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When the ISWC 2 programme started in Zimbabwe, there were already several islands of success in SWC that could have a positive impact on land husbandry activities beyond the borders of the communities concerned. ISWC-Zimbabwe focused on raising awareness about these successes, scaling them up and institutionalizing the approaches into major development programmes and government research and extension structures. The challenge was to spread not only the promising SWC techniques but also the participatory methods for developing, disseminating and adapting them.

Background

The successful cases of combating degradation of natural resources in Zimbabwe had resulted from several initiatives undertaken over the years by farmer innovators, development agencies or research institutions exploring ways to improve soil fertility and water management in drought-prone areas. It started with approaches and techniques that some researchers and development agents regarded as having potential in responding to SWC problems in Southern Africa. These were tested in close collaboration with a small number

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Map 28.1 *Action areas, ISWC-Zimbabwe*

of communities. Some of the initiatives were successful, judging by the degree of farmer involvement in refining the techniques, the high level of local adoption and the effectiveness of the techniques in conserving soil and water. The land users themselves determined the success of the techniques on the basis of their own criteria.

Examples of good practice serve little benefit unless a large number of people become aware of them. It is therefore important to ensure that lessons and experiences from successful cases are documented and shared with all relevant stakeholders, particularly with those that are well placed to help spread the ideas. In Zimbabwe, such institutions include the Department of Agricultural and Technical Extension Services (AGRITEX), the Department of Natural Resources (DNR), the Department of Research and Specialist Services (DRSS), the Zimbabwe Farmers Union, NGOs and community-based organizations. If convinced, these could scale up or mainstream the good ideas and, at the same time, increase the likelihood of sustaining the process of generating technologies that are appropriate for smallholder conditions. However, institutionalizing participatory approaches is not an easy task, particularly in institutions with a track record of regarding their own staff as 'experts' who should impart knowledge by 'sending messages to farmers'.

The farmer-to-farmer approach to spreading good ideas among farmers or communities is most effective in an enabling environment in which the institutional and legal framework not only recognizes but also actively supports the approach. A good example of farmer innovation in SWC that initially failed to spread because a supportive institutional framework was lacking, was the work of Zephaniah Maseko Phiri in Zvishavane district in Midlands province of south-central Zimbabwe. Phiri developed a number of innovations in SWC,

but it took more than 15 years for them to spread beyond his farm. In the 1990s, before the start of the ISWC-Zimbabwe programme, support from individuals with a good understanding of the national policy framework and from NGOs seeking alternative SWC techniques helped to spread his work by exposing other farmers to it, documenting his experiences and providing a platform for him to share these with farmers, scientists and extensionists.

Earlier, Phiri's innovations had not spread because government service providers viewed them as a 'threat' to the country's policy of natural resource management which had remained the same even after Independence. They regarded him as a mad person whose ideas should never be emulated by anyone sane. This was despite the fact that, in 1981, Phiri had proved to both the local magistrate and the Natural Resources Board that his practices were effectively reducing soil erosion and improving moisture conservation.

The government staff regarded any type of knowledge that was locally developed, ie that did not find its origin in either DRSS or AGRITEX, to be traditional and primitive and therefore not to be encouraged. The technologies disseminated to farmers by both DRSS and AGRITEX had to be 'tested and proven'. Moreover, the government staff regarded the 'master farmer' model as the best vehicle for delivering extension services. In this model, farmers are trained according to a standardized curriculum, irrespective of the trainees' access to resources or differences in agroecological conditions. The extension agent determines the criteria for 'success', which usually means following as closely as possible the guidelines and practices recommended by the extension service.

AGRITEX has been in existence for over 70 years and now has over 2000 staff posted throughout Zimbabwe to provide extension support to rural communities. The DNR, although not represented in every community, is represented in each district office. It has the task of reinforcing the sustainable management of natural resources through legislation. The researchers in the DRSS provide a range of technologies for extension workers to pass on to farmers. Despite the heavy presence of these support institutions, soil and water loss has increased on most of the cropland and pastures in communal areas. Some farmers are losing soil at a rate of up to 40t/ha annually (Chuma and Hagmann, 1995). Problems of soil erosion have worsened mainly because of the emphasis in mainstream research and extension on inflexible top-down approaches with a very strong technology focus.

It is against this background that the various development agencies mentioned at the outset had started to seek alternative approaches to and technological options for managing soil and water. These were tested and further developed at various sites with a view to scaling them up if they proved to be successful locally. In addition, a wide range of SWC techniques, including tied ridges, tied furrows, mulch tillage, infiltration pits and improved methods of organic manuring, were developed and tested jointly by farmers, NGO staff and government researchers and extension agents, with a view to promoting their adoption and adaptation by other farmers. 'Experts' from within the key agricultural services had been drawn into this process in order to increase the chances of mainstreaming the ideas subsequently.

Intensive work in Masvingo province

One example is the work of two institutions in Masvingo province: the GTZ-funded Conservation Tillage Project (Contil) and the Intermediate Technology Development Group (ITDG). In 1991, both of these groups started to explore alternative approaches to working with smallholder farmers. Contil was a participatory research project that initiated adaptive on-farm trials in Gutu, Zaka and Chivi districts. ITDG, whose main focus was on participatory extension to enhance household and food security, initiated work in Ward 21 of Chivi district and then expanded to Ward 4 in the same district.

In 1993 the two institutions met and realized that they had much in common. Firstly, they both understood that the problem of SWC in rural Zimbabwe was due more to social crisis than to poor access of farmers to better SWC technologies. Numerous socio-organizational and cultural problems in the rural communities undermined the process of innovation in farming. Some of the major factors affecting the level of adoption and adaptation of SWC techniques were lack of cooperation, conflict between generations, internal leadership wrangles, mistrust, jealousy, fear of trying out new ideas, and a general lack of community will and commitment. The struggle for power between modern state structures (Village Development Committees, Ward Development Committees, etc) and traditional leadership aggravated this situation.

Contil and the ITDG recognized that it was difficult for any one of them alone to institutionalize a participatory approach to research and extension within government structures. They started to network and to document lessons and experiences emerging from their work and shared these with AGRITEX. They set up programmes to support the training of extension workers in the Participatory Extension Approach (PEA) (AGRITEX, 1998). A major component of PEA is Training for Transformation, a tool for bringing about attitudinal and behavioural change in people so that they can attain new values for themselves, such as self-respect, self-confidence, self-awareness, self-esteem, mutual trust, self-reliance, inclusiveness, capacities for open criticism and equal opportunities (Hope and Timmel, 1984).

Discomfort model of training

Contil and ITDG started at community level with a process that was designed to increase local institutional and technical capacity. Farmers were exposed to Training for Transformation and, as a result, became more conscious of their needs, rights and responsibilities, as well as of the responsibilities of the public service providers. Then the extension staff, feeling uncomfortable with being challenged by farmers, asked why they were not being offered training like that given to the farmers. Indeed, they wanted to be the ones who transferred the training to the farmers. However, Contil and ITDG preferred a process

that would compel AGRITEX staff to be more responsive to the needs and circumstances of smallholders. Once the extension workers realized that they needed to be exposed to the PEA, Contil and ITDG responded accordingly and facilitated the learning process at this level.

The exposure of the extension workers to new approaches of working with farmers created a crisis at the next level: they found themselves in conflict with their supervisors who, in turn, requested that they be given the same training. The demand for training in PEA continued up to the level of head office as the 'bosses' were afraid of being overshadowed by their 'juniors' and 'mere' farmers.

Parallel to this, key contact persons within AGRITEX were identified to build supportive networks. Also, the provincial heads in Masvingo were targeted. The same strategy was applied later at national level. These contact persons at different levels became instrumental in internalizing the participatory approach within AGRITEX.

Creating a strong demand pull

Through the PEA approach, farmers, especially those in Ward 21, realized the advantages of working in groups and as a community, such as being able to share knowledge and skills to help each other, to share assets, to generate ideas rapidly to solve common problems and to market their produce more efficiently. With a ratio of one extension officer to about 1000 farmers, it is almost impossible for all farmers to contact an extension worker on an individual basis. The farmers in Ward 21, with ITDG support, began to organize themselves better in order to enjoy the benefits of working together. They became more confident and were able to articulate the learning process they had gone through. They started organizing local competitions in soil and water management in order to stimulate farmers to try out new techniques.

The farming communities working with Contil and ITDG in Masvingo province also shared their experiences with visiting farmers from throughout the country as well as from South Africa, Mozambique, Zambia, Malawi and Swaziland. The visits were organized and financed by development-support institutions in these other countries. They had became aware of the initiatives in Masvingo through various intermediaries who had either read about the work in development publications or had heard about the initiatives during workshops where this information was shared by Contil and ITDG staff. The numerous foreign visitors (averaging one group of about 30 per month) to communities working with the two programmes helped to raise their profile and made it easier for programme staff to share their approach with AGRITEX staff at both district and provincial levels.

The second phase of ISWC 2, which began in 1997, fuelled this process as it strengthened the innovation and experimentation activities of farmers by linking them with scientists, and it intensified and gave more support to farmer-to-farmer exchange. In Ward 25 of Chivi district, for example, researchers from the Institute of Environmental Studies (IES) of the University

of Zimbabwe developed a partnership with innovative farmers to explore alternative techniques of SWC and soil fertility management. These were techniques that combined farmers' ideas and those of scientists, sometimes based on local innovations, sometimes based on an idea from science combined with farmers' suggestions, about how it could be implemented under their conditions. The techniques, which included tied ridges, mulch ripping, strip cropping, *fanya juu* terraces, infiltration pits, stone bunds, higher quality manure and compost, were evaluated in researcher-supported on-farm trials and farmers' own experiments.

Spreading upwards and outwards

Before ISWC 2 began, communities in Ward 21 had started already to host farmers from different corners of Zimbabwe almost on a monthly basis. This had become the basis for a loose network of farmers interested in SWC. Since ISWC 2 began, this new network has spread throughout five provinces of Zimbabwe: Masvingo, Manicaland, Midlands, Mashonaland East and Matabeleland South. Farmer innovators in each province share experiences during exchange visits organized by both governmental and non-governmental institutions, with some coordination and facilitation by ISWC-Zimbabwe. In some cases, funds are made available by the programme; in others, the support institutions and even the farmers themselves have mobilized the resources to finance the travel.

The ISWC 2 programme gave an opportunity to scale up the farmer-to-farmer extension activities, with a focus on outstanding farmer innovators. These individuals were given opportunities to visit each other to learn from each other's innovations and experiments. The innovators themselves organized exchange visits within their own communities and between farmer innovators in different communities, districts and provinces. They invited government extension agents to join the visits, even though AGRITEX was not involved in their planning and funding.

The exchange visits between farmer innovators provided an opportunity for the extension staff to document information about the innovators and their new techniques or adaptations. This task, initiated by ISWC-Zimbabwe, obliged extension staff to listen carefully to the farmers and to learn from them. As a result of going through this process, the extension agents began to realize that these innovators were not mad, but rather key resource persons in their communities. The extension agents have found that documenting farmer innovation is so important that they now do this as part of their normal extension work. Both field staff and managers in AGRITEX were involved in the decision to do this.

Under the ISWC-Zimbabwe programme, farmer-to-farmer visits between countries were also organized. For example, four Zimbabwean farmers went to Mozambique at the invitation of the Mozambican hosts and about 20 farmers went to Lesotho on a visit organized by the ISWC-Zimbabwe coordinators who had contacts with organizations supporting farmer innovators there. The coordi-

nators had recognized that the climatic and socioeconomic conditions in many parts of that country are similar to those in action areas of ISWC-Zimbabwe. This meant that the lessons learnt in Lesotho could be applied readily to Zimbabwean conditions. In Lesotho, the renowned farmer innovator, James Jacob Machobane, was a special attraction, and the Zimbabwean farmers learnt about the organization of farmer innovators as exemplified by the Machobane network. They also gained a wide range of technical information, eg about the Machobane Farming System, gully reclamation, use of indigenous pesticides, the reclamation of wasteland and use of organic manures.

The continued networking of ISWC-Zimbabwe partners with key individuals at provincial and national levels contributed to incorporating these elements of more participatory research and extension into the DRSS and AGRITEX. In some cases, the spread of participatory approaches was supported by like-minded organizations such as VECO (Vreideselanden Coopibo). This Belgian organization, based in Mashonaland, East province, financed visits by groups of farmers from that province to the Zvishavane Water Projects in Midlands province, to Wards 21 and 25 in Chivi district and to Makoholi Research Station in Masvingo. Farmers and project staff assessed the impact of these exchange visits, using methods such as self-evaluation, informal observation and formal questionnaire surveys. They found that the visits increased the rates of farmer adoption of technologies such as rock catchments, water harvesting, tied ridges, infiltration pits, modified contour ridges, mulch tillage, *fanya juu* terraces, intercropping and use of termite mounds for soil amelioration. They also increased the farmers' self-organization capacity and self-confidence to experiment in order to identify their own solutions and forged wider network linkages between farmer innovators.

In Masvingo province, liked-minded individuals from a number of government services and NGOs managed to build up a strong network. These included Contil, ITDG, AGRITEX, DNR, the Farming Systems Research Unit of the DRSS, IES (University of Zimbabwe) and the Integrated Rural Development Programme. ISWC-Zimbabwe encouraged the sharing of a common understanding of the role of farmer innovators in land husbandry through workshops and seminars, and organized and facilitated training in PTD to enable practitioners to develop the capacity to identify, document and support experimentation by farmers. Jointly with partners like the Zvishavane Water Projects, the programme succeeded in making participatory approaches to research and extension more acceptable in the government agricultural services. The involvement of many of the above organizations in this informal collaboration was made possible by their flexibility in making decisions at the implementation level. This is also reflected in their use of funds which is guided to a high degree by the situation on the ground.

Mainstreaming the Approach

Nearly all the SWC success stories were achieved through the use of participatory approaches. In an effort to mainstream such approaches in the institutions providing agricultural services, the following activities were undertaken by ISWC-Zimbabwe and its partners:

- Staff from AGRITEX and other development support institutions documented the experiences, particularly in Masvingo province. The lessons that emerged were analysed together with key staff from both AGRITEX and DRSS in order to develop a common understanding of the approach and to share it widely.
- A PEA framework and curricula for training extension staff in PEA were developed and shared with AGRITEX staff throughout the country and elsewhere in Southern Africa, such as Northern province in South Africa, Helvetas project sites in Lesotho and the Department of Agriculture in Cabo Delgado province, Mozambique.
- An organizational development process that was already underway within AGRITEX, with the support of GTZ, has helped to mainstream participatory approaches. After going through the PEA training, extension staff are exposed to successful cases in Masvingo province so that they can witness the impact and effectiveness of using participatory approaches in working with smallholders, especially in SWC.
- The identification and documentation of farmer innovators and the support given to their networking strengthened their position and they started to ask many questions to scientists and extensionists, eg 'Do you know our priorities?' 'Why do you not respond to our problems? Do you lack the necessary resources or do you lack support from your leaders?' 'How can we help you to help us?' (quoted in various workshop proceedings). It was this strong demand from farmers that pushed extension staff to demand training in participatory approaches. Under the ISWC-Zimbabwe programme, about 30 extension agents in Manicaland were trained to be able to respond better to farmers' demands. Similarly, in Shurugwi and Gwanda districts, about 60 extension agents were trained in the PEA process and are using this approach with support from ISWC-Zimbabwe.

Constraints and Opportunities

The ISWC-Zimbabwe programme scored a number of successes, but also experienced some constraints, such as high turnover of staff in government departments and the 'donor syndrome' among some farming communities. Several lessons can be drawn from the experiences:

- Organizations are different; hence, what works with one may not apply to another, even if both organizations work with and for the same clients. These differences can be attributed to personalities and to organizational culture, identity and history. The process of institutionalizing the approach has been quite successful within AGRITEX: all extension agents are now required to take reorientation training in PEA. The same cannot be said of DRSS or DNR, mainly because of variations in the above-mentioned factors. Sometimes, it is the level at which these institutions interact with clients that determines their ability to transform themselves and to be more responsive. Institutionalizing participatory approaches means maintaining a learning process and continuing to integrate new practices as one learns. However, for institutions like AGRITEX, DRSS or DNR, with a tradition of hierarchy, blockages to this process can always appear. The strength of tendencies toward standardization, centralization and opposition to innovation within bureaucratic organizations should not be underestimated.
- It is important to determine the best time to move from a pilot phase to a phase of integration or mainstreaming. Moments of crisis can be the best opportunities for selling new ideas. The 1991–92 drought forced agricultural support institutions to seek alternative approaches to deal with drought-stricken communities. Government programmes like the Smallholder Dry Areas Resource Management Programme and the South East Dry Areas Programme, which sought to mitigate the effects of drought in the semi-arid areas, took the opportunity to introduce participatory approaches to SWC already in the early 1990s and thus prepared the ground for ISWC-Zimbabwe and partner programmes that focused on scaling up such activities.
- Generally, networks and alliances can be very strategic in selling new ideas within key institutions of research and extension. However, the success of these networks depends on numerous factors, such as personality, trust and shared vision, and the ability of the parties involved to compromise.
- Exposure visits stimulated by awareness created through documentation play a major role in spreading ideas, especially from farmer to farmer or community to community. Whereas many people believe that documentation can capture and share the lessons emerging out of any work, the experience of ISWC-Zimbabwe has been that the readers then want to see with their own eyes what was done. The more that the work in Wards 21 and 25 of Chivi district was documented, the more visitors these communities received from throughout Southern Africa. On the initiative of Ward 21 farmers, a follow-up study was made recently of all farmer groups hosted since 1994. This formed part of an impact assessment of several programmes (including ISWC) that was made by ITDG Southern Africa, one of the lead agencies of ISWC-Zimbabwe. Questionnaires were sent out by ITDG to all persons who had visited the sites in Ward 21 and, based on the returns, determined the rates of adoption and adaptation. The results showed that, after the farmers had returned home, nearly 95 per cent of them had tried out some of the ideas they had gained during the visit.

- Although exposure visits are an effective tool for disseminating new ideas, the great distances involved make them costly and difficult to sustain without external financial support. For the approach to be sustainable, self-help capacity needs to be developed within the rural communities. Several of the farmer groups have already started to mobilize their own resources through contributions from members. In some cases, groups have requested training from ISWC-Zimbabwe and its partners in writing project proposals and they are accessing funds directly through government programmes and from other donors.

Conclusion

Good progress has been made in mainstreaming participatory approaches into land management programmes in Zimbabwe, although the degree of institutionalization varies from one programme or agency to another. This success is due to a multifaceted approach. Networks on different levels were used to lobby for policy change. Key players in relevant institutions were used as entry points for lobbying. Joint documentation and analysis of success stories helped to raise awareness. Farmers joined voices to express their demands. Training for Transformation proved to be a valuable tool for creating a paradigm shift in the attitudes of all stakeholders. Exposure visits to islands of success and between islands of success stimulated the processes of experimentation and innovation by farmers. The members of the ISWC-Zimbabwe Steering Committee were drawn mainly from public institutions, policy advisers and academia and all are in a position to influence the direction of thinking in their institutions. All these different strategies contributed to the total impact of the ISWC-Zimbabwe programme.

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