

Evaluation of remediation recommendations: Stakeholder Workshop 3

Boteti, Botswana

1. Introduction

The most glaring constraining factors for soil and water conservation in Botswana are poverty (limited financial resources), lack of livelihood alternatives to those which are land based, lack of information on available innovation and technologies and low levels of literacy. Land degradation issues in the Boteti study site in Botswana include:

- Water shortage
- Drought
- Poverty
- High livestock mortality
- Loss of vegetation cover
- Heat and dust

To tackle some of these issues, the following remediation strategies were suggested by stakeholders in the WB3 workshop:

- Game ranching
- Biogas production
- Rainwater harvesting
- Solar cookers

Game ranching scored the most under all the criteria that were selected during the WB3 workshop (Table 1). However after discussions consensus was reached to pilot bio gas production as it was deemed the most affordable and practical for local farmers.



Figure 1: Cattle crossing a salt pan in Boteti District, Botswana

Participants discussed the criteria used in the WB3 workshop to assess their suitability for use to evaluate the bio-gas technology in the final workshop. Some aspects were found to be relevant and

others were removed. New ones were added as shown in Table 2. Beans were used for all ranking and evaluation due to low literacy levels. For evaluation of the technologies the participants were each given five beans representing a scale of 1-5 (very poor, poor, average, good, very good). For ranking ways of facilitating adoption of remediation technologies participants were given ten beans as the aim was to rank.

Table 1: Criteria used to select remediation strategies for trial during WB3 workshop in Botswana

Economic	Ecological	Socio-cultural
Education	Reduce degradation and improve appearance and state of the environment	To promote cooperation, self reliance and volunteerism.
Employment	To protect the ozone layer	To conserve culture and natural resources
Profit	To improve harvests	To alleviate poverty

Table 2: Criteria used in final workshop to evaluate remediation strategy trialled and modelled during WB4-5 in Botswana

Economic	Ecological	Socio-cultural
Education	Reduce degradation and improve appearance and state of the environment	To reduce domestic work load
Employment	To protect the ozone layer	To alleviate poverty
Profit	To improve soil fertility and increase yields	Suitable for local conditions
Startup capital	To conserve natural resources	

Table 3: Evaluation of bio-gas versus traditional firewood against economic, ecological and socio-cultural criteria defined by participants during final DESIRE workshop in Botswana. Scores are based on votes cast by participants using beans as counters, aggregated using FACILITATOR software

Economic	Bio-gas	Firewood	Ecological	Biogas	Firewood	Socio-cultural	Bio-gas	Firewood
Education	4.63	0.38	Reduce degradation and improve appearance and state of the environment	4.9	0.38	To reduce domestic work load	4.9	1.13
Employment	3.5	0.38	To protect the ozone layer	4.75	1.13	To alleviate poverty	4.75	1.13
Profit	4.63	1.13	To improve soil fertility and increase yields	4.75	0.75	Suitable for local conditions	4.63	2.23
Startup capital	3.25	1.5*	To conserve natural resources	4.9	0.38			

3. How can we enable priority remediation options to be adopted?

Table 4 summarises suggestions made by workshop participants to enhance the adoption of remediation strategies that had been prioritised during the workshop.

Table 4: Suggestions from workshop participants for enhancing the adoption of recommended remediation strategies in Botswana, in rank order

Ways to encourage uptake of technological strategies	Score	Rank
Education, awareness and information dissemination	78	1
Demonstration in the context of development projects	73	2
Financial assistance	52	3
Conservation initiatives (development)	34	4

4. Feedback from participants

Workshop participants provided the following feedback about the DESIRE project:

- “The DESIRE project has been good. It brought knowledge that we can pass on to younger generations. What remains is for us to teach other people bio-gas and take them to Chaa’s house who has kindly opened up her home for this pilot.”
- “I say let’s move fast and hold awareness campaigns and teach people about the remediation technologies we worked on. It’s a pity the Rural Industry innovation Centre (RIIC) is not marketing the technologies. I am now convinced these would. I think there is poor extension service.”
- “As a community we should also improve on communication. Not enough people know about the good work of DESIRE and I blame the village leadership. We should improve. Otherwise this has been a good and useful project. This workshop also went very well. As a representative of the youth drama group in the village I promise that we will include the messages of these technologies in our drama scripts to spread the message whenever we are invited to perform.”
- “Please show the Government these results so that they can be included in the development proposals especially those targeted at fighting the impacts of desertification.”
- “Ms Chaa has agreed to be our ‘mirror’ on this project and our responsibility is to bring people to learn from this project. We thank the DESIRE team for the support and ask them not to abandon us. You have seen our problems yourselves and our lives.”



Figure 2: Participants discussing remediation strategies during the final DESIRE workshop in Botswana