



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 (Tayikistán)

DESCRIPCIÓN

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.

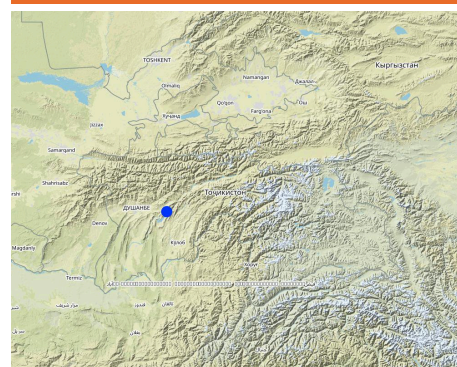
Methods: An energy specialist organises a community based workshop with up to 15 participants. In the 2-3hr workshop the participants complete, under guidance, a pre prepared flip chart on energy use (electric, tapak, wood, coal, brush). The information is collected in financial expenditure and weight. 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.

LUGAR



Lugar: Nurobod, Shaftuti Bolo, RRS, Tayikistán

Georreferencia de sitios seleccionados

- 69.51083, 38.50198

Dato de inicio: 2011

Año de conclusión: 2012

Tipo de Enfoque

- ☐ tradicional/ local
- ☐ iniciativa local reciente/ innovadora
- ☒ proyecto/ basado en un programa



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))

METAS DEL ENFOQUE Y ENTORNO FACILITADOR

Propósitos/ objetivos principales del Enfoque

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.

Condiciones que facilitan la implementación de la/s Tecnología/s aplicadas bajo el Enfoque

Condiciones que impiden la implementación de la/s Tecnología/s aplicadas bajo el Enfoque

- **Normas y valores sociales/ culturales/ religiosos:** 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.
- **Carga de trabajo, disponibilidad de mano de obra:** 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.
- **Otros:** 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.

PARTICIPACIÓN Y ROLES DE LAS PARTES INTERESADAS INVOLUCRADAS

Partes interesadas involucradas en el Enfoque y sus roles

¿Qué partes interesadas/ entidades implementadoras estuvieron involucradas en el Enfoque?	Especifique las partes interesadas	Describa los roles de las partes interesadas
usuarios locales de tierras/ comunidades locales	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.	
especialistas MST/consejeros agrícolas		International support and finance was provided for this approach, however, the questionnaire was developed in collaboration between national and

		international staff to ensure relevance and applicability to the context.
ONG	CAMP Kuhiston	

Agencia líder
CAMP Kuhiston

Involucramiento de los usuarios locales de tierras/ comunidades locales en las distintas fases del Enfoque

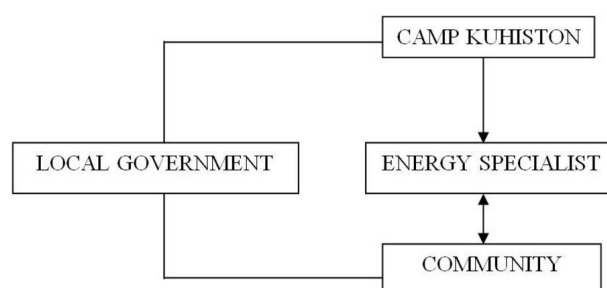
	ninguno	pasivo	apoyo externo	interactivo	auto-movilización
iniciación/ motivación	✓				
planificación	✓				
implementación				✓	
monitoreo y evaluación			✓		
Research	✓				

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.

Flujograma

The project employs an energy specialist to conduct a participatory workshop. The process is supported by the local government.



Autor: S. Stevenson (CAMP Kuhiston, Dushanbe)

La toma de decisiones en la selección de Tecnología MST

Las decisiones fueron tomadas por

- ☐ solamente usuarios de tierras (autoiniciativa)
- ☒ principalmente usuarios de tierras con el apoyo de especialistas MST
- ☐ todos los actores relevantes, como parte de un enfoque participativo
- ☐ principalmente por especialistas MST en consulta con usuarios de tierras
- ☐ solo por especialistas MST
- ☐ por políticos/ líderes

La toma de decisiones se basa en

- ☐ la evaluación de conocimiento MST bien documentado (la toma de decisiones se basa en evidencia)
- ☐ hallazgos de investigaciones
- ☐ la experiencia personal y opiniones (no documentadas)

APOYO TÉCNICO, FORTALECIMIENTO INSTITUCIONAL Y GESTIÓN DEL CONOCIMIENTO

Las siguientes actividades o servicios fueron parte del enfoque

- ☒ Construcción de capacidades / capacitación
- ☐ Servicio de asesoría
- ☒ Fortalecimiento institucional (desarrollo institucional)
- ☒ Monitoreo y evaluación
- ☒ Investigación

Construcción de capacidades/ capacitación

Se proporcionó capacitación a las siguientes partes interesadas

- ☒ usuarios de tierras
- ☐ personal de campo/ consejeros

Forma de capacitación

- ☐ en el contexto de trabajo
- ☐ de agricultor a agricultor
- ☐ áreas de demostración
- ☐ reuniones públicas
- ☒ cursos

Temas avanzados

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

Fortalecimiento institucional

Se fortalecieron/ establecieron instituciones

- ☐ no
☐ sí, un poco
☒ sí, moderadamente
☐ sí, mucho

en el siguiente nivel

- ☒ local
☐ regional
☐ nacional

Describe la institución, los roles y las responsabilidades, miembros, etc.

Tipo de apoyo

- ☒ financiero
☐ construcción de capacidades/ entrenamiento
☐ equipo

Detalles adicionales

The Jephcott Foundation financed local NGO CAMP Kuhiston to implement the approach.

Monitoreo y evaluación

socio-cultural aspects were regular monitored by project staff through observations; indicators: Observations of participants understanding of economic benefits. management of Approach aspects were ad hoc monitored by None through observations; indicators: international staff monitor the set up of the workshops and levels of participation. There were few changes in the Approach as a result of monitoring and evaluation: The timing of the workshops (i.e the time of year) will be changed to the end of the winter when energy use is more of a priority issue, e.g. cold weather, poor electric supply, lack of easily accessible natural resources There were no changes in the Technology as a result of monitoring and evaluation: None

Investigación

La investigación trató los siguientes temas

- ☒ sociología
☒ economía/ marketing
☐ ecología
☐ tecnología

CAMP Kuhiston collated data on energy usage and by association natural resource use. In addition to the participatory workshop CAMP conducted a household questionnaire to assess the suitability of different energy efficiency technologies, and the social vulnerability of the inhabitants, to identify the most effective households to implement energy saving activities.

Research was carried out on-farm

FINANCIAMIENTO Y APOYO MATERIAL EXTERNO

Presupuesto anual en dólares americanos para el componente MST

- ☒ < 2,000
☐ 2,000-10,000
☐ 10,000-100,000
☐ 100,000-1,000,000
☐ > 1,000,000

Precise annual budget: n.d.

Approach costs were met by the following donors: international non-government (Jephcott Foundation, UK): 100.0%

Los siguientes servicios o incentivos fueron proporcionados a los usuarios de las tierras

- ☐ Apoyo financiero/material proporcionado a los usuarios de tierras
☒ Subsidios para insumos específicos
☐ Crédito
☒ Otros incentivos o instrumentos

Posters and stationery

parcialmente financiado
totalmente financiado

Metal sheets, demonstration material

El trabajo de los usuarios de las tierras fue

- ☐ voluntario?
☐ comida por trabajo?
☐ pagado en efectivo?
☐ recompensado con otro tipo de apoyo material?

Otros incentivos o instrumentos

The Jephcott Foundation financed local NGO CAMP Kuhiston to implement the approach.

ANÁLISIS DE IMPACTO Y COMENTARIOS DE CONCLUSIÓN

Impactos del Enfoque

¿El Enfoque ayudó a los usuarios de tierras a implementar y mantener Tecnologías MST?

The extent to which it will reduce the amount and type of natural resource use will be re assessed at the end of the project. It is estimated that there will be a 20% reduction.

No
☐ sí, un poco
☒ sí, moderadamente
☐ sí, mucho

¿El Enfoque empoderó a grupos en desventaja social y económica?

The approach was implemented in a socially disadvantaged area.

☒ ☐ ☐

Motivación principal del usuario de la tierra para implementar MST

- ☐ producción incrementada
- ☒ incremento de la renta(bilidad), proporción mejorada de costo-beneficio
- ☐ reducción de la degradación de la tierra
- ☐ reducción del riesgo de desastres naturales
- ☐ carga de trabajo reducida
- ☐ pagos/ subsidios
- ☐ reglas y reglamentos (multas)/ aplicación
- ☒ prestigio, presión social/ cohesión social
- ☐ afiliación al movimiento/ proyecto/ grupo/ redes
- ☐ conciencia medioambiental
- ☐ costumbres y creencias, moral
- ☐ conocimiento y capacidades mejorados de MST
- ☐ mejoramiento estético
- ☐ mitigación de conflicto
- ☒ well-being and livelihoods improvement

Sostenibilidad de las actividades del Enfoque

¿Pueden los usuarios de tierras sostener lo que se implementó mediante el Enfoque (sin apoyo externo)?

- ☐ no
- ☐ sí
- ☒ incierto

CONCLUSIONES Y LECCIONES APRENDIDAS

Fortalezas: perspectiva del usuario de tierras

- Quick and simple way to put an economic cost on fuel use.

Fortalezas: punto de vista del compilador o de otra persona recurso clave

- The approach needs minimal resources and is relatively easy to implement. (How to sustain/ enhance this strength: It would be easy to replicate and easy to teach others how to undertake the approach.)
- It makes participants evaluate what they need to run their households, and puts an economic and natural resource value on the process.
- It helps focus the participants on how much time, effort and money are being used to run their household. (How to sustain/ enhance this strength: To follow up, to see how effective the implementation of the technologies was in reducing their energy needs.)
- The scope of the level of participation is flexible and can be adapted to the contexts. It allows for direct comparison for before and after the implementation of the technology. (How to sustain/ enhance this strength: It could be further developed to put an economic value on SLM technologies.)

Debilidades/ desventajas/ riesgos: perspectiva del usuario de tierras cómo sobreponerse

Debilidades/ desventajas/ riesgos: punto de vista del compilador o de otra persona recurso clave cómo sobreponerse

- It requires participants to have good quality data available to be effective. Complete follow up visits to households to check data quality.

REFERENCIAS

Compilador

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Editors

Revisado por

David Streiff
Alexandra Gavilano
Joana Eichenberger

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Personas de referencia

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Mirzo Pochoev - Especialista MST

Descripción completa en la base de datos de WOCAT

https://qcat.wocat.net/es/wocat/approaches/view/approaches_2442/

Datos MST vinculados

Technologies: Two Room Stove https://qcat.wocat.net/es/wocat/technologies/view/technologies_1518/

Technologies: Energy efficiency measures to increase the application of organic fertilisers.

https://qcat.wocat.net/es/wocat/technologies/view/technologies_1050/

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Proyecto

- Pilot Program for Climate Resilience, Tajikistan (WB / PPCR)

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