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Promotion of the Efficient Use of Renewable Energies in Developing Countries

Visit Community Report

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List of Acronymes

CDEA	Community Development and Environment Association
DGS	Deutsche Gesellschaft für Solarenergie
NUOL	National University of Laos
SHS	Solar Home System
VOPS	Village off grid Promotion and Support

Etc.

1 Introduction

As the REEPRO pilot community selection, it is very important to visit five communities and select one, potential community for implementing as a pilot community project in Laos. In selection will base on the community that has no access to electricity yet, and it also has highly potential in development of renewable energy as well as to the community development. Therefore project team had initiatively visited Ban Mane (or Mane village) which is located in Mahaxay district, Khammoune province. It is one of villages interested and registered for Solar Home System (SHS) as a highest percentage 89,01% of totalling 182 households required use of SHS from VOPS project compared to other 4 villages.

Figure 1 Khammoune province



Khammoune is located in the middle part of Laos that share bordering bordering Bolikhamxay and Savannakhet Provinces. Khammouane covers about 16,000 square kilometers and has a population of approximately 330,000, mostly engaged in agriculture. The Mekong River Valley in the west is framed by the Annamite Mountain Range which separates Khammouane from Vietnam to the east. There are 9 district, including with Thakhaek, Mahaxay, Nongbok, Hinboun, Nhommalath, Bualapha, Nakai, Xebangfay and Xaybouathong.

1.1 Objective of Visiting Community:

- To visit and see the most potential community in development of renewable energy as well as community development, leaded to finally decision, as an available natural resources, high of community cooperation; long expand of electricity line and no electricity access.

1.2 Project team

On 3 to 4 January 2008 the project team that involved with in visiting;

- Mrs. Antje Klauss-Vorreiter and Dr. Kai Jan Kai Dobelmann, International Solar Society, German Section (GDS),
- Mr. Khampha and Mr. Bouangern, Community Development and Environmental Association (CDEA) and,
- Dr. Khamphone Nanthavong, National University of Laos (NUOL) had started visiting villages in Khammouane province, where one of interesting villages is Ban Mane in Mahaxay district, to see a potential development of project activities, along with community's long sustainability.

2 Description of Mane village

2.1 Location

Mane village is located far from Mahaxay central district about 25 km and 15km from main road to village, with the horrible road condition access to the village. It is old and traditional villages which settled around 200 years ago, along with isolated village no bordering with other villages.

Figure 2 Road access to village (15km)



This road is able to access only in drying season but in rainy season is cut off from outside. However, it is difficult for communication.

2.2 Social and economic

There are 182 households which comprising of 1128 population (588 women). They are 100% occupying on agricultural practice, and there are only 72 (39%) of totaling hand tractors use for farming. Otherwise, they almost base on traditional methods, use water buffalos. There is one secondary school (from grade 1-5) which children attended school about 90% from total, and others has help parents working in a farm or no receive supporting from family. For the income generation which mainly got from rice sold and husbandry sold averages highest 20.000LAK/month (15 EUR/month) and lowest 50.000LAK/month (4EUR/month). In which its price of rice sold based on market price 200LAK/kg (1.2EUR/kg).

Figure 3 Secondary School, children sawing timber



2.2.1 Energy use and natural resource

80% of totaling 182 households uses torch (oil from tree mixed with dried wood), and other sometimes uses lantern. With high number use of torch because of the difficulty of road access in rainy season, they therefore use torch. Otherwise the high cost of fuel; gasoline 11000LAK/L (0.8EUR/L) and diesel 10.000 LAK/L (0.7EUR/L) and the average spent 2L/month estimated. There are 6 rice mills which only use rice husking not for electricity or TV, radio, CD at all. CDs, radio and TV are used battery which it cost for charging 15000LAK/time (1.14EUR/time) excluding fuel cost for motorbike 15km from village to main road.

Figure 4 Lantern use lighting and battery use for CDs



Its area covers about 1200km² excluded more 15ha of cultivated areas and there is flat river nearby the villages (1200m far). There is the totaling number of husbandry; 218 cows, 182 water buffaloes, 236 pigs averaged 5 pigs/household, and animal raised most bases on traditional methods.

2.3 Plan of development villages

On the future plan for development of villages as priorities;

1. Improve roads access to be better condition
2. Improve the old water well and water supply
3. Get access of electricity

Mane village is one of target villages in Mahaxay district of VOPS project, based on the VOPS plans about 166 household or SHS units of total 182 households which will be installed in Mane village.

2.4 Challenge of project

Figure 5 Fruit tree around households



Because SHS project will nearly operate in March, REEPRO project couldn't prepare and provide as a training level 3 based on project initiate plan. Otherwise, from observation vil-

lage there are pretty of fruit trees in which will cause some difficulty for installing SHS on the top roof that will hide the sun light. Otherwise, the VOPS plans installation of more than 400 systems in 5 villages in 1 year completed and it become a challenge.

3 Recommendation

As recommended of REEPRO teams visited for some solution of installing SHS options to avoid cutting down fruits trees and achieve plan

1. Install in the house but we have to cut tree down all households which will consume time
2. Install one SHS station (220v) and connect line to households wanted
3. Install one battery charging station and users can bring battery to charge in one station
4. Install individual battery charging station where sun light can get such field of school, rice field. In the case the users have to buy two battery for switched charging

4 References

Mr. Khamphat Soulinthon, manager, Individual Electricity Provider, Khammouane province,
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