



Participants assessing their natural resource use and energy consumption for the previous year 2010 (Shane Stevenson (Camp Kuhiston, Dushanbe))

Participatory Cost Benefit Analysis for Energy Efficiency Measures (ຕາຈິກິສະຕານ)

ຄຼີອະທິບາຍ

The use of a cost benefit analysis approach to assess the financial and natural resource needs for energy consumption at community level, and further attribute costs to SLM practices to meet this need, and subsequently improve rural livelihoods.

Aims / objectives: To collate quantitative data on the amount of energy used within the community in terms of financial expenditure and natural resource use. Through the use of a participatory workshop the attendees determine which natural resources are being utilised, in the form of wood, bush and organic materials. The objective is to use this quantitative data to encourage through cost benefit demonstrations, the implementation of Sustainable Land Management technologies to reduce the amount of natural resources exploited, and the expenditure on energy consumption.

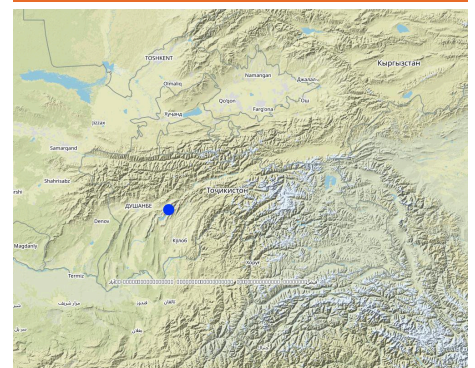
Methods: An energy specialist organises a community based workshop with up to 15 participants. In the 2-3hr workshop the participants complete, under guidance, a pre prepared flip chart on energy use (electric, tapak, wood, coal, brush). The information is collected in financial expenditure and weight. Once the energy assessment is completed a subsequent discussion is encouraged on how to more effectively meet this need at a community level. The moderator also takes this opportunity to demonstrate several technologies including solar lights, improved stove design, thermal insulation, and the development of energy forests. The information is collated and used as a baseline assessment for evaluation of implemented technologies.

Stages of implementation: The stages of implementation are relatively straight forward. First you must select the community that you wish to work in, and inform a community mobiliser, in this case the head of the village that you wish to conduct a 2-3 hr workshop for up to 15 participants, and that the participants must be the person in the households who is responsible (or has knowledge of) the energy use within the household. The moderator prepares a flip chart with a table of fuel types used in the village and uses this as the basis of the workshop to extract information on energy use within the community. Once the information is collated, a discussion is encouraged to review the information and devise means by which this amount can be reduced. The moderator then takes this opportunity to demonstrate several low cost energy efficiency measures that may appeal to the community.

Role of stakeholders: The community are expected to attend the workshop, engage in active discussions on their energy use and ways in which it can be reduced. The workshop needs to be supported by the local government, this provides gravitas, and a platform to launch the approach in other communities. The final stakeholder is the implementer, in this case a local NGO who organises the workshop, demonstrates the technologies and provides ongoing support during the implementation of the technologies.

Other important information: It is important to understand the spending habits of the participants, if they are used to spending on a day to day basis and not used to financial planning, it is important to recognise this fact in the implementation of the technology.

ສະຖານທີ່



ສະຖານທີ່: Nurobod, Shaftuti Bolo, RRS, ຕາຈິກິສະຕານ

ການຄັດເລືອກພື້ນທີ່ ທີ່ອີງໃສ່ຂໍ້ມູນທາງພູມິສາດ
• 69.51083, 38.50198

ວັນທີເລີ່ມຕົ້ນ: 2011

ປີຂອງການສິ້ນສຸດ: 2012

ປະເພດຂອງແນວທາງ

- ☐ ພູມິສາດ / ທຸກໆປະເພດ
- ☐ ການລົງທຶນ / ພາຍໃນ / ນະຄອນລັດ / ນະຄອນລັດ
- ☐ ພາຍໃນ / ຄຸນນະພາບ / ຜົນກະທົບ



Participants assessing their natural resource use and energy consumption for the previous year 2010. (Shane Stevenson (Camp Kuhiston, Dushanbe))



Participants assessing their natural resource needs for heating, cooking and lighting. (Shane Stevenson (CAMP Kuhiston))

ໝາຍເຫດ / ຂໍ້ມູນ ນວທຸກ ລະຫວ່າງ ລະຫວ່າງ ລະຫວ່າງ ລະຫວ່າງ ລະຫວ່າງ

ເປົ້າໝາຍ / ຈຸດປະສົງໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

The Approach focused mainly on SLM with other activities (Energy Conservation)

There were two main objectives to this approach, the first was to raise awareness on energy use with respect to types of energy, cost and accessibility, and to use this as a platform for encouraging the implementation of low cost energy efficiency measures in the community. The second was to collate baseline data to allow an assessment of how the implemented technologies impacted on energy (and by association natural resources) use and how the expenditure and amounts were reduced in real terms.

The SLM Approach addressed the following problems: This approach was designed to make the participants evaluate and assess the amount of money, time and effort that goes into meeting their energy needs. It is also a clear and precise way to collate information on the amount of natural resources that are been used to meet this need. These natural resources can be in the form on bushes, wood, dung, cotton sticks etc. These resources are being redirected from other purposes such as construction, but also as natural fertilisers, mulch and compost. This directly impacts on agricultural production, household finance and ultimately livelihoods. The reduction in resource use can reduce the risk of conflicts between villages, and reduce pressure on natural resources allowing them to rejuvenate, and increase soil fertility and quality.

ເງື່ອນໄຂທີ່ສະໜັບສະໜູນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

ເງື່ອນໄຂທີ່ເຊື່ອງຊ້ອນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

- **ສັງຄົມ / ວັດທະນະທຳ / ມາດຕະຖານ ແລະ ຄຸນຄ່າທາງສາສະໜາ:** Rural communities emerging from the soviet system have very low business awareness. Even when there are seemingly obvious savings to be made in finance and natural resources there is a lack of appreciation of the potential savings that could be made. Treatment through the SLM Approach: Discussion on the issue of savings in time, money and resources helps promote better understanding. The concept of pay back had to be repeatedly explained.
- **ວຽກ, ມີກຳລັງຄົນ:** There are times of year when the village participants are otherwise distracted by sowing seeds, harvesting, Ramadan etc. Treatment through the SLM Approach: The most effective time would be at the end of the winter period when resources are scarce, money constraints are more apparent and energy use is a household priority issue.
- **ອື່ນໆ:** In many of the households the men are working away in Russia. This leaves the women in charge of the household, however, many of the energy costs are organised by the men before they leave or on their return. Treatment through the SLM Approach: Many of the labour migrant leave in the springtime, therefore it would be more effective to organise the workshops at the end of the winter before they leave.

ການມີສ່ວນຮ່ວມ ແລະ ລະຫວ່າງ ຂອງ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ວຽກງານສູນກາງ

ພາລະບົດບາດຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ທີ່ມີສ່ວນຮ່ວມໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

ແມ່ນໃຜ / ພາກສ່ວນໃດ ທີ່ເປັນເຈົ້າການ ໃນການຈັດຕັ້ງປະຕິບັດ ວິທີການ?	ລະບຸ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ	ຜົນລະບາ ບົດບາດ ໜ້າທີ່ ຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ
ຜູ້ປຸງ / ຊຸມ / ນະຄອນ / ຊຸມຊົນ / ຊຸມຊົນ	A representative from each household in the community was involved. Women hold a traditional role in the society and did not participate in the workshops. The men pay all the bills and see their role as that of the provider for the family. The entire village suffers from mass labour migration, with nearly all households reliant upon remittances from Russia.	
ຜູ້ປຸງ / ວຽກງານນະຄອນ / ທຸກໆ / ທຸກໆ / ທຸກໆ		International support and finance was provided for this approach, however, the questionnaire was developed in collaboration between national and

ອົງການທີ່ເປັນຕົວແທນໃນການຈັດຕັ້ງປະຕິບັດ
CAMP Kuhiston

ບໍ່ມີ
 ການບໍ່ມີ
 ການຂຽນ
 ການສູນ
 ການສູນ
 ການສູນ

they were active in the participation in the workshops and the collation of data.
Active in providing follow-up data to evaluate the success of the project.

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graph TD
    CK[CAMP KUHISTON] --> LG[LOCAL GOVERNMENT]
    LG --> ES[ENERGY SPECIALIST]
    ES --> CK
    ES <--> C[COMMUNITY]
  
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ການຕັດສິນ ໑໐ ດຍ

ຜູ້ຖືກ ຊີນຜູ້ ການລິ ອຸດົມຍຸດ ອາ
 ຜູ້ຖືກ ຊີນຜູ້ ການສະ ບສະ ນ ດຍ ອຸ ວຊານານນ ຊີນ ບບ
 ຍາ
 ພາກສ່ວນກ ວ ອຸ ທັງ ັ ພສ່ວນ ັ ຂອງວິທຳ ບບສ່ວນຮັມ
 ຜູ້ ວຊານ ກິດຕິນ ການຄຸ ອາ ທີນ ບບຍາ ມຫຼານຕິດຕາມປັດສາຫາລັ ັ
 ຜູ້ ຊີນ
 ຊີ ວຊານ ພະ ການຄຸ ອາ ດິນ ບບຍາ ຜູ້ ວ
 ນັກການ ອາ ຜູ້

ກ້າມສິນ ຈົມມະພຸດຖານ

ປະ ມຸ ອກກະສານຄວາມສຸກ ວັດ ການຄຸນຄອງ ທຸກ ບາບຄຸນຄຸນ (ຫ້າຖານທຸ ຊຸຍ ນການກ້າມສິນ ກ ຜູ້ ສູ້ ຈາກການຄຸນຄອງ ປະສົບການສຸກ ລະຄວາມຄິດ ທຸກ ບາບຄຸນຄຸນ ປະກະສານ

ການສ້າງຄວາມສາມາດ / ການຝຶກອົບຮົມ
ການປຶກສາ
ສະຖາບັນການສ້າງຄວາມ
ຕິດຕາມກວດກາ
ການຄຸ້ມຄອງ

ຮູບແບບການຝຶກອົບຮົມ

- ການຝຶກສູງສູງ
- ຕົວຕົວ
- ອົງການສູນກາງ
- ກອງປະຊຸມ
- ຫ້ອງຮຽນ

The training included raising awareness on stove adaptation, indoor two room stove construction, solar power, and low cost thermal insulation for rooms.

