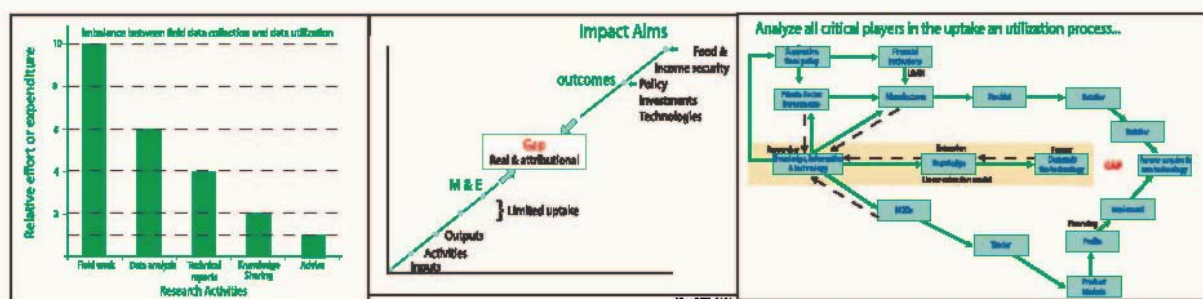


SWMnet Working Paper

1

Institutionalized Scaling-up and Uptake Promotion of Outputs from Soil and Water Management Research in East and Central Africa (SWMnet R8381)

Ethiopia Country Report on Constraints & Barriers



April, 2005

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SWMnet Working Paper 1

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Ethiopia Country Report on Constraints & Barriers

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About SWMnet & SWMnet Working Papers

The Association for Strengthening Agricultural Research in East and Central Africa (ASARECA) is a non-political organization of the national agricultural research systems (NARS) of ten countries: Burundi, the Democratic Republic of Congo (DRC), Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda. SWMnet aims at supporting the generation of wealth by coordinating the efforts of ASARECA to support effective utilization of land and water resources in profitable crop, livestock and other natural resources-based enterprises.

The SWMnet Working Papers are designed to encourage members of SWMnet to share initial findings from research and other investigations facilitated by SWMnet in order to encourage wide scale peer review during the research process. These are raw documents which have not been reviewed and edited and are released to encourage discussion of work in progress. Readers are therefore welcome to send comments to: asgelil@yahoo.com or soil_water@earo.org.net

Institutions Participating in the Project



The Ethiopian Agricultural Research Organization (EARO)



The International Crops Research Institute for the Semi-Arid Tropics - as scientific partner to SWMnet

Acknowledgement:

SWMnet is a regional network of individuals and organizations, under the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). SWMnet is currently running programmes supported by several organizations including, EU, DFID-NRSP, IFAD and governments of participating countries.



This particular document is an output from a project funded by the UK Department for International Development (DFID) for the benefit of developing countries. The views expressed are not necessarily those of DFID as the content is solely the responsibility of the authors

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Acronyms

ASARECA	Association for strengthening Agricultural Research in the East and Central Africa
EARO	Ethiopian Agricultural Research Organization
ECA	East and Central Africa
ESTC	Ethiopian Science and Technology Commission
IAR	Institute of Agricultural Research
KIT	Knowledge, Information and Technology
MoARD	Ministry of Agriculture and Rural Development
NGO	Non-governmental organizations
NRM	Natural resources management
SG-2000	Sassakawa Global - 2000
SWM	Soil and Water Management
SWMnet	Soil and Water Management Research Network

Executive Summary

The understanding is that only a small proportion of research outputs, in soil and water management are translated to practical advice for policy makers and other clients.

Hence, the purpose of the project was to identify the barriers to uptake promotion and scaling-up of knowledge, information and technologies (KIT) emanating from research in soil and water management , search for means to mitigate the identified barriers so as to ensure the delivery of existing and new knowledge to the target policy makers, planners and all key actors.

The methodology adopted in Ethiopia was first to review available literature and reports by the institutions on the subject, then identify and analyse stakeholders who may play significant roles in the uptake promotion and scaling-up of KIT. A check list of hypotheses developed at regional level was converted into a questionnaire which was then administered to members of research and extension service. A total of 60 experts responded to the questionnaire although some refrained from answering some of the questions – reducing the size of effective sample to only 35 respondents. Furthermore, focused group and individual discussions were carried out on the subject by interviewing several senior officials in research and a few from the Ministry of Agriculture and Rural Development (MoARD), universities and colleges.

The findings show that most policy documents gave a lot of emphasis to up-take promotion and utilization of research. It was also encouraging to note that majority (84%) of researchers are aware of these documents. However, only a small proportion (28%) of the respondents indicated that they had accessed these documents. Although the rapid appraisal was limited to the research system, the results show that the main stumbling block is the artificial division of labour between research and extension services. This is followed closely by inadequate budget allocation, in the sense that, apart from being very small, the budget for uptake promotion is not distributed to researchers but is lumped with the technical department for research-extension-farmer linkages. When this is coupled with the inability of extension to target stakeholders such as NGOs, private organizations (such as processors and exporters) who are key to the uptake and utilization of research results, then it is not surprising that only very limited uptake is achieved. This appraisal has confirmed that inadequate capacity of

researchers to design and implement communication and up-take promotion plans, is an important barrier. Finally, incentives to promote up-take are missing and many researchers just consider it as an extra piece of work at no extra benefit. Efforts are needed to change this kind of attitude.

Despite its limitations, the rapid appraisal led to the following tentative recommendations:

- i) Researchers should be given the mandate, budget and enhanced capacity to undertake robust communication and uptake promotion of their research results either through the extension service or directly to target clients. This will require a mechanism that removes the artificial separation of research and extension services.
- ii) The mandate recommended above should go with modified guidelines for the preparation of research proposals to ensure the inclusion of plans and budget for communication, uptake promotion and scaling-up.
- iii) A fair incentive system which rewards those researchers, who have brought significant and sustainable impact, is needed.
- iv) The importance of stakeholders other than the extension service and farmers should be recognized and prioritized in the up-take promotion activities.

1 INTRODUCTION

Ethiopia is one of the poorest countries in the world but very rich in natural and human capital. One cause of the prevailing poverty is the failure to adopt and utilize appropriate knowledge, information and technologies (KIT) to convert the natural and human capital into income, food and physical assets. Policy review documents in Ethiopia already acknowledge this shortfall and it has been observed that farmers have been given very few if any, agro-ecological - specific recommendations for bringing rapid and significant impact in agricultural production and productivity (GoE, 2002). However, concerted efforts towards this objective are lacking and the rapid appraisal reported here was conducted to evaluate the existing constraints and barriers.

This rapid appraisal was done as part of a regional project (Box 1) covering four countries: Ethiopia, Kenya, Sudan and Tanzania, under the auspices of the Soil and Water Management Research Network for Eastern and Central Africa (SWMnet). The purpose of the regional project was to support the

Box 1: Project Objectives

Goal:

Livelihoods of the poor farmers in East and central Africa improved through effective and integrated management of land and water resources for agricultural enterprises.

Purpose:

A culture of promoting uptake, scaling-up and effective use of results from soil and water management research in East and central Africa

Institutionalized

Outputs:

Constraints and barriers limiting uptake promotion by research institutions and partners, **Elaborated** and **Understood**

Understanding by key research managers, of the importance of communication and uptake promotion strategies for impact of R4D in S&WM **increased** and **enhanced**

Capacity for providing training and skills development in communication planning and uptake promotion **developed** among the SWMnet stakeholders in ECA

institutionalization of a culture of promoting up-take, scaling up and effective use of results from research in soil and water management.

The rapid appraisal was designed and conducted to test the following eight hypotheses, agreed by team members from the four participating countries:

Hypothesis 1: The role of research systems, institutions and researchers in up-take promotion is rarely recognized or promoted in policies and strategies that guide research in soil and water management.

Hypothesis 2: The mind set of most research planners, managers and researchers in soil and water management are still fixated in the linear dissemination approach of reaching the ultimate beneficiaries through extension services.

Hypothesis 3: Research programmes and projects rarely include communication and uptake promotion plans.

Hypothesis 4: Research programmes and projects are rarely evaluated for communication, knowledge sharing, uptake and utilization of knowledge and technologies produced.

Hypothesis 5: A very small proportion of programme and project budgets and activities are committed or used in the communication and uptake promotion of research results.

Hypothesis 6: Research outputs rarely include specific advice to farmers, input suppliers (e.g. fertilizer suppliers), extension service, policy makers and other clients.

Hypothesis 7: Researchers are not adequately trained for communication and up-take promotion.

Hypothesis 8: The reward and incentive systems like salaries, promotion, prizes to researchers do not demand evidence of utilization and impact to research.

To investigate these hypotheses, the Ethiopian team focussed on the assessment of attitudes of research planners, managers and researchers themselves towards the role of research systems in communicating, scaling-up, and promoting up-take of results from research in soil and water management. This included investigating the extent to which projects and programs of the Ethiopian Agricultural Research Organization (EARO) have addressed scaling-up and uptake promotion of research results as measured by issues such as budget commitments, capacity of researchers in the art of scaling-up and uptake promotion and the reward and incentive systems of researchers.

The methodology followed during the appraisal is described in chapter two while the results and findings are presented in chapter three. A discussion of the methodology and a synthesis of implication of the findings are given in chapter 4 followed by conclusions and recommendations.

2 METHODOLOGY

The methodology had three main aspects. The first aspect was concerned with the collection and review of relevant policy, strategy and programme documents. These documents included those dealing with the following:

- Agricultural research policy & strategy,
- Food Security Strategy,
- Sustainable Development and Poverty Reduction Program,
- Land Use Policy Decree,
- Agricultural Development led Industrialization Policy,
- Strategies and several guidelines of EARO,
- Rural Development Policies and Strategies, and
- Postgraduate curricula of two universities.

The second aspect of the methodology focussed on interviews and discussions with senior government officials, specifically departmental heads in the Ministry of Agriculture and Rural Development (MoARD). These interviews and discussions were also conducted with senior management officials in agricultural research, university colleges, and extension service. The third aspect involved collection of data by use of the questionnaire presented in Appendix I, which was administered to researchers and extension experts. A total of 66 distributed questionnaires were returned but only 35 were fully completed and thus valid for the analysis. Respondents were mostly researchers and a few from extension and other experts. The data from the questionnaires were collected, coded and analyzed using statistical software. The report is summarized in tables, figures and charts presented with respect to the different hypotheses.

3 RESULTS AND DISCUSSION

3.1 The Role of Research System in Up-take Promotion is not recognized in Policy and Strategy Documents

3.1.1 Government level documents

National Poverty Reduction Programme (GoE, 2002b), was designed to provide a broad thrust of Ethiopia's strategy for sustainable development and poverty reduction. The programme calls for:

- Overriding and intentional focus on agriculture as the sector providing source of livelihood for 85% of the population where the bulk of the poor live,
- Strengthening private sector growth and development as means of achieving off-farm rural employment and growth in income generation,
- Rapid growth in export sector through the production of high value agricultural products and increased support to export oriented value-adding processing sectors,
- Strengthened agricultural research,
- A focus on increased water resource (water harvesting and small scale irrigation) utilization to ensure food security, and
- Major investments in education and strengthening of the on-going effort on capacity building to overcome critical constraints to implementation of development programmes.

Although it has not been directly mentioned, increased access and utilization of KIT is implied in nearly all the thrusts of the programme. However, it is clear that the programme has not given priority to this issue and as such it may not receive the investment it deserves.

Agricultural Development Led Industrialization Strategy (ADLI) (GoE, undated) is perhaps the second most important policy document in Ethiopia, with respect to agricultural research and knowledge systems. This strategy emphasizes that faster growth and hence economic development could be realized if the country adopts a strategy that helps raise the employability of labour resources and enhance productivity of land resources aimed at capital accumulation. ADLI, as it is referred to, is seen as a long term strategy to achieve faster growth and economic development by making use of technologies that are labour intensive but land augmenting such as fertilizers and improved seeds and other cultural practices. The focus on technology provides a good policy support for increased efforts in scaling-up and promotion of uptake and use of existing KIT.

Food Security Strategy (FSS) (GoE, 2002a) is designed to address both the supply and demand sides of the food equation availability and entitlement, within the framework of the national agriculture and rural development strategies. The revised strategy is targeted mainly at the chronically food insecure, which are found in areas suffering from frequent soil-moisture deficits as well as in the pastoral areas. The strategy is characterised by a clear focus on environmental rehabilitation as a measure to revise the current trend in land degradation. Water harvesting and the introduction of high value crops, livestock and agro-forestry development are emphasized. With respect to research in S&WM the strategy gives the following guidelines:

- Develop technologies to conserve, protect and efficiently utilize natural resources;
- Promote the production of fertilizers or fertilizer substitutes from local materials;
- Make efficient use of imported fertilizer materials;
- Conduct research on locally available substitutes for inorganic fertilizers; and
- Conduct verification /adaptation tests of technologies developed under similar agro-ecological environments elsewhere.

It is clear from the list of priorities given above that promotion, scaling-up and utilization is not central to the strategy. It can be seen that the strategy is focussed on the generation of technologies with little reference to the promotion of their use.

Nearly all the researchers responding to the rapid appraisal questionnaire acknowledged that they are aware of the existence of policies and strategies to guide agricultural research and development. However, 72% of them believe that it is difficult or not possible to get access to these documents (Fig. 1). Also majority of them indicated that they respond fairly well to those policies they have been exposed to (Fig.2).

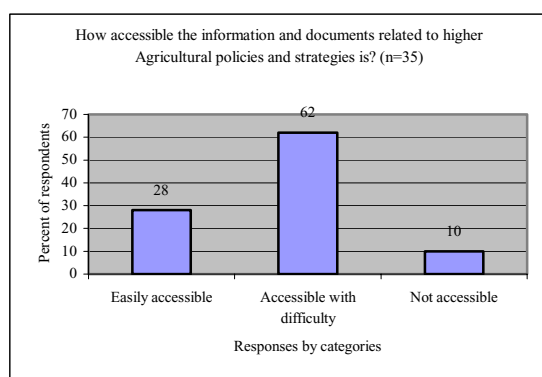


Figure 1: Accessibility to policy and strategy documents

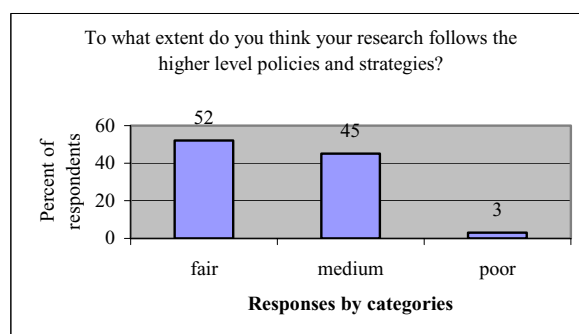


Figure 2: Extent to which research responds to policy priorities

3.1.2 Research institute level documents

EARO Strategic Plan (EARO, 2002): The Ethiopian Agricultural Research Organization was established in 1996 to coordinate research in the country for the generation of appropriate technologies to increase productivity on sustainable basis. EARO has prepared strategic plan and management for a period of ten years (2000-2010). In this plan, emphasis has been given to technology transfer to small scale farmers and other stakeholders such as state farms, NGOs and private investors. The plan puts a lot of emphasis to the concept of research-extension-farmers linkages (EARO, 2000). The set-up requires the researchers to generate technologies, which after approval by the technology release committee, should be disseminated through the extension department.

Research project proposals in EARO are required to follow a guideline for research planning, monitoring and evaluation (EARO, 1999). The guidelines covers the traditional aspects in that the proposals is required to state and describe objectives, methodology, literature review, duration, expected output, logical framework, work plan, monitoring and evaluation and references. Specification and budgeting for communication, up-take promotion and scaling-up are completely missing. However, the proclamation N^o. 69/97, the proclamation that legalized the establishment of EARO has two articles that say the organization or whom he designates would popularise new research findings.

Researchers were asked whether their proposals adhere to the policies and strategies of the government and whether they received enough budgets for their approved proposals. Fifty two percent (52%) of the respondents (n = 33) said their research follows government policy and strategy priorities and 66% of them said the budget they receive from the government is reasonable for their plans (Fig. 3).

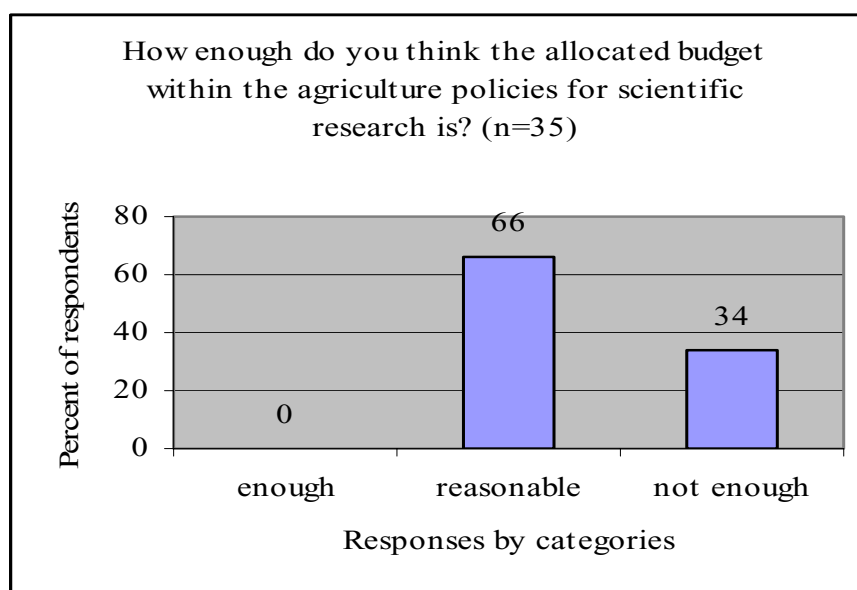


Fig. 3: Opinion on budget allocation for research

3.2 The Linear Dissemination Approach Dominates

Researchers were asked what mechanisms they have been using to disseminate their research outputs to the end users. Majority of the respondents said that the means of disseminating the research outputs is through the extension agents or others via workshops and field days (Figs. 4 & 5). Therefore the extension service of the Ministry of Agriculture has been the main bridge between the researchers and the end users (mainly farmers) for technology transfer in soil and water management and other sectors (EARO, 2000). However, most of the respondents said that this approach of dissemination and sharing of research findings had not been evaluated for their effectiveness.

It is well known that stakeholders or clients of research have expanded to include private investors, manufacturers, exporters, stockiest, NGOs, traders, and retailers. The extension service is not equipped to deal with this expended clientele. It was found out that some direct links between research and the non-farmer clients have started to develop. This arrangement is not formalized but it proves the linear dissemination model is leaving a key section of agro-entrepreneurs out of the agricultural knowledge loop.

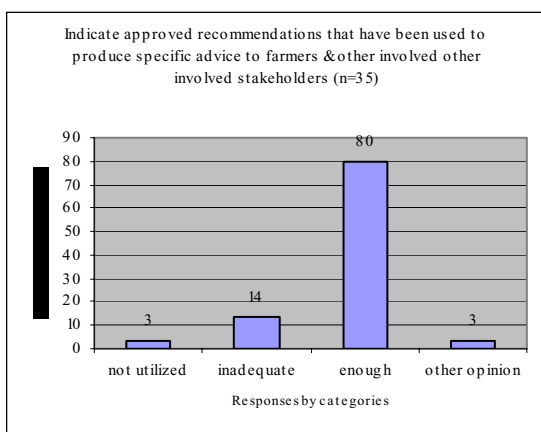


Fig. 4: Approved advices for end-users

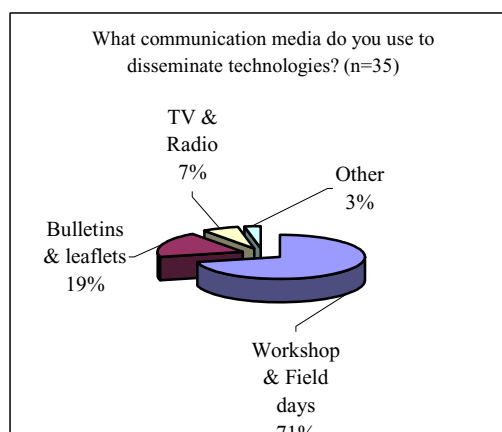


Fig. 5: Means of disseminating results

3.3 Communication and Uptake Promotion Plans in Research Programmes and Projects

Documents of four projects were evaluated to assess the extent to which communication and up-take promotion was included in past and current projects. These projects were:

- i) The Joint *Vertisol* Management Project started in 1986 with a consortium of national and international organizations. Lessons learned from the project include the importance of:
 - Critical mass of information necessary to achieve impact,
 - Experience gained from international research institutions, and
 - Knowledge sharing between national and international research organizations.
- ii) The African Highland Initiative (AHI) is a collaborative eco-regional research program managed by ICRAF (International Centre for Research in Agroforestry) which started in 1995, focusing on the issues of natural resource management (NRM) in the highlands of East and Central Africa. It is implemented through inter-institutional research and development efforts by focusing on NRM to solve soil productivity and land use efficiency issues. The Ethiopian component is designed to:
 - focus on integrating solutions to NRM issues with farmers' agricultural production objectives by adopting an integrated systems approach,
 - strengthen partnerships and greater collaboration of a wide range of institutions and organizations to achieve more effective and efficient research and development,
 - improve the integration of biophysical and social science research, thus marrying human and technical dimensions, and

- link policy formulation to technology development while emphasizing sustainability of the highland areas.

The programme has helped to show that research results obtained could be used in the region and not only in a specific country. Also the experience gained through exchange visits by researchers working with different stakeholders across the participating countries increased innovations and productivity of researchers.

- iii) The 3rd project that was evaluated is the ‘Combating nutrient depletion in the Ethiopian Highlands’. Activities of the project include collecting baseline data to monitor soil status, on-farm experiments to assess crop responses to different fertilizer practices and cost-benefit analyses of recommended options. Socioeconomic and cultural factors that determine the adoption of improved management practices by farmers are also being studied. Participatory methods for disseminating recommended soil management practices and sustaining adopted practices beyond the lifetime of the project are being developed in collaboration with farmers, extension workers and non-governmental organizations. The project has shown that the approach of using representative benchmark sites enhances scaling-up of results to areas with similar agro-ecological and socioeconomic conditions.

Relevant documents of these three projects give some preliminary indication that aspects of communication and knowledge sharing were done as an afterthought (Table 1). These aspects were only added later to project plans. However, all the three examples show that farmers are clearly targeted and are participating at the problem identification and project implementation stage (Fig. 6). As already discussed above this is not adequate to achieve scaling-up because other key players in the up-take pathways and their needs are rarely considered. Therefore, there is a need for efforts to be done to find ways of adapting the participatory approaches that are used with farmers, for the other stakeholders. It must be emphasized that most of the other players in the uptake pathway are in private business which are not keen to invest a lot of time in the sometimes time-consuming participatory activities.

Table 1: Status of CP in the project proposals

	Vertisol Project	AHI project	CND project
Inclusion of CP in the project proposals	CP was included in the second phase of the project, based on the suggestions of the evaluation team. Reports, leaflets in both Amharic and English prepared and distributed to users.	Similar to that of the Vertisol project CP has been included in the second phase of the project.	CP was not included in the project proposal.
Stakeholders analysis and targeting	Stakeholders participated in problem identification, prioritization and implementation of the project. Small-scale farmers were the target of the project.	Stakeholder's analysis was done and the target of the project was small-scale farmers.	Stakeholder's analysis was not done properly like in the other two projects.

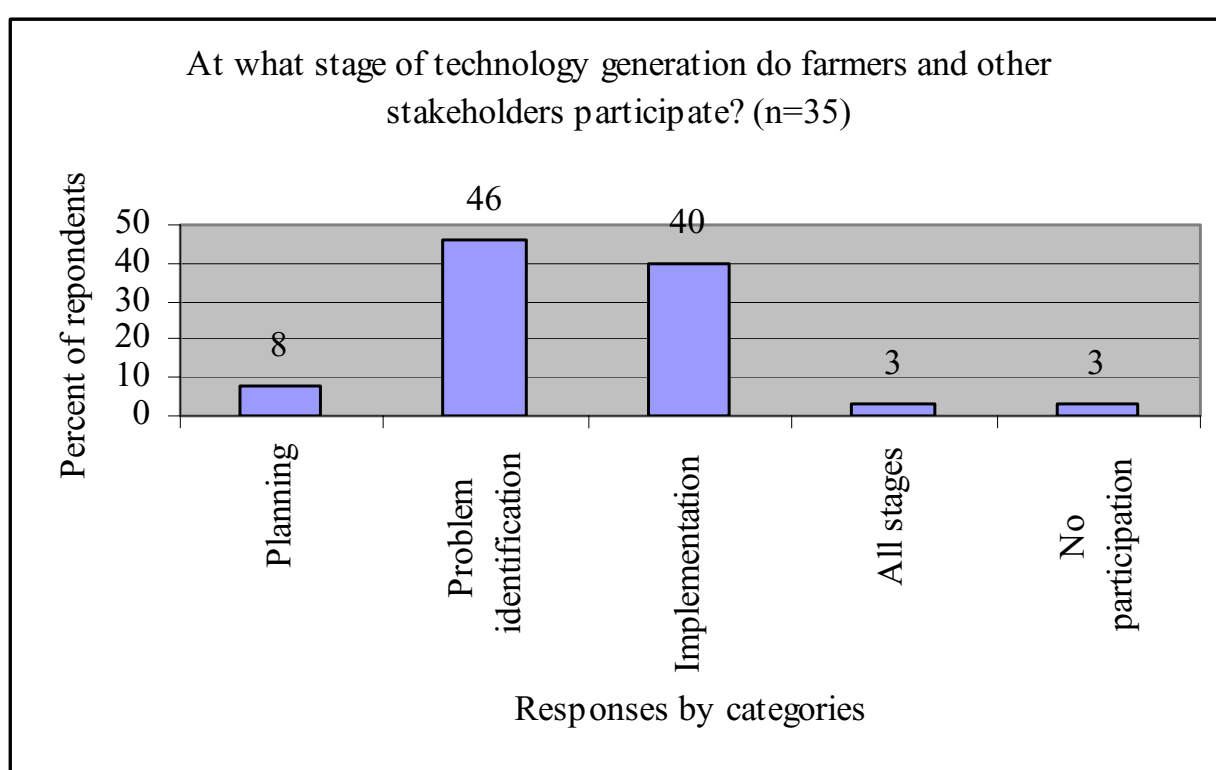


Fig. 6: Extent of participation of farmers in technology generation

3.4 Evaluation for Communication, Knowledge Sharing, Uptake and Utilization of Results

The only evaluation on record was conducted in the mid-1990's when EARO conducted an assessment of achievements of technology generation and transfer efforts for the period between 1986 and 1997. This was implemented through workshops in technology transfer conducted in different zones across the country. The research centres conducted their own assessment and presented the findings at the workshops with respect to technologies

released and extended to the farmers. They also presented the feedbacks they have been receiving from the adapters of the technologies. Extension officers were also invited to present their assessment and experiences with respect to performances of the knowledge, information and technologies released in their respective zones as well as constraints faced (Deressa and Seboka, 1997 & 1998). Furthermore, this exercise was conducted when a new approach of agricultural extension was introduced by SG-2000 and when the government extension personnel were adopting the same principles and procedures.

Apart from this single exercise, there was no evidence that research projects are evaluated for their effectiveness and this was confirmed by the researchers themselves as more than three quarters of those responding to the appraisal questionnaire indicated that this has never been done (Fig. 8). However, participatory evaluation with farmers is implemented occasionally. In some of the research centres, field days are held every year and the opinion of the farmers on the different technologies is gathered and used in the evaluation. However, the effectiveness of this evaluation system is not very well established but it is a good start.

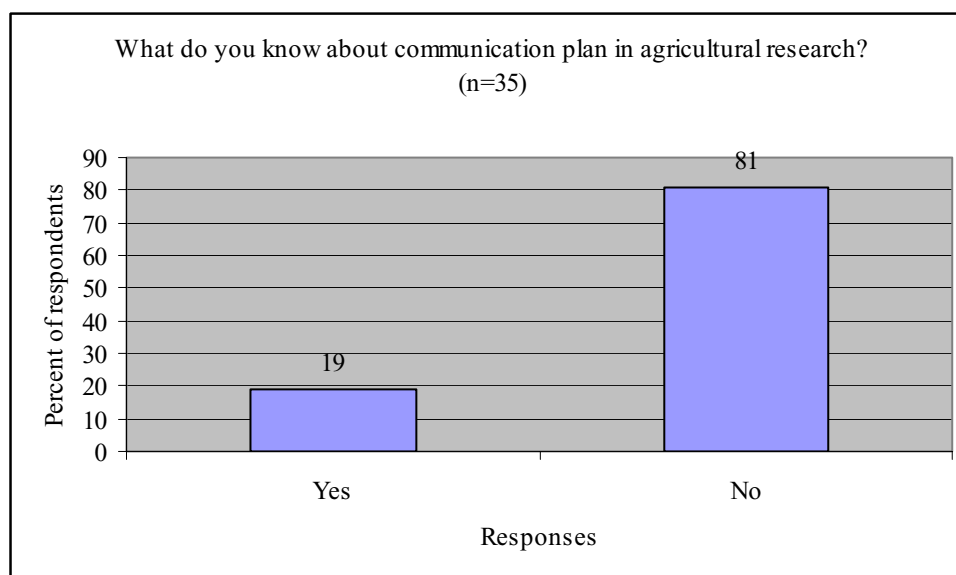


Fig. 8: Evaluation for up-take promotion and utilization of results

3.5 Effort and Budget for Communication and Uptake Promotion

The current guidelines do not emphasize the inclusion of robust plans for communication and uptake promotion in the research proposals (EARO, 2001b). Therefore, slightly more

than half of the respondents said they had spent only about 10% of their research efforts in communication and promotion of uptake of research results. A third of the respondents said they spend between 6 and 25% of their research efforts on these activities. On the other hand, majority of the respondents said the budget allocated for communication and uptake of research results with reference to the budget of the whole research was often less than 5% (Fig. 9). Thus budget shortage limits participation of the researchers in uptake promotion activities.

Generally, communication of results is limited to publications, training, visiting demonstration sites, meetings and field days. Implementation of field days is becoming more important where farmers, extension agents and researchers come together and openly discuss the technology setbacks and how it should be improved. Respondents to the questionnaire indicated that meetings between the farmers and researchers or extension agents are better means of the transfer mechanism as they bridge the gap between researchers and farmers. This has been enhanced by the wide adoption of participatory on-farm trials. Over 86% of interviewed researchers indicated that they are implementing on-farm trials.

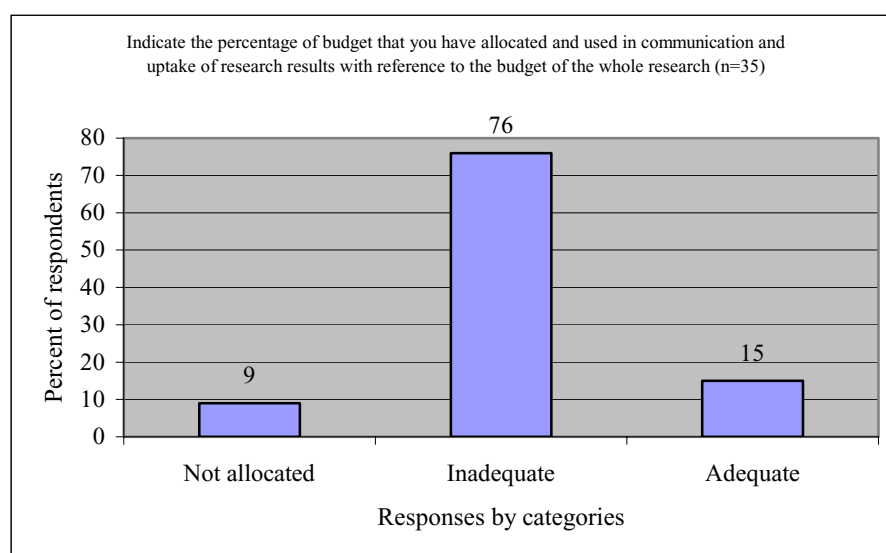


Fig. 9: Manpower and financial resources allocated for communication and up-take promotion of research results

3.6 Inadequacy of Training to Researchers in Communication and Uptake Promotion

Researchers were asked to respond to several questions in relation to their knowledge and experience on planning and implementation of communication and uptake promotion strategies. To the question requesting to know the extent of appreciation of the importance of communication and uptake promotion, most of the respondents indicated very limited knowledge (Fig. 10). Also the majority indicated that they have not received training in communication planning and implementation (Fig. 11). However, the engagement of many researchers in on-farm trials is an indication that there are efforts already being made to improve communication of new findings to farmers despite the capacity limitation. This was confirmed by review of relevant post-graduate curricula of two universities, which showed that there is very little training of future researchers in communication and knowledge sharing (Debab University, 2003 and Makelle University, 2000).

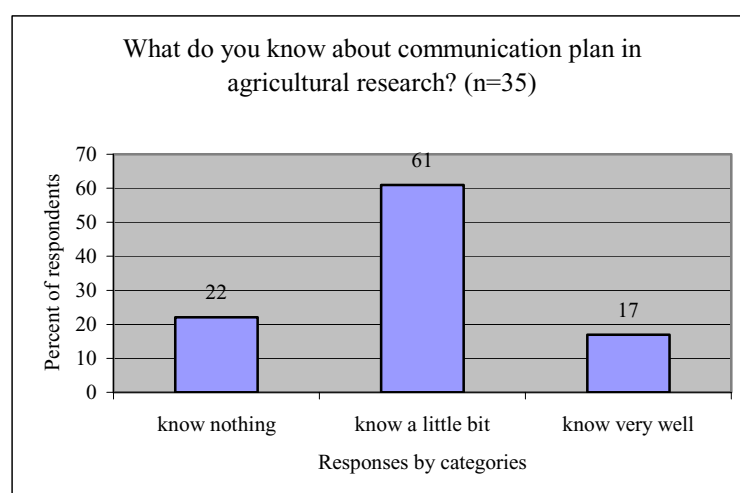


Fig. 10: Knowledge on communication plans

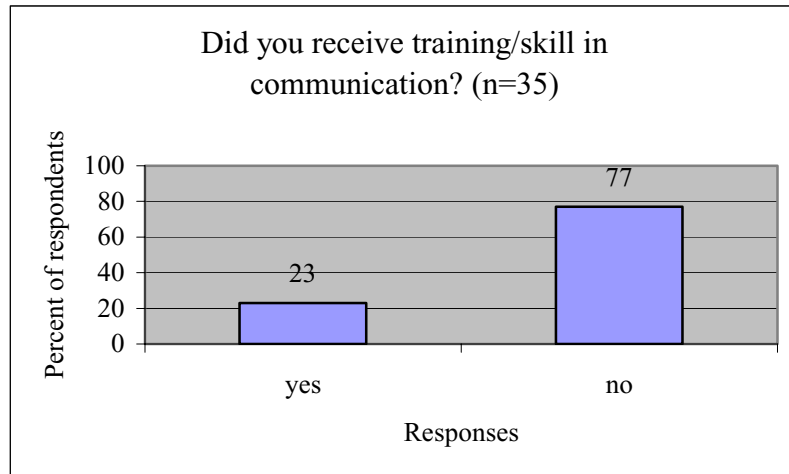


Fig. 11: Whether researchers were trained in communication and uptake promotion

3.7 Reward and Incentive Systems for Researchers

Ethiopia has seen some outstanding achievements in agricultural research and these have been tested on the farmers' fields. The superiority of these findings is not something that has been advocated only by the researcher(s) but also witnessed by the end users tested on their own respective holdings. However, so far there has been no functional rewarding system. Very few scientists have been rewarded for their achievements. This is so despite the fact that EARO is mandated and required to establish a rewarding system for outstanding performance of scientists. The criteria for promotion demands only publications in journals and proceedings (EARO, 2001a).

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusions

Although limited by the nature of rapid appraisals and the difficult of extracting information by questionnaires sent out through mail, the methodology adopted has provided initial evidence of existing constraints to uptake promotion in Ethiopia. Most of the reviewed policy and strategy documents have actually got strong policy statements committing the government and relevant organizations to high level of promotion of research results. Therefore, it is the opinion of the authors that the main stumbling block is the artificial division of labour between research and extension services. The findings show that the

researchers are allocated only a meagre budget for uptake promotion because this is not considered to be their responsibility. Therefore, the second main obstacle to uptake promotion according to the findings of this appraisal is the little budget allocation. Apart from being very small, budget for uptake promotion is not distributed to researchers but is lumped with the technical department for research-extension-farmer linkages. This brings us to the third main obstacle, namely the inability of extension to target stakeholders such as NGOs, private organizations (such as processors and exporters) who are key players in the uptake and utilization of research results. Informal contacts between researchers and this category of stakeholders have already been established and need to be formalized. The fourth barrier is capacity of researchers to design and implement communication and uptake promotion plans. Finally, incentives to promote up-take are missing and many researchers just consider it as an extra piece of work at no increased tangible benefit to the individual. Efforts are needed to change this kind of attitude.

4.2 Recommendations

It is always difficult to make recommendations from a limited rapid appraisal such as this one. However, on the basis of the findings together with the experience of the authors, it is tentatively recommended that:

- Researchers should be given the mandate, budget and enhanced capacity to undertake robust communication and uptake promotion of their research results either through the extension service or directly to target clients. This will require a mechanism that removes the artificial separation of research and extension services.
- The mandate recommended above should go with modified guidelines for the preparation of research proposals to ensure the inclusion of plans and budget for uptake promotion and scaling-up.
- We also need a fair incentive system which rewards those researchers who have brought significant and sustainable impact. Specifically, EARO should take steps to implement its already approved reward system.
- The importance of stakeholders other than the extension service and farmers should be recognized and prioritized in the up-take promotion activities.

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APPENDIX I: QUESTIONNAIRE

We believe answering these questions will help us to understand the current situations. Your opinion can be elaborated on the technologies, knowledge and information, we have particularly on soil and water management, the implementation thereof, the communication plan to promote and upscale the research products and the barriers we face. Please answer them all. Thank you for your cooperation.

I. Strategy and Scientific Research

1. Do you have any idea about higher agricultural policies & strategies?
(a) Yes (b) No
2. How accessible the information and documents related to higher Agricultural policies and strategies are: (a) Easily accessible (b) Accessible with difficulty (c) Not accessible
3. Do you think the allocated budget within the agricultural policies for scientific research (a) enough (b) reasonable (c) not enough
4. To what extent do you think that your research follows the higher policies and strategies? (a) fair (b) medium (c)

II. Scientific Research and Communication

5. Indicate approved recommendations that have been used to produce specific advice to farmers & other involved stakeholders.
a) Enough information (b) A few (c) No information
d). Other opinion, indicate _____
6. Do you think the method of dissemination and sharing of research findings ever been evaluated for their effectiveness?
(a) Yes (b) No
7. Indicate the percentage of budget that you have allocated and used in communication and up-take of research results with reference to the budget of the whole research _____ %.
8. Have you ever been trained in the area of communication and up-take of research results?
Yes, indicate _____
No

III. Availability of Knowledge, Information, & Technology (KIT)

9. What is your opinion of the availability of knowledge, information and technologies for Natural Resources Management?
a) Yes, KIT is available ____ b) there are some technologies ____
c) there is no technology ____
10. Are there appropriate KITs for Natural Resources Management?
a. Yes ____ b. No ____

IV: Soil Fertility Management

11. At what stage of technology generation do farmers and other stakeholders participate?

- a) At planning stage b. Problem identification c. Implementation d all stages, e. No participation

V Scientific Research and Communication Plan

12. What communication media do you use to disseminate technologies?
a. Publication b. training c. visit d. meeting d. Field day
13. What do you know about communication plan in agricultural research?
a. know nothing b. know a little bit c. know very well
14. Do you carry out on-farm research trials? a). Yes b) No
15. If yes what percentage of your research is related to adaptive type?
0-10% b. 10-25% c. 25-50% d. %0-75% e. 75-100%
16. How do you communicate your research findings?
a. Through extension b. Direct communication with farmers
c. Through other stakeholders
17. How do you report your research findings?
a. Progress report b. Journals c. Proceedings of workshop c. Technical bulletins
d. Extension Pamphlets etc
18. Have you produced printed materials for end users?
yes b/no
19. If yes, in what languages and form a) English, b) other local language
b). what languages _____
20. How do you rate the manpower and financial resources allocated for on-farm research?
a. very low b. low c. adequate d. not allocated
21. Did you receive training/skill in communication?
a. yes b. no
22. If yes where a) college/University _____ b) others _____
specify
23. Does the Department/division publish extension materials or communication materials? a) yes
b) no
24. Does the extension unit collaborate with other local stakeholders in terms of training, research work, data exchange, popularization, technology transfer etc? yes or no;
25. If yes, are the collaboration strong from the extension point of view? Yes or no
If no why?
26. What are the major constraints facing the collaborative efforts?

27. What are the future plans of the extension department with regard to collaboration with private and government organizations?

V: Extension

28. What is the status of linkage between research and extension?
a. Strong b. weak c. no linkage
29. What kind of KITs are you presently promoting ?
a. Crop related b. NRM related c. livestock related
30. Where did you get the technology to be promoted?
a. Research Organization b. Higher learning institution c. NGOs
d. International Agric. Research Centers e. Other sources: Mention them
31. How is your communication with the extension officers/agents.?
a. Personal b. Formal through institutional agreement c. If others specify

32. What are the major development outputs of the extension department that have brought impact?
a) SWC b) soil fertility management c) irrigation d) drainage management
33. What are the mechanisms used to disseminate research and development findings?
a. Adopted the extension package prepared by MoA
b. From my own experience
c. From the instructions by my immediate boss
d. From research center manual/bulletin, handbook
34. What are the present engagement of the extension department?

35. List the major natural resources technology already disseminated?

36. Particularly in many developing countries participatory research and extension with farmers is highly supported. In your opinion is this a) useful b). not useful
37. Have you participated in any participatory extension work either with researchers or NGOS? a) Yes b) No
38. If the answer to # 49 is yes have discussed it with your boss to adopt this approach? A) yes
b) no and if yes has agreed or not.
39. It is believed that we should fit our approach to the changing situation of people and the environment. This requires the mind set change of extension professionals to the current status of farming community and the environment. What improved approach of dissemination do you envisage to better communicate with the farmers?

40. What major problems were encountered in undertaking extension activities?

41. Indicate the measures taken to solve the problems?

42. In addition to extension activities what type of services does the extension system provide?
a) Tax collection; b) general purpose data collection
c). input distribution d). education and training

43. Is human resource availability adequate? Yes/no

44. Is budget adequate for the work available? Yes/no

45. Does the extension system have information and documentation center or service? Yes/no

46. Does the Department publish extension materials? a) yes b) no

47. Does the extension unit collaborate with other local stakeholders in terms of training, research work, data exchange, popularization, technology transfer etc? yes or no;

48. If yes, are the collaboration strong from the extension point of view? Yes or no
If no why?

49. What are the major constraints facing the collaborative efforts?

50. What are the future plans of the extension department with regard to collaboration with private and government organizations?

VI: Barriers and Suggestions

1. What do you think are the most critical barriers to undertake more active role in communication & promoting up-take utilization of results from soil and water management research point of view?

2. What are your suggestions to overcome these barriers mentioned above? _____
