability is more certain when there is an in-depth, realistic, and concrete understanding of how an intervention is going to function without support. Many successful interventions such as paraprofessionals and soil and water conservation schemes, were not sustained post-HIMA to anticipated levels. In these cases there was often a lack of consideration given to the means by which these would be maintained without HIMA support.

Recommendations

The Evaluation shows that interventions to improve crop production and productivity, at the community and HH levels in rural areas, have real potential for sustainable improvements in living standards. It is therefore recommended that development partners and partner governments should give consideration to increased investment and programming in this sector.

Programme design

- A realistic sustainability strategy is required at the beginning or soon after implementation based upon the local context.
- Community ownership of processes and outcomes should be built into programme design and implementation to enhance sustainability.
- There is a need for an explicit component of programming that links successful interventions at all levels with policy advocacy and development, so that policy influence is planned not a chance occurrence.
- Explicit mechanisms are needed to ensure that replication occurs. Monitoring should determine the extent of replication and to feed back learning about why replication does or does not take place.
- Programme interventions should have a properly designed and resourced phase-out period with termination dates agreed to several years in advance. A phase-out plan is required after the programme mid-point.

Programme delivery systems

- Robust and systematic feedback loops through monitoring and evaluation systems, should supply programme managers with information on outcomes in addition to administrative information. Learning should be explicitly required, including through reporting.
- Data requirements for monitoring, evaluation, and learning should be identified at the outset of programming. Robust and resourced systems should be established to collect, analyze and report on this data.
- Financial data should be organised in such a way that permits the linking of line items to program outputs in a results based budgeting fashion.
- Professionally designed baseline data collection should be performed. Baseline data should be collected around the commencement of major programme interventions. The need for new baseline studies should be periodically reviewed.
- Livelihood programming should benefit from customized and proactive marketing support strategies and from ongoing technical support until activities are sustainable. Programming should be defined by real market potential and be designed and implemented based on the economic limitations together with the other strengths and weaknesses of the participants.

1 Introduction

The Hifadhi ya Mazingira (Protect the Environment) Natural Resources Conservation and Management Project in Tanzania (HIMA) promoted sustainable agricultural production, natural resource management (NRM), and forestry production among farmers, by utilizing participatory approaches that involved the local population and relevant “indigenous knowledge”.

HIMA commenced in Iringa District in January 1990 and was extended to Njombe and Makete Districts for the period 1992-97. A second phase of HIMA in Iringa District was approved in February 1995 to run up to mid 1997, bringing it in line with the period for Njombe and Makete. As a result of Danida’s sector programme strategy and the inclusion of the agricultural sector in Danida’s new country strategy for Tanzania, it was decided to include the next phase of HIMA, expanding to the entire Iringa Region (Iringa, Njombe, Makete plus new districts of Mufindi and Ludewa) in the first phase of the Agricultural Sector Programme Support (ASPS) as a special component: ‘The Natural Resources Conservation and Land Use Management Project, Phase III’. The ASPS period was five years, from January 1998 to the end of 2002. The total budget of HIMA from 1995 to 2002 was 118 million Danish Kroner (DKK).

The nature of HIMA’s interventions have changed emphasis from one phase to the next, which can be broadly described as a change from a conservation approach to an emphasis on crop and livestock productivity, and sustainable forest management – but with sustainable utilisation of natural resources remaining a key feature. HIMA anchorage with government structures has changed over time to be aligned with local government structures, with the various district councils as executing agencies. There has throughout the phases been a strong focus on assistance supporting capacity building and institutional sustainability.

In July 2006, a consortium made up of Orbicon A/S from Denmark and Goss Gilroy Inc. from Canada was contracted by Danida to undertake an impact evaluation of HIMA. An integrated team of international and national consultants carried out the evaluation, with the Tanzanian based evaluators being actively involved in planning, implementation and evaluation reporting activities.

1.1 Evaluation Objectives

The main objective of the Evaluation was to assess HIMA’s impact on livelihoods and poverty in HIMA areas. The Evaluation concentrated on impacts from the interventions carried out under HIMA auspices during the 1995-2002 period. Within this context, the Evaluation also assessed HIMA’s impact on:

- Soil and water conservation,
- Agricultural and forestry practices,
- Local government, citizen participation, women’s empowerment, and institutional strengthening.

The lessons learned and the recommendations drawn up by the Evaluation from the HIMA experience can be used to inform future Tanzanian and Danida interventions. (See Annex 1 for the ToR)

1.2 Evaluation Scope

The following sections define the scope of the evaluation:

Time Period

Although HIMA began as a project in 1990 in Iringa District, the Evaluation examined the implementation of HIMA from 1995 to its termination in 2002.

Geographical Coverage

The Evaluation addressed all project areas in the five districts of Iringa Region where HIMA had operated – Iringa, Ludewa, Makete, Mufindi, and Njombe. The present Kilolo District was also included as it was formerly located in the Iringa District.

Interventions

The Evaluation assessed all the core areas of HIMA's interventions that covered a wide range numbering over 70 in total. HIMA programming was implemented to different degrees across different districts. There were no areas of intervention that were specifically excluded from the Evaluation.

The core areas of HIMA intervention can be divided into the following seven categories:

- Livelihood interventions such as livestock/animal husbandry, beekeeping, and fish farming,
- Crop practices and production,
- Soil and water conservation (S&WC),
- Forestry practices and production,
- Village institution building,
- Women's empowerment/gender equality,
- General capacity building of institutions and individuals, including training and awareness raising on issues relevant to HIMA.

Livelihoods were broadly defined as: "Assets, activities, and access to these that together determine the living gained by the household". For analytical purposes the Evaluation separated crop production from other sources of income and in-kind goods/services, including livestock.

HIMA Target Groups

The primary target group identified by HIMA was farmers in approximately 200 villages. The secondary target group was village governments, divisional and district line agencies, and the regional authorities.

1.3 Evaluation Team

The Evaluation team comprised eight international and eight national consultants. The consultants' expertise covered institutional development, agriculture, NRM, gender

equality, economics, sociology, and bio-diversity. In turn, the consultants hired and trained local consultants at Tumaini University, Iringa, to conduct the quantitative survey of 330 HHs in Njombe District. (See Annex 2)

1.4 Schedule

The Evaluation commenced with an inception period that lasted from mid-July to September 2006. At that time, a number of constraints and challenges were identified, in particular with regards to availability and accessibility of quantitative baseline data to conduct a rigorous impact evaluation. It became obvious that more time and effort would be required to search for useable data files. It was therefore decided, in full agreement with Danida, to apply a gradual inception process, where inception activities related to further development of methodological design were extended and overlapped with the subsequent phases (pre-field mission and fieldwork). Consequently, although iterative versions of the Inception report were reviewed and circulated, a Final Inception Report was not delivered at that time. (The updated version of the Inception Report can be found in Annex 3)

Another issue was that the time scheduled proposed in the ToR for the fieldwork phase (mid-October - mid-December 2006) was critical due to the rainy season in Iringa, which usually starts in November-December. During this period many remote areas in Iringa Region are inaccessible by road. The Evaluation was therefore under pressure to implement and complete fieldwork activities as early as possible before the rain could cause any serious problems.

By October 2006, preparatory activities for the main data collection began. The main data collection period lasted from mid-October to early December 2006.

Data analysis began early in 2007 preparatory to a team workshop held in late February 2007. The draft report was submitted in mid-March 2007, and was followed by a stakeholder workshop held in Tanzania in late March 2007. More data analysis was then undertaken in April, May, and June of that year. A draft of the final report was submitted in early July 2007.

1.5 Organization of the Report

This report is structured as follows:

- **Chapter 1** profiles the Evaluation by describing the objectives, scope, constraints, the evaluation team and the work undertaken.
- **Chapter 2** explains the methodologies employed and includes the challenges and limitations experienced.
- **Chapter 3** profiles HIMA by describing the context, planned results and programming modalities, together with the financial analysis.
- **Chapter 4** identifies the Evaluation findings and the results achieved by HIMA as they related to income, income security and livelihoods.
- **Chapter 5** sets out the Evaluation findings and results achieved by HIMA as they related to crop production.
- **Chapter 6** describes the Evaluation findings and results achieved by HIMA as they related to NRM.

- **Chapter 7** identifies the Evaluation findings and results achieved by HIMA as they related to institutional development.
- **Chapter 8** describes the Evaluation findings and results achieved by HIMA as they related to gender equality.
- **Chapter 9** discusses external factors and how they interacted with HIMA implementation.
- **Chapter 10** comments on HIMA design and delivery.
- **Chapter 11** sets out the lessons learned from the HIMA experience with regard for their applicability to development cooperation in general.
- **Chapter 12** provides a series of recommendations to inform future programming.

A list of annexes is shown with the Table of Contents. The first two annexes are available in both hard copy format and on an accompanying CD-ROM. The rest are available only on CD-ROM.

2 Methodology

2.1 Inception, Planning and Design

To determine how to meet the evaluation objectives most effectively, a series of inception activities were first carried out. At this stage, a number of constraints and challenges were identified that were subsequently addressed during evaluation planning and design. The nature of these constraints led to them being identified and addressed in an iterative fashion. Therefore the design of the Evaluation was significantly changed but on an ongoing basis. With the approval of Danida these changes were captured in various drafts of the Inception Report, but a final version of the report was not completed before the fieldwork commenced. (The updated Inception Report can be found in Annex 3)

Changes to Original Evaluation Design

The original evaluation design in the ToR and the Consortium proposal included:

- A HH survey in 20 HIMA villages and in 10 non-HIMA or control villages. Thirty HHs were to be interviewed in each village.
- Participatory Rural Appraisal of satellite images from eight HIMA villages using baseline imagery from the 1990's and new images from 2006.
- Key Informant Interviews.
- Focus Groups.
- Document Review.

There were a number of challenges encountered with the HH survey, the satellite imagery, and the document review that necessitated a change in methodology. The diagram below summarizes the original design, the issues and challenges encountered, the revised methodology, and the limitations of the revised methodology. The challenges, considerations, and rationale for changing the methodology have been fully detailed and articulated. (See Annex 4 Part A: Original Design and Changes to the Methodology)

Since quantitative data on changes in income was not available the Evaluation considered the state of “economic well-being” in the villages. This captured the income and economic related quality of life improvements, such as food consumption and increased landholding that would be missed with a narrow emphasis on changes in income.

Figure 1: Methodological Changes and Related Issues

Methods	Survey	Satellite Imagery	PRA	Site Visits	Inter views	Focus Groups	Doc Review
Original Design from ToRs/ Proposal	Regional Survey 20 HIMA Villages: 30 HHs x 20 Villages = 600 HHs 10 Control Villages: 30 HHs x 10 Villages = 300 HHs	Satellite Imagery Analysis (8 PRA Exercises)	Not Included	Not Included	Approx 50	8 to 10	Financial, activity, output, monitoring, etc
Issues and Challenges with Original Design	No baseline data on incomes (HIMA or Control) Limited data on livelihoods Large statistical design error	No images available from HIMA period Images available for 2006					HIMA Monitoring database not accessible No financial data below district level No accurate quantitative data on activities
Revised Methodology	Repeat 1996 Njombe District Baseline Survey 12 HIMA Villages: 27 HHs x 12 Villages = 330 HHs	Satellite Imagery Analysis (2 Village PRA Exercises)	Village PRA 13 HIMA Villages 6 Comparison Villages	Village Site Visits 30 HIMA 1 Non-HIMA	Interviews (175)	Focus Groups (33)	Document Review
Limitations of Revised Methodology	Not representative of HIMA or Njombe District Only recall data on income changes Incomplete baseline data Not representative of 12 villages	No baseline	No documented baseline Does not cover every issue in every village HIMA contamination in comparison villages				No data on HIMA activities per village – time period, intensity, cost, results, etc

2.2 Main Data Collection

The main data collection phase took two months to complete and embodied the following methods:

Document Review

An initial review of documents was carried out before the tendering process by the Danish firm Scanagri. This included valuable lists of relevant documents, scanned executive summaries of key documents, and synopses of important reports. Using the Scanagri work as a base, the document review was initiated during the inception period and continued throughout the period of the field study. The Evaluation consulted the HIMA library in Iringa several times to extract relevant data and information at the national, regional, district, division, village, and individual levels. A bibliography of the main documents consulted can be found in Annex 12. The Scanagri documentation study can be found on the CD-ROM.

Household Survey: Njombe

The Evaluation repeated the Njombe baseline survey with 330 HHs from the same 12 villages surveyed in 1996. The data collection tool for the HH survey was based on the 1996 Njombe baseline survey instrument but with improvements to the questionnaire in order to increase the accuracy and speed of data collection. To address the issue of the absence of baseline information on issues such as income levels, the survey requested that HH members attempt to recollect changes in their incomes between 1996 and 2006. While this method undoubtedly led to recall error, the Evaluation decided that, given the circumstances, this was the best way to proceed. (Annex 4 Part C: Njombe Household Survey Report)

Given the provisional state of the data analysis due to gaps in the 1996 information, the survey results were considered in two different sets of tables. The first was a “Panel Set” (A data set containing observations on multiple phenomena observed over multiple time periods) consisting of 189 HHs who responded to both surveys. The second was a comparison of the 300 1996 HHs with the 330 HHs, surveyed in 2006. Due to gaps in the 1996 data, however, some questions could only be analyzed using one set of tables or the other. (Annex 5 Part A: Data Tables for Panel Set and Annex 5 Part B: Data Tables for 1996 and 2006 Comparison)

Structured Key Informant Interviews

Over 175 key informant interviews were conducted to obtain qualitative findings, at all levels, on most of the evaluation issues. These interviews provided in-depth information that allowed the Evaluation to draw conclusions on the relevance, results, and sustainability of the programme. Most of the key informants were Tanzanian government officials.

The following is the breakdown of the interviews together with the numbers involved:

- National government officials – 5 participants,
- Regional government officials – 10 participants,
- District level officials – 28 participants,
- Ward level officials – 15 participants,
- Donor partners/Non-Governmental Organizations (NGOs) – 7 participants,
- Danida/Royal Danish Embassy (RDE) – 9 participants,

- Villagers – 115 participants.
(Annex 4 Part D: Interviews and Focus Groups)

Focus Groups

The Evaluation conducted 33 focus group sessions comprised of 140 stakeholders including government officials and staff at the district and division levels, and, especially, with extension workers.

The following is the breakdown of the focus groups:

- Village leadership and committee members – 8 participants,
- Mixed groups of male and female farmers – 10 participants,
- Women farmers – 5 participants,
- PPs – 4 participants,
- Ex-HIMA staff – 6 participants, with at least one per district.

(Annex 4 Part D: Interviews and Focus Groups)

Participatory Rural Appraisal

In keeping with the consortium's recommendation, an extensive PRA process was undertaken in 13 HIMA villages. Half way through the project, an additional HIMA village was selected to compensate for the probability of lack of access to the PRA villages caused by impassable roads during the rainy season. Six comparison villages were incorporated into the PRA process.

Village Selection

In order to construct a sample frame of villages by district, population size, Agro-ecological Zone (AEZ), and HIMA start date, the Evaluation based its selection of the 13 villages on information gathered in Iringa Region, and on documentary sources at Danida.

The six comparison villages were selected using the following criteria: district, AEZ, population size in the 1990s, the distance from a main road, and their location in a HIMA or non-HIMA division.

After the PRA process had begun, errors were discovered in the HIMA start dates provided to the Evaluation. Consequently, the 12 villages initially chosen for the PRA, over sampled villages started by HIMA in the 2000-2002 period. That is, the sample included a disproportionate number of villages with little or no actual HIMA implementation. To compensate, two villages were changed to ensure that the sample corresponded to the sample frame. (An additional HIMA village was added to address access issues due to rain, bringing the total to 13). (Annex 4 Part B: Village Coverage)

Participatory Rural Appraisal Tools

The following were the main tools used in the PRA:

- Historical timeline
- Resource Map
- Transect walk
- Semi-structured interview

Given the “participatory” nature of the PRA that encouraged villagers to tell their HIMA story, it was impossible to address all of the evaluation issues and questions in each village. For example, although changes in yield might have been an issue, it was inconsistently raised by villagers. In addition, if data, such as protection of water sources, was identified by an interviewee, but could not be verified in the transect walk, it was not reported as a result. Consequently, the PRA results do not always refer to all 13 villages. Again, there may have been a report that HIMA interventions had targeted water source protection in six villages and that in five of those, the water sources were still protected. This type of data was reported as “... water sources were still being protected in almost all of the villages for which there was data.” (Annex 6: PRA Synthesis Report)

Site Observations

Site observations were carried out in the 12 survey villages as well as in an additional 32 HIMA villages. One non-HIMA village was also visited. These villages were in addition to the 19 PRA villages. Due to the broad range of HIMA interventions, evaluations of NRM practices, verified by observation of physical impacts on the land, varied in their scope and content. (Annex 4 Part B: Village Coverage)

Satellite Imagery

The consortium purchased new satellite images for two different villages in Iringa in order to facilitate an alternative focus group discussion. The images were compared to old PRA maps of the village land. In a positive way, these discussions contributed to an understanding of local changes in the landscape, and they provided good, fast and accurate overviews of large tracts of land. (Annex 7: Satellite Image Analysis)

Panoramic Photographs

After its conclusion, HIMA left behind several series of panoramic photographs that enabled the Evaluation to locate seven of the old sites. Focus group discussions centred on the panoramic scenes of 1996 and 2006 were undertaken successfully in three SSI workshop sessions. Sessions could not be arranged in the other four sites due to challenges with organising discussion sessions and inability to reach sites due to rain. (Annex 8: Documentation of HIMA Interventions using Panoramic Photographs)

Constraints Encountered

Due to the Danida evaluation schedule the data collection phase took place during the early days of the rainy season, posing a considerable logistical challenge for the Evaluation. On account of impassable roads, some PRA villages in the sample frame had to be substituted with others. In addition, since there was neither the time, nor the means of access to carry out a follow-up, once a PRA village exercise had been concluded, any outstanding issues regarding the data remained unresolved. Likewise, any questions arising from survey findings could not be followed-up.

2.3 Data Collation and Analysis

The following processes were used for collating and analyzing the data collected from the three primary lines of evidence: 1) interviews, focus groups, and site observations, 2) PRAs, and 3) the HH survey.

Interviews, Focus Groups and Site Observations

All data collected from interviews, focus groups and site observations was recorded in written and photographic form. A logbook of all data collection events was created giving a unique identifier to each event. All event data was then analyzed and tagged with a reference code according to a predefined set of themes and issues. Each data point was cross-referenced according to these themes and issues.

The list of themes and issues was as follows:

Figure 2: Data Collection Themes and Issues

Themes	Issues
Soil and Water Conservation	A. Impact on Incomes
Forestry	B. Impact on Livelihoods (Including Crop Security)
Crop Production	D. Crop Production and Productivity
Income Generation / Livelihoods	E. Institutional Changes
Capacity Development	F. Sustainability of Interventions
Gender Funds and Gender-Specific Activities	G. Replication of Practices
Community Governance / Participation	H. Design and Delivery
Other	I. External Factors
	J. Other

Using cross-referencing, each data point was then combined in a thematic document (divided into sections by issues) so that the forestry document, for example, contained all forestry data points, organized according to A, B, etc.

Given that the sustainability analysis took place four years after the conclusion of HIMA, the very existence of the results observed by the Evaluation proved their sustainability. Therefore, in terms of impact, HIMA's successes were very closely related to the prognosis of sustainability. Regarding replication, the Evaluation considered the two geographical dimensions identified in the evaluation issues: 1) replication within HIMA villages from participants to non-participants, and 2) replication from HIMA villages to non-HIMA villages. Given that HIMA and the Evaluation covered all the districts in the Iringa Region, the possibility that other, non-HIMA districts had replicated aspects of the HIMA programme, could not be considered.

Participatory Rural Appraisals

Each village was assigned a member of the PRA team who agreed to act as that village's reporter and to write up the evaluation. The PRA results were then triangulated across the different methods to reach a set of findings. For example, both the Transect Walk and Resource Map confirmed that six water points in a particular village were still being conserved using HIMA techniques. The individual village reports first documented each activity and then added a commentary section to make connections between the findings in a particular village and HIMA's performance in other villages. (Annex 9: PRA Village Reports, Parts A-S)

The findings in the 13 HIMA and six comparison villages were analyzed and synthesized into one report. The full PRA team analyzed the data according to major areas; it assigned ratings and groupings to different results areas, such as changes in the division of labour between men and women.

Household Survey

After data cleaning and recoding, a set of tables covering the 189 HHs that took part in both surveys, was generated for the Panel Set. This data was then analyzed using a repeated-measures approach. The change in each variable was measured for each HH. Then, a model showing the expected causal relationships between variables was constructed. See Figure 3 below. (Annex 5 Part C: Analysis Tables for Panel Set and Annex 5 Part D: Additional Analysis Tables)

The model only contains variables that are included in the Panel Set. It is recognised that there are other important relationships between income, livelihoods, and crop production that are included in the findings of the Evaluation. However, these could not be included in this causal analysis as they are not part of the Panel Set.

This model was used to guide the analysis of the HH survey data. In most cases, the tests of these relationships were conducted using a simple correlation of two measures. Some analysis relied on testing the difference in means between different types of HHs. One of the key difference-in-means tests was to compare the outcomes for HHs which had either adopted, or not, a specific intervention or technique promoted by HIMA.

Respondents were coded in accordance with the following four types of HHs:

- HHs that had implemented a technique in both 1996 and 2006.
- HHs that had not implemented a technique either in 1996 or 2006.
- HHs that had not implemented a technique in 1996 but had implemented it by 2006.
- HHs that had implemented a technique in 1996 but were not using it by 2006.

This categorization helped to identify the proportion of the HHs, with their outcomes, that had the potential to be linked to HIMA interventions. Only the outcomes for the HHs that, in 1996, had not implemented an agricultural technique or practice but, by 2006, had adopted a HIMA-inspired initiative, could usually be considered attributable to HIMA. The first two categories are HHs that did not change their practices between 1996 and 2006. In fact, the group that had not adopted the practice in either year could almost be seen as a baseline, since any changes in their outcomes could be due to such factors as the adoption of alternative practices, or even changes in the weather.

The poor wording of the survey questions posed difficulties in that it either hid the change in the “yes-yes” category, or provided too many categories for the undertaking of the analysis. One example relates to livestock keeping. The simple “yes-no” question masks the fact that the type of livestock kept could have varied between 1996 and 2006. A HH could respond, “yes” in both years despite there having been a successful HIMA pig rearing intervention that changed the livestock mix. In the 1996 survey, the question on the type of livestock was so poorly worded that the categories could not be segmented to undertake this type of analysis.

Another limiting factor arose after the 189 HHs had been split into the earlier identified four types. When the analysis was carried out, the number of cases in some of the four categories proved to be too low for statistical reliability.

For the means tests, the calculation involved detecting whether the means of the different groups within the variables was statistically significant with the use of an analysis of variance F-test, at the $p < .01$ level. Correlations between the results for the different variables were also tested for significance at the $p < .05$ level. The coefficient of determination was then calculated to determine the proportion of the variability that could be accounted for by the expected relationship.

A set of tables for the entire 2006 questionnaire, involving all 330 respondents, together with the 300 1996 respondents – where the data was available – was also generated. Since there was usually no more than a 5% difference between the results for the same variable between these tables and the Panel Set, both sets of results were used in the analysis.

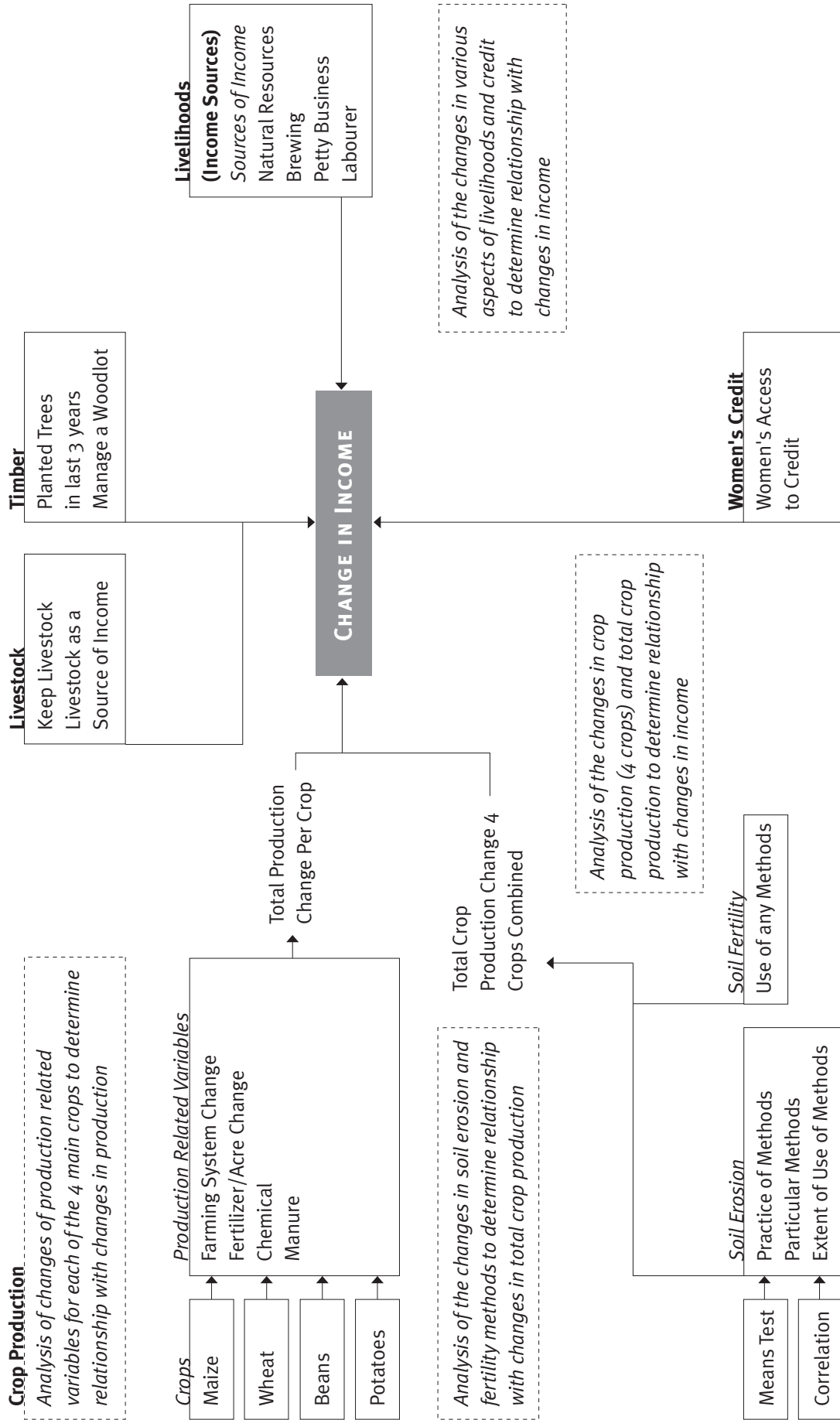
Synthesis Across Lines of Evidence

In order to analyze the data and to develop findings, conclusions, and recommendations, a team meeting of most of the international and Tanzanian team members was held over four days in Dar es Salaam. The team was divided into thematic groups which examined all the data points in a particular thematic area, using all three lines of evidence. The team also developed summary findings and conclusions by issue and theme. For example, forestry findings and conclusions were organized by incomes and livelihoods, institutional changes, etc. Each thematic group then presented its findings and conclusions to the larger group for clarification and/or amendments.

Following this exercise, the findings and conclusions were then regrouped according to issue areas such as forestry sustainability, agriculture sustainability, etc. Issue groups then took over the discussions. Findings and conclusions were refined before being presented to the larger group that then instituted any further necessary amendments and clarifications.

Unfortunately, the results and analysis, i.e., the means test and correlations of the Panel Set had not been prepared by this time and could only be considered after the team meeting.

Figure 3: Model of Expected Causal Relationships Between Variables



3 HIMA Profile

The purpose of HIMA was to promote sustainable agricultural production, natural resource management, and forestry production among farmers in the Iringa Region of Tanzania. HIMA followed a participatory approach that involved the local population and tapped into relevant “indigenous knowledge”. HIMA was integrated with, and implemented through, local government structures, with the various district councils acting as executing agencies. Institutional sustainability was emphasized throughout planning and implementation.

3.1 HIMA Context

The United Republic of Tanzania, comprising about 886,000 square kilometres, is one of the world’s poorest countries. In terms of Gross Domestic Product per capita, in 2006 Tanzania ranked 175th in a total of 177 countries. With regards to the Human Development Index (HDI), in 2006 Tanzania ranked 162nd with a value of 0.430 (source: Human Development Report 2006, United Nations Development Program (UNDP)). Poverty is widespread, and with income inequality increasing, many people live below the poverty line. The Household Budget Survey of 2000/01, and the Integrated Labour Force Survey of 2000/01, established that:

- 18.7% of the Tanzanians live below the food poverty line, and 35.7 live below the basic needs poverty line.
- Poverty is more severe in rural areas compared to urban areas.
- The rural poor constitute about 87% of the rural population.

Tanzania is predominantly an agrarian society, with agriculture contributing around 50% of the Gross Domestic Product. Approximately 80% of the labour force is engaged in agriculture that provides 85% of exports including coffee, cotton, tea, tobacco, cashew nuts, and sisal. The Tanzanian economy is characterised by overwhelming supply side constraints, including low productivity in agriculture and low levels of human resource development.

An analysis of the policy context for HIMA can be found in Section 9.1 and Annex 11.

The Iringa region is located in the Southern Highlands of Tanzania. The total area of the region is 58,936 square kilometres and the region has a population of 1,495,333, according to the 2002 census. The region is divided into seven districts: Iringa Rural and Iringa Urban, Kilolo, Ludewa, Makete, Mufindi, and Njombe. There are over 6,000 villages across the region and five towns corresponding to the district headquarters. The climate of the region varies from semi-arid tropical to cool tropical. Agriculture is the main livelihood of 80% of the population and contributes 85% of the regional Gross Domestic Product. Main food and cash crops grown include maize, wheat, beans, potatoes, rice, cassava, sorghum, millets, groundnuts, simsim, sunflower, soya beans, fruits (apples, pears, peaches, pineapples,) pyrethrum, coffee, cashew nuts, tea, tobacco, tomatoes and paprika. There are an estimated 300,000 hectares of natural forestland, part of the Eastern Arc Forests, characterized by high levels of biodiversity.

HIV/AIDS has had an adverse effect on the Southern Highlands in general and Iringa in particular. The 2004 Demographic and Health Survey (DHS) shows that 5.9% of children in the Southern highlands area have lost their biological father, a rate higher than all other regions (exceeding the closest rate 0.9%). For Iringa region in particular an astonishing 9.4% percent of total households with children had seen the death of the father, exceeding all other surveyed regions by at least 3.1%. This factor has contributed to a lagging domestic income, as households with a male head reported a higher domestic income. The Southern Highlands also had the highest orphanage rate in Tanzania, at 12.9%, indicating a highly dependent youth population. Again Iringa was notably above this level with an orphan rate of 20.7%.

Context at Entry

In the early 1990s when HIMA was initiated there were problems of unsustainable and inappropriate use of natural resources and improper land use management. Illicit utilization of timber and fuel wood was also a significant issue, especially the encroachment on natural forests. Problems of soil erosion were widespread, due to deforestation, inappropriate cultivation, and overgrazing. Declining soil fertility was common across many parts of the region. These problems were aggravated by capacity gaps with the district administration, in terms of finances, systems, and skills and knowledge. With respect to gender equality, women, who represent 85% of all land users, and are the main producers and carry out the major part of agricultural activities in the region, are routinely denied ownership of land.

Although there was a large variation across the program a “typical” HIMA village would have a population of 1,000 to 2,000 persons with the population distributed among a number of sub-villages or hamlets. Villages have a government structure that typically consists of a village chairperson, an executive officer, and several committees, such as Social, Finance, and Environment. Most villages cultivate wheat and maize and a variety of other crops depending on the agro-ecological zone that they are located in. Most villages also have livestock and a minority, located in the North of the region, are predominantly pastoralist. Depending on the wealth of the villagers housing would consist of mud or wood walls and thatch roofs or brick/concrete clad walls and metal roofing. While most villages have a number of water points, piped water to the house is rare as is indoor plumbing.

HIMA Stakeholders

There were many different groups of stakeholders involved in HIMA. These can be divided into two groups: direct and indirect stakeholder. The direct stakeholders in HIMA included the following groups:

- Small-scale farmers (women and men) including paraprofessionals in HIMA targeted divisions.
- Groups of women and men involved in HIMA interventions outside of crop production.
- Village governments, committees, and governing bodies.
- Government extension staff (agriculture, forestry, and community development).
- Ward, division, district, and regional authorities and officers.
- NGOs involved in HIMA implementation.

Indirect stakeholders of the program included:

- National authorities.
- Other development actors in the region including NGOs.

Implementation Arrangements

There was an evolution in the implementation arrangement for HIMA throughout its lifespan. HIMA was initially housed under Prime Ministers office from the start of the program until 1998. From 1998 onwards it was placed under the jurisdiction of the Ministry of Agriculture until its completion in 2002. There was an overall Program Manager (PM) at the regional level with a Government of Tanzania (GoT) regional level counterpart for overall coordination. In the five districts of the Iringa Region HIMA was located under the District Executive Director (DED). HIMA's activities were implemented through the line agencies of Community Development (CD), Forestry, Agriculture and Livestock. There was a large degree of autonomy in the districts with the result that HIMA was more or less five semi-independent projects. All the HIMA funding was directly from Danida. Danida also provided office space at central, district, and divisional level. The GoT provided staff for the implementation.

3.2 Planned Results

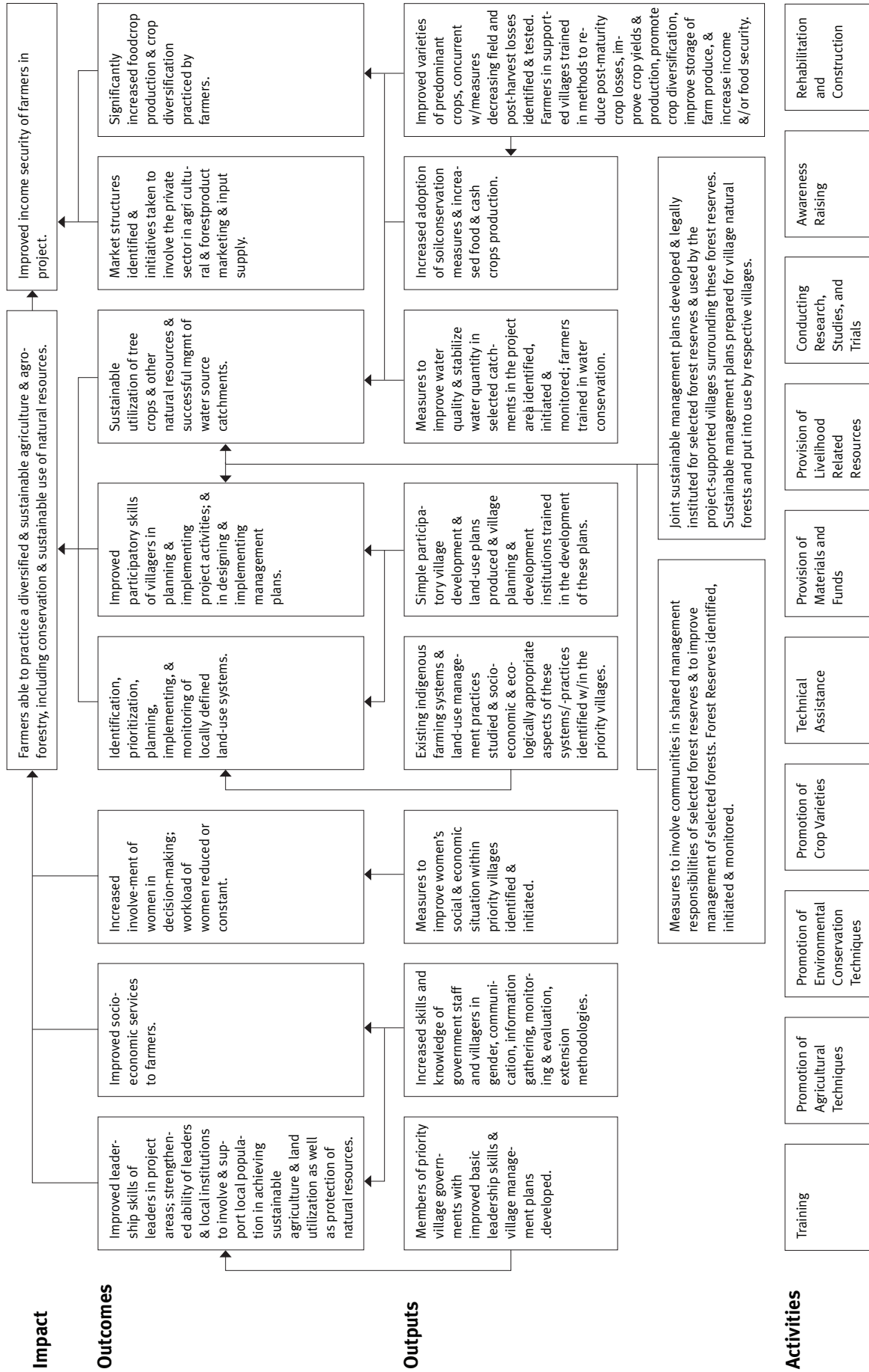
HIMA had many logic models and result chains that were applied both during its various phases and across different implementation districts. These have been rationalized into one logic model of activities, outputs, outcomes, and impacts. See Figure 4.

3.3 Modalities

HIMA focused its programming at the village level. The selection of villages was initially driven by a “catchment approach”, i.e., a geographical area that collects rainwater, which drains, into a common river or basin. This approach embodied a conservation rationale in which environmental disturbances such as deforestation, overgrazing, poor agricultural practices, and wildfires in the upper areas of a “catchment”, would have to be addressed in order to tackle issues of water quality and quantity, and soil erosion at lower levels. The “catchment approach” was used to select priority villages using criteria of i) position within the catchment, ii) severity of environmental degradation and iii) responsiveness in accepting the programme activities. Following a number of initial studies, HIMA began with the preparation of a village workplan. A series of HIMA interventions, spanning several years, were initiated in many villages. (See Annex 10)

In total, HIMA operated in approximately 212 villages across the five districts. The largest number of villages was in Iringa District, followed by Makete and Njombe. HIMA commenced activities in approximately half of the total number of villages during the 1998-99 period. Almost a quarter of the total number of villages had HIMA activities initiated in the final two years. Within Iringa Region districts were unevenly exposed to HIMA. In Iringa, Njombe and Makete Districts, HIMA was active throughout the evaluation period, whereas Ludewa and Mufindi Districts were only included from 1998. Building on the experiences gained in “the old districts” Ludewa and Mufindi managed in a remarkably short time to start HIMA activities in 27 and 23 villages respectively. In

Figure 4: HIMA Logic Model



3 HIMA PROFILE

Ludewa a majority of these (24 villages) were added during the last two years of HIMA rendering lasting impact within the villages less likely.

Figure 5: Number of Participating Villages

(By start year, population size and district)

Start Date Period / Population Size	District / Number of Villages					Total	% of total
	Iringa	Ludewa	Makete	Mufindi	Njombe		
1995 – 1997							
1,000 or less	5		10		3	18	8
1,001 to 2,000	14		6		6	26	12
Over 2,000	7		1		10	18	8
Total	26	0	17	0	19	62	29
<i>% of total of HIMA</i>	<i>12</i>	<i>0</i>	<i>8</i>	<i>0</i>	<i>9</i>		
1998 – 1999							
1,000 or less	0		17	1	1	19	9
1,001 to 2,000	22	5	17	6	21	71	33
Over 2,000	6		0	3	5	14	7
Total	28	5	34	10	27	104	49
<i>% of total of HIMA</i>	<i>13</i>	<i>2</i>	<i>16</i>	<i>5</i>	<i>13</i>		
2000 – 2001							
1,000 or less	0		1	1		2	1
1,001 to 2,000	4	24	0	11		39	18
Over 2,000	6		0	1		7	3
Total	10	24	1	13	0	48	23
<i>% of total of HIMA</i>	<i>5</i>	<i>11</i>	<i>0</i>	<i>6</i>	<i>0</i>		
Total Villages	64	27	52	23	46	212	100
<i>% of all villages</i>	<i>30</i>	<i>13</i>	<i>25</i>	<i>11</i>	<i>22</i>		

Source: HIMA Administrative Data.

HIMA carried out a wide range of interventions at the village and HH levels that could, in general, be categorized into several themes with many associated activities:

- *Soil and Water Conservation:* Water resource monitoring; land-use mapping; soil-conservation campaigns; contouring and ridging in fields; stabilization of contours; gully reclamation and rehabilitation; establishment of Vetiver-grass nurseries; soil-fertility training for farmers; training of select farmers on contour making; identification and protection of water sources and sub-catchments; soil-fertility and soil

and water conservation trials; rehabilitation of trial plots for soil conservation; improvement and protection of water points and water sources; protection of water intakes; establishment of plans for water sources; participatory rehabilitation/ construction of dams; organic farming and composting for soil fertility; and, collection and analysis of water samples.

- *Crop Production:* Seed production of improved varieties; promotion of improved agricultural techniques in compost making and organic pesticides; training of PPs in the cultivation of round potatoes and other crops to facilitate the training of other farmers; farmer-to-farmer field visits; on-farm training of cash crops for farmers; crop diversification; teaching/promotion of crop preservation techniques and home gardening; green manuring and rock phosphate fertilizer trials; construction of improved demonstration granaries; testing of botanicals against field and storage pests; on-farm trials of beans, tomatoes and maize; training of farmers on fruit and vegetable preservation and/or home gardens and/or improved crop/grain storage; fruit-tree nurseries; provision of agricultural inputs such as seeds and fertilizers to trial participants (farmers); development and distribution of training materials for different types of crops; training of farmers on storage facilities; study tours for select farmers on ploughing with oxen; planting of fruit-tree seedlings; promotion of coffee, cotton and pyrethrum as cash crops; planting of avocado, guava, lemon and tree tomato seedlings; and, the establishment of demonstration plots on crop varieties.
- *Promotion of New/Alternative Livelihoods:* Fish farming; pig rearing; bee keeping; use of oxen; training of PPs on organic farming, poultry, guinea pigs, and rabbits; distribution of small animals; and, on-farm training of farmers in animal husbandry.
- *Forestry Practices and Production:* Planting of trees and seedlings; weeding and protection of forest boundaries; campaigning for fire-prevention; raising of multi-purpose/indigenous tree seedlings at/in schools/nurseries; registration of tree nurseries; training of primary-school teachers on tree planting and management; training in wildfire prevention techniques; development of forest management plans for villages; woodlot management; approval, publication, promotion and distribution of improved by-laws specific to environmental and agricultural issues; execution of tree-species trials; establishment of screening trials for multi-purpose trees; training of farmers on forestry and forest management; trials with exotic species; raising of tree-seedlings by farmers; training of wood-lot owners on harvesting techniques; training of wood-lot owners on the marketing of forest products; and, distribution/sale of tree seedlings.
- *Village Institution Building:* Preparation of manuals for village leadership training; formation of farmers' committees; training of PPs and village leaders; production of villages' annual plans; training of village leaders in by-law formulation and enforcement, record keeping, leadership, and management skills; execution of leadership training for villagers; formation of village Mazingira Committees; training on planning, monitoring, and evaluation for select village leaders.
- *Women's Empowerment/Gender Equality:* Establishment of Women Mazingira Fund (WMF) committees; development of training manuals on gender issues; training of village leaders in gender-based planning and monitoring; identification of women's groups for bee-keeping, training in fish ponds, and the distribution of fingerlings; training of women in beekeeping, donkey management, and the raising and

tending of black cattle; training on home gardening and the preservation of green vegetables; small projects supported via WMF; distribution of pigs and oxen to WMF groups; advice on improved animal sheds and energy-saving stoves; training for business women on marketing and input supply; study tour on animal husbandry; leadership training; promotion of energy saving technologies in order to reduce women's workload; production of a video about gender relations; and, training on gender issues for farmers.

- *Other interventions:* Construction of dispensaries; HIV/AIDS awareness raising with villagers; well and hand-pump installation; construction of improved stoves; study tours on the construction of shallow wells; execution of workshops on marketing and input supply issues; and, the establishment of notice boards for price information and distribution of leaflets to villages.

In addition to the village level, interventions carried out at the division level or above, included:

- Government capacity building such as the training of extension staff in participatory methods; training on budgeting and financial controls; strengthening relationships between councillors and district executive staff; training of staff in basic computer skills; promoting sustainable agriculture; promoting sustainable forestry; raising the awareness of HIV/AIDS by means of materials and staff training.
- Establishment of tree nurseries.
- Conservation of district level forest reserves.
- At the regional level, HIMA supported the surveying, boundary maintenance and mapping of government forest reserves in the Eastern Arc Forest Range.

3.4 Finances

Accurate and complete financial data on HIMA's actual expenditures was very difficult to obtain. Line items only permitted limited financial analysis. It was impossible to link expenditures to villages, to thematic areas of intervention such as soil and water conservation, or to specific types of activities such as training. While the line items did include headings for training, forestry, etc., they did not include personnel or operational expenditures such as transport costs for the thematic areas. Consequently, it was impossible to provide an accurate picture of actual thematic or programmatic expenditures. In addition, since there were no detailed expenditure figures for most line items for the years 1995-97, the Evaluation could not construct an analysis for whole period. Without accurate and complete financial data, an analysis of efficiency for the evaluation was impossible.

During the evaluation period HIMA's actual expenditures were in the range of 118.2 to 124.4 million Danish Kroner (DKK). But since the evaluation period bisected the largest single phase of HIMA, it was impossible to calculate the exact amount of expenditure. It is important to note that all technical assistance, i.e. all local and international advisory inputs, is not included in the official HIMA expenditures. These were paid for separately from a budget line managed from Copenhagen.

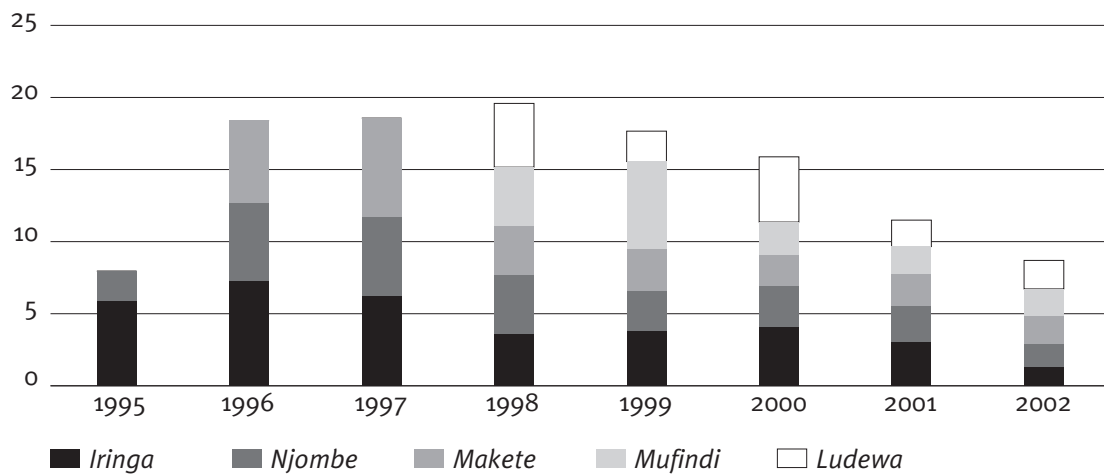
In-kind contributions from HIMA beneficiaries are also not included. Cost sharing at the village level would have included farmers contributing their time to attend to HIMA activities. At the district level, officers were usually seconded by the authorities to work

with HIMA. District authorities would pay the salary of these officers and thereby contribute to some, albeit small, cost sharing.

The only dimension of HIMA having relatively complete, representative, and accurate data was the district level expenditures. Figure 6 shows approximate HIMA expenditures from 1995 to 2002. Ludewa and Mufindi were added in 1998. The figure also shows that total HIMA expenditures peaked in 1998 and then dropped fairly rapidly until the closing in 2002. While Ludewa and Mufindi took an increased share of the expenditures between 1998 and 2000, only in the last two years of HIMA were the amounts fairly evenly distributed in the five districts. These expenditures included buildings and maintenance, equipment, staff salaries, per diems, vehicles and motorcycles, petrol, and the cost of trainings and workshops.

Figure 6: HIMA Expenditures by District

Expenditures (DKK millions)

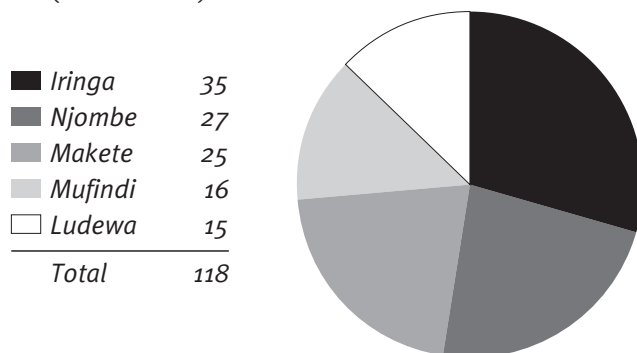


Source: HIMA Financial Data.

Figure 7 shows the total expenditures between 1995 and 2002, proportionally by district.

Figure 7: HIMA Expenditures Proportionally by District (1995-2002)

(DKK millions)



Source: HIMA Financial Data.

Given that reasonable financial data was available by district, and that there was a fairly accurate tally of the number of villages per district, it was possible to undertake an analysis of expenditures per village by district. It is recognized that not all expenditures were focused at the village level. Figure 8 shows a remarkable consistency across all the districts with respect to the relative percentage of total expenditures in a district and the proportion of villages. There was some disparity, however, in the average spending per village. The expenditures for Iringa, Ludewa, and Njombe were quite close, all in the range of 550-580,000 DKK per village. Makete was slightly below at 480,000 DKK per village. However, Mufindi was much higher than the rest with the average amount of expenditure per village 33% higher than the average across all districts (710,000 DKK per village). This finding could be the result of factors such as relatively higher levels of expenditure on interventions at the ward, division, and district level. Since data from the period of HIMA's phase out was unavailable, it was impossible to determine the reason for this relative difference.

Figure 8: Relative Expenditure by District and Proportion of Villages

(Millions DKK)	Iringa	Ludewa	Makete	Mufindi	Njombe	Total
DKK / district	35.04	14.86	25.21	16.36	26.76	118.23
DKK / village	0.55	0.55	0.48	0.71	0.58	0.58
% of total villages in district	30	13	25	11	22	
% of total expenditure in district	29.63	12.57	21.32	13.84	22.63	100

Source: HIMA Financial Data.

4. Income, Income Security, and Livelihoods

4.1 Changes in Economic Well-Being

The Evaluation found that HIMA was linked to improvements in the economic well-being of many of the residents of HIMA villages. The majority of HHs surveyed, and most PRA villages, reported that income levels had improved. The evidence also indicated: increases in the consumption of crops per HH; greater livestock ownership and diversity; larger landholdings and timber ownership; and, a reduction in food insecurity. In addition, access to, and availability of water had improved in many of the PRA and surveyed HIMA villages. Collectively, this data paints a convincing picture of improved economic well-being and quality of life in HIMA villages.

With respect to income, 70% of the HHs surveyed in 2006 stated that their household income had improved over the last five to 10 years, the timeframe in which HIMA was active. However, female-headed households did not have the same levels of improvement as those headed by men. Only 60% of female-headed households reported that their income had improved; in male-headed households, 75% reported improved income. The lower figure for women could be due to the loss of a male household provider.

Figure 9 shows how respondents utilized additional income.

Figure 9: Uses of Additional Income

Purchases	% with Improved Income
Clothing	86.6
Agricultural Inputs and Equipment	84.3
Household Improvements	75.3
Household Articles	72.3
Medicine and Drugs	68.8
Radio	50.6
Bicycle	39.4
School Fees and Uniform	13.3

Source: Njombe HH Survey 2006 (N=330).

Thirty percent of HHs claimed that their income had not improved over the last five to 10 years.

Figure 10 shows the reasons respondents gave for lack of improved income.

Figure 10: Reasons for Lack of Improved Income

Reasons/Factors	% of HHs without Improved Income
Poor Quality Agricultural Inputs	56
Death of a Household Provider	42
Price Increases	24
Poor Soil	19
Drought	14
Bad Rains	10
Insects / Crop Disease	2

Source: Njombe HH Survey 2006 (N=330).

With respect to the HIMA PRA villages, 10 of the 13 villages reported positive changes in income. Of the remaining villages, the failure was attributed, in one, to lack of timber production, and, in the other two, to failure of alternative livelihood practices.

The Evaluation also analyzed the status of food security as another means for identifying changes in income. Food security was addressed in the 1996 baseline study in Njombe and was repeated in the 2006 HH survey. Key determinants used to measure the status of food security were access to food and the experience of hunger, including its duration.

The analysis indicated a slight shift in food security with an increase in the number of HHs feeling more food secure, from 80% in 1996 to 85% in 2006. Very few respondents stated that they had either sometimes, or often, lacked food. Approximately 12% of HHs surveyed had experienced hunger in 2006 versus 15% in 1996. However, when the figures were broken down into defined periods within the year, 4% experienced hunger for two months in a year, 6% experienced hunger for more than two months but for less than six months in a year, and, 2% experienced hunger for more than six months in a year. These figures may demonstrate that the hunger experienced is not a chronic problem but, rather, an intermittent one. The lack of food could, perhaps, be related to seasonal variations in food production. In retrospect, only 7% of the respondents felt that hunger had worsened over the past five years; 8% reported the occurrence of hunger over the last 10 years.

Size of Landholdings

Between 1996 and 2006 in the surveyed area of Njombe, a remarkable change had occurred in the size of land owned by the same HHs. Farmers participating in the 1996 survey had been able, generally, to acquire more land, moving from smaller farms, defined as three acres and below, to larger holdings.

Figure 11: Total Acreage of Agricultural Land: 1996 and 2006
(excluding hired land)

Acres	2006	1996
1-2 acres	8%	14%
3	19%	28%
4	20%	21%
5	22%	17%
6 and above	31%	20%

Source: Njombe 2006 HH Survey (N=330), and 1996 Baseline Survey (N=300).

Counterfactual

The Evaluation used three comparative approaches to determine how the positive income changes in the HIMA villages compared with non-HIMA villages: 1) a comparison of PRA villages, both HIMA and non-HIMA, 2) comparisons with national data for rural Tanzania, and 3) comparisons with district level data derived from the 2002 census. However, all three had limitations that are discussed below.

Two of the six non-HIMA PRA villages experienced positive changes in income. In addition, income-generating activities that had begun to take hold in another village, were attributed to lessons learned from HIMA. The evidence, therefore, indicates that the proportion of non-HIMA PRA villages with positive changes was lower than for HIMA PRA villages.

The reported income and household characteristics of the 12 villages surveyed in Njombe were compared with rural averages for Tanzania. As shown in Figure 12, HHs in the survey had slightly higher averages, but not significantly above those representing villages in rural Tanzania.

Figure 12: Comparison of Njombe HH Survey with Rural Tanzania

Household Characteristics	2006 Njombe HH Survey	2004/05 Rural Tanzania
TV Ownership	1.5%	0.7%
Bicycle Ownership	45.2%	41.9%
Radio Ownership	54.2%	51.6%
Telephone Ownership	5.2%	2.3%
Refrigerator Ownership	0.3%	0.3%
Piped Water to House	7.3%	2.1%
Ownership of Mosquito Net	8.8%	36%
Ownership of Treated Mosquito Net	7%	14%
Ownership of Car/Truck	0.6%	0.5%

Source: Njombe HH Survey 2006 (N=330), Demographic Health Survey 2004/05 (N=12,964).

Since malaria is not endemic in Njombe, the lower rates of mosquito net ownership might be a reflection of lowered risk.

Figure 13: Household Characteristics in Iringa Region compares characteristics for the surveyed HIMA HHs with HHs in other districts in the same region. In all cases, the surveyed HIMA HHs have better characteristics than district averages, especially for the overall Njombe District where the survey villages are located. It should be noted, however, that the data for the other districts relates to the year 2002, and that for HIMA to 2006. The findings, therefore, have only limited value for this comparison.

Figure 13: Household Characteristics in Iringa Region
(by district)

Household Characteristics	2006 Njombe HH Survey	Njombe District	Iringa Rural	Mufindi	Makete	Ludewa	Kilolo
Bicycle Ownership	45.2%	43%	34%	34%	13%	19%	27%
Radio Ownership	54.2%	47%	39%	41%	39%	40%	40%
Telephone Ownership	5.2%	1.2%	0.7%	1.2%	0.4%	0.3%	0.3%

Source: 2002 data from Poverty and Human Development Report, 2005; Research and Analysis Working Group, Government of Tanzania.

By looking at the change in poverty levels in rural Tanzania as a whole, at data from Household Budget Surveys (1991/92 and 2000/01), and at data from the Rural Poverty Portal, Tanzania (2006), it is evident that rural poverty has remained almost unchanged over the past 15 years. There has only been a decrease of only 3 percentage points from 41% to 38%. These figures indicate that improvements in income of the kind cited by surveyed HIMA HHs are contrary to what is happening, in general, to income levels in rural Tanzania.

In conclusion, it appears that these positive changes are unlikely to have happened to the degree they did without the HIMA intervention. Without HIMA most of the villages may have had some slight improvement in income, however, these changes would not likely have been as widespread or significant as those achieved by HIMA.

4.2 Causal Factors

In order to attribute positive income changes to the HIMA programme, two links in the causal chain of results were identified: 1) the impact of HIMA-related livelihoods on income, and 2) the impact of crop productivity and production on income. See Chapter 5 of this report for the impact of HIMA on crop production.

The PRA team took into consideration both of the above factors in their construction of an analysis of the HIMA villages, undertaken to determine which economic benefits were attributable to HIMA. In villages where it was possible to determine a HIMA linkage, the big picture is one of positive HIMA causality:

Figure 14: PRA Analysis of Economically Better-Off Villages as a Result of HIMA

Opinion	Number of Villages
Yes, better off due to HIMA	1
Better off with some influence from HIMA	6
No Change due to HIMA	1
Worse Off due to HIMA	0
Not Possible to Determine	5

Source: PRA Village Reports/Analysis.

Crop Production

Given that the majority of villagers were engaged in agriculture, it is not surprising that income changes were strongly linked to crop production. To measure this correlation, four main crops were assessed: maize, round potatoes, wheat, and beans.

The analysis indicated that both maize and round potatoes had a significant correlation with income, while wheat and beans did not. However, a means test to determine the average increase in production of the groups reporting an increase in income, versus those who did not, showed a substantial difference in the production change for wheat.

The results of the analysis are shown below:

Maize Production

Means Test – Those households reporting an increase in income had an average increase of 655 kg in maize production, whereas those reporting no increase in income had an average increase of 10 kg.

Correlation – There was a significant correlation (.003) between change in maize production and reported increase in household income. Approximately 5% of the variation in the change in income could be explained by this change in maize production.

Round Potatoes Production

Means Test – Those households reporting an increase in income had an average increase of 609 kg in round potatoes, whereas those reporting no increase in income had an average increase of 155 kg.

Correlation – There was a significant correlation (0.028) between change in round potato production and reported increase in household income. Approximately 3% of the variation in the change in income can be explained by the change in round potato production.

Beans Production

Means Test – Those households reporting an increase in income had an average increase of 137 kg in bean production, whereas those reporting no increase in income had an average increase of 45 kg.

Correlation – There was not a significant correlation between change in bean production and reported increase in household income.

Wheat Production

Means Test – Those households reporting an increase in income had an average increase of 80 kg in wheat production, whereas those reporting no increase in income had an average increase of 38 kg.

Correlation – There was not a significant correlation between change in wheat production and reported increase in household income.

Livelihoods

Livestock keeping appeared to be linked with household income improvement, but all other livelihoods tested did not. The data was tested for correlations between the reported change in income and several livelihood variables.

Findings from this analysis are set out below:

- *Livestock*: Three quarters of those HHs reporting an increase in income either kept livestock in both years or switched, in 2006, to keeping livestock from not keeping it in 1996. Those who kept livestock in both years had a HIMA influenced shift to diversification and pig rearing. The analysis showed that 84% of this latter group reported an increase in HH income. In contrast, less than 50% of those who either did not keep livestock in either year, or gave up keeping livestock (41% and 46%, respectively), reported an increased HH income. Consequently, the keeping of livestock appears to have been a factor in the reported increase in HH income. The type of livestock kept could not be analyzed due to the design of the categories in the baseline survey. The statistical correlation could not be determined one way or the other, due to the small number of cases in each grouping.
- *Timber*: In both surveys, HHs were asked if they had managed a woodlot. Overall, there was only an 8% increase in the number of HHs doing so. Of the group managing a woodlot in both years or switching to woodlot management, 74% and 81%, respectively, reported increased HH income. However, 45% of those who had never managed a woodlot, and 60% of those who switched out of managing a woodlot also reported increased HH income. Consequently, in statistical terms, the management of a woodlot appears to be a negligible factor in the reported increase in HH income, and much less so than livestock.
- *Women's access to credit*: There was a substantial shift in women's access to credit after the 9% of HHs responding that women were accessing credit in 1996 rose to 34% in 2006. However, there was no significant correlation between change in access and reported income change. While 69% of HHs reporting adult female members gaining access to credit also reported increased income, the overall majority of HHs (60%) did not have access to credit by female members in either year. Yet, 68% of these HHs reported increases in income.
- *Other livelihoods*: In terms of HHs reporting natural resources as a source of income, there was no significant correlation between a change in this factor and the reported change in income. However, it is worth noting that of the 15% of HHs for which natural resources became a new source of HH income in 2006, 83% of them reported increased HH income. For those who dropped natural resources as a source of income (3.7%), only 43% reported an increase in HH income. Other livelihoods, reported by a substantial number of HHs as sources of HH income, were brewing local beer, petty business, and work as a labourer. There was no

statistically significant correlation between changes in these sources of HH income and a reported increase in HH income.

4.3 Overall Livelihoods

The only data available on changes in livelihood patterns were found in the HH survey, and, specifically, in the Panel Set with repeated measures. The survey indicated that there had not been a dramatic shift in the livelihoods of the Panel Set. The overwhelming majority of respondents derived their major source of income from agriculture, a slight increase from 96% in 1996 to 98% in 2006.

Two respondents stated that agriculture was not a source of HH income in 1996, but all respondents claimed that the agricultural sector had contributed to their income in 2006. This evidence indicates that, between 1996 and 2006, there had been a contraction in the small numbers who derived their major source of income from non-agricultural livelihoods.

There were significant positive shifts in income sources derived from some livelihoods in areas promoted by HIMA. In natural resources and livestock, there were increases of 12 percentage points and 6 percentage points, respectively. In fact, these were the only areas that showed any major increases. Also, there were reductions in local brewing, arts and crafts, and artisanship as sources of income, possibly due to the penetration of manufactured goods. Remittances from relatives as a source of income have also dropped.

Figure 15: Livelihoods as a Source of HH Income

Number of HHs	2006	1996	% Change
Natural Resources (Wood, Charcoal, etc.)	16	4	+ 12
Livestock	59	53	+ 6
Large Scale Business	2	1	+ 1
Bee Keeping	1	1	0
Petty Business	14	14	0
Salary from Employment	2	2	0
Fishing and Fish Ponds	0	2	- 2
Labourer	12	14	- 2
Local Brewing	34	40	- 6
Remittances from Relatives	1	9	- 8
Artisanship	11	21	- 10
Arts and Crafts	5	17	- 12

Source: Njombe Survey Panel Set, N=189.

The PRA exercise concluded that crop production in farmer's fields had little impact on diversifying revenue sources. However, it did find that the introduction in three villages of vegetable gardens growing crops such as Swiss chard, spinach and other vegetables was successful from the standpoint of providing a new revenue stream.

In Nganda, where some of the villagers had been trained in the manufacture and repair of ox-carts, the village now owns nine ox-carts that are used mainly for fuel wood collection. These ox-carts can be used without charge if the borrowing farmer has his own pair of oxen but where the oxen have to be hired, there is a fee of 2,000-4,000 Tanzanian shillings (TSH).

4.4 Timber

The promotion of timber production as an income generating activity has been a significant HIMA success. The reported impact of timber production in some villages went beyond the simple generation of revenues to that of influencing an economic realignment of villages. A greater emphasis has been placed on revenue from timber production instead of a reliance on revenue from other agricultural production.

Timber Production and the Evolving HIMA Village

In most of the old HIMA districts, forestry allowed farmers to improve the quality of their lives quite quickly, since the planting and tending of trees brought about an increase in the availability of fuel wood and building materials. For some in the HIMA areas, tree planting has also meant the means of earning extra income through the selling either of whole pieces of timber or of processed wooden slabs, primarily of pine. These successes have led to a decrease in dependency on the agricultural sector as the sole cash earner for HHs. In some locations, there had been a greater awareness of the need to practice sustainable NRM.

In the HIMA PRA villages, and other timber-producing HIMA villages, there was evidence to suggest that these villages were being transformed by the current and anticipated economic impact of planting trees. There were a number of scenarios emerging where groups or individuals were securing additional income streams through the timber trade. In one HIMA PRA village, there were four groups operating successful tree nurseries. In other HIMA PRA villages, there were some small-scale sawmills emerging that allowed the villagers to sell a more refined timber product, a practice that kept in the village another cycle in the production chain.

In at least three HIMA PRA villages, agriculture as an income generator was receiving less emphasis than the more profitable timber trade. Although the respondents in the Njombe HH survey listed agriculture as the main source of revenue, 16% also listed NRM, mostly related to forestry and charcoal production, as an alternative source of revenue. This is up from 4% in 1996.

In the HIMA PRA villages where trees have matured to the point where they can be sold, there is a noticeable difference in the standard of living in terms of clothing and housing standards, and in disposable income for consumer goods.

Counterfactual

Two comparison villages that embraced the timber trade were also found to be enjoying a level of prosperity similar to that of the timber producing HIMA villages. The main difference found in the HIMA villages was the establishment of additional resources related to forestry management, such as tree nursery operations and better tending of planted woodlots, adding further value to the timber production. Therefore it seems that timber related livelihood improvements would not have occurred to the same extent in the villages without HIMA. However, it is important to note that all villages engaged with timber production (HIMA as well as non-HIMA), were generally seen to be better off than villages that for either climatic or other reasons did not produce timber. This is supported by the fact that in those comparison villages that were not involved in the timber trade, livelihood activity was generally very limited and usually related to agriculture.

In one comparison village, deforestation had reached critical proportions forcing people to consider working as labourers in the local town. Another comparison village benefited from having a tea estate nearby since there was a possibility of securing wage labour. However, the dominance of the tea estate over village activities, limited the ability of villagers to manage their natural resources as a means of establishing alternative livelihoods.

4.5 Beekeeping and Fish Farming

Beekeeping and fish farming have had limited success in helping targeted groups establish alternative livelihoods. The PRA exercise and HH survey both indicated that fish farming and beekeeping, two HIMA livelihood staples, were practiced by very few people. In the 2006 Njombe survey (n=330), only three people reported operating beehives, and no one claimed to be in fish farming. In the PRA villages, both activities had fallen off significantly.

Where fish farming or beekeeping was successful, these activities could be highly beneficial for participating individuals, families, or groups. This was the finding of both the PRA exercise and supplementary field observations. Moreover, the benefits went beyond financial considerations to addressing other developmental concerns such as nutritional needs. In the PRA villages where these activities were more closely examined, there was evidence, in a small number of villages, of a limited number of individuals being very successful.

Counterfactual

Successful entrepreneurs involved with fish farming or beekeeping would likely have prospered without HIMA's support. However, since HIMA introduced new livelihood practices, these HHs might not have been as successful and the diversity of livelihood practices would likely not have been as large. Those who were successful with traditional livelihoods such as beekeeping would likely have been as successful, as HIMA techniques were generally not widely adopted.

4.6 Animal Husbandry

Despite some significant setbacks experienced with HIMA interventions, the Evaluation found that animal husbandry was more successful as a livelihood activity than either bee-keeping or fish farming. HIMA introduced better practices, especially for women farmers, in the raising of small animals such as goats, pigs, and chickens. In the majority of PRA villages where animal husbandry was promoted, HIMA's efforts could either be considered successful or, at least, as having achieved mixed successes. The key successful practices introduced by HIMA were: 1) better use of animal medicine, 2) better feed for the animals, 3) better breeds, and 4) better shelters with elevated floors to ensure zero grazing. Some interventions did prove to be less than successful. For example, in one instance, a sow was given to a group but the nearest boar was too far away for breeding. In another case, a sow received two impregnations but none of the piglets survived. This outcome was attributed to inadequate training of the farmer.

In the Njombe survey Panel Set (n=189), there was an increase from 53% in 1996 to 59% in 2006, of HHs reporting animal husbandry as source of revenue. The composition of the livestock had also changed significantly with a greater diversification of combined groups of livestock rather than one particular group. The exception to this trend was in pig production where there was a significant increase of 16% in HIMA promoted pig farming. Of note, there were also significant decreases in animal husbandry activities – a decrease of 16% in HHs keeping only small animals such as chicken and rabbits. Those HHs keeping ruminants only, decreased to 8%. The number of HHs having a mix of animal types was up 10% from 1996 to 2006.

Counterfactual

Animal husbandry was being practiced in all of the comparison PRA villages. In terms of economic achievement in half of the villages these practices were very successful, but in an equal number of villages there was only limited success. In the absence of HIMA it is likely that some of the HIMA villages would still have had successful animal husbandry operations, though perhaps not with the same types of animals, or the same levels of contribution to income.

4.7 Gender Equality and Livelihoods

There was much evidence to support HIMA's willingness to encourage women's participation in income generating activity. Yet the Evaluation found that the results of such activities were, on the whole, less than satisfactory. Women were the focus of income generating programming at both the individual and group levels. Two areas where women were especially encouraged were animal husbandry and household gardens. In one PRA village where gardening was encouraged, women introduced the production of tomatoes and other vegetables. In turn, this activity allowed women to gain more control, albeit slowly, over the management of the HH budget. In one instance, males took over an animal husbandry project, intended for women, after the activity had been firmly established.

4.8 Sustainability and Replication

Sustainability

With respect to non-agricultural livelihoods, the sustainability prognosis is mixed.

- Timber-related livelihood activity remains in an expansion mode and retains strong market potential. Planting activities continue to ensure the sustainability of this sector.
- Fish farming, and some other livelihood activities, continue to be vulnerable both to climatic factors and/or to market considerations. Since these activities, typically, were not widely successful, there was little economic activity to be sustained.
- Animal husbandry efforts have been more successful and appear to be more sustainable.
- Many other livelihood interventions, such as beekeeping, machine sewing, etc., have not been widely sustained for a variety of reasons.

Replication

With the exception of timber production and, to some extent animal husbandry, there is little evidence that HIMA-supported livelihood activities have resulted in broad replication. In the AEZs where timber production is feasible, i.e., principally in zones 3, 4, 14 and, to a lesser degree, in zones 8 and 16, HIMA villages – both those participating in the PRA exercise and the three other villages visited by the Evaluation – were found to be highly engaged in timber activity. And, in most cases, the participants were working towards expansion. While timber production increased widely across most villages, the attribution to HIMA for replication was hard to assess. Of the twelve HIMA PRA villages receiving HIMA forestry support, eight reported that there was a potential HIMA influence on increased timber production. However, four reported that there was not.

The following Figure 16 sets out the livelihood intervention areas, the prognosis for sustainability (low, medium, and high); actual replication (low, medium, and high); and, supporting evidence.

Figure 16: Livelihood Areas and Sustainability

Impact / Intervention Area	Sustainability Replication	Lines of Evidence	
		HIMA PRA Villages	Njombe HH Survey, 1996 /2006 Field Observation / Interviews
Beekeeping	<i>Low sustainability.</i> Little evidence of spread within HIMA villages. In comparison villages traditional methods were still used.	One village out of 8 reported an increase in the number of beekeepers. In 5 villages there was no beekeeping.	Three people claimed to be beekeepers as opposed to 1 in 2006. No beekeeping observed. Initial investment was too high for several farmers. Little technical back up.
Fish Farming	<i>Low sustainability.</i> No evidence found of replication.	No villages reporting an increase in fish farming. Few HIMA supported ponds still operating.	No fish farming in 2006. A few incidents of successful fish farming observed with a positive impact on income.
Animal Husbandry	<i>Medium Sustainability.</i> Replication: Limited expansion in HIMA villages. Pigs, goats and chicken most successful. In comparison villages little evidence of HIMA influence.	Seven villages maintaining limited or expanded HIMA level animal husbandry activity.	Increase to 62.8 % from 55.4% of the households reporting animal husbandry as source of revenue. Many examples of improved animal husbandry on an individual level.
Timber Production	<i>High sustainability</i> Replication: HIMA forestry management and tree planting practices adopted in 2 comparison villages and 4 other non-HIMA villages. HIMA was an inspiration for MEMA* and PFM**	In 8 of 9 villages, timber production is in various states of expansion due, in some degree, to HIMA but overall, driven by growth of industry.	Three villages observed in full expansion of timber production. Forest products and charcoal making as income generating activity increasing.

* MEMA – Matumizi Endelevu ya Misititu ya Asili (Sustainable Utilization of Natural Forests)

**PFM – Participatory Forest Management

Factors Influencing the Sustainability of Non-Timber Related Livelihood Activities

A variety of factors have contributed to the relative lack of sustainability of non-timber related livelihood interventions.

- Some of these factors were related to design and equipment issues. Investments in beekeeping activities were compromised by a lack of the safety equipment required to facilitate the modern honey harvesting technique promoted by HIMA. At least two animal husbandry projects failed when the logistics of villages sharing a boar proved to be insurmountable.
- HIMA supported income-generating activities without the implementation of appropriate marketing strategies. Research revealed that HIMA did a marketing study in 1999 and established marketing task force teams in 2000, just two years before HIMA ceased to operate.
- Unfulfilled commitments, and/or late project starting dates severely damaged activities such as fish farming which required ongoing technical guidance. The PRA exercise revealed that the final years of HIMA were the weakest in terms of following through on commitments and providing ongoing technical support.
- The weather also had an adverse effect on fish farming. The drought of 2005 adversely affected many operations. Most of the remaining operational fishponds dried up.
- Frequently, individuals or groups participating in HIMA income generating activities did so within limited economic margins. Because HIMA failed to take economic status into account, relatively poor fish farmers who lost fish stocks either to drought or flooding were without the means to replenish their ponds. Likewise, disease impacted adversely on animal husbandry activities. In one instance, a diseased boar could not be replaced.
- The diminishing quality and frequency of extension services in the later years of HIMA affected income-generating activity in the late-starting villages.

It is important to underscore that not all non-timber income generating activity failed. Fish farming is a good example of an activity that, where successful, became an important source of income leading to improvements in other dimensions of HH well-being. In one HIMA PRA village, the honey produced through a HIMA promoted beekeeping scheme accounted for 85% of HH income. Such activities seemed to work best in villages where ongoing extension support was maintained, and where strong village organizations existed either in terms of village leadership or through committees. Another factor, identified during the PRA exercise, was the motivation of the individual to see an activity succeed. However, this willingness was not enough to overcome circumstances such as drought or unforeseen animal disease.

Factors Influencing the Sustainability of Timber Production Livelihood Activity in HIMA Villages

For timber production, the following factors helped to support sustainability:

- The positive role model provided by successful, neighbouring timber producing HIMA, or non-HIMA villages.
- The existence of a vibrant regional market for timber products. Unlike other livelihood activities, HIMA timber production has benefited from a high product demand that sees timber buyers actively seeking out producers.

- Strong technical support from HIMA, especially in terms of refining practices in areas such as the operation of nurseries and the marketing of seedlings.
- The promotion of the concept of conservation and complimentary activities such as the establishment or the enhancement of forest reserves by means of better management strategies. This culture of conservation encouraged communities and individuals to make a stronger connection between forestry management and developmental benefits.

4.9 Conclusions

HIMA's interventions are linked to increases in economic well-being and improved income that appear to be more substantial than regional and national comparators. The income increases can be attributed to HIMA influenced increases in crop production and yields. Improvements in maize and round potatoes production and yields had a significant correlation with income. Income increases can also be linked, to some extent, to changes in livestock prevalence and practices. HIMA influenced timber activities have also contributed to economic well-being.

The evidence indicates that HIMA achieved mixed results in improving and broadening the livelihood base in Iringa region. While there are examples of successes at the village, individual, and family levels, in the establishment of viable, improved and/or new livelihood activities, there are also cases of failure.

To elaborate:

- Other than for timber production, there was little evidence of HIMA having contributed to improvements in village-level livelihoods.
- Livestock programming was seen as having a positive impact on income and there was evidence of HIMA influence on the mix of livestock and the adoption of improved practices. However, there was not a substantial increase in the numbers of people engaged in livestock-related livelihoods.
- With regard to non-timber livelihoods, the Evaluation found HIMA villages with unsuccessful income generating activities. However, in some cases programming had contributed to the success of either a small number of individuals, or of a particular activity.

The Evaluation found instances where the success of one activity had created an overall positive impression of a village despite there having been other unsuccessful livelihood activities. Yet many of the simple initiatives promoted by HIMA both worked at the time of their introduction and were continuing to work in 2006.

5 Crop Production

5.1 Changes in Crop Production and Productivity

HIMA interventions to improve agriculture were introduced in almost all of the villages. These interventions targeted specific crops such as beans, maize, vegetables, wheat, pigeon peas, finger millet, and sunflowers.

Njombe Survey Panel Set

Maize was the most important crop for the surveyed villages. The data shows that the number of farmers cultivating maize appears to have remained constant as all farmers cultivated maize in 1996 and were still doing so in 2006. The incidence rates for the cultivation of beans, potatoes, and wheat all changed slightly in the ten-year period: beans increased by 8 percentage points to 55%; potatoes were up by 11 percentage points to 47%; but wheat fell by 7 percentage points to 38%. However, the overall acreage under cultivation for these four crops remained fairly constant, increasing only by 1.7 percentage points.

Most of the other crops were not grown by a significant number of farmers in either of the survey years: 0.6% grew soya beans; 0.9% grew sorghum; 1% grew sugarcane; and, 1% grew pyrethrum. The exceptions were sunflowers at 17%; finger millet at 8%; and, bananas at 33%. Of these crops, the percentage of farmers growing sunflowers and bananas remained fairly constant, only varying by 2-3 percentage points. In contrast, the numbers growing finger millet dropped by half.

An analysis of the Panel Set showed significant increases between 1996 and 2006 in both production and productivity for all four main crops:

- Beans and round potatoes, both of which saw an expansion in acreage, had large production increases of 132% and 144%, respectively.
- Maize and wheat, both of which had contractions in acreages cultivated, still had significant production increases of 48% and 43% respectively.
- Maize and round potato yields per acre increased by 58% and 46% respectively; beans and wheat yields increased by 103% and 93%, respectively.

Data for all four crops can be found in Figure 17.

Figure 17: Production and Productivity for Four Main Crops

Crops	2006	1996
Total Acreage of Maize	410	436
% Decrease in Acreage	-6	
Total kg of Maize Production	260,100	175,600
% Increase in Production	48	
Total kg / Acre	634	403
Increase in kg / Acre	232	
% Increase in kg / Acre	58	
Total Acreage of Beans	185	162
% Increase in Acreage	14	
Total kg of Beans Production	35,750	15,400
% Increase in Production	132	
Total kg / Acre	193	95
Increase in kg / Acre	98	
% Increase in kg / Acre	103	
Total Acreage of Wheat	91	123
% Decrease in Acreage	-26	
Total kg of Wheat Production	26,950	18,900
% Increase in Production	43	
Total kg / Acre	296	154
Increase in kg / Acre	142	
% Increase in kg / Acre	93	
Total Acreage of Potatoes	122	73
% Increase in Acreage	67	
Total kg of Potato Production	148,300	60,850
% Increase in Production	144	
Total kg / Acre	1,216	834
Increase in kg / Acre	382	
% Increase in kg / Acre	46	

Source: Njombe Panel Set Survey (n=189).

Participatory Rural Appraisal Data

In an overwhelming majority of villages surveyed, villagers linked HIMA interventions with increased yields. Moreover, practices that had been introduced were being sustained. Figure 18 shows the summarized survey data by crop type, confirming these findings:

Figure 18: HIMA Interventions by Crop, Sustainability and Yield Increase

No. of Villages with	Type of Crop				
	Beans	Maize	Vegetables	Wheat	Others
HIMA Intervention	4	6	7	3	3
Yield Increase from HIMA Intervention	4	5	7	3	2
Sustained Practice of HIMA Intervention	3	4	6	3	2
Limited Sustained Practice	0	0	1	0	1
No Sustained Practice	0	1	0	0	0
No Data on Sustained Practice	1	1	0	0	0

Source: PRA Village Reports.

The PRA findings of increased production and productivity mirror those from the Njombe survey.

Causal Linkages

The Evaluation identified several expected causal linkages for the increases in production and productivity.

Rainfall: Rainfall is one of the most important determinants of production and productivity. In Iringa Region recorded harvests, over the past 20 years, show some correlation between rainfall patterns and yields on a regional basis even though this data cannot be disaggregated on a HIMA specific level. (Source: Basic Data Agriculture Sector 1994/95-2000/01; Statistics Unit, Ministry of Agriculture and Food Security, August 2002). However, farmers from the villages surveyed in 2006 reported increased yields despite the fact that the rainfall in 2006 was below average.

Improved Varieties and Seed: A majority of the farmers interviewed in both the Njombe survey and in the PRA villages linked better yields following HIMA assistance with improved varieties and seed. Increased productivity of maize, beans, vegetables, wheat, and other crops was reported within the PRA villages as the outcome of such HIMA interventions.

Chemical or Organic Fertilizer: While the use of chemical fertilizer was positively correlated with yield increases, most of those increases cannot be explained by this variable. Data was tested from the Panel Set on a crop-by-crop basis for the four main crops. As Table 18 demonstrates, increased use of chemical fertilizer, in terms of kg per acre, was positively correlated with yield increases for maize, wheat, and potatoes, (at the 0.01 level, two tailed). However, this finding does not explain significant proportions of the increase, as the highest was potatoes at 17% explanation of variance. While there were some notable yield changes for those switching farming systems, they were not statistically significant, and they were in the expected direction – i.e., there was a yield decrease when switching from a single farming system to a mixed farming system.

Figure 19: Chemical Fertilizer Yield Increases

Crop	Maize	Beans	Wheat	Potatoes
Yield Increase (kg/acre)	232 (58%)	98 (103%)	142 (93%)	382 (46%)
Chemical Fertilizer change (kg/acre)	+ 9 (47%)	+ 4 (43%)	+ 7 (100%)	+ 18 (100%)
Causal Relationship	Significant. 6% of yield increase.	No correlation.	Significant. 9% of yield increase.	Significant. 17% of yield increase.
Organic Fertilizer Change (kg/acre)	- 0.6 (-27%)	0 (0%)	+ 0.1 (50%)	+ 0.5 (63%)
Causal Relationship	Significant. 2% of yield increase.	No correlation.	No correlation.	No correlation.
Farming System Change	11% net switched to single cropping.	3% net switched to single cropping.	3% net switched to single cropping.	1.6% net switched to single cropping.
Notable Production Changes (kg)	Similar changes for all states – +230 to +270.	Single to mixed had +7.5 compared to always mixed +70.	Single to mixed decreased yield by 329, always mixed -125.	Single to mixed decreased yield by 910, always mixed -62.

Source: Njombe Panel Set Survey (n=189).

Soil Fertility: Other causal linkages are evident from HIMA's interventions to improve soil fertility. The data from the Panel Set on soil fertility measures was available for all crop production but not for a crop-by-crop basis. All HHs reported the use of some soil fertility measures, with the majority, 94%, using at least one method in both 1996 and 2006. No correlation was found between the use of any of these measures at the 0.01 level and total crop production. There was, however, a significant difference between the use of any soil erosion control method and total crop production increase at the 0.05 level. The largest production increase, 1,106 kg, was realized by those farmers who had used a soil fertility method in both years. Those farmers who took up the use of soil fertility improvement measures, or abandoned such measures, had increases of 266 kg, and 318 kg, respectively.

Soil Conservation: Again, the data available from the Panel Set on soil conservation measures was unavailable on a crop-by-crop basis but, rather, referred to all crop production. With the exception of two villages – Maliwa and Mang'oto – soil conservation measures were reported as having been introduced in 11 of the 13 PRA villages. One village

claimed to have had greatly increased yields from soil conservation methods (Lyasa), while another five villages were reported as having more limited increases in yields. In five other villages, it was impossible to determine if soil conservation measures had led to any increased yields. Using the Panel Set survey data, it was found that the change in use of any soil conservation measures was not statistically significant.

Production increased in all categories of change in the use of soil erosion measures; with the greatest mean increase of 1,996 kg in those HHs that reported using no soil erosion measures in 1996 and 2006. Those who used soil erosion measures in both years and those who had switched to using them, had mean increases of 1,281 kg, and 864 kg, respectively. Those who used measures in 1996 but not in 2006 had the lowest mean increase of 277 kg. In terms of a measure-by-measure analysis, none of the predominant means of soil erosion prevention had a statistically significant correlation with total production. However, it is worth noting that those who used contour ridges in 1996 but not in 2006 experienced a negative mean change in total production of minus 163 kg. All the other categories had positive mean increases ranging from 1,100 kg to 1,350 kg. The same phenomenon was observed for the use of grasses to stabilize contour ridges. Those who stopped the practice had a negative mean production change of minus 700 kg. Conversely, the largest mean increase was found with those farmers who had not used grasses in 1996, but had done so in 2006 (1,480 kg).

Agricultural Extension: Another factor that was tested for correlation with change in total agricultural production was the existence of agricultural extension. Some 10% of HHs reported no agricultural extension in either 1996 or 2006. These HHs had a mean total production increase of 921 kg. In comparison, 36% of the HHs that reported agricultural extension in both 1996 and 2006 had a mean total production increase of 1,212 kg. The largest mean change in total production was for those farmers (13% of HHs) who reported no agricultural extension in 1996, but an extension in 2006. In their case, the average increase was 1,722 kg. Conversely, those who reported extension in 1996 but not in 2006 (41% of HHs), had the smallest mean production change of 757 kg. Regardless, in statistical terms, there was no significant correlation between change in extension and change in total production.

Counterfactual

In the comparison PRA villages, only two out of the six reported any use of new crop varieties, such as vegetables and sunflowers, and there was no data available on any changes in yield. It was assumed that the introduction of new varieties and practices was, to a large extent, due to HIMA promotion. The most significant reason for villagers not continuing to cultivate varieties yielding better results was increased expenses. Farmers tended to be more conservative and risk adverse by placing their trust in varieties that had proven successful in the past, with local conditions.

Therefore, in the absence of external factors to improve productivity and production such as improved varieties, soil fertility and conservation measures, and external interventions such as demonstration plots to show the advantages of these interventions to farmers, it appears likely that HIMA villages would not have experienced such improvements in yields and production, especially in the context of decreasing average rainfall.

National/regional production and productivity data for some of the intervening years for maize and wheat did not provide a useful counterfactual. There was no comparable data available for 1996 and 2006, the two years of the Njombe survey. Thorough agricultural surveys through the national monitoring system (Mkukuta or National strategy for growth and reduction of poverty) are only conducted every four years. Agricultural surveys were undertaken in 1993/94 and in 2004/05. The next survey is expected to take place in 2008. The latest raw regional production figures (not disaggregated down to the district and/or divisional levels) available with the Ministry of Agriculture cover the period 2002/2003. Due to yield and production variations from one year to the next, mostly due to rainfall, there are no national or regional data points to compare with the Njombe survey results.

5.2 Practices to Improve Soil Fertility

HIMA sought to introduce a variety of methods to improve soil fertility in order to establish a strong base for the promotion of sustainable farming. Quantitative data on the deployment of these practices provided a comparative measure vis-à-vis the findings of the 1996 baseline survey that recorded the baseline prevalence of specific practices. The evidence indicated that crop rotation as a means of improving soil fertility has become much less common since 1996. Likewise, the practices of intercropping and leaving land fallow have become less common. However, the use of nitrogen-fixing plants had increased more than 20% in the intervening period, with almost a third of farmers now following this practice.

The use of compost, as promoted by HIMA, was generally unsuccessful and there was little evidence of its use in 2006. The diminished use of composting was mainly due to the laborious work required in its preparation, transportation, and application. Yet, there is little doubt that HIMA's campaign generated interest in the use of compost together with a recognition of its benefits. Throughout the PRA, numerous people spoke about the desire to have access to good quality compost. However, HIMA may have made a tactical error in assuming that people would be willing to sustain the burden of the work required to implement the relatively sophisticated composting model that HIMA had promoted.

In contrast to the PRA villages, the Njombe HH survey showed that there had been an increase of 10% in number of households using compost, rising from 5% to 16%. There was also an increase in the amount of compost used per acre (50-60%) with wheat and round potatoes.

5.3 Practices for Soil Conservation

HIMA worked to introduce improved soil conservation techniques in most of the participating villages. Judging from project progress reports, training and awareness raising efforts related to soil conservation were substantial. In the majority of the PRA villages, respondents mentioned that HIMA had been working with soil conservation. HIMA's principal technique was the construction of semi-permanent contour ridges, planted with either Vetiver or Guatemala grasses.

Although the Evaluation found evidence of contour ridges in several of the villages, maintenance was often poor. Evidence of contour ridges planted with grasses was also found in a majority of the PRA villages although their use and prevalence was limited. Interviews and observations indicated that in most of these villages, respondents considered soil erosion to be a continuing problem.

Figure 20: Soil Conservation Measures, Prevalence and Sustainability

No. of Villages	Measures Introduced		Existence of Contour Ridges with Grasses 2006		Contour Ridges generally maintained		Soil Erosion still a Problem		Existence of Indigenous measures (HIMA only)
	HIMA	Comp	HIMA	Comp	HIMA	Comp	HIMA	Comp	
Yes	11	2	-	-	0	3	2	1	3
Somewhat, to some extent	-	-	9	3	6	-	9	3	4
No	2	4	1	-	1	-	0	2	0
No Data	-	-	1	1	4	1	2	-	6
Not Applicable*			2	2	2	2	0	-	

* Not applicable as these measures were not introduced.

Source: PRA Village Reports.

Figure 20 shows that soil erosion was still considered a problem in nine out of eleven villages where HIMA had introduced soil conservation techniques. Some of the contour ridges stabilised with grass still existed in nine of the HIMA villages, and in half of the non-HIMA villages. In six of the nine HIMA villages, these were still being maintained.

In contrast, almost 83% of the HHs surveyed, in 2006, in Njombe District, said that they were using some type of soil erosion control. However, reports that one or more methods of control were in use, do not indicate how well those interventions were either executed or maintained. This lack of evidence may explain why there are significant differences between the HH data and the PRA observations.

The HH survey indicates that there have been some significant shifts between 1996 and 2006 in the use of different methods of soil erosion control. The Evaluation found an increase in the use of contour ridges coupled with an increase in the use of the planting of perennial grasses. Leaving land fallow for certain periods had become less common, leading to increased pressure on arable land. In terms of the amount of land affected by soil erosion where soil erosion measures had been applied, those HHs who had used one, or more, of the control methods responded as follows: 17% reported that they used measures on all their affected land; 41% used measures on some of their affected land; and, 42% used measures on only a little of their affected land. Although the frequency of perennial grass planting had increased, the exotic grass species introduced by HIMA were in very limited use by 2006. With a few exceptions, this trend was confirmed in a majority of the PRA villages.

HIMA's long-term success regarding the treatment of gullies was mixed. The technical interventions were seen as appropriate in some places but inadequate in others. In some of the villages, the respondents said they had not found it worthwhile to continue rehabilitation activities.

Gully protection was a common HIMA intervention given that it was introduced into most of the HIMA PRA villages. In some places, HIMA also supported attempts to prevent soil erosion from rural road building and maintenance. Over half of the HIMA PRA villages reported ongoing problems with gullies. The Evaluation found that no rehabilitation work was being carried out in all three villages experiencing a significant, and current, gully problem. All the remaining villages, some of which had less severe gully problems, were engaged in some form of rehabilitation. This raises the question of whether, or not, the villages with a less difficult gully situation had made good use of rehabilitation methods and, thus, reduced their problem. Alternatively, the villagers, when faced with a very serious gully problem, could have regarded the rehabilitation methods promoted by HIMA as inadequate.

Counterfactual

Regarding the implementation of contour ridges, the overall picture from the comparison villages showed a similar situation to that of the older HIMA villages. In terms of sustainability, three out of the six villages had contour ridges with grasses; two did not have contour ridges; and, no data was available for one. The contour ridges in the three comparison villages were reported to be well maintained. However, all three villages with existing contour ridges had external influences, one from HIMA, one from a tea plantation located near to the village, and one from a missionary led program.

All but two of the villages reported that soil erosion was still a problem. Almost all of the comparison villages reported that they had practiced some form of an indigenous soil conservation technique. In those comparison villages using soil conservation measures no data was available on any linkage between yields and the use of any conservation measures. Problems with gullies were present in only two of the comparison villages. The protection of gullies, while not prevalent in comparison PRA villages, had been carried out successfully in one instance.

Without HIMA's intervention the HIMA villages may have undertaken some soil conservation and fertility measures, including indigenous ones. However, it is likely that these methods would not have been as elaborate as those undertaken due to HIMA influence, and it is likely that they would not have had the same positive influences on yield.

5.4 Post-Harvest Loss Reduction

HIMA interventions in post-harvest loss reduction were generally unsustainable. HIMA's improved grain stores had limited use in only two of the seven PRA villages where they were introduced. Several farmers pointed out that an opening at the top of the store increased the possibility of theft. The promotion of pesticides from locally grown plants

had a little more success. In four of the five PRA villages where they were introduced, there was some limited use.

Post-harvest loss reduction interventions were not prevalent in the comparison villages. Only one village reported the use of a barn similar to the storage unit introduced by HIMA. There was no data on the use of locally prepared pesticides.

5.5 Sustainability and Replication

The likelihood of HIMA-related impacts on crop production proving to be sustainable is mixed. The gains in crop production and productivity, highlighted in the Njombe surveys, are contrasted with shifts towards single cropping, less fallowing and crop rotation, and, reduced use of soil fertility improvement practices. All of these factors point to increased pressure on the land that could, ultimately, lead to a decrease in sustainability. In addition, many of the interventions to increase yield in an environmentally sustainable fashion were not successful. Improved storage to reduce post-harvest losses, most soil conservation measures, and composting all had low success rates, in that they were not being sustained by villagers. More positive results, to a degree, were attained through the use of contour ridges and gully protection measures.

Figure 21: Agriculture and Sustainability

Impact/ Intervention Area	Sustainability/ Replication	Lines of Evidence		
		HIMA PRA Villages	Njombe HH Survey, 1996 /2006	Field Observation /Interviews
New Crop Varieties	<i>High sustainability.</i> Improved vegetable and sunflower seeds adopted in two comparison villages.	Increased production and dispersal of beans, round potatoes, and vegetables due to HIMA introductions.		Increased production and dispersal of beans, round potatoes, and vegetables due to HIMA introductions.
Soil Fertility Improvement	<i>Low to Medium sustainability.</i> Some replication of use of nitrogen- fixing plants in HIMA villages. No data on replication in non- HIMA villages.		Only two practices had an increase from 1996, most decreas- ed. But use of nitrogen- fixing plants increas- ed by 20%.	

5 CROP PRODUCTION

Impact / Intervention Area	Sustainability/ Replication	Lines of Evidence		
		HIMA PRA Villages	Njombe HH Survey, 1996 /2006	Field Observation /Interviews
Composting	<i>Low sustainability.</i> No evidence of replication.	Only limited field use in minority of villages.	Increase from 5% to 16% of HHs using compost.	No evidence of widespread use and no evidence of replication.
Improved Stores	<i>Low sustainability.</i> No evidence of replication.	Limited or no use in 7 villages.		No evidence of widespread use or replication.
Local Pesticides	<i>Low sustainability.</i> No evidence of replication.	Limited use in 4 villages.		Evidence of limited use and no replication observed.
Contour Ridges	<i>Medium to Low sustainability.</i> Observed in two comparison villages influenced by other NGOs.	Medium to high levels of replication (use doubled).	Use increased by 32%.	Evidence of limited use.
Other Soil Conservation Methods	<i>Low sustainability.</i> No replication observed in comparison villages.	Limited to no replication.	Most use dropped except for perennial grass planting.	No evidence of widespread use.
Gully Protection	<i>Medium sustainability.</i> No replication observed in comparison villages.	Rehabilitation ongoing in five out of nine villages. Some replication but extent difficult to assess.		Rehabilitation ongoing but quality of maintenance varied.

Factors that have influenced the sustainability of HIMA interventions include:

- The degree of labour required from farmers to establish and maintain the interventions. Even when farmers generally understand the benefits, labour intensive interventions have not been as successful as approaches simpler to implement.

- The complexity of interventions. Composting is an example of an intervention that was too complex. The system required a lot of work to transport the compost from the manufacturing area to the fields. As a consequence, much of the sustained practice in composting is based upon simplified and locally adapted methods. In addition, the composting is used more often for home gardens located nearer to the site of composting than for field crops.
- The extension of support to villagers was inconsistent after HIMA concluded. With the retraction of village level outreach and extension together with the tendency of PPs to engage in activities beyond that envisaged by HIMA, farmers have lacked the support necessary for the implementation of new practices.
- Unforeseen market forces resulting in a drop in prices of agricultural goods. One PRA village that had adopted the HIMA practice of contour ridging saw its production increase significantly but found that the market price of the crops had fallen. The increase in production, however, allowed farmers to maintain the same level of income by selling more goods at a cheaper price.

In terms of replication, successful agricultural activities were reported from two comparison villages where improved vegetable and sunflower seed had been adopted. These successes were probably linked to HIMA activities. In several villages, respondents perceived HIMA's agricultural activities as being for the select few. Improved bean and maize seed appeared to have had a long-term effect in many of the PRA villages. One encouraging finding was the replication of the use of improved seed having taken place between farmers in HIMA villages. With respect to soil conservation measures, the Evaluation found an insignificant amount of replication.

5.6 Conclusions

HIMA's agricultural interventions to increase production and productivity were broadly successful in that they could be linked to improvements in yield for all four major crops. While a small proportion of these results were probably due to an increase in the use of chemical fertilizers, the majority of the benefits could be attributed to HIMA interventions that introduced improved varieties of seed. Although the harvests have varied over the years, farmers reported that they have, in general, been the beneficiaries of HIMA's efforts to introduce improved seed. With a few exceptions, farmers who, in 2006 reported increased yields, had continued to take advantage of improved practices. To a lesser extent, some of the more widely practiced measures to conserve soil and improve fertility, may have contributed to production and productivity gains.

The evidence indicates that sustainable practices, such as crop rotation and fallowing, which were designed to increase soil fertility, have declined in use in the survey villages. Nor has the promotion of the use of compost been successful. Measures designed to reduce post-harvest losses, such as the improved storage of grain, and the use of locally made pesticides, have not proved to be sustainable. Moreover, soil conservation measures have neither been continued nor widely replicated.

In the absence of HIMA it is likely that crop production and yields would not have increased to the extent they did, without the varieties, and soil conservation and fertility improvement measures. However, the yield gains from the use of chemical fertilizers would be expected in a scenario without HIMA.

6 Natural Resource Management

6.1 Forestry

Nurseries

In many villages HIMA supported small local nurseries, several of which remain productive today. Some of these nurseries are owned by the village while others are run as private enterprises, generating income for the owners. Although HIMA often promoted the use of indigenous species, the success of some of the nurseries can be partly attributed to the cultivation of fast growing exotic species such as eucalyptus and pine.

The continued existence of village-based, self-sustaining tree nurseries is a good indicator of an increase in the level of a local awareness of environmental issues. Their existence is also an indication of the capacity of individuals to generate surplus along with an ability to visualize long-term investments 10 to 20 years into the future.

A majority of the PRA villages reported that tree nurseries promoted by HIMA were extant. Of the ten villages where small locally based nurseries had been promoted, nine had found the activity worthy of continuation. Kanamelenga was the exception likely due to the fact that activities were started there in 2002, the last year of HIMA's existence. Functioning nurseries were found across most of the AEZs.

To a large extent, the PRA findings are confirmed and reinforced by those of the Njombe survey. The number of HHs in the Panel Set who continued to manage their own woodlots had risen from 54% in 1996, to 63% in 2006.

The Evaluation found that with upsurge in timber production, individual nurseries, the source of tree seedlings, had undergone a change. Whereas in 1996, only about half of the surveyed HHs had relied on nurseries for their seedlings; in 2006, this percentage had risen to 80%. HIMA's sustained emphasis on smaller, self-sustained private nurseries has, therefore, been very successful. Observations made of some of the village nurseries indicated that, in the main, they were raising exotic species because of their faster growth. Species suitable for fuel wood were also being produced.

Figure 22: Source of Tree Seedlings

Source	2006	1996
Own Nursery	80%	49%
Purchased	3%	16%
Collecting Off-Shoots Locally	7%	17%
Given by HIMA	2%	0%
Given by Government	0%	2%
From Neighbour	2%	5%
Village Nursery	5%	10%

Source: Njombe HH Survey 2006 (N=330), 1996 Baseline Survey (N=300).

Counterfactual

Although HIMA made a major impact on nursery activities, the interest around the production of tree seedlings is traditionally high in large parts of Iringa Region. Data from nursery activities in the comparison villages showed that all of these operations, at one time, had received some kind of external support for the establishment of nurseries, and one was influenced by HIMA. The nurseries continued to exist in these villages at the time of the Evaluation.

There is evidence that HIMA, by means of training, and sometimes with the provision of improved seed, has added some value to existing nurseries. Field observations generally show that these nurseries have been well maintained. Therefore in the absence of HIMA, but with other programs, it is likely that the HIMA villages would have had nurseries, but perhaps without the same species or results. In addition, without HIMA, there may have been fewer individually operated nurseries without HIMA. In the absence of HIMA or other forestry programs, it is likely that there would have been far fewer nurseries.

Tree Planting

In many districts, HIMA successfully built on an already thriving timber market. Today, in many places, the landscape still bears evidence of the tree plantings facilitated by HIMA. The Evaluation also collected data on how tree planting and harvesting activities are being sustained. Although some tree planting and forest-related activities had already taken place in 11 out of 13 of the HIMA PRA villages before HIMA started, about two-thirds of the villagers reported that HIMA had had a positive influence by increasing tree planting activities.

To a large extent, the quantitative survey from Njombe supported findings from the PRA, which showed a decline in the number of HHs who identified, as a problem, the availability and proximity of fuel wood. Whereas in 1996 about half of the sampled population reported having experienced fuel wood problems, in 2006, only 14%, of the same sample continued to experienced problems with fuel wood. In 1996, less than half of the HHs sampled reported that they collected fuel wood from their own land. In 2006, almost three quarters of HHs reported that their own land was a major source of fuel wood. Likewise, these HHs reported that their reliance for fuel wood from natural or institutional forests, or from village land had declined.

Figure 23: Major Source of Fuel Wood

Source	2006	1996
Own Land	71%	45%
Natural Forest	13%	23%
Village Land	7%	22%
Purchased	5%	3%
Neighbouring Village	3%	2%
Institutional Forests	1%	5%

Source: Njombe Panel Set Survey (n=189).

Figure 24 shows that fewer trips are now being made to collect fuel wood. The explanation could be that walking distances are shorter making it easier to transport larger loads home.

Figure 24: Trips Made per Week to Fetch Fuel Wood

Trips Made	2006		1996	
	Dry Season	Wet Season	Dry season	Wet Season
1 – 2	62	57	22	41
3 – 5	30	22	60	45
More than 5	8	6	16	14
None	1	15	1	1

Source: Njombe HH Survey 2006 (N=330), 1996 Baseline Survey (N=300).

The panoramic photographs from 1996 and 2006, taken of the Lupembe Division in Njombe District, show an increase in tree coverage on the open land (See Annex 8).

An analysis of the Panel Set data on tree planting around homesteads showed an increase in the planting of timber producing species such as Eucalyptus and Grevillea. There was also a slight increase in the species used for boundary planting and windbreaks. This finding suggests a larger degree of self-sufficiency in timber for buildings. Farmers might also regard these plantings as security against inflation.

Counterfactual

Before HIMA started, comparison villages were already engaged in tree planting activities, and they continued to do so in 2006 in two of them. Two of the six villages had influence from HIMA either in tree planting or management techniques and practices. However, timber production improved in only half of the villages over time. Without HIMA's intervention villages that were well suited for timber production would likely have continued and prospered, though perhaps not to the same extent or with the same levels of sustainability. The majority of HIMA villages would likely not have improved their income to similar levels without HIMA tree planting and management interventions. In addition, it is likely that fuel wood would not have been as readily accessible.

Fruit Trees

HIMA worked intensively to promote the planting of fruit trees both as a guard against nutritional problems in villages and as the means of securing a cash crop. HIMA provided training in grafting techniques and in fruit tree planting practices. In some villages fruit trees were distributed to farmers. In several villages HIMA encouraged the establishment of private nurseries, and the raising of fruit trees. In December 2001, in Mufindi District, there were 3,000 farmers who had received training in fruit tree planting.

In most PRA villages, fruit tree planting initiated by HIMA was evident. The more successful planting of fruit trees usually occurred in the context of larger tree planting activity. A very common practice, observed in a number of PRA villages, was the planting of fruit trees around homes to provide shade. Some of the fruits that were planted as a HIMA initiative included bananas, pears, peaches, guava, custard apples, plums and avocados. Certain species of banana trees were often planted as part of conservation strategies to protect water sources.

In four PRA villages, HIMA supported fruit tree planting as an active component of an overall ambitious tree planting strategy. In Mlondwe and Kidegimbye, prior to HIMA's involvement, religious groups had helped to establish tree planting, an activity that had facilitated HIMA's later introduction of fruit trees. In Lyasa, fruit tree planting had also begun before HIMA's entry into the village on account of the villagers having either copied the practices or purchased fruit tree planting supplies from surrounding HIMA villages. After HIMA arrived in the village, fruit tree planting was accelerated.

In five PRA villages fruit tree planting was moderate in that it came, largely, in the form of fruit tree planting around homesteads. In Vikula, the villagers had to repeat the planting of fruit trees after flooding destroyed the first attempt. At the time of the Evaluation the fruit trees planted in Itimbo under HIMA had not yet fruited. Three other villages reported an absence of fruit tree planting.

However, an analysis of the Panel Set data showed a significant decline in the number of fruit trees planted around the homesteads. Only peaches and plums were still being grown at close to 1996 levels, while apple and pear tree growing had declined substantially. Clearly, HIMA's success regarding the cultivation of fruit trees has been mixed.

Figure 25: Fruit Tree Growing Around the Homestead

Number of Trees Around the Homestead	2006	1996
Peach	1,675	1,900
Plum	500	675
Pear	275	975
Apple	200	1,325

Source: Njombe Panel Set Survey (n=189).

Counterfactual

Two comparison villages had established successful fruit tree planting activities and a few others had confined their plantings of fruit tree planting to the areas around their homesteads. The remaining comparison villages reported no fruit tree planting activity. None of the comparison villages reported any fruit tree planting as a direct result of HIMA's influence. Therefore, without the HIMA intervention, fruit tree planting might not have been as widespread, but there would probably not have been much difference in the level of success.

6.2 Natural Forest Management

In most of the villages where HIMA had been active, the Evaluation found a high awareness of the need to protect forests. Ten out of thirteen villages reported that they had a natural forest nearby. Of these ten villages, 70% to 75% reported that the forest was controlled either by a joint or a community-based forest management scheme. The remaining 25% to 30% of these villages claimed that since the natural forest was not secured by any protection protocol, it was, therefore, vulnerable to over-exploitation. Interviews with senior officials in Ludewa District revealed that the conservation of natural forests, by means of joint forest management agreements, was working, currently, in four different locations. The Evaluation did not make an assessment of the actual state of the forests.

The Panel Set showed a shift in their responses when invited to give their opinion on the most effective ways to protect forests. Support for village by-laws as a means of protection fell from 64% in 1996, to 51% in 2006. Support for education dealing with environmental conservation, considered the best method of protection, rose from 31% in 1996 to 44% in 2006. These changes may be a reflection of the recognition given by the villagers to the importance of education versus control through by-laws.

With regard to fuel wood, the Njombe survey showed that the dependence on fuel wood collected from neighbouring natural forests had dropped from 23% to 13%. Rather than a continuous depletion of the natural forests, the data regarding new tree planting and availability of fuel wood suggested that it was now easier to find fuel wood closer to home. In terms of the collection of fuel wood, the data suggested an easing of the pressures on the natural forests.

Wild Fires

Wild fires are a constant threat to forests and, increasingly so as cultivated areas tend to be located both on the outskirts of the forest, and within the forest itself. If the forests are to be protected, a high degree of an awareness of the need for protection must be coupled with active measures both to combat and to avoid wild fires. The Evaluation learned that in half of the HIMA PRA villages, measures were in place to tackle the problems of wild fire.

Although wild fires remain a threat, officials in Ludewa District, especially, reported that the fires had decreased over the past years. Conversely, field observations conducted during the data collection period suggested that wild fires are still a significant problem in most parts of the old HIMA areas.

The Njombe survey data showed a mixed picture with respect to the perceptions of wild fire problems. Over 20% of respondents consistently perceived wild fires as a “very serious” problem. The percentage of those seeing wild fire as a “serious” problem fell slightly from 47% in 1996, to 41% in 2006. Those rating the issue as “not a problem at all” increased substantially from 10% in 1996, to 29% in 2006, an indicator, perhaps, of some success in controlling wild fires. The numbers of those who were “indifferent” to the problem of wild fires fell dramatically from 22% in 1996, to 4% in 2006. This last figure implies that the awareness campaigns, carried out by HIMA, were successful.

Counterfactual

Five out six comparison villages reported the existence of an active forest management programme, an indicator that other personnel and programs have influenced an awareness of the value of natural forests. In villages located next to natural forests, there is a high level of awareness among villagers of the need for forest protection and maintenance. Whether this awareness is due to HIMA efforts, to existing local laws and customs, or to the current national joint forest management campaign is not easily determined. However, the responses from the comparison villages suggest the importance of one, or other, of the latter two reasons. Half of the comparison villages had some kind of fire control mechanisms, and reported it as working satisfactorily. In two of these villages, fires were not identified as a problem. In addition, HIMA influenced national forestry policy and national and regional forestry programs (See Section 9.1). Consequently, natural forest protection and reduction in wildfires would likely have not taken place in the absence of HIMA or HIMA influenced / inspired programs.

6.3 Water Source Protection

HIMA's interventions to secure the protection of water sources has given many villages a more stable flow of water throughout the year. The simpler and less expensive methods of ensuring a constant supply of water have been most viable when combined with effective by-laws. In more than half of the villages visited, water source protection schemes have mostly been successful and sustainable. Villages often had both a successful HIMA-initiated water protection facility and another similar facility held in reserve to cope with malfunctions. When HIMA initiated simple, cheap, and easy to maintain water protection systems, they proved to be both successful and significant.

Figure 26: Water Source Protection in HIMA and Comparison Villages

HIMA Villages			Comparison Villages		
No. of Villages	Water Source Protection Introduced	Water Sources Currently Being Protected	No. of Villages	Water Source Protection Introduced	Copied from HIMA
Yes	11	6	Yes	5	2
To Some Extent	-	3	To Some Extent	-	0
No	0	3	No	1	3
No Data	2	1	No Data		1

Source: PRA Village Reports.

The Njombe survey also demonstrated HIMA's impact on water source protection. Between 1996 and 2006, 10% fewer of the respondents experienced problems due to the water source drying up at some point in the year. In 1996, 33% of respondents had experienced problems; in 2006, only 23% reported problems.

The 1996 baseline data for water availability was not included in the 1996 Survey Report or the electronic files. Consequently, the 2006 HH survey had to rely on respondents' recollections concerning changes in water availability over the previous ten years. The most significant change in terms of availability was the 57% of HHs that reported a water source closer to home. In terms water quality, equal numbers of respondents reported that it was cleaner and dirtier.

Counterfactual

In comparison PRA villages, water source protection had also been undertaken by a majority of the villagers. Half of the comparison villages with water source protection in place had copied the methods used in HIMA villages. Therefore, access to water and the productivity of water sources would likely not have improved to the extent they did in HIMA villages, without HIMA interventions.

6.4 Sustainability and Replication

With respect to NRM, the prognosis for sustainability is very good. The thriving timber industry in the region supports some key aspects of HIMA interventions. In addition, the establishment of HH woodlots has lessened the likelihood of exploitation of the natural forests. However, the actual level of encroachment on the forests could not be verified.

The Figure 27 below provides elaboration:

Figure 27: Sustainability and Natural Resource Management

Impact /	Sustainability/ Replication	Lines of Evidence		
		HIMA PRA Villages	Njombe HH Survey, 1996/2006	Field Observation/ Interviews
Nurseries	<i>High sustainability.</i> HIMA forestry management and tree planting practices adopted in two comparison villages and four other non-HIMA villages.	Nine out of ten villages with functioning nurseries.	Increase in self managed woodlots from 54% to 63%. Individual nurseries increased from 50% to 80%.	Production of mainly exotic species. Well-maintained nurseries.
Tree Planting	As above.	Majority of villages continue to plant trees.	Increased availability and proximity of fuel wood, increasingly sourced from own land.	Establishment of woodlots a success. Some places where Eucalyptus trees are planted too close to water sources.
Natural Forest Management	<i>High sustainability.</i> In terms of replication, probably a synergistic, two-way influence with policies and other programs.	70% to 75% of villages have forest management schemes. 50% of villages have anti-fire measures.	Dependence on natural forests for fuel wood dropped from 18% to 12%.	Interviews indicated decrease in bush fires. Field visits observed many bush fires. Quality of forest management plans and condition of forests not assessed by the Evaluation.
Water Source Protection	<i>High sustainability.</i> Two comparison villages had successfully replicated HIMA protection approaches.	Nine out of eleven villages with water sources still being protected. Medium to high levels of replication in other places.	Water access improved. Fewer water sources drying up.	Simple and cheap measures were in use and maintained.

In the comparison PRA villages, there was some replication of HIMA forestry practices. The data showed that forest management and tree planting in two villages had been copied from HIMA.

Replication was most evident in the establishment of water source protection schemes. Half of the comparison villages had some form of protection, and villagers reported that they had been inspired by HIMA's efforts elsewhere.

6.5 Conclusions

In a majority of the villages, HIMA has had a positive impact on the sustainable production and planting of trees. And, to a considerable degree, these successes have been augmented by the external forces of the big timber industries. Moreover, the villagers appear to be anticipating a lucrative future timber market. Village activities included the harvesting of trees planted during HIMA, the establishment and maintenance of a base to sustain production by private village nurseries, and the selling of trees and timber to other farmers.

With some exceptions, trees continue to be planted and some awareness exists of the need to conserve and protect natural forests. All the data indicates that resources are being managed in a sustainable fashion.

Extensive planting of trees in the HIMA area has had a positive impact on access to fuel wood and appears to have eased pressure on the natural forests. In addition, HIMA has played an instrumental role in inspiring other projects and programmes to coordinate their work with the management of natural forests by means of joint management schemes. Together, these programmes and HIMA have contributed to an awareness of the need to protect the natural forests, both in HIMA and non-HIMA villages. In addition, water conservation interventions have been broadly successful, with obvious benefits for the villages.

Without HIMA's intervention villages that were well suited for timber production would likely have continued and prospered, though perhaps not to the same extent or with the same levels of sustainability. However, the majority of HIMA villages would likely not have improved their income to similar levels without HIMA forestry management interventions, especially nurseries. Access to water and the productivity of water sources would likely not have improved to the extent they did without HIMA, as over half the comparison villages with water source protection had copied schemes from HIMA. Natural forest protection in the absence of HIMA, or HIMA influenced/inspired programs would likely not have taken place.

7 Institutional Development

7.1 Governance and Capacity at District, Regional and Central Levels

District Levels

At the district level, HIMA's most notable impact resulted directly from the key approaches and concepts employed to reinforce the implementation of local government reform processes. Such reforms gradually gained momentum through the late 1990s. When compared with districts in other regions, management and staff from central and regional authorities, all closely related to the local government reform process, confirmed through interviews with the Evaluation that Iringa districts were ahead in their understanding of planning modalities and participation processes. These processes, the core of HIMA interventions were, likewise, central to the implementation of the Local Government Reform Agenda of 1996.

The evidence indicated a strong link between achieved results and HIMA initiatives to train and develop staff. Staff development and training in the HIMA period was mainly based on two Training Needs Analysis (TNA) sessions, with the first having been carried out in 1994 and the second in 1998/99. The last TNA was used to formulate a Human Resource Development Master Plan (1999), which guided external training up to the completion of HIMA in 2002. These training sessions focused on planning issues, participation processes, and the implementation of local governance and democratization processes in Iringa Region.

Through the TNA each unit in the district that was involved with HIMA would be assessed for their formal credentials and skills. Training plans would then put forward recommendations for upgrading skills and qualifications. Specific topic areas such as Gender Equity or Project Planning were also specified. The district offices, in consultation with HIMA management, selected individual participants. In total more than 2,000 participants attended HIMA staff training activities.

Even though many of the staff have taken up other employment, the district offices estimated that more than half of the current staff had received HIMA training.

While HIMA attempted to improve staff capacity, most notably at the individual level, this initiative appears to have had a more limited impact on the establishment of systematic changes, directed towards a more integrated decentralized planning within the districts. However, some district offices reported that the more integrated and efficient working procedures, the regular planning meetings, and the greater cooperation between and within district departments, all introduced by HIMA, were to some extent, still in place (Iringa, Njombe, and Mufindi). In contrast, other respondents reported that most of the working structures and procedures initiated by HIMA were only used to a more limited extent (Ludewa, Kilolo, and Makete). Evidently, the impact HIMA made was stronger when it supported horizontal planning and participation processes, both within villages and district offices, than in the strengthening of vertical structures such as the links between villages and the district offices.

The Evaluation received confirmation of the existence of this "planning gap" between the village and district level from interviews with a large number of key stakeholders.

Repeatedly, the Evaluation heard that there had been a tendency with planning issues to revert to a top-down approach between districts and villages. Given that, though with HIMA guidance, the villagers themselves had initiated the development of village plans, this reversal was disappointing. Yet villagers and village governments alike, explained that even when plans had been prepared by the villagers and then submitted to the ward and district level, the villagers themselves had had very little influence on the ultimate outcomes of the planning process. Very limited – or in some cases – no dialogue between the villagers and the district authorities took place in this phase of planning. The end result is that the interpretation of needs (initially formulated by the villagers) is, in the end, determined by the districts where final village plans and corresponding budgets are approved. This type of planning has led to lower levels of ownership among villagers.

HIMA had a positive impact on bringing about a change in attitude among individuals involved in planning processes, in village participation, and, in multi-disciplinary teamwork at the district level. HIMA was less successful, however, in the establishment of effective systems and procedures designed for the support of decentralized planning within Iringa districts. The administrative functions within district offices depended, to a large extent, on individuals, many of whom were trained by HIMA on well-established systems and procedures. Consequently, changes in working processes have not translated into systemic changes in the ways that organizations function, because they are based on the workings of individuals. This institutional weakness was emphasized in interviews with administrative and technical staff from Danida and with respondents from regional and district levels in Iringa. These interviews also revealed that the quality of district budgets and financial reports varied considerably from jurisdiction to jurisdiction.

The Evaluation found notable improvements in physical infrastructure, office buildings, equipment, computers, etc. at both the district and division levels. On the whole, the equipment remains in place and operational, and to some degree, it is being maintained.

Extension Services

According to a comparison of the 1996 Baseline Survey with that for Njombe in 2006, there has been little change in the ratings given by HHs on the services provided by agricultural, community development, and forestry extension officers. Regarding forestry extension officers, respondents requested to rate their services as “excellent” or “good” decreased from 83% in 1996, to 78% in 2006. In both survey years, however, the ratings assigned to forestry officers were significantly higher than those for both agricultural officers and community development officers.

The district offices reported that a large group of former extension officers employed by HIMA had died due, possibly, to the HIV/AIDS epidemic.

Many extension officers formerly working with HIMA have either been promoted or acquired better jobs within ministries, regional authorities, and NGO's. These promotions appear to have been facilitated by the training and education they received as part of the HIMA initiative. The investment HIMA made in the training of these officers has had long lasting benefits for both the individual and the community at large.

The Evaluation found that district offices were experiencing problems with the recruitment of extension officers because of a lack of experience among applicants. In many cases, therefore, district offices have had to employ people with fewer of the desired qualifications, a move which, in turn, has had a negative impact on the quality of the exten-

sion services provided to the farmers. Thus, in Iringa Region, there has been a paradoxical outcome in that HIMA's success in building the capacity of individual extension staff members has brought about an adverse effect on the provision of extension services.

Another explanation for HHs reporting no improvement in the provision of extension services could be the result of the general retraction of services delivered to villages, in effect from the time of HIMA to the present day. Almost half of the respondents in the 2006 survey reported that they had never received a visit from an agriculture extension officer; almost two-thirds of respondents stated that they had never received visits from either forestry or community development extension officers. There was a decline in awareness levels of extension services from 1996 to 2006.

This data confirms the nature of the qualitative information collected at both the village and district levels. The extension officers across the Iringa Region, themselves, agree that due to budget constraints, they have had to drastically reduce the number of visits to villages since HIMA concluded. As well as cut backs in financing for the reimbursement of allowances for food, accommodation, and transport, extension officers have had to deal with onerous bureaucratic procedures, particularly for transport.

Central and Regional Levels

HIMA's overall programming approach was of an experimental nature. To some extent the approach could be seen as constituting a "laboratory" for sustainable rural development by means of the empowerment of local communities. HIMA also put a particular emphasis on the empowerment of women, and encouraged them to become active participants in planning and decision-making processes. Thus HIMA focused primarily at the local level.

Nonetheless, the Evaluation identified certain "trickle-up" effects attributable to HIMA. These results were realized mainly at the central and regional levels by two means:

- The transfer and promotion of ex-HIMA staff to more powerful positions within central and regional government offices, and other organizations, definitely influenced policy-making and promoted support for democratic decision processes. In turn, this transfer of personnel has led to enhanced rural development and sustainable NRM in rural areas. Also, some improvements can be attributed to the HIMA-influenced changes in the mindsets of local officers and advisers.
- Although HIMA carried out its interventions independently of central government input, interviews with district staff coupled with files from HIMA villages and other official documents, showed that ministerial officers made visits to study HIMA interventions. These visits may have been the inspiration for subsequent ministerial policies.

Although the Evaluation was unable to link the adoption of any particular central or regional policy directly, and solely to HIMA, there is a clear perception on the part of a number of key stakeholders and focus groups at all levels, that HIMA had, indeed, influenced a number of central and regional policy interventions. HIMA's "footprint" was recognized in policy documents from the late 1990s onwards, in areas such as forestry, community development, environment and local governance. Although not all developments can be tied exclusively to HIMA, there is evidence suggesting that HIMA had a positive influence at the central and regional levels.

Lately, the GoT has implemented, at the village level throughout the country, a concept for village planning, labelled the Obstacles and Opportunities for Development (OOD). This planning tool is based on a very similar participatory planning approach earlier advanced by HIMA. The development of OOD is probably another example where HIMA influenced central government policy.

7.2 Community Capacity and Governance

Governance

Within HIMA villages, at the community level, there are clear indications of positive improvements in community governance. The share of respondents in the Njombe HH survey, which viewed their village government as either “excellent” or “good” increased from 36.0% in 1996, to 66.2% in 2006. Moreover, the PRA analysis showed that all thirteen HIMA villages had active and engaged village governments and professionally organized government administrations. The overall rating of the quality of village governments across the 13 PRA villages was uniformly “medium”.

With respect to governance institutions other than environmental, the by-laws in two HIMA PRA villages were being enforced and, in one of them, the by-laws had been expanded without HIMA support. Of the four villages, where official committees had previously been established or supported by HIMA, three have retained functioning committees.

Counterfactual

The PRA analysis revealed that the comparison villages had received the same level of rating on the quality of village governments as the HIMA villages. Two comparison villages reported a higher quality of village government than in the HIMA villages. Comparison villages also had active and engaged village governments and professionally organized village government administrations.

Although there is a clear indication that a significant positive change has occurred within the last decade of the perception villagers hold of village government within HIMA villages, the Evaluation did not conclude that local governments in HIMA villages performed better than those in non-HIMA villages. These findings are in line with those from a preliminary analysis, dated 2001, dealing with the impact of the HIMA programme in Njombe District. The assessment concluded that although there had been a general improvement in the village government rating from 1996 to 2001, there was “... no indication that village governments in priority villages have a higher rating than non-priority villages”.

Although HIMA provided, for the most part, village leadership training in HIMA villages, the comparison villages had also received other external support in this area during the same period. While HIMA does appear to have had a positive impact on community governance in those villages where the programme was implemented, other external local governance support programmes, implemented in non-HIMA villages, have also had a similar impact.

Therefore, these changes would likely have occurred without HIMA as they were found in all of the comparison villages. However, in the absence of HIMA or other programs, it is likely that community governance would not have improved to the extent it did.

Women's Political Participation

The Evaluation found that HIMA interventions to improve women's political participation have been successful and sustainable. Women's political participation was found to be high in nearly all of the HIMA PRA villages for which data was available. In a majority of villages, women were found in leadership positions within village government structures. In half of the villages the participation of women was rated high or medium with respect to government structures such as committees, meetings, etc. Women were also able to speak in front of men at meetings, a phenomenon that was observed throughout the period of the Evaluation. Many discussions with women underscored that their participation had been forbidden in the pre-HIMA village setting.

Counterfactual

HIMA villages had greater general levels of women's participation than comparison villages. However, when looking solely at the numbers of women in leadership positions, there were generally no differences between HIMA and non-HIMA villages. With respect to overall participation in governance matters, such as speaking in public or participating on committees, the level of participation in comparison villages was found to be lower than in HIMA villages. Consequently, women's participation in political processes and planning would likely not have been as positive in HIMA villages, without HIMA intervention.

Planning Processes and Participation

HIMA had a notable impact on planning at the village level. During visits to the District Offices in Njombe and Kilolo, the Evaluation carried out reviews of a random selection of village plans that had been prepared by the villagers. The Evaluation found that village plans from HIMA villages were, in general, of a higher quality and had been more comprehensively prepared than those from non-HIMA villages. The PRA confirmed these findings from visits to HIMA and non-HIMA villages. District officials stated that, in the planning process, there was a clear difference in the interface between government and HIMA villages as opposed to non-HIMA villages. HIMA villages were frequently cited as being: 1) better prepared, 2) more innovative, 3) more able to incorporate their own aspirations into the plans, and 4) more proficient with planning tools.

Counterfactual

In the absence of HIMA, HIMA villages would likely have engaged in planning, but those plans would have been of lower quality and less able to capture the needs and aspirations of the village.

Community Groups

HIMA was successful in helping to establish agricultural and producer groups. Data on this intervention area is limited but three PRA villages reported the existence of groups and that all such groups were still active in 2006. In addition, there were groups that had been initiated and sustained in the absence of HIMA support. In an additional two villages, several agricultural and producer groups were initiated, also without HIMA support. The Njombe survey showed that while the proportion of HHs rating the services of informal groups as “excellent” had doubled, there were, also, indications of increased dissatisfaction. The percentage of HHs rating their services as “average” had risen from 19% to 34%.

Counterfactual

Agricultural and producer groups were not prevalent in comparison villages. Out of the three villages reporting data on this issue, one village had a single Savings and Credit Co-operatives group; the other two villages had no groups. Without interventions from HIMA, it is likely that most HIMA villages would not have a vibrant and well-developed community group infrastructure.

Capacity of Para-Professionals

Although not part of the original design, through HIMA, selected farmers were trained to become PPs to provide ongoing support and advice within their respective villages. Many of the key stakeholders from outside the villages mentioned the concept of PP as one of HIMA’s most successful components. The Evaluation heard that other external supported village programmes had adopted the concept as well.

Within the HIMA PRA villages, support for the concept of PPs was largely in abeyance. In only one out of the eight PRA villages reporting the training of PPs, were the PPs carrying out duties as envisioned by HIMA. In six villages they were carrying out a much more limited role than was originally planned; in one village they were not active at all.

Today, although PPs are easily identified in HIMA villages, they appear to be very rarely consulted by their fellow farmers. One explanation is that whereas PPs were mainly trained to assist the farmers in contour setting for soil conservation, in 2006, few farmers were constructing new contour ridges. Some PP’s complained of farmers not approaching them, an indicator, perhaps that the PPs had been inadequately trained in extension approaches. Some villagers found the knowledge of the PPs too narrow. For example, a common complaint was that the PPs were unable to provide support on marketing and commercial matters. A factor may have been the planned exchange of labour between PPs and other farmers. Apparently the system that was promoted involved farmers working on the PPs field in return for support. This system may have broken down following HIMA completion and with a reduction in extension services.

Another related problem was the lack of a critical mass of PPs required in the village to sustain change. Given the broad range of HIMA interventions, there were too few PPs to make a real difference. From an institutional point of view, the idea of having PPs taking over the responsibilities of government officials might also have been a limiting factor.

Figure 28: Capacity Building and Activity of Para-Professionals

No. of Villages	Para-Professionals Trained in the Village	Para-Professionals Currently Active
Yes	8	1
To Some Extent	-	6
No	0	1
No Data	5	5

Source: PRA Village Reports.

7.3 Environmental Governance

HIMA interventions designed to establish and improve environment-related governance through supporting the establishment of environmental committees and the formulation of by-laws, seem to have been both successful and sustainable. In seven HIMA PRA villages, environment committees had been established or reinvigorated with support from HIMA. In all but one of these villages, the environment committees were still functioning and active. By-laws had been formulated with support from HIMA in almost all of the HIMA PRA villages. Environmental by-laws had been enacted and enforced in seven of those villages; were undergoing a mixed implementation in three; and, in one village, were not being enforced.

Counterfactual

Figure 29: Overall Rating of Environmental Protection and Sustainability

	High	Medium	Poor
HIMA PRA Villages	0	9	4
Comparison PRA Villages	1	2	2

Source: PRA Village Reports.

The positive results achieved in HIMA PRA villages did not differ greatly from comparison PRA villages. Environment committees were active in four out of five comparison villages. Environmental by-laws had been formulated in all five of the comparison villages for which there was data, and were being enacted and enforced in four of these.

It is plausible that non-HIMA villages have “caught-up” with HIMA villages in the establishment of environmental committees and in the enacting of by-laws. This could be due to several factors, including replication from HIMA, and an increased general focus on environmental issues in governmental and non-governmental programmes and policies during this period. The enacting of the Environmental Act in Tanzania in 2004 has been vital to sustaining environmental governance. Therefore, in the absence of HIMA, environmental governance would likely not have been different in HIMA villages.

7.4 Sustainability and Replication

District to Central Levels

The sustainability picture with respect to government capacity and infrastructure is very mixed. While HIMA was successful in building capacity, the organizational context for the sustainability of those changes is not broadly supportive. Since HIMA impacts were felt most at the individual, rather than the organizational level, there are no robust ongoing systems and processes to continue with new methods and ways of working. Contributing factors include the apparent lack of resources that continue to hamper the delivery of high levels of direct extension to villages.

Community Capacity and Governance

With regard to community capacity and governance at the village level, the prognosis for sustainability is positive. Several years after the ending of HIMA, village governments are still active and engaged; women continue to participate at various levels in community governance; and, community groups are still functioning. Moreover, the Evaluation found that community groups have continued to form since HIMA concluded. There is no doubt that HIMA has left a lasting capacity in village planning. However, the PPs, while having benefited, individually, from HIMA interventions, are not providing the services for which they were trained.

There are many factors that have contributed to the sustainability of community capacity and governance at the village level. One is the existence of the so-called “virtuous circle”, created when an organized and involved citizenry work with an engaged and active government. These two social/political organizing processes reinforce one another in a positive way. As well, broader reform efforts have played a role. For example, comparison villages have benefited from a positive state of governance and active participation. Finally, HIMA invested in structures such as committees; policies such as by-laws; and, social change processes such as the participation of women. All of these processes have built sustainable improvements in capacity rather than an investment in individuals alone, a much less sustainable option.

Figure 30: Government Institutional Development

Impact / Intervention Area	Sustainability/ Replication	Lines of Evidence	
		Njombe household Survey	Field Observation/ Interviews
District Capacity –Planning, Multi- Disciplinary Teamwork	<i>Medium to low sustainability.</i> Replication: New approaches not replicated in government structures. Some synergistic two- way influence with policies and other programs in non- HIMA villages.		Improved capacity but tends to be individual rather than organiza- tionally based, some reversion to top down planning.
District Capacity – Infrastructure	<i>Medium sustainability.</i> No HIMA infrastructure being renewed. No replication observed.		Buildings and equipment still operational and maintained to some degree. Solar batteries most often not working and only few funds for diesel to power genera- tors. Current use of HIMA infrastructure did/does serve non-HIMA villages.
Extension Services	<i>Low to medium.</i> Replication: New approaches not replicated in govern- ment structures. HIMA influenced and strengthened services were extended to non- HIMA villages until 2002 but less so after HIMA concluded.	No significant change in performance rating of services from 1996 to 2006. Interaction levels with HHs fell from 1996- 2006.	Strengthened services during project period now reduced in village outreach.

Figure 31: Sustainability, Replication, and Community Capacity/Governance

Impact / Intervention Area	Sustainability/ Replication	Lines of Evidence		
		PRA Villages	Njombe household Survey	Field Observation/ Interviews
Village Government	<i>High sustainability.</i> Replication: Engagement and participation generally high across villages. In comparison villages no evidence of replication.	All 13 villages with active and engaged governments.	Performance rating show positive increases from 36% in 1996 to 62% in 2006.	Village governments well organized and inclusive.
Women's Political Participation	<i>High sustainability.</i> Replication: two villages positively influenced by changes in HIMA villages.	High levels of participation in 11 villages. Women in leadership positions and involved in governance structures.		Women participating in meetings and speaking in front of men.
Community Groups	<i>High to medium sustainability.</i> No data on replication.	All groups formed during HIMA still active and additional groups formed in three villages.	More groups rated as excellent (23%) or average (34%) in 2006, as opposed to good (66%) in 1996.	
Village Planning	<i>High sustainability.</i> Synergistic two-way influence with policies and other programs.	Evidence of planning exercises – maps, etc.		HIMA plans of higher quality than non-HIMA villages. Officials report substantial difference in planning capacities of HIMA vs. non-HIMA villages
Para-Professionals	<i>Low sustainability.</i> Medium replication as concept is used by other donor programs. New PPs not emerging.	PPs carrying out intended role in 1 village out of 8, and a more limited role in 6 villages.		PPs taking on important entrepreneurial ventures/positions but not carrying out tasks as envisioned.

Environmental Governance

With respect to environmental governance, many of the same sustainable capacity elements were found in village institutions as in village governance. However, with environmental governance there were more external factors impinging on the levels of sustainability. Despite institutional supports for environmental sustainability, such as the enactment and enforcement of by-laws, there are also economic pressures to carry out environmentally unsustainable practices. There are also deep-rooted traditional practices and, in one village, political interference that have combined to reduce the prospects for sustainability. It is not clear whether the generally positive environmental governance practiced in villages today, will remain fairly strong or will be slowly eroded due to external pressures.

Figure 32: Environmental Governance, Sustainability and Replication

Impact/ Intervention Area	Sustainability Level	Lines of Evidence		
		PRA Villages	Njombe household Survey	Field Observation/ Interviews
Environment Committees	<i>Medium sustainability.</i> No evidence of replication..	Seven out of seven villages with func- tioning commit- tees. Eleven villages with environ- mental by-laws, enacted and enforced in seven of eleven.	Decrease in reported use of burning prior to cultivation.	Evidence of application of by-laws in some villages. Evidence of not being applied in others, e.g., burning.

7.5 Conclusions

The strengthening of local government capacities was an important area of HIMA intervention. In terms of planning, multi-disciplinary teamwork, and the use of new technology, HIMA has improved capacities at the district level. However, capacity building seems to have been more effective at the individual, rather than the organizational level. The Evaluation observed some reversion to top down planning instead of from the bottom up, as promoted by HIMA. In terms of infrastructure, buildings and equipment provided by HIMA are still operational and maintained to some degree.

The provision of extension services in Iringa Region is one area where performance has not improved. The Njombe survey showed that there has been no significant change in performance rating of extension services between 1996 and 2006, even though the services were rated fairly high in 1996. There was a reduction in outreach at the village level, and a decline in interaction levels between 1996 and 2006.

With respect to community capacity and governance, village government improved in all HIMA PRA villages, as did women's political participation. Village planning capacity was also high in HIMA villages as a result of earlier interventions. With respect to environmental governance the results were more mixed results, as functioning environment committees and by-law enactment and enforcement were not uniform across all PRA villages. However, HIMA was less successful with regard to the sustainability of the paraprofessionals (PPs). Only in a minority of villages were PPs continuing to carry out tasks originally envisaged by HIMA. Instead, PPs had taken on entrepreneurial ventures or other positions.

Most of these changes would likely have occurred without HIMA as they were found in all of the comparison villages. However, women's participation in political processes, village planning, and community group formation, would likely not have been as positive without HIMA intervention.

8 Gender Equality

8.1 Division of Labour

HIMA has had some impact on creating a more equitable division of labour between men and women, and some success in reducing workloads for women. However, this latter success has been tempered, to a degree, by the introduction of individual and group activities for income generation. While these activities have provided women with some financial resources, they may also have had an adverse effect on some labour-saving mechanisms instituted to relieve women of the burden of HH tasks such as the collection of water and fuel wood.

The HIMA PRA villages also reported that, in over half of the villages, there had been a shift towards a more equitable division of tasks. There are indications that some men have assumed a greater role in the performance of many HH tasks such as child rearing, the collection of water, and with certain agricultural tasks such as threshing, in some villages. However, the data from the HIMA PRA villages showed that these changes had not translated into an overall workload reduction for women since it was reported that workloads had been reduced in only two villages.

Water Collection

Women and girls are the major collectors of water in over 75% of HHs. The Njombe survey, however, indicated that the burden on women of water collection has diminished. This change may be due to successful HIMA interventions with water source protection.

In terms of the availability of water, 57% of HHs stated that water sources were now closer to home, 14% stated that water sources were further from home, and 29% reported no change. In terms of the time and effort to collect water, the norm was two to three trips per day. Over 82% of HHs stated that they spent less than half an hour to collect water. Consequently, it can be said that there have been reductions in the time and effort that women and girls spend collecting water.

Fuel Wood Collection

Wood continues to be a major source of fuel for cooking. NRM data indicates that problems associated with the availability of fuel wood have diminished. Survey data from the Panel Set shows that, with respect to the collection of fuel wood, the division of labour associated with its collection changed between 1996 and 2006. Fewer females were fetching wood on their own, down 20%, now that more adult males, up 8%, are assisting women. However, the data indicates an increase in the proportion, up 14%, of women assisted by children.

Counterfactual

Improvements in the division of tasks between men and women were also reported for the comparison PRA villages. Half of the comparison villages indicated some progress towards a more equitable division of labour. However, there was no corresponding overall reduction in women's workload. All of these villages had some external influence, either from HIMA or programs of other organizations. Therefore, in the absence of HIMA, or other external programs, it is likely that the division of labour would not have changed significantly in HIMA villages and women's workloads would not have been reduced.

8.2 Women's Economic Empowerment

On the whole, HIMA interventions have not improved the economic status of women. However, there are many examples of individual women having benefited enormously from practicing new livelihoods. In many villages, the increase in women's ownership of productive assets has improved the HH safety net for women and for the family. Moreover, successful women are functioning as role models for other women, and are helping to break down barriers to ensure further economic participation of women. However, these changes have not been of a systemic nature. The participation of women in income generation activities is addressed in the livelihoods section, page 44.

Access to External Finance

There have been significant changes in regard to women's access to external finance. In the 1996 Panel Set, only 9% of women had access to external finance. By 2006 this statistic had increased to 34%. Most of this finance, however, is drawn from the local savings and credit societies, and cannot be linked directly to HIMA interventions.

Land Ownership

Land ownership, often through inheritance, is a key gender equality issue in rural Tanzania, one explicitly linked to the feminization of poverty. In the four villages for which there was data, women were allowed to own land, in accordance with Tanzanian law.

Counterfactual

Similar levels of women's ownership of land were found in three of the comparison PRA villages where women were allowed to own land. All of these villages had some external influence, either from HIMA or programs of other organizations. However, in one comparison village women were explicitly forbidden from owning land in keeping with "tradition". It is difficult to determine what would likely have happened in the absence of HIMA. It is likely that legal changes allowing women to own land would have had some effect in HIMA villages, but it is not clear how much.

8.3 Other Gender Equality Issues

Awareness by Men

Male awareness of gender equality issues is a critical precursor to social change towards women's equality. HIMA invested considerable time and effort in gender equality training for men and women, and has left a positive impact in this area. Public recognition by men of women as equals was evident in almost half of the HIMA PRA villages.

Counterfactual

Half of the comparison PRA villages also had some positive changes with respect to awareness by men of gender equality issues. However, they were not as significant as those in the HIMA PRA villages in terms of the public recognition of gender issues by men. In addition, these villages were either influenced by HIMA or had external gender equality related programs. Consequently, it is likely that in the absence of HIMA or programs of other organizations, most HIMA villages would not have recognition of gender equality issues by men.

Household Decision-Making

In over half of the HIMA villages, there have been positive changes in women's participation in HH decision-making. These changes involved decision-making on the use and the control of HH resources.

Figure 33: Changes in Household Decision-Making

Number of Villages	More Female Participation	
	HIMA	Comp
Yes	4	1
To Some Extent	2	2
No	-	2
No Data	7	1

Source: PRA Village Reports.

Counterfactual

HIMA's success in promoting gender equality in HH decision-making appears to have exceeded advancements in comparison PRA villages. While half of the comparison villages reported some positive shift in HH decision-making, two out of the five villages surveyed indicated no change in existing patriarchal dominance. In addition, the three villages with positive shifts were influenced by HIMA or other organizations. It is likely that without interventions from HIMA or others, the majority of HIMA villages would not have experienced positive changes in HH decision-making.

Gender-Based Violence

There was very little data on HIMA's impact on gender-based violence (GBV). In one HIMA PRA village, HIMA had brought about a reduction in GBV in that there were, in place, village by-laws prohibiting it. There was also anecdotal evidence from other villages that tolerance levels for GBV had dropped, and that women now supported each other in confronting violent males.

Counterfactual

Comparison PRA villages gave a more mixed picture. Two out of the four villages with data reported some decrease in GBV; the other two reported a persistent problem. One of the two villages with some decrease was influenced by an external organisation. Therefore, it is likely that had HIMA not taken place, there would have been little or no change to existing levels of GBV.

Women's Organizations

At the village level, women who had organized themselves into formal and informal groups, run by women for women, were key components of the institutional framework for gender equality. In four HIMA PRA villages there were 17 groups run by women for women.

Counterfactual

In the comparison PRA villages, there were two women's groups located in two villages. Both of these were villages where other programs had been implemented addressing gender equality issues. There was no data for the four other villages. Taking this into account, it is likely that without external intervention, in the form of HIMA or another gender equality program, there would not have been a significant number of women's groups in HIMA villages.

8.4 Sustainability and Replication

Intervening at a time of broader social change, HIMA's efforts to increase gender equality appear to have created, to some degree, a sustainable realignment in the social relations between men and women, at both the HH and the community levels. The positive changes in women's participation in governance, community organizations, household decision-making, and the economic sphere all benefited from external facilitation but continue without any ongoing external support. Women's economic empowerment is certainly sustainable at the individual and HH level. However, at the collective village level, there is unlikely to be sustainable change without further external support.

Given the positive change in some comparison villages, it is recognized that other external factors, such as legislative, and other general social trends have contributed to this sustainability. However, mention must be made that the positive changes experienced in

the comparison villages are as a result of interventions by external organizations such as HIMA or other NGOs. In contrast, those villages that not been exposed to outside influences, remain locked in patriarchal, discriminatory, and violent gender relations.

The Figure 34 below elaborates on the results achieved:

Figure 34: Sustainability, Replication and Gender Equality

Impact/ Intervention Area	Sustainability/ Replication	Lines of Evidence		
		PRA Villages	Njombe household Survey	Field Observation/ Interviews
Gender Equality Overall	<i>High sustainability.</i> Two villages positively influenced by changes in HIMA villages.	Positive changes in many aspects of gender equality.	Data showing positive equality changes.	Anecdotal reports of positive changes in women's participation.
Division of Labour	<i>High sustainability.</i> No evidence of replication.	Six out of nine villages with some level of more equal division of tasks.	Fewer women fetching wood by themselves and increase help from men and children.	Men performing traditional women's task in field, e.g., threshing.
Reduction of Women's Workload	<i>Medium Sustainability.</i> No evidence of replication.	Four out of eight villages with some level of reduction in overall women's workload.	Reduction of workload for water and fuel wood collection.	
Women's Economic Empowerment	<i>Medium to Low sustainability.</i> Some replication by men.	Individual women succeeding in some income generating activities but, collectively, little change.	Women's access to credit increased from 14% in 1996 to 34% in 2006.	
Women's Organizations	<i>Medium sustainability.</i> No evidence of replication.	Seventeen groups run by women, for women, in four villages.		

8.5 Conclusions

HIMA has had important positive impacts on gender equality issues in some villages. In many cases, there has been a more equitable division of labour, and reduction of labour by women for the collection of water and fuel wood. There has been some economic empowerment of women at an individual level through expanded livelihoods, and women's access to credit has greatly increased. However, these economic changes are sporadic rather than systemic in nature. Yet, in HIMA villages, many groups, run by women for women are still in existence. Generally speaking, there has also been some improvement in gender equality.

Many of these positive changes also took place in comparison villages, although the scope and depth of the results was not as significant as in the HIMA villages. In addition, the changes in comparison villages can be linked either to HIMA replication or to the interventions of other NGOs. Consequently, while HIMA successes have built on broader changes in society, data from HIMA villages seems to suggest that the changes have been somewhat more profound than in non-HIMA villages. In the absence of HIMA, or other gender equality programs, it is likely that most of these positive changes would not have taken place in most villages.

9 External Factors

9.1 Policy/Enabling Environment in Tanzania

The following key acts and policies had an impact on the implementation of HIMA:

- *Civil Service Reform:* Civil service reform in 1995 brought about cutbacks in the public sector, leaving a vacuum in some districts. This legislation may explain some of the periodical difficulties HIMA experienced in terms of getting sufficient GoT staff to fill all positions in certain districts.
- *Community Development Policy:* The community development policy introduced in 1996 stressed the need for a multidisciplinary and participatory approach to planning and development with an emphasis on local communities. This policy probably reinforced HIMA's standing in some of the districts.
- *Local Government Reform:* Local government reform in 1996 increased the emphasis on decentralization through the devolution of responsibilities. The local government reform process was intended to “devolve” power to local communities in order to enhance the capacity and participation of civil society. In the aftermath of this change, there were some coordination problems between the central and the district levels that caused some confusion on the assignment of tasks. However, at the macro level, this reform opened up new avenues that HIMA, until its completion, sought to follow. Most critical was the gradual hand-over of responsibilities and finances to the district administrations.
- *National Environment Policy:* The National Environment Policy in 1997 called for the formation of environmental committees at the district, ward, and village levels. In most districts, HIMA made a special point of working through these new committees.
- *New Land Act (1999):* For HIMA, the *Village Land Act* was especially pertinent as it provided for the management and administration of land in village- and forest-related matters. The *Act* gave citizens the right to acquire title deeds on plots of land. Thus, women were put in a stronger legal position regarding: 1) the right of a women to acquire the title and registration of land, 2) equal representation of men and women in various bodies, 3) voiding any customary law that would deny women their right to use, transfer and own land, and 4) establishing quorums for meetings of the village land council comprising a minimum of four, of which two were to be women. Although this had the potential for large changes for many farmers, the impact on HIMA and target groups was limited. It is reported that small farmers are still unable to take advantage of these changes, as the embodied bureaucratic procedures are substantial and difficult.
- *Forestry Sector Legislation:* Important acts were passed in the forestry sector in 2002 and 2004. Both supported the forest policy of 1997, which had stated clearly the roles that communities were expected to play regarding natural forests and the need to establish private woodlots. In effect, HIMA's intentions were suddenly, and in many ways, inscribed into national legislation. This greatly influenced HIMA

implementation and has had an ongoing impact. The forest policy of 1997 paved the way for both MEMA and PFM. MEMA, as a local Iringa-based project, and PFM as a national programme, found some inspiration from HIMA. HIMA influenced the forest policy by acting as a laboratory with a number of other projects, most notably that in the Usambaras supported by Finland, and the project in Babati supported by Sweden.

- *Women and Gender Development Policy (2000)*: The Women and Gender Development Policy emphasized the necessity of equal participation. Although this policy probably had little effect on HIMA, its existence shows a general trend of an increasing national awareness around gender issues throughout the years of the project. This trend appears most clearly in the comparison villages where two villages reported that women had made strides in taking on greater responsibility both at the HH and village level; two villages reported that they had had training or gender-related project activities in the past.

(See Annex 11: Review of Policies and Legislation Related to HIMA)

9.2 Danida Policies

Danida's shift away from project support to sector programme support, a major change in focus from March 1999 on, began with the "Strategy for Danish Development Policy Towards Year 2000" from March 1994 on. As a consequence, there was a major impact on HIMA. The sector programming in the agricultural sector in Tanzania first turned HIMA into a component of Agricultural Sector Programme Support 1998 (ASPS) and, later, after its termination at the end of 2002, left the new District Agricultural Development Support (DADS) component of the ASPS to take up minor parts of HIMA activities.

From 1994 the support to the agricultural sector increased from 5% of the bilateral frame, up to 20%, and then later in 2001 it was scaled back down to 6%. This created some uncertainty among both the local partners and the project management.

9.3 Other Projects in Iringa Region

Another major actor in the NRM sector during the HIMA's time frame was the Irish NGO, CONCERN. CONCERN operated in Isimani division in the northern part of Iringa District promoting activities similar to those of HIMA. When CONCERN pulled out of Isimani in 1998, HIMA started up in the same areas. Today, however, many villagers are able to relate better to the impacts of CONCERN, present for more than ten years, rather than to HIMA, present for four years.

Figure 35 provides an overview of other development programmes present in the HIMA area, before, during, or after HIMA implementation:

Figure 35: Presence of Other Development Programs During, Pre-, or Post-HIMA

Presence of Other Programs	Agriculture		Governance		Forestry/ Environment		Livelihoods		Gender Equality	
	HIMA	Comp	HIMA	Comp	HIMA	Comp	HIMA	Comp	HIMA	Comp
None	0	2	0	0	0	2	0	0	0	1
Only a Few or Small	7	3	2	5	10	3	9	3	2	1
Many or Large	0	0	0	0	0	0	0	1	0	1
No data	0	1	11	1	3	1	4	2	11	3

Source: PRA Reports.

Figure 35 shows that a majority of the comparison villages have had some external assistance especially around governance issues (five out of six), and that half of the comparison villages had received projects dealing with either forestry or agriculture. Little over half of the HIMA PRA villages had also received agricultural assistance from other projects; a majority of the HIMA villages (10) had other forestry projects attached to the village. All except one comparison village characterized the projects as being limited and small.

Forestry was reported as being positively affected by external factors in the comparison PRA villages, negatively affected in one village, and not affected by external factors in another. The majority of HIMA PRA villages (six) for which data was reported were not affected by external factors; two found that they had been negatively affected; and, one positively affected. The responses point in different directions and give an indication of the climatic and economic diversity of the HIMA project area. "Friendlier" AEZs paired with a booming local timber industry would prompt farmers to plant trees whatever the circumstances. HIMA's contribution in this area would have focused on better management practices and inputs to local capacity development of institutions.

With the possible exception of forestry, the conclusion reached is that HIMA had been the most influential external project in the region. The potential impact and quality of other smaller projects were not assessed by the Evaluation. Except for one major gender project and one major livelihoods programme in two comparison villages, villagers themselves judged the other projects as being relatively minor.

9.4 HIV/AIDS

HIV/AIDS are considered to be one of the most impoverishing forces facing Tanzanians because the epidemic has affected individuals in their prime of their productive and childbearing years. HIV/AIDS have added a considerable burden to overstretched families who have to care for the infirm and orphans; and, their effects have touched every aspect of Tanzanian society including livelihood, food security and socio-economic development. The impact of HIV/AIDS is significant in Tanzania since the adult prevalence rate is of approximately 6.5% (Source: UNAIDS, 2006). An estimated 1.4 million Tanzanians are living with HIV/AIDS. In addition, there are approximately 1.1 million

children who have lost either their mother or father, or both parents due to AIDS. While higher prevalence rates are concentrated mostly in urban areas and transport corridors, the impact is slowly being felt in the rural areas. Iringa is one of the regions with the highest prevalence of HIV at over 13%. Some of the HIV surveillance sites reveal some disturbing figures for Iringa. For example, antenatal data from the Ipogoro site revealed a prevalence rate of 32.1% for 2000. The Iringa regional hospital had a prevalence rate of 40.1% for 1999.

As one would expect, the AIDS epidemic continues to have an impact on the Iringa Region. The best evidence regarding this impact on HIMA areas came from the PRA villages. However, the manner in which HIV/AIDS are affecting the affairs of the PRA villages is far from uniform and difficult to document fully. There are PRA villages where HIV/AIDS did not even rate as a key concern. At the same time, there are both HIMA and comparison villages where the epidemic has proved to be devastating.

The Evaluation found that, when it compared itself with other villages, the PRA village of Ilula Mwaya ranked itself as having the worst problems related to the outbreak of the AIDS epidemic. At the same time, these villagers found it difficult to discuss the matter, and were not forthcoming with the PRA team on this subject. Moreover, the campaigns by HIMA and other groups to generate an awareness of HIV/AIDS have not enabled full and open discussion about the problems. One of the most severely affected districts in the entire country is Makete. According to people in Mlondwe, a village in Makete District, HIV/AIDS has affected most HHs there. The village is trying to cope with the situation in the best way possible but with little support. For the village of Maliwa, where HIV/AIDS hit the village hard in 1997, the epidemic is regarded in the village's historical timeline exercise as one of the most important events in the entire history of the village.

One example of the devastation brought by the HIV epidemic can be found in the very successful timber producing comparison village of Ilindiwe. Cooperative Assistance for Relief Everywhere (CARE), together with the United Nations International Children's Emergency Fund (UNICEF) have assisted in the care of the 70 orphans in Ilindiwe, a village with a total population of 419. HIV/AIDS in Ilindiwe have also had an impact on local agricultural and woodlot management. Although there is an opportunity to increase productivity on account of the availability of large tracks of fertile land surrounding the village, there is an absence of the labour needed to exploit the resource. The inability to expand the economic base of the community had made the retention of young people difficult. The paradox is that although the village has a strong economic base compared to most HIMA and comparison villages, the economy is floundering.

Ilindiwe is uncharacteristically under populated and quiet for its physical size and state of development. The village is rich in natural resources, has clean drinking water, and employment opportunities through the timber trade. At the same time, Ilindiwe is losing people to HIV/AIDS, and there is movement to find work elsewhere.

The impact of HIV/AIDS on gender relations in Ilindiwe is similar to that in many HIMA villages. Women have had to take on new care and support roles as the adult population diminishes. In the HIMA villages of Kidegembye and Lyasa, as their male partners die from AIDS, women have to assume the role of head of the household. In Ilindiwe, women are now in charge of woodlots. However, there is a negative aspect to this as women, who also carry the burden of high rates of infection, are expected to continue to act as the traditional caregivers for the sick and orphaned. On the one hand, women's eco-

conomic and social positions are being improved as a result of the HIV/AIDS epidemic but, on the other, they have to take on even more work when they care for others.

The situation for women is not the only irony related to the AIDS epidemic. Another issue involves that of livelihood activity. The spread of HIV/AIDS is being exacerbated by an increase in worker mobility, and greater regional economic integration. This is happening at a time when many HIMA villages, especially those involved in the timber trade, are expanding their economic focus. One example is Lupembe, which has become dependent on tomatoes as a cash crop. The people of Lupembe claim that the men traveling to the urban areas of Dar es Salaam, Morogoro and Mbeya to sell the tomatoes, contract HIV there and then infect their partners on returning home.

The Njombe HH survey shows how HIV/AIDS have had an impact on income improvements. For the 30% of respondents who indicated that income had not improved over the last ten years, 42% stated that the death of a HH provider had been the cause.

HIMA has played a role in helping villages contend with the epidemic. Ihanzutwa is a village that benefited greatly from HIMA in terms of controlling the impact of HIV/AIDS. The villagers of Ihanzutwa believed that HIMA should be thanked for the leading role it took in carrying out awareness raising and training on this sensitive issue. Before the training, it was very common to see villagers dying from an illness few people understand and one, many associated with witchcraft. Some of the PRA HIMA and comparison villages established HIV/AIDS committees through other means with various degrees of success.

9.5 Other Major Factors

Rainfall Patterns

Critical to the success of farming, and of more importance than either projects or improved seed, is the amount and distribution of rainfall. An analysis of the annual rainfall data was crucial to an evaluation of HIMA's interventions regarding sustainability and the quality of impacts.

The Evaluation only had access to the rainfall data from Iringa town. Therefore, given the topographical diversity and size of the project area, generalizations pertinent to the whole region based on rainfall cannot be made. However, the Evaluation did identify trends in precipitation levels that give helpful insights into the successes and failures of HIMA.

Figure 36 shows the annual precipitation in Iringa over a 36-year period. Annual precipitation is recorded for the hydrological /agricultural year identified as beginning on the first of September in one year and ending on the 31 August in the following year. Figure 36 shows that the average annual rainfall for Iringa during this period, illustrated on the graph as a dotted line, was almost 700 mm. The trend line, in bold, indicates increasing or decreasing patterns during the same period.

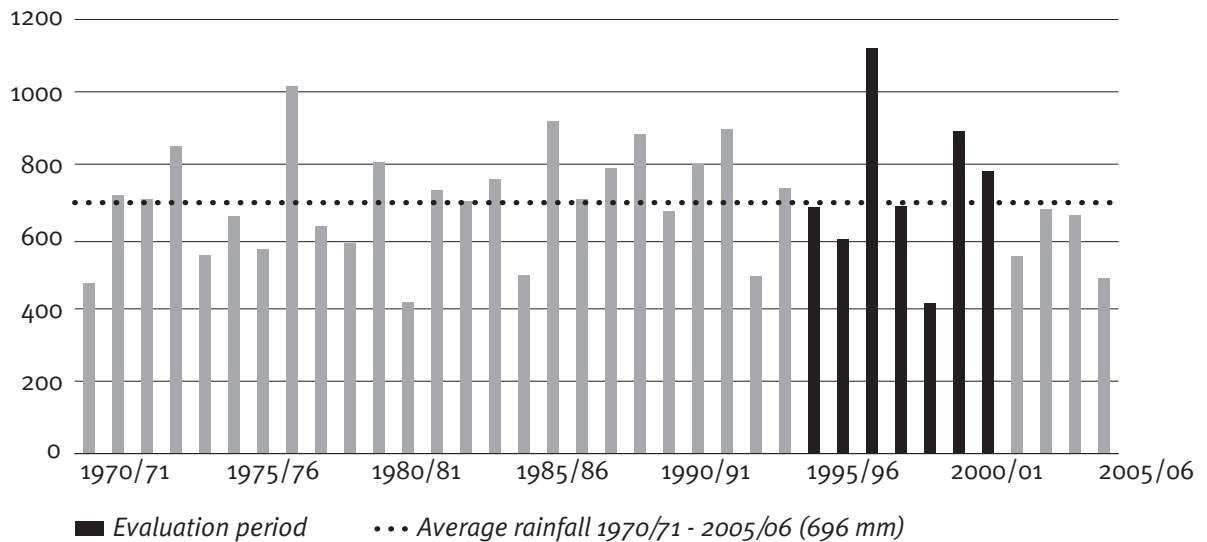
Figure 37 illustrates the monthly precipitation for the period, 1990 to 2006.

During the 36-year period of weather recording in the area of Tanzania where HIMA was active, the rainfall records show the occurrence of two periods of extreme weather

conditions. In 1999-2000 there was a drought; in 1997-98 the rainfall exceeded all previous records. Conversations with farmers in other parts of the region confirmed that these years had produced “extreme” conditions in many parts of the project area. Villagers often mentioned the very wet period of 1997-98 as an example of a year with severe soil erosion, crop damage and subsequent hunger. Figure 37 clearly shows that the high rainfall of 347 mm in December 1997 coincided with the start of the growing season.

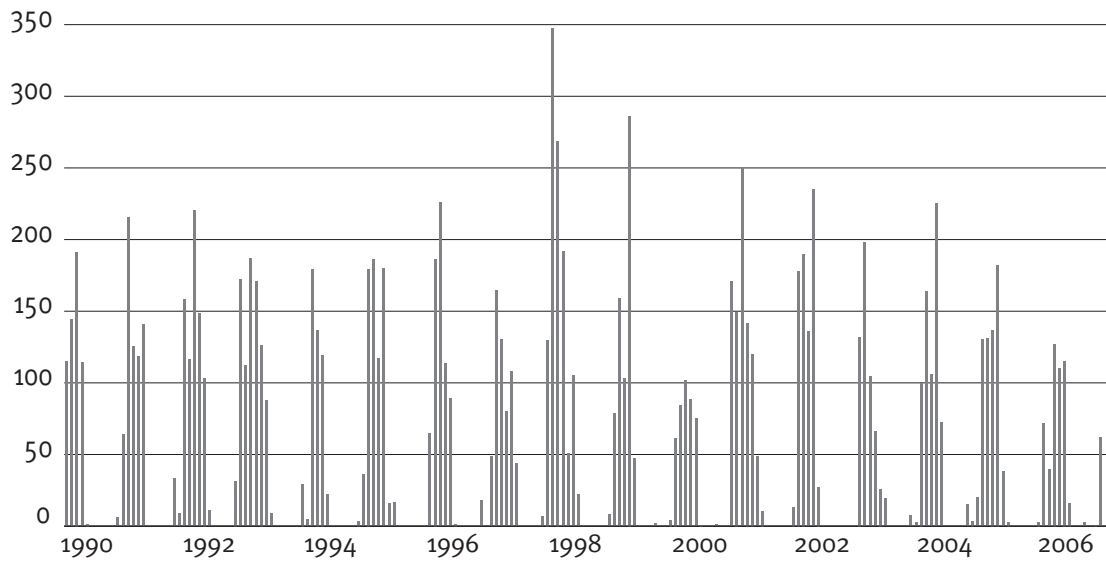
Since 2002, the annual precipitation in Iringa has been below the average of 696 mm. Since farmers from the villages surveyed in 2006 reported increased yields despite the fact that the rainfall in 2006 was below average, this underscores the findings that these yield increases where HIMA influenced. It also emphasizes the importance of HIMA’s results in improving the access and productivity of water sources through protection measures.

Figure 36: Annual Precipitation in Iringa from 1970-2006
(mm)



Source: Iringa Maji Depot – Station 97.35014

Figure 36: Monthly Precipitation in Iringa from 1990-2006
(mm)



Source: Iringa Maji Depot – Station 97.35014

10 Design and Delivery

Before commenting on HIMA's design and delivery mechanisms, two key points must be taken into account. First, the discussion and evaluation of HIMA design and delivery must, in all fairness, take its point of departure from the prevailing knowledge and accepted aid delivery mechanisms in place at the time of implementation. Second, HIMA strategies, methods and practices evolved between 1995 and 2002, and were often in response to changing foci, policies and aid modalities that emanated from both the national and international arenas.

10.1 Implementation Issues

Changing Focus

During its lifespan, HIMA changed its primary focus from a conservation-driven initiative to more of an agricultural/rural development initiative that emphasized soil and water conservation as a means of improving productivity. At the beginning of the period under evaluation, HIMA placed its emphasis on planning interventions around the upper major water catchment areas of Rufiji and Ruaha. Gradually however, this focus changed and HIMA increasingly began to resemble a rural development project entering areas outside the initial identified major catchments, whilst embracing a wider array of activities. This gradual shift in geographical focus brought change and development to individuals in some villages, but it also led to a reduction in environmental impacts at wider catchment levels.

Intensity of Inputs

In general, the HIMA design allowed for an intensive input of resources such as financial and technical advice, and the training of civil servants and farmers in a comparatively small area. The delivery mechanisms relied heavily on funding. The Evaluation findings show that these high resources levels would not be sustainable following HIMA's conclusion.

While this would be an obvious and easy criticism to make of HIMA today, this design has had long lasting positive impacts at several levels. The mindsets of many civil servants, possibly a critical mass, occupying influential positions were changed. The resourcefulness and intensity of HIMA allowed for much experimentation, and it provided ample learning opportunities.

The advisory input was no doubt heavy and the recruitment of several local advisers probably controversial at that time. However, several of these advisers, influenced by HIMA's thinking and experimentations, occupy influential positions at national and district levels today. Furthermore, HIMA was successful in demonstrating fruitful, cross-sector collaboration and it supported individual capacity building at the extension staff level. In a subtle way, this in itself is still resulting in smaller but significant local changes.

HIMA Adaptability and Rigidity

At the macro level, the Evaluation found that the HIMA design allowed for enough flexibility to take advantage of changing national policies and strategies. Examples of this flexibility are demonstrated in the implementation of small innovative pilot projects

around joint forest management carried out during the build-up to the Forest Policy of 1997 and the *Forest Act* of 2002. Further, as the decentralization efforts of the GoT gained momentum during the 1990s, HIMA capitalized on this development by supporting and encouraging the intentions of the *Local Governance Act* in all of the HIMA districts. In addition, HIMA was in tune with changes in agricultural policies that gradually shifted to a focus on individual farmers and producers, rather than on production.

At the micro level, HIMA had a tendency of being more supply-driven than demand-driven. With the benefit of hindsight, it seems that the initiatives often missed important learning points. HIMA never capitalized on the many opportunities for income generation. Fish farming and beekeeping, for example, had a virtually insignificant impact on incomes. The former was mainly due to poor technical designs and little follow-up from extension workers; the latter was often due to limited local markets and/or little or no follow-up from extension staff.

Another example would be the sustained promotion of exotic grasses for soil conservation. It can be questioned whether this was the wisest use of resources and whether the promotion of other soil erosion measures should not have been pursued earlier in areas where farmers continued to resist the adoption of certain techniques. The Evaluation heard that HIMA, in its keenness to promote these grasses in some locations, delivered grass splits without providing the necessary training in how to establish and maintain contours. The villagers stated that they were compensated financially for their attendance at seminars on the use of grasses.

HIMA composting activities provided an example of programming rigidity. The Evaluation heard that farmers found the initiative's recommended composting system to be so tedious to implement that they never really accepted the approach. Yet composting was widely promoted by HIMA – even in the later stages of the initiative. Today, farmers are using simpler and more affordable means of making compost and some are now selling it as a thriving side business. Compost making has become an entrepreneurial activity that is responding to a large market for affordable compost or fertilizer. Yet HIMA did nothing to exploit this opportunity to assist farmers. HIMA could have become involved in the promotion of enterprises either at the village or district level selling soil-enriching products.

Institutional Design

Overall, HIMA's institutional design was in line with existing governmental structures. The initiative was implemented through district offices and village governments, and within existing village planning systems. In addition, divisional offices were established to strengthen decentralization dimensions. This approach strengthened the institutional sustainability of interventions even though some weaknesses were detected.

First, HIMA focused mostly on supporting internal institutional processes through the training of villagers in leadership and participatory planning processes, and through the training of district staff in teamwork, facilitation and planning. Little attention was given in the project design to take into account external factors related to sustaining and adopting procedures, systems, plans, by-laws, etc., developed and implemented through HIMA. Such an integrated and holistic approach to institutional development would have required a much more comprehensive analysis on how external functional, political and financial factors could be supported in order to increase HIMA's impact.

There are examples that show that HIMA's impact could have been improved if the institutional design had contained a broader scope. For instance, in the process of approval and implementation of village plans there still seems to be a separation from the district to the village level. The processes for the enacting of village by-laws remain slow, often taking years to reach completion. Likewise, resource constraints at the district level have seriously affected support to several of the procedures and activities introduced by HIMA.

Secondly, institutional financial management was, until the last phase of HIMA when the local government reform agenda process was implemented, designed to go through a parallel system within district offices. At the same time, no cost-sharing modalities were included in the financial programme management design. Interviews carried out with district staff revealed that the financial design complicated integrated district planning because funding was administered from two different places. At the village level, several HIMA village governments claimed that they had too little influence on fund allocation and that interventions became, in the end, more supply, than demand driven.

From the interviews carried out, it seems likely that a more integrated financial design, including a cost-sharing modality, could both have improved the sustainability of various aspects of HIMA interventions and ensured greater demand responsiveness. For instance, after HIMA was phased out, the availability of funding for the transportation of extension officers to villages was cut dramatically, a move that had strong, negative implications on the follow-up of HIMA activities. The financial resource base at district offices was poor throughout the period. With some reflection early on regarding the implications of phasing out, HIMA could have improved the chances for the realization of more long-lasting institutional changes.

10.2 Thematic Issues

Forestry and Agriculture in Dry Zones

A major design error was HIMA's underestimation of the time and effort it would take to make a significant and lasting impact in dry zones. Apart from a renovated building which functions very well as the divisional administrative headquarters, the interventions in Isimani division, comprised of the harsh and dry AEZs 8 and 16, have left only a few notable traces behind. After the initial surveys were finalized, most villages there received only two to three years of support before the project was completed. A comparison with Mazombe division with similar climatic conditions to Isimani, but with a sustained HIMA focus of nearly 15 years, shows that impact can be achieved in dry areas if long-term commitment exists. Not surprisingly, survey results show that the villagers in Isimani were unimpressed by HIMA. Some farmers expressed disappointment over the fact that, while considerable financial resources went into renovating a building which would be used as a HIMA sub-centre, little relevant attention was given to their problems in the fields.

Commerce and Marketing

HIMA tended to introduce the same income generating activities into each village, typically with only a very limited strategy for marketing products. In doing so, opportunities may have been missed to encourage different forms of entrepreneurial activity. From the Njombe survey, field observations, and the PRA villages, there is very little evidence that HIMA ever experimented in promoting other forms of livelihood activities. Any addi-

tional entrepreneurial initiatives would have required an investment into an understanding of market considerations, an area that, clearly, was not one of HIMA's strengths.

Therefore, while HIMA was designed mainly with a focus on food security and soil conservation, the design did not address the need to link production to product markets. Likewise, huge investments in training activities that focused on production increases and income generation did not appear to be based on specific cost-benefit and market analyses. Instead, progress reports from December 1997 onwards repeatedly state that the marketing of crops was problematic and inefficient. The June 2002 report concluded with a short statement saying that no district had been able to finalize a market strategy, although some training had been undertaken.

A stronger HIMA orientation towards commerce and marketing would have been desirable given that Tanzania, in the 1990s, was trying to make a transition to a more market-based economy, following a long period with a controlled planned economy and fixed price settings. Many villagers raised the issue of marketing and commerce during the Evaluation's visits. They stated that a stronger HIMA focus on increasing capacities and knowledge within these areas would have been much more beneficial to them and would, in turn, have increased HIMA's impact. On the other hand, farmers in several villages who reported a surplus in production, especially in beans, reported good prices and an adequate supply of traders coming to their villages.

10.3 Programming Issues

Data Collection and Analysis: Financial, Activity, and Performance

HIMA implementation was managed with the use of robust financial systems that effectively tracked expenditures across the program. However, these systems did not tie financial data to program outputs in a results based budgeting system. Consequently the line items used for expenditures are not structured in a way that permits an analysis of HIMA efficiency.

Although there are indications that the resources invested in the internal monitoring system were substantial, the impressive amount of monitoring data that was collected failed to help identify which interventions had worked and which had not. Whereas the monitoring system was strong on the control side in order to ensure that the government and HIMA targets were being met on time, the system provided little information of the actual quality of the support provided to the villagers. The absence of a robust and systematic feedback loop no doubt contributed to the continuation of some interventions that clearly were not working.

In addition the activities were not linked through out HIMA to the villages that they were implemented with. Village level data was only captured in the final years of HIMA implementation. This data gap prevented the program from systematic analysis and learning through village level analysis.

Phase-Out Strategy

The Evaluation was unable to locate any documents that laid out in detail the plan and strategy for the phase-out of HIMA's programme. Two years before HIMA's exit date, the annual sector review agreement mentioned that HIMA should develop "... proposals for scaling up and down of HIMA support". It seems that only proposals for scaling up

were developed and little if any consideration was given to how the initiative would eventually be scaled down. One year before its closure, HIMA was active in 187 villages; six months before closure that number was expanded to 245 villages. And, another two villages were finally added in the last six months of HIMA's lifetime, bringing the official number of villages up to 247. Not surprisingly, the Evaluation found little evidence of the impact of HIMA in these late starting villages but a good deal of resentment.

The Evaluation encountered several people, villages, and institutions that referred to the process for the phasing-out of HIMA as being short and brutal. Apart from the hasty exit that compromised several elements of sustainability, villages had also found that the late promises made by HIMA were not realized before the funding was stopped. The lack of a clear and long-term exit strategy left an unnecessary shadow over some of HIMA's achievements.

It is reasonable to expect that HIMA saw its phase-out plans as consisting, largely, of an integration into district structures. According to progress reports, the first steps taken towards integration were taken in 1999 after HIMA had become a component under the ASPs. In October 2002, it was reported that district integration was completed, a closure which left no time to further support or to stabilize implementation arrangements.

The traditional focus on supporting sustainable, self-contained interventions at the village level was, apparently, insufficiently supplemented by efforts that would allow district councils with limited resources to continue assisting old and new HIMA villages. As mentioned elsewhere, this had consequences for the institutional sustainability of HIMA.

10.4 Overall Relevance

By applying a combination of multi-disciplinary and participatory approaches as guiding principles to development, as well as undertaking periodical critical reviews, HIMA maintained its relevance to both GoT policies and internal Danida policies.

HIMA's objectives accorded with the agricultural sector objectives of assuring basic food security for all, improving standards of living in rural areas, and promoting sustainable land use. In the forestry sector, the GoT objectives of ensuring a sustainable supply of forest products through the maintenance of forests with effective management; of ensuring ecosystem stability through the conservation of forest biodiversity, water catchment and soil fertility, and of enhancing national capacity to manage and develop the forest sector in collaboration with stake-holders were, in one way or another, all included under HIMA's overall or immediate objectives.

Danida's cross cutting themes within poverty reduction, gender equality, and environmental issues were all well covered by HIMA. Although poverty and environmental degradation is widespread in parts of the region, the geographical choice of the setting of the HIMA project in one of Tanzania's more productive and well off regions is debatable. HIMA's catchment approach was planned to compensate for this choice (some of Tanzania's most important water catchment areas are situated within the region). However, as this approach was later either diminished or completely abandoned, the justification disappeared.

11 Lessons Learned

The following elaborates on the key lessons generated by the Evaluation. In effect, these lessons constitute learning opportunities derived from generalizations based on the Evaluation's conclusions. These lessons have been selected, in particular, for their potential value in attaining extended benefits through other development cooperation applications.

Success is increased by coupling interventions with a wave of growth identified through in-depth context analysis

HIMA's successes in crop production and forestry show the value of coupling project interventions with positive trends in the local context. HIMA was most successful when it recognized and then built on areas with the potential for good growth. Such interventions are most effective when the planning process includes an in-depth contextual analysis to identify potential or actual areas of growth.

Success is enhanced by a private sector approach that embodies a clear, market-driven strategy

To be successful, interventions such as those implemented by HIMA, require a business/private sector approach. This requirement became evident, for example, when the focus on the forestry initiative shifted from centralized to individual nurseries. Had there been an earlier focus on the private sector, HIMA would have been more successful. A market-driven strategy, installed at the outset, could have assured potential entrepreneurs that they would have access to information regarding existing markets for their new products, and would have an opportunity to engage in mutually beneficial dialogues with experienced entrepreneurs by taking advantage of project facilitated exchange mechanisms.

New or innovative livelihood interventions require additional support over a longer timeframe in contrast to livelihood practices that are already familiar to villagers

Where an intervention introduces a "pioneering" approach, such as HIMA's fish farming initiative, the provision of an accompanying appropriate design and an adequate level of resources are essential. This type of intervention is inherently supply-driven since it brings into the village an unknown or little understood practice that the organization then tries to "sell". Compared with well-known and accessible livelihoods, this type of intervention requires a longer timeframe and additional support for its establishment. In contrast, interventions that support activities already recognized as part of everyday village life require fewer programme inputs.

In the HIMA context, small animal keeping was successful because it was an occupation everyone, including women, could afford. Because the keeping of small animals was well known, it was a HIMA initiative demanded by villagers rather than being supply-driven. Consequently, such a livelihood could be successful even with lower levels of support.

In order to ensure that unsuccessful interventions do not make the participants worse off, it is critical that the capacities of targeted beneficiaries are “understood” to the extent of recognizing the degree of risk they can realistically absorb

When promoting livelihood activities, there is a strong requirement for an understanding of how the participants will be able to respond to, and overcome, difficult periods such as droughts, floods, and other unforeseen events beyond their control. An in-depth analysis of the economic margins of the participants is advisable before the introduction of ventures, such as fish farming, which carry a high risk of failure. Often, such projects collapse because the extension services and/or technical advice that is provided after introduction proves inadequate for the needs of the participants. This omission sometimes rendered vulnerable groups even more vulnerable after the implementation.

Results are enhanced when there is a realistic understanding of the poverty reduction potential of livelihood interventions, and when the central focus is placed on the needs and priorities of the “real poor”

Entrepreneurial income generating activities are often most appropriate for the small number of people who have surplus resources, an affinity for business, and an ability to address the inherent risk. Expecting a trickle down effect to poorer segments is optimistic and probably unrealistic. In the forestry sector, timber, the production of seedlings, and tree harvesting are often seen as examples of areas where income can be generated. Although tree-planting activities can benefit the lives of many in terms of better livelihoods and greater security for timber and fuel wood, such an occupation most likely remains an appropriate vocation only for the relatively wealthier elements of the population who can withstand any set-backs.

Cheap, simple, and easy-to-maintain interventions are more sustainable

Technical interventions at the farmer level sometimes went beyond the capabilities of the recipients who then became the victims of unrealistic expectations. An examination of successful, extant interventions demonstrates, without doubt, that the simpler techniques are the ones most likely to survive. A clearer focus on this lesson throughout the HIMA period may have brought about a greater degree of replicability. This need for simplicity may also explain the general opinion that a transfer of knowledge is often more successful for interventions targeting participatory planning, gender awareness, etc., than for technical interventions such as new livelihood practices like beekeeping and fish farming.

Expectations of how much replication can take place with entrepreneurial-related activities should be a guiding factor. Due to technical, material, and planning challenges, it may have been too much to expect that activities like beekeeping and fish farming could have resulted in broad-based replication.

Monitoring and data collection is more effective when focused on results, in addition to control, and when data is fed into planning with an emphasis on learning

It is important to understand that sufficient staff, ample funds, and many good ideas can be leveraged more effectively when combined with a responsive monitoring system that is implemented in parallel to the field activities. HIMA's monitoring system focused more on control and target registration than on the actual quality and relevancy of training and advice. Opportunities for learning and adjusting approaches and strategies were often missed.

Research is most useful when there are explicit mechanisms to feed data on context and local conditions into programming and decision-making processes

The undertaking of detailed socio-economic surveys creates expectations and implicit understandings of promises being made. An impressive number of surveys were carried out by HIMA. While not judging the quality of these, nor doubting their intentions, they may have occasionally done more harm than good. Often, it seems that these surveys were put to little use after they were completed, the possible exception being research on high yielding seeds and new varieties. Rather than responding to a village's specific needs, implementing agencies sometimes carried out activities that resembled more of a blueprint approach.

Results are improved and sustainability is enhanced when support is used to strengthen existing structures rather than used to build parallel structures, i.e., project versus sector support

During much of the implementation framework, HIMA structures and processes were essentially separate and parallel to government structures. While this may have improved HIMA performance, such an approach was not conducive to the achievement of long-term results and the sustainable creation of government capacity.

Sustainability is more certain when there is an in-depth, realistic, and concrete understanding of how an intervention is going to function in the complete absence of programme support

After HIMA's completion there were many sound interventions that proved unsustainable at the desired levels. In part, this deficiency was the result of a lack of consideration given to the likelihood of the viability of an intervention after HIMA was terminated.

In the case of PPs, there were several factors that were inadequately addressed. According to established practice, when the PPs were acting as consultants, the villagers were obliged to work on the PPs' fields instead of their own. What might have been foreseen is that once HIMA had concluded without having left in place the necessary institutional arrangements to ensure that they continued to function as envisaged, the PPs were free to pursue other livelihoods. In hindsight, the exchange of labour did not take place, PPs became too busy or successful to carry out their tasks, and/or they became community leaders. In addition, the recognition PPs gained from HIMA was no longer present. Many PPs were locally very active and successful (one of the selection criteria).

The S&WC conservation schemes are another example of a lack of foresight on the part of HIMA on how the cooperation and joint labour agreements between many farmers in the sub-catchment areas would be maintained after completion. In the absence of any formal mechanism to ensure the future organization of this joint effort, the likelihood of these schemes being slowly abandoned was high and even if they had formerly proved successful to some degree.

12 Recommendations

Given that this impact evaluation was undertaken several years after the completion of HIMA, the recommendations are: 1) general in nature yet relevant, 2) targeted to the audiences of this report, and 3) actionable for future programming. The following recommendations are advanced on this basis.

12.1 Overall Recommendation

The Evaluation shows that interventions to improve crop production and productivity, at the community and HH levels in rural areas, have real potential for sustainable improvements in living standards. It is therefore recommended that development partners and partner governments should give consideration to increased investment and programming in this sector.

12.2 Specific Recommendations

With respect to future programme design, it is recommended that:

- A documented sustainability strategy is required at the beginning or soon after implementation. This strategy must be assessed for its realism and the degree to which it reflects the local context.
- Community ownership of processes and outcomes should be built into programme designs and into implementation, monitoring, and evaluation in order to enhance sustainability.
- There is an explicit component of programming that links successful interventions at all levels with policy advocacy and development. Influence on policy from successful field implementation should not be a chance occurrence but an integral component of programme design.
- If replication of programming interventions in non-programme locations is a desired result, explicit mechanisms must be designed and implemented, to help to ensure that replication goes beyond the mere articulation of a theory or premise predicting how replication might take place. Monitoring should be employed to determine the extent of replication and to feed learning about why replication does or does not take place. In turn, the outcome should inform the functioning of the replication mechanisms.
- Programme interventions should have a properly designed and resourced phase-out period with termination dates agreed to several years in advance. Towards the middle of the programme, there should be a requirement for a phase-out plan that includes ongoing follow-up to determine how the plan is being executed. Interventions should be ended once sustainability has been established rather than set to meet an arbitrary deadline.

With respect to future programme delivery systems, it is recommended that:

- Robust and systematic feedback loops, in the form of monitoring and evaluation systems, should routinely supply programme managers with information on the status of outcomes in addition to programme administration information. This information should be used for programme learning. There should be explicit requirements, including reporting requirements, to demonstrate concrete and useful programme learning.
- Data requirements for ongoing monitoring and future evaluation, and for programme learning should be identified at the outset of programming, and robust and resourced systems should be established to collect, analyze and report on this data.
- Financial data should be organised in such a way that permits the linking of line items to program outputs in a results based budgeting fashion.
- Professionally designed baseline data collection, meeting international standards for rigor and reliability should be performed. Where needed, recognized experts in quantitative and qualitative data collection and analysis should review and endorse baseline data collection plans. In addition, baseline data should be collected prior to, or immediately after, the commencement of major programme interventions. The need for new baseline studies should be periodically reviewed.
- It is recommended that all future programming targeting improved livelihoods should:
 - Benefit from more proactive marketing support strategies that are customized for particular contexts.
 - Benefit from ongoing technical support until such time as the activities are deemed to be stable and sustainable.
 - Be conceptualized and implemented with a good understanding of the economic limitations together with the other strengths and weaknesses of the participants.
 - Be defined by real market potential as opposed, simply, to promoting predefined activities.

12.3 Impact Evaluation Recommendations

To improve the success and utility of future impact evaluations it is recommended that:

- The initial analysis of data availability and reliability should be undertaken by the same unit that will be conducting the impact evaluation. A phased or staged contracting mechanism should be used, and the time required to identify availability and suitability of data should be added to the inception period. If this is not a feasible option, then concrete details of the data, perhaps including the data set, should be used as the basis for the Request for Proposals for the evaluation. However, this will reduce the learning of the entity that is carrying out the impact evaluation.
- There should be a “test” for minimum data availability and reliability that is used as the basis for an explicit “go or no go” decision on whether to proceed with the evaluation. This decision could be made as late as at the submission of the inception report.
- The initial schedule for the impact evaluation should contain an overall timeframe. Flexibility should be built into the schedule and there should be an explicit de-linking of the planning stage from the implementation stage. Due dates for elements such as fieldwork and deliverables, such as the draft report, should be set in the inception report, and should not be made to conform to any initial overall timeframe, especially if the situation on the ground warrants otherwise.

Annex 1

Evaluation Terms of Reference (full text, see CD-ROM)

Copenhagen, 20 March 2006
EVAL. File. No. 104.A.1.e.46.

Terms Of Reference for the Impact Evaluation of Hima, Iringa Region, Tanzania

Introduction

Following Annual Consultations between Denmark and Tanzania in January 1986 and the subsequent recommendations from a joint Danish-Tanzanian identification mission, the Danida Board in April 1987 approved an allocation of DKK 2.1 million to formulate a project proposal for Danish assistance to soil and water conservation and afforestation activities in Iringa Region.

In February 1989, the Danida Board approved an allocation of DKK 32 million for the implementation of the Natural Resources Conservation and Management Project, HIMA.¹ The Project commenced in Iringa District in January 1990. The Project was reviewed in 1992, which led to the formulation of similar projects in Njombe and Makete districts that were approved in August 1992 with a total budget of DKK 75 million for the period 1992-97. The Danida Board approved the second phase of HIMA in Iringa district in February 1995 with a total budget of DKK 17.4 million. Initially, a project period of five years was envisaged, but it was decided to reduce the project period to 2½ years up to mid 1997, bringing it in line with the project period for Njombe and Makete.

As a result of Danida's sector programme strategy and the inclusion of the agricultural sector in Danida's new country strategy for Tanzania, it was decided to include the next phase of HIMA, covering the entire Iringa Region (Iringa, Njombe, Makete plus Mufindi and Ludewa Districts) in the first phase of the Agricultural Sector Programme Support as a special component: 'The Natural Resources Conservation and Land Use Management Project, Phase III'. The programme was approved by the Board in September 1997. The total budget was DKK 250 million of which the HIMA component amounted to DKK 82 million. The programme period was five years, from January 1998 to the end of 2002.

The nature of HIMA's interventions have changed emphasis from one phase to the next, which can be broadly described as a change from a conservation approach to an emphasis on crop and livestock productivity, and sustainable forest management – but with sustainable utilisation of natural resources remaining a key feature. HIMA was based on a participatory approach involving the local population and tapping into relevant 'indigenous knowledge' to be used in project activities. HIMA anchorage with government structures has changed over time to be aligned with local government structures, with the various district councils as executing agencies. There has throughout the phases been a strong focus on assistance supporting capacity building and institutional sustainability.

1) *HIMA: Hifadi ya Mazingira: Kiswahili for "Protection of the environment"*

Objectives of the Evaluation

The main objective of the Evaluation is to assess HIMA's impact on livelihoods and poverty in HIMA areas. The Evaluation will focus on the impact of the long-term assistance and identify lessons learned that can be used by Tanzania and by Danida, both in its Tanzanian programme and more generally in agricultural sector programmes, NRM activities, rural development interventions, and other development activities. The Evaluation will concentrate the impact assessments based on interventions carried out under HIMA auspices during the 1995-2002 period.

Within the overall objective of analysing HIMA impact on livelihoods and the poverty situation for people affected by HIMA, the Evaluation will assess:

- a. The impact on soil and water conservation;
- b. The impact on agricultural and forestry practices;
- c. The impact on local government, participation, women's empowerment, and institutional strengthening.

And finally,

- d. Draw lessons learned from HIMA and present these according to their usefulness for various types of future Tanzanian and Danida interventions.

Scope of work

HIMA impacts on livelihoods and poverty in Iringa result from, and should thus be analysed through, the totality of HIMA interventions and their impacts on soil and water conservation, agriculture and forestry, participation and institutional strengthening as well as external factors influencing the development context in HIMA areas.² Thus, in analysing impacts on poverty and livelihoods, the Evaluation shall cover the following issues:

1. *Livelihoods and poverty in the Iringa Region:*

- The Evaluation shall assess HIMA's impact on income security and present livelihoods in the Iringa Region,³ and thus seek to distinguish this from impacts of general development in the local framework conditions (described below under external factors), as well as to climatic variations. The sources from which people derive their livelihoods can be described as being composed of revenues (in cash or kind) from natural resources management (agriculture, pastoralism, forestry, fisheries, etc.), as well as from incomes from local petty production, services and trade, local salaried work, salaries from migratory work, linkages to the urban economy in Iringa and elsewhere, etc.

2. *HIMA intervention areas (soil and water conservation; agriculture, forestry, fisheries, participation, institutional arrangements; etc.):*

2) See the HIMA cause-effect chart attached as Annex B to TOR.

3) See the paper on livelihoods in Iringa, attached as Annex D to TOR, and map of agro-ecological zones in Iringa Region in Annex C.

- The Evaluation shall analyse how, and to what extent, HIMA interventions have had an impact on the sustainable use of natural resources, sustainability in agricultural production, participation, women's empowerment, and institutional strengthening; and examine how these have contributed to livelihood improvements in the HIMA areas.
 - In doing so the Evaluation shall identify any 'weak links' in the causal chain from inputs to outputs to impact so as to establish reasons for any findings of little or no impact of the programme.
3. *Factors external to HIMA with an influence on HIMA and its local impacts:*
- The Evaluation shall place HIMA in an evolving policy context to examine whether changes in national and donor policies have affected potential project outcomes, e.g. through their influence on supply of inputs and services, marketing conditions, rural infrastructure, land tenure, etc. Relevant to HIMA are national policies and strategies related to e.g. liberalisation policies and a free market for agricultural products, changes in land policy and land rights, decentralisation of government decision-making structures, including those relating to agricultural and rural development, environment protection, and management of natural resources.
 - The Evaluation shall further consider the extent of similar programmes implemented by the Government of Tanzania (GoT), other donors, or NGOs to assess the impact of HIMA vis-à-vis the impact of other development activities in the area.

It is important for the Evaluation to emphasise inter-linkages between the various areas of assessment, as all interventions have had the objective of contributing to improved livelihoods and poverty reduction. The Evaluation shall include assessments of the extent to which HIMA has managed to incorporate the crosscutting issues, and shall cover unintended and unforeseen (positive and negative) impacts of HIMA and also relate the impacts of HIMA to external factors (see Annex B).

Based on the above-mentioned analyses, the Evaluation shall draw lessons learned that can be used by Tanzania and Danida for future development policies, project and programme designs, implementation modalities, as well as sustainability of interventions. Particular attention should be placed on institution building and capacity development, sustainable agricultural production, natural resource and environmental management, rural development strategies (and urban-rural economic links).

A number of suggested evaluation questions are outlined in Annex A. These should be seen as guiding examples illustrating the substance of the main issues to be examined and the Evaluation should therefore not focus on answering all specific questions.

Approach and Methodology

The Evaluation shall be carried out in accordance with Danida's Evaluation Guidelines.⁴ It will focus on impacts of HIMA and will thus be guided by the five DAC evaluation criteria. Particularly, the factors relating to impact, relevance and sustainability will be assessed by the Evaluation, and, to the extent possible, also effectiveness and efficiency.

4) See Danish Ministry of Foreign Affairs: *Evaluation Guidelines, 1999, revised 2001:* www.um.dk/danida/evalueringsrapporter/eval-gui/index.asp

The evaluation is to be undertaken as a mixed method approach drawing as extensively as possible on available data for the regions combined with thorough qualitative studies. Whilst the existing HIMA project data (baseline surveys, monitoring reports, etc.⁵ are inadequate they should be used to the extent possible and other sources should be examined for suitable and reliable data (e.g. poverty monitoring data, World Bank Africa Live database, data from the Local Government Reform Programme). In addition, a certain amount of data on natural resources (soil and water conservation, changing land use practices, etc.) can be acquired before the start of the fieldwork, through the use of satellite imagery. Existing imagery and analysis is available and can be supplemented by imagery, which looks specifically at the changes that have taken place in the villages selected for the fieldwork (before and after).

Rigorous qualitative approaches should likewise be employed to analyse and examine the data, explore causality, and to understand project processes, external influences, etc. Methods could include in-depth interviews, focus groups and participatory rural appraisal (PRA) methodologies.

The preparation of the Evaluation TOR has involved the selection of the geographical coverage for the field phase of the Evaluation. Seventeen villages within four divisions within four districts in Iringa Region have already been selected for inclusion in the Evaluation. An additional three have to be selected by the Evaluation Team. The divisions covered are: Isimani division in Iringa District; Sadani division in Mufindi District; Imalinyi division in Njombe District; and Matamba division in Makete District. Annex E contains the criteria for selection of divisions and villages and a list of villages selected in these divisions. The Evaluation Team shall further select a number of control villages (see under Phase I below) to assess the 'with and without' HIMA situations.

The Evaluation of impacts will take its point of departure in the contemporary situation in the Iringa Region. The Evaluation will thus look backwards in time, looking for decisive events in the assessment of how HIMA elements have contributed or not to obtaining well-being/improved livelihoods of the rural population in present day Iringa Region.

There are three phases of the Evaluation: Phase I consists of a desk study of existing documentation, comprising a review of available HIMA related documents, as well as of Tanzanian government, Danida and other donors' policies and strategies relevant for the Evaluation. This phase may also include interviews with former project staff and other stakeholders in Denmark. The purpose of the desk study and the interviews is to deepen the understanding of the evolution of HIMA during the period covered by the Evaluation and of developments and changes of key policy issues.

Phase I should, furthermore, decide on the detailed Evaluation methodologies and plan the fieldwork in Phase II. Phase I should thus include preparation of questionnaires/interview guides and other tools for the fieldwork, and the identification of stakeholders to be interviewed. A visit to Tanzania by some non-Tanzanian Team members may thus be necessary during Phase I.

5) *A baseline survey from 1996 is available for Njombe district. See also Information and Data provided by the Client: 'The Documentation Study, 2004'*

Special consideration shall be given to a thorough preparation for the selection of 30 households in each of the 20 selected villages (covering all sub-villages) and a further selection of five control villages that have not been directly affected by HIMA, although located in the divisions selected for the Evaluation, and five villages in divisions with no HIMA activities. The control villages should have been subjected to as little donor activity as possible. The Evaluation Team should, to the extent possible, use satellite image surveys produced during the HIMA preparation and implementation phases, as well as images capturing changes in those villages selected, as preparation for village visits.

An Inception Report should be produced at the end of Phase I and approved by the Evaluation Department before the fieldwork is initiated.

Phase II consists of the fieldwork in the selected villages, divisions and districts in the HIMA areas, as well as of interviews with selected stakeholders at regional and national levels. The analyses in the field shall cover the different HIMA phases and be representative of the livelihood patterns and composition of people in the region (socio-economic, social and ethnic), as well as of the agro-ecological and economic zones covered by HIMA. Furthermore, they shall represent different categories and different levels of activities related to the Evaluation questions and should be representative for the villages, villagers, and local governments, who were involved with HIMA. The Evaluation Team shall compile a list of the HIMA interventions in each of the villages covered by the fieldwork.

At the end of the fieldwork, a Debriefing Note containing preliminary findings and fieldwork status should be presented to the relevant stakeholders at the Royal Danish Embassy (RDE) in Dar es Salaam, and to the Evaluation Department in Copenhagen.

Phase III will focus on the main Evaluation Report, where findings collected during the first two phases are analysed and synthesised, supplemented by additional fact-finding, as needed, and consolidated into a draft report.

The Evaluation Report will conclude on the impacts from HIMA, draw lessons learnt and recommendations that can be useful generally and specifically for Tanzania and Danida in their efforts to develop appropriate development policies and strategies relevant for today's development work.

Based on the draft Evaluation Report, a workshop will be organised in Tanzania with relevant authorities and stakeholders. The workshop will discuss main conclusions and recommendations with a bearing on development policy and strategy issues. Based on the outcome of this workshop and on written comments on the draft report, the final Evaluation Report will be prepared.

Prior to the Evaluation itself, a documentation study⁶ was conducted, which has identified 418 HIMA documents. The documents have been catalogued and classified according to their relevance for the Evaluation; in addition, executive summaries have been collected and are readily available for the 71 most important documents. A further 32 supplementary documents are located in Danida, Copenhagen. All documents in hard copy are available either at the District Agricultural Development Support (DADS) office in Iringa or in Danida, Copenhagen.

6) See *Information and Data provided by the Client: 'The Documentation Study, 2004'*.

Danida has established a Peer Review Group for review and discussion of Inception and draft Evaluation reports.

Evaluation Outputs

The outputs of the Evaluation correspond to the main tasks described above. These deliverables will be produced according to the following outline plan:

1. Inception Report, max 20 pages excluding annexes, to be delivered in word and pdf-files; a final Inception Report will be produced after receiving comments from the Evaluation Department. The Draft Inception Report is to be presented at the end of Phase I;
2. A Debriefing Note, containing preliminary findings to be presented to the relevant stakeholders at the RDE at the termination of the fieldwork, and to the Evaluation Department in Copenhagen;
3. Draft Evaluation Report, max 80 pages, excluding annexes, to be delivered in word and pdf-files, with cover (digital) photo proposals; the draft report will be adjusted⁷ by the Evaluation Team after receiving comments from the Evaluation Department. The draft Evaluation Report will be delivered three months after the termination of the fieldwork;
4. Workshop: A presentation to be prepared of the draft Evaluation Report and presented at a stakeholder workshop in Tanzania. This workshop shall be arranged three weeks after the circulation of the draft Evaluation Report;
5. Final Evaluation Report, max 80 pages, excluding annexes, with attached CD-ROM (of all major evaluation documents), to be delivered in word and pdf-files. The annexes should contain a Field Report, including the reports from the fieldwork, as well as compiled statistics, questionnaires etc., as relevant. Based on the discussion at the workshop, and on written comments on the draft from stakeholders and the Peer Review Group, the final Evaluation Report will be prepared not later than six weeks after the workshop;
6. Draft Evaluation Summary, three to four pages, for production of a pamphlet aimed at public audiences;
7. Presentation of the Evaluation Report at a workshop in Copenhagen;
8. The Evaluation Team will also be required to deliver a 'post-mortem' brief report (max five pages) of their evaluation process experience.

All reports shall be written in English.

Composition and profile of the Evaluation Team

An Evaluation Team, selected through international global tendering, will carry out the Evaluation. The organization of the Team's work is the responsibility of the Consultant and should be specified and explained clearly in the proposal.

The Evaluation Team should be composed of international consultants. International consultants are defined as persons with an international background, e.g. a degree from an internationally recognised university and with a major part of the professional experience from assignments within several developing countries, and working for recognised international consulting companies or institutions. Consultants submitting proposals for the Evaluation shall provide a written statement that none of the team members have had

7) See Danida's Evaluation Guidelines (1999) Section 7.1 Preparing the report.

a relation (preparation, implementation or reviews) with HIMA, as this would be incompatible with the required independence or create a conflict of interest for the Evaluation.

The Evaluation Team should possess the following qualifications and experience:

General qualifications by all team members:

- Higher relevant academic degree;
- At least five years of experience (10 years for the Team Leader);
- At least three references as Team Leader for multi disciplinary teams (for the Team Leader). It should be indicated which of the stated references in the CV fulfil this;
- At least five references as team member in multi disciplinary teams;
- The Team Leader is permanent staff of the Tenderer;
- Fluency in English;
- Fluency in Kiswahili by national/regional consultants, as well as by some of the international consultants.

Further specific qualifications for the Team Leader:

- Extensive experience in evaluation of development assistance and design (at least three references for the Team Leader);
- Knowledge about rural development policies and strategies and rural livelihood approaches.

Specific qualifications to be covered by two or more team members:

- Experience in evaluation of development assistance and design (at least one reference for each team members);
- Experience with rural development, agriculture and natural resources management;
- Experience with soil conservation and agroforestry;
- Experience with evaluation of livelihoods and poverty alleviation measures, as well as with cross-cutting issues (gender, environment, participation and good governance);
- Experience with participatory approaches and local democratisation;
- Experience with local government planning and management reforms in Tanzania;
- Experience from impact studies or impact research in East African countries;
- Knowledge of development policies, strategies and management;
- Experience with technical assistance at country, sector and programme levels.

Specific qualifications to be covered by at least one of the team members:

- An intimate knowledge of Danida policies and strategies during the HIMA period and up to today, and ability to read Danish;
- Experience with satellite image interpretation and analysis.

Experience from Tanzania/Eastern or Southern Africa for all team members:

- Minimum one year, long-term or short-term, experience from Tanzania;
- Experience from Eastern or Southern Africa;
- Experience from the Iringa Region will be an advantage.

It should be stated which of the proposed team members cover which of the above qualifications and experiences. In each case, reference should be made to the specific assignments on the CV that document the experience.

Input

It is estimated that Phase I of the Evaluation will require 15 person-months work, Phase II 20 person-months work, and Phase III 15 person-months work. In addition, funds will be allocated to cover the personnel and project (evaluation) related reimbursable costs. A total input of 25 person-months of international consultants and 25 person-months of national/regional consultants is foreseen.

Evaluation principles, management and support

The basic DAC evaluation principles of independence from those responsible for the design and implementation of the development intervention, and of utilisation of evaluators external to the donor and implementing organizations will be applied.

Responsibility for the content and presentation of the findings and recommendations of the Evaluation rests with the Evaluation Team. The views and opinions expressed in the report will not necessarily correspond to the views of the Danish Government, the Tanzanian Government, or the implementing organizations. The Evaluation Report will be available to all relevant stakeholders and to the Policy and Planning Department (PPD), Ministry of Agriculture and Food Security, GoT. The Evaluation Report will be published online at www.evaluation.dk.

Three sets of roles are contained in the evaluation process: the Evaluation Management, the Peer Review Panel, and the Evaluation Team (Consultant):

Role of the Evaluation Management

Danida's Evaluation Department (EVAL) will manage the Evaluation as regards funding, contracting and implementation management. The designated PPD officer will follow the evaluation process.

The Evaluation Management will:

- Approve the ToR of the Evaluation, and approve the tender process documents;
- Participate in the tender committee's selection of the Evaluation Team;
- Ensure quality throughout the Evaluation process;
- Comment on and approve the draft and final versions of Inception, Field and Evaluation reports;
- Advise Danida on the Evaluation, as well as coordinate internal agency contributions;
- Provide feed-back to the Evaluation Team and the Peer Review Panel;
- Organise, facilitate and participate in Evaluation workshops, as per need;
- Organise the presentation of the Evaluation results, and assist with necessary follow-up of the Evaluation.

Role of the Peer Review Panel

A Peer Review Panel composed of individual resource persons and researchers has been established.

The tasks of the Peer Reviewers are:

- Commenting on draft TOR with focus on key Evaluation questions and approach;
- Commenting on the Inception Report, including, methodology and work plan;
- Commenting on the draft Evaluation Report;
- Participating in workshop(s) in Tanzania and Denmark;
- Making possible contributions at workshop(s).

Role of the Evaluation Team (Consultant)

The Evaluation is carried out through a contract with a consulting company/ research institution by a team composed of international and Tanzanian/ East African consultants lead by an Evaluation Team leader.

The Evaluation Team will:

- Carry out the Evaluation as per ToR;
- Be responsible for the findings, conclusions and recommendations of the Evaluation;
- Report to the Evaluation Management, be in regular contact, coordinate mission timing and key events with the Management and seek its advice, when needed;
- The Team Leader is responsible for the Team's reports, and for the organization of the work of the Team;
- The Team Leader will participate in workshops, as required.

Tender process requirements:

Requirements for the Consultant's Home Office Intervention

The Consultant's home office shall provide the following, to be covered by the Consultant's fees:

- General home office administration and professional back up. The back-up activities shall be specified.
- Quality assurance (QA) of the consultancy services in accordance with the Consultant's quality management and quality assurance system, as described in the Consultant's application for qualification. Special emphasis will be given to quality assurance of draft reports prior to the submission of such reports.

The Tenderer should select a QA Team, envisaged to consist of minimum two persons, to be responsible for Head Office QA. The members of the QA should not be directly involved in the implementation of the Evaluation and their CVs should be included in the Tender. The QA team should have the same level of competence and professional experience as the Evaluation Team.

All QA activities shall be properly documented.

The Tenders shall comprise a detailed description of the proposed QA, in order to document that the Tenderer has fully internalised how to implement the QA and in order to enable a subsequent verification that the QA has actually been carried out as agreed.

- Implementation of the business integrity management plan, as described in the Consultant's application for qualification, in relation to the present evaluation. This implementation shall be specified.

Alternative Tenders

Alternative tenders will not be permitted.

Agreement of Exclusivity

The Consultant is not allowed to impose agreement of exclusivity on national sub-consultants.

Timing

The Evaluation is scheduled to take place during 2006-07. It is anticipated that the Evaluation will be completed by June 2007, as indicated below. The tentative timetable for the Evaluation is as follows:

Tendering and contracting of the Evaluation	January-June 2006
Mobilisation of Consultant	June/July 2006
Phase I Desk study, Inception Report, etc	July-September 2006
Approval of Inception Report	6 October 2006
Phase II Field studies	Mid-October – Mid-December 2006
Debriefing at the Royal Danish Embassy and Danida Evaluation Department	December 2006
Phase III Evaluation Report, draft	15 March 2007
Workshop in Tanzania	April 2007
Evaluation Report, final	15 June 2007
Presentation of the Evaluation in Copenhagen	August 2007

Information and Data provided by the Client

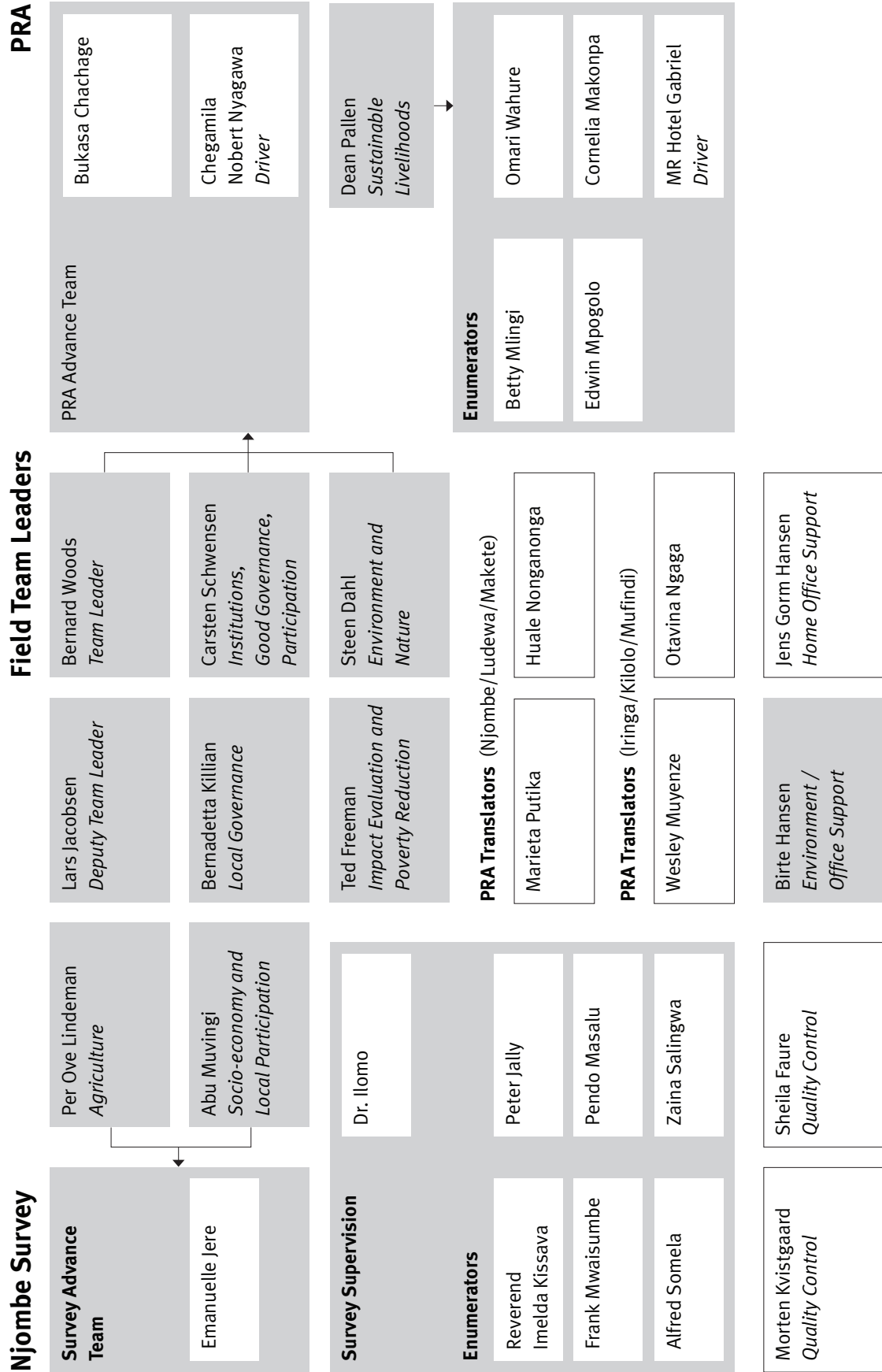
Evaluation Guidelines, Danida February 1999, Revised 2001. (Available on-line: www.evaluation.dk)

Other background documents

The following reports and publications provide background information:

- The Documentation Study, ‘Evaluation of HIMA Programme in Iringa Region (Preparation for ASPS HIMA Evaluation)’ and ‘Synopses’ draft dated December 15, 2004. Scanagri Denmark/Tanzania. In addition, list of 32 supplementary publications found in Danida, Copenhagen.
- “A Developing World – Strategy for the Danish Development Policy towards 2000”, Ministry of Foreign Affairs, Copenhagen, March 1994.
- “Tanzania – Strategy for Danish-Tanzanian Development Cooperation”, Ministry of Foreign Affairs, Copenhagen, April 1996.
- “Agriculture – Danida Sector Policies”, Ministry of Foreign Affairs, Copenhagen, October 1996.
- “Denmark’s Development Policy, Strategy”, Ministry of Foreign Affairs, Copenhagen, October 2000.
- “Country Strategy for Tanzania 2001-2005, Strategy for Danish Development Cooperation with Tanzania”, Ministry of Foreign Affairs, Copenhagen, January 2002.

Annex 2



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