RESULTS GAINED FROM EXTENSION OF IMPROVED COOK STOVES & TRAINING OF LOCAL BUILDERS OF BLN STOVES AT KRONG NO COMMUNE, LAK DISTRICT, DAK LAK PROVINCE

(MRC/MARD/GTZ PROJECT)

Short-term Mission Report

by

Eng. Tran Ngoc Dang: FSTAC Manager
Eng. Nguyen Phu Nghiep: Extension Officer

Hanoi, November 1997

On behalf of:
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH and
Mekong River Commission Secretariat

TABLE OF CONTENTS

1 Introduction
1. INTRODUCTION

Based upon a proposal by the Project dealing with Sustainable Management of Resources in the Lower Mekong River Basin and trying to consolidate and extend the results obtained following the introduction of improved BLN cook stoves in Dak Phoi to other areas, in particular to communes of Lak District, the Forest Science and Technology Application Center (FSTAC) has carried out activities to build new model BLN cook stoves and train stove builders at two (2) villages: Lak Dong and Ba Yang in the commune of Krong No, Lak District, Dak Lak Province.

The social and economic conditions of the new commune, including the local practices of cooking meals, and those of using fuels and building materials for stove running and construction, are almost the same as prevailed in the two (2) villages of Bu Juk and Jie Juk of Dak Phoi (See Report on Extension of Improved BLN Cook stoves at Dak Phoi by FSTAC in June 1997).

However, the new activities at Krong No have been preceded by a field check made for the assessment of the performance of cook stoves built at Dak Phoi during these last six (6) months to find out more efficient approaches for the work to be done.

2. BRIEF ASSESSMENT OF THE PERFORMANCE OF BLN COOK STOVES BUILT AT DAK PHOI.

The cook stoves built there have been under use for six (6) months. For a fast assessment as required by the time available, field checks have been carried out at only three (3) villages of Du Mal, Jie Juk and Bu Juk in Dak Phoi commune. Generally speaking, the cook stoves have been found to run satisfactorily. There has been no return to the use of traditional stove, i.e. the tripod or the so-called "three-stone" stove. Most cook stoves under assessment are well maintained, with some of them having cracks not in the cook stove body itself but at a stand for fuel storage next to it; all of which have been made good again through plastering with mortar or clay. Some households however have rebuilt newer stands for fuel storage which look quite nice and strong.

- All cook stoves built with fired bricks have so far experienced no problems.
- Others constructed with sun-dried bricks (or adobes) though still providing good use have experienced more cracks than usual. Worth mentioning here is a cook stove built with adobes at Jie Juk village which has been experiencing many cracks but which is still in use. The main cause for this is the cook stove being built on the last day of the extension campaign when the weather was wet with rains and very high relative humidity, thus causing high moisture content to prevail in the adobes themselves. Under further use, the adobes shrank badly leading to cracks going on deepening and in case of no timely repair the cook stove will be destroyed. The lesson from the above is in the case of using adobes the cook stove body should be built first and well in advance and then left for setting for some time before plastering with cement and mortar.

The field checks have proved to be useful. They show that local farmers have been interested in fuel and time savings and in the better cooking environments gained for the household as a whole. Local farmers are proud of the results obtained and love to maintain the cook stoves for effective use in future.

3. CONSTRUCTION OF MODEL COOK STOVES AND TRAINING OF LOCAL BLN STOVE BUILDERS AT THE NEW SITE
In spite of the fact that the communes of Dak Phoi and Krong No are next to each other, only some authorities from the villages and commune of Krong No were invited to take part in the final seminar held at Dak Phoi for them to have an idea of the process of BLN cook stove introduction. Most people living in the villages of Lak Dong and Ba Yang (of Krong No commune) have not known anything of that process. Therefore, publicity on the matter has had to be carried out parallel with the introduction of cook stove models in some households at the new sites.

Working against time, we also had to build up model cook stoves parallel with the training of BLN stove builders for the two (2) villages of Lak Dong and Ba Yang.

The households selected should satisfy the following conditions:

1. They should apply for the matter;
2. They should accommodate a permanent and separate space for cooking in their houses;
3. They should live at the center of a village (or hamlet) so to help facilitate the process of result demonstration; and
4. They should have a demand in cooking and using fuels rated as above the local average (for instance they should be a quite large household now practicing pig rearing).

Stove builders, on the other hand were chosen among:

1. Those willing to get trained in stove construction, and to work as BLN stove builders at the villages and their neighborhood after training;
2. Those having good health conditions to work, and the necessary basic education to understand the working of an improved cook stove and to get the skills required, in particular those already having some masonry/stonework skills; and
3. Those enjoying the trust of local farmers.

Based upon the above and in collaboration with the relevant village heads and elders, the lists of households in which model cook stoves would be constructed and of people to be trained in BLN stove building were drawn up.

The training comprised two (2) modules, one dealing with the working of an improved cook stove, and the other with the construction of the stoves themselves. In previous campaigns when much more time was available, arrangements were made to explain the functioning of a stove for one day. But under the present conditions, that module has been shortened to the essential to gain time for practical work.

The trainees have been eager to learn and quick to understand and get the skills, in particular Ama Kri living at Lak Dong and Mason at Ba Yang; they have been rated as very good learners. After only six (6) days, some four (4) villagers have been trained in BLN cook stove building for them to work as both stove builders and instructors in the villages. At the same time a local officer, Mr. Y San, an agriculture engineer working in the Agriculture Department of Lak district, has been trained in-service in conducting the process of BLN cook stove introduction, in planning it and monitoring the related activities for the achievement of satisfactory results.

The practical training has resulted in the construction of 10 model BLN cook stoves in households of the two (2) villages of Lak Dong and Ba Yang at Krong No commune (See List of Households in Appendices).

4. RECOMMENDATIONS FOR FURTHER EXTENSION OF IMPROVED COOK STOVES AT DAK PHOI AND KRONG NO

After the field checks at Dak Phoi and the assessment made at Lak Dong and Ba Yang (of Krong No commune), the officer in charge in collaboration with Mr. Tran Huu Nghi, a member of Mekong River project, has come up with the following recommendations:

For the next campaigns in the villages of Krong No commune and elsewhere it is not advisable for the Project to shoulder all the cost incurred as done in Dak Phoi at the beginning; it is time now to adopt the policy of "working together with local people", with the Project sharing the costs of the main building materials such as bricks, cement, lime and those required for the training of stove builders, and the local farmers contributing their resources to other inputs such as sand and unskilled labor.
The approaches as suggested have been discussed with village heads and elders and the newly trained cook stove builders and have received consensus. In fact the 10 cook stoves built during this campaign have been constructed following the above-mentioned arrangements.

Other recommendations / suggestions read as follows:

- The household in which a BLN stove is to be constructed shall pay the wage of one (1) man-day per stove following various procedures prevailing in the area, through either labor exchange for land farming and other work, or in cash/kind (using rice or maize) as agreed upon.
- For very poor households having no resources to pay, the village authorities concerned shall propose an assistance from the Project, which should be discussed openly in community meetings so to secure solidarity in the community between its members.
- On the other hand, the Project, for the purpose of encouraging stove builders to work actively for BLN extension, is requested to pay the builders an extra amount of VND 6,000 - 10,000 per stove constructed (or 20 -30 per cent of the cost incurred for the construction of a stove at Dak Phoi).

The extra money will not only act as an incentive urging the builders to yield higher performance in their work but also as a compensation to the extra capacity and skill the builders have got. (In fact the trained builders look able-bodied and have produced higher work output than many other local farmers).

The so-called policy of "working together with local people" appears to yield more than one advantage:

- The BLN cook stoves constructed in the households of farmers have come into existence partly through their own contributions and resources; as a result they are likely to take better care of the stoves, because - as the saying goes - people always make a fuss of their own children and resources.
- The money saved can be used for furthering the extension of BLN cook stoves first in Dak Phoi and Krong No communes then to other far-away areas within the Mekong River basin to help farmers there save fuels and time in their daily meals cooking, improve their local environments and their forest resource management, and not the least remove the drudgery of women and children often being involved in the collection of fuels from remote forested escarpments.

LIST OF HOUSEHOLDS TO BUILD BLN STOVES

<table>
<thead>
<tr>
<th>A Ma Kri</th>
<th>Lac Dong village</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ma Krang</td>
<td>-</td>
</tr>
<tr>
<td>Ma Duyen</td>
<td>-</td>
</tr>
<tr>
<td>MaThan</td>
<td>-</td>
</tr>
<tr>
<td>Ma Quyet</td>
<td>-</td>
</tr>
<tr>
<td>Y Krong</td>
<td>-</td>
</tr>
<tr>
<td>Ma Nam</td>
<td>Ba Yang village</td>
</tr>
<tr>
<td>Ma Son</td>
<td>-</td>
</tr>
<tr>
<td>Ma Bin</td>
<td>-</td>
</tr>
<tr>
<td>Ma Riu</td>
<td>-</td>
</tr>
</tbody>
</table>

November 13, 1997