

1 Executive summary

R7483. Displaced Person Domestic Energy – Demonstration Phase

This document reports on the results of a two year research intervention in Northern Ghana.

The purpose of the project was to validate the effectiveness of the rapid assessment method demonstrated in R6849 (adoption barriers for efficient domestic energy in refugee sites) by measuring the impact of using the outcomes of R6849.

The indicator for this was set as a percentage increase in use of (improved) domestic stoves and/or an uptake of sustainable live wood use. The target was 20% increase for stove use – the project has achieved a 51% increase. There has been a measurable change of attitude and behaviour regarding stoves. The pressure on wood sources has increased and so the results show that while attitude and behaviour towards wood collection have improved (in those receiving extension education attached to the project), the wider, general trend is still towards unsustainable use. The project has clearly demonstrated the effectiveness of the targeted messages.

Research Project R6849 pioneered the use of the Theory of Reasoned Action (TORA) as a survey method for gaining a better understanding of livelihood strategies. In this case the livelihood component was domestic energy among displaced persons.

Open ended interviews and PRA techniques have often been used to define the “*what, where, when, who and how*” of livelihood strategies. However, little attention has been paid to the “*why*”. Why do people behave as they do - what motivates them, what reasoning fuels their decisions? Some open interview surveys have asked the question why but the answers are often inconclusive.

The TORA tool explains the relationship of these different expressed attitudes on the decision to adopt improved practice. It therefore helps isolate the key issues that may be acting as drivers or barriers to positive behaviour. *The added value of the TORA rapid assessment tool is its use of a second more formal survey after the open interview, to give statistically validated findings.*

In R6849 the TORA was applied to domestic energy concerns. It resulted in recommendations for extension messages (both content and channels of delivery) and proposed that if these were applied by extension agents as part of their everyday work they would result in changes in behaviour among the agents clients.

This project (R7483) has taken the recommendations of R6849 and worked with extension services across Northern Ghana to apply them. The deliberate extension intervention included messages that addressed cognitive barriers to the adoption of three generalised behaviours:

- improved stove adoption.
- firewood collection,
- wood lot planting,

The extension initiative was therefore seen to ‘focus’ on these particular barriers. The ‘messages’ and methodologies of this ‘focused’ extension were further developed by local extension agencies, both GO and NGO, involved in the promotion of sustainable natural resource management, during a workshop conducted in Tamale in January 2000.

Possibly the most important conclusion from the workshop was the importance attached to issues associated with domestic fuelwood use and environmental degradation by extension and agricultural workers and policy makers. This was evident not only in the numbers who attended the workshop (with a high rate of acceptance of invitations), but also in the responses given throughout the workshop – formally through sessions, and informally through discussions.

In particular, firewood **collection** was regarded as an important, and hitherto ignored area, which should be addressed. It was interesting that woodlot planting was an important activity in the area, registering as one of the issues most commonly addressed by delegates. The workshop revealed that improved stoves is a complex issue where much work has been done. The complexities are due to traditional cooking methods and cultural preferences for a variety of food preparations, but most important is the fact that there appears to be a large range of these practices in a relatively small area.

R7843 internal workshop report January 2000

A further workshop was conducted in December 2000 to assess the midterm extension process and strengthen it with promotion tools, e.g. the development and testing of dramas suitable for radio, village dramas, role-play and flip charts for use by extension agents. The general ‘focused’ extension intervention ran from February 2000 to September 2001. However, the more structured approach was applied between January 2001 and September 2001.

The final research activity¹ was to repeat the TORA survey in order to explore the changes that had occurred among extension clients. 230 sample households were surveyed in the districts exposed to the focused extension. The project determined if the focused intervention had changed these barriers and whether there was a related improvement in the three behaviours.

1.1 Improved Stoves

- The ‘focused’ extension has led to an increase in the use of improved stoves and a stronger intention to continue this practice.
- One of the main findings of this research is the more positive response achieved by including the improved stove as part of a wider integrated approach to sustainable natural resource management.
- Where this has taken place in comparison to a ‘stoves only’ demonstration, the social support from the important social referents for the adoption of the improved stove has significantly increased.
- This increased social support is across the genders, i.e. husband and extension agents, who in many cases are also males.
- Regarding the promotion of improved stoves, the barriers identified in the first survey, the subsequent messages developed to address these and the ‘channels’ or most appropriate social referents to target in the ‘focused’ extension strategy have been vindicated.

1.2 Firewood collection

- There has been a general deterioration in sustainable collection behaviour over the past 3 years.

¹ Note:- presentations of findings were made in Ghana to the participants of the research and to other interested parties in March 2002. The project has also worked towards active dissemination of the lessons learned through this research, and dissemination has been considered a “project activity” although not a “research activity”.

- The 'focused' extension programme does appear 'to have halted' this negative trend and has led to more sustainable behaviour.
- This positive intention is driven more by their sense of 'social obligation' than by their attitude towards wood collecting.
- Nevertheless, the previously identified barriers to sustainable collection practice that were addressed by the 'focused' extension programme have changed within the targeted population. For instance:- an awareness of possible future scarcity and women's self perception of their own capability to address it have now become drivers.
- In the case of the rural Dagomba women, the main finding is the importance of targeting / involving the subjects' important social referents and changing the referent's perceived attitudes toward the natural resource in question, in this instance firewood and its source, trees, i.e. an integrated cross-gender approach to natural resource management.

1.3 Woodlots

- Generally tree planting and wood lot management behaviour have weakened over the past 3 years.
- Those communities exposed to the 'focused' extension initiative, and particularly those who have attended demonstrations have registered a significant positive change in both their current practice and future intentions.
- The positive change in the expressed intention to plant wood lots is based mainly on the response to perceived social pressure rather than attitudes (experience based reasoning).
- The main finding is the importance of targeting / involving the subjects' important social referents via an integrated cross-gender approach to natural resource management.
- Field demonstrations have proved a particularly effective extension tool regarding wood lot promotion.

1.4 Conclusions

- The short period of the 'focused' extension intervention and the significant changes achieved in behaviour demonstrate the effectiveness of the 'Theory of Reasoned Action' (TORA) model in the identification of the critical issues influencing the decision making process.
- It enabled a more focused and therefore efficient extension intervention.
- The use of the (TORA) model in the Northern Ghana context has demonstrated an effective methodology for the identification of the most salient psychological barriers influencing the adoption of recommended 'natural resource management' practices.
- It provided the means of combining this knowledge with an intervention strategy that targeted the most influential social referents of the objective population regarding the particular behaviour in question.
- TORA has proved to be a precise although not necessarily a rapid assessment tool.
- TORA's periodic application can enable extension or education programme managers to identify precisely the impact of their interventions and adjust these accordingly, thus ensuring the greater efficiency and effectiveness of their investment.

1.5 Recommendations for future work

Specific recommendations were made in project R6849 regarding extension practice based on the findings. Project R7843 has applied these recommendations with a measure of success (behavioural change).

- For the gains of the recent extension work not to be lost, we recommend that the development actors in Northern Ghana come together for a workshop in late 2002 to reinforce the messages that are being used among extension workers.

R6849 concluded that the TORA was a useful tool for identifying the internal motivation of community members (both displaced and non-displaced) and could be widely used in the energy sector and beyond. The tool was said to be appropriate for environmental programmes, technology transfer and health programmes. The report recommended that the results of this project be widely disseminated to agencies working in the refugee, energy and environmental sectors, and other relevant programmes where an understanding of the internal motivation of the participants will assist planning of interventions, the TORA rapid assessment tool would be useful.

Project R7843 has validated that the TORA is indeed an effective tool for identifying the barriers and drivers towards behaviour in communities and groups. It is more rigorous than some of the participatory tools currently being promoted within the development community. It allows the planner to identify the key points that need to be addressed in extension messages or development discussions. In this case it served as a tool to enhance behaviours that were beneficial to the environment. At the same time it has demonstrated that it could be used to address behaviours that affected common livelihood strategies among a community.

- As such it should be promoted for wide and regular use in development projects to aid focussed educational extension work.
- We recommend that a manual be developed for using the TORA as a planning tool for project planners to encourage widespread use of it.

Acknowledgements

Like all projects, this one would not have been possible without the co-operation and support of numerous organisations and individuals. We wish to thank all agencies that were involved in the project. These included:- ACDEP (NGO), ADRA (NGO), Amaschina Self help Organisation (NGO), ARI (NGO), BADECO (NGO), CRS (NGO), Dept. of Community Development, Environmental Protection Agency (EPA), ETCC (NGO), Forest Services Division, Ghana Denmark Co-operation Programme, Ghana National Fire Service, Ministry Of Food and Agriculture, National Disaster Management Org. (NADMO), Presby Agric. Programme (NGO), Rural Media Network (RUMNET), Savannah Resources Management Programme (SRMP), TADO (NGO), TIDA (NGO), UDS (University).

We should give a particular thanks to Mr **G. K. Ekekpi**, of the Agricultural Extension Department **TAMALE** (Ministry of Agriculture) who helped organise the workshops and acted as co-ordinator. A special thanks to those who conducted the surveys.

We acknowledge with gratitude the role of the University of Ghana in organising and co-ordinating activities in Ghana including colleagues and assistants to Dr O Sakyi Dawson.