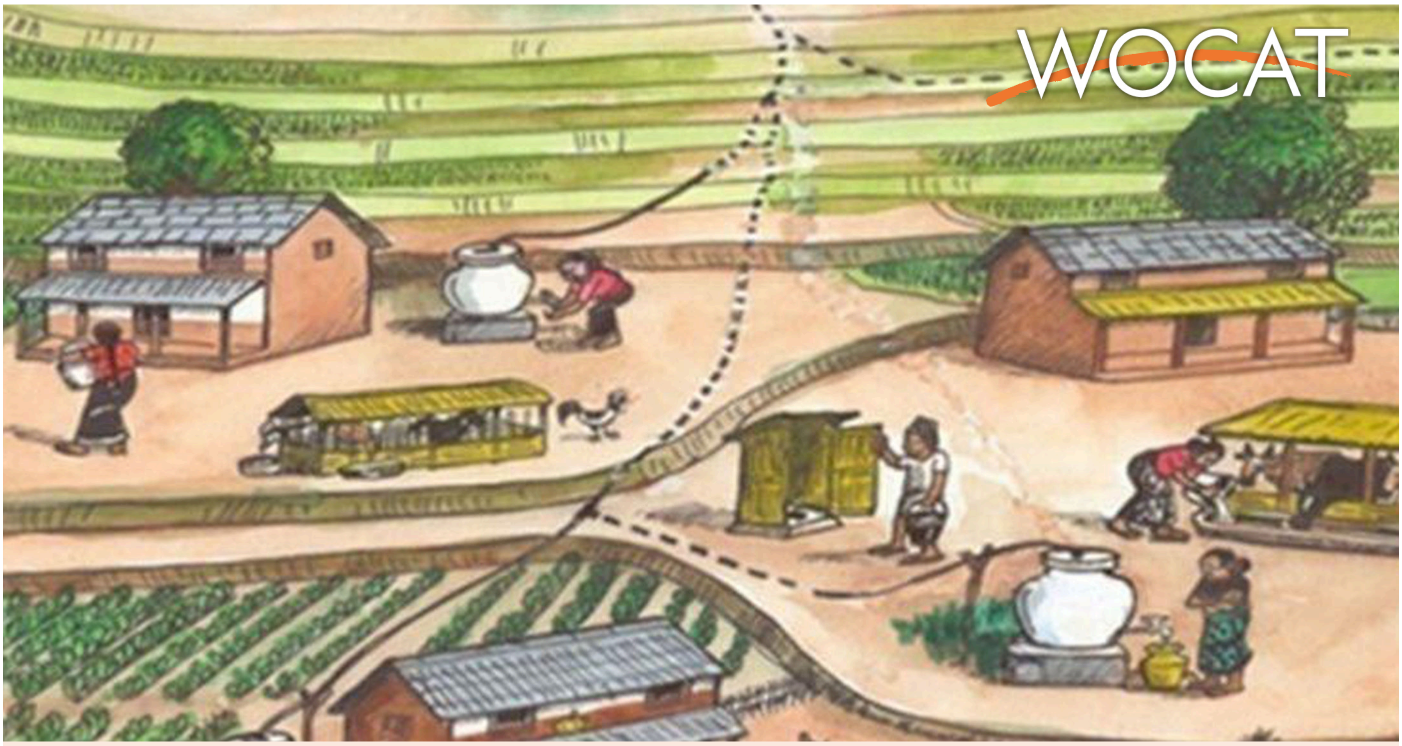


Diagrammatic illustration of a one tank system where a single tank provides water both to the domestic tap stand and to fill up drip irrigation header tanks. (IDE/Nepal)

A multiple-use water system (ເນໂປ)

Bahu uddhasaya Pani prayog pranali (Main contributor: Parmananda Jha, IDE/Nepal)

ຄຳອະທິບາຍ

A multiple-use water system gives a community access to water for domestic use and water for crop irrigation.

Aims / objectives: A multiple-use water system (MUS) is a combined water facility that has proven useful as a means of providing drinking water and water for irrigation for smallholder farmers in the hilly areas of Nepal. Water is collected by gravity from a highland source into a holding tank and is shared by means of distribution lines, domestic tap stands, and irrigation off-take lines. It can also support application of micro-irrigation technologies (MIT) such as drip and micro sprinkler irrigation systems.

Methods: MUS is a community-managed system that caters mainly to smallholder landowners and marginal households in rural hilly areas. When properly implemented, it can help to alleviate poverty and increase food security for poor and marginalized groups. The first priority is to provide drinking water and water for domestic use to the community; any excess water is used for agriculture and irrigation.

Stages of implementation: The following points should be taken into consideration before a community establishes a MUS:
• The source of water should be clear of water-rights issues
• The water should be plentiful and of good quality
• There needs to be a sufficient drop in gradient between the source and the tank if the water is to be collected by gravity. If the drop is not sufficient, users should be prepared to consider lifting the water.
• The distance between the source and the village should be less than 3 km.
• The community should be ready to contribute unskilled labour as part of their contribution to the project.
• The community should be ready to put aside some funds for operational and maintenance costs; these funds can, in part, also be collected in the form of monthly users' fees.
• At least 70% of the water users should be ready to adopt micro-irrigation technologies (MIT) such as drip and sprinkler irrigation.

ສະຖານທີ່

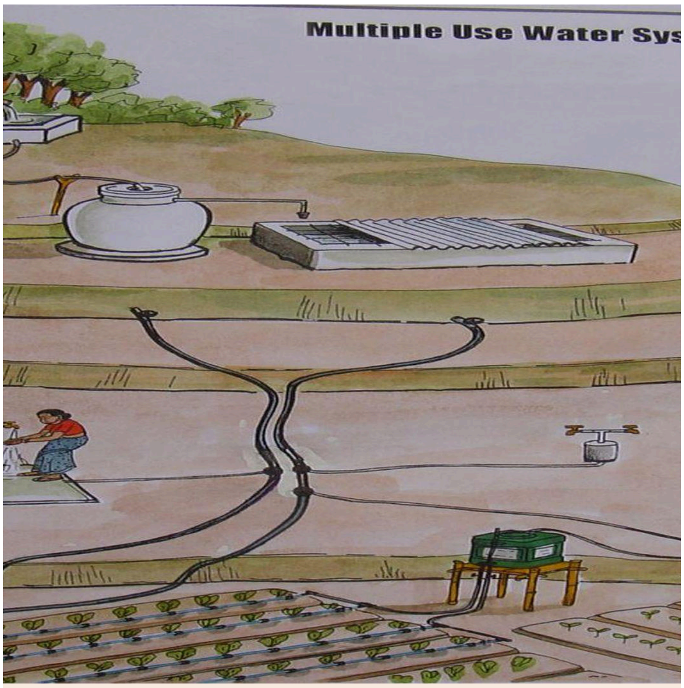
ສະຖານທີ່: Kaski, Lamjunj, Tanahun, Dhading, Sangjya, Gulmi, Arghakhanchi, Palpa, Udayapur, Pyuthan, Rolpa, Ruk, ເນໂປ

ການຄັດເລືອກພື້ນທີ ທີອີງໃສ່ຂໍ້ມູນທາງພູມິສາດ
- n.a.

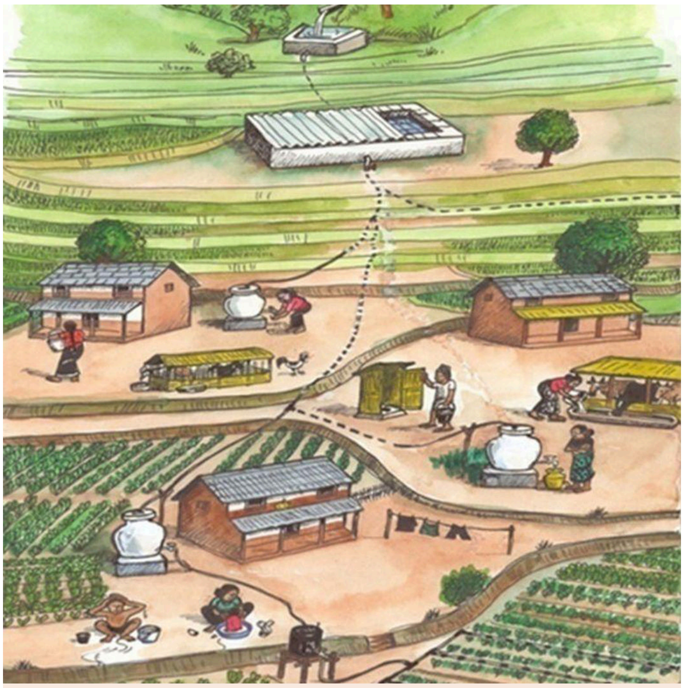
ວັນທີເລີ່ມຕົ້ນ: n.a.

ປີຂອງການສິ້ນສຸດ: n.a.

ປະເພດຂອງແນວທາງ
- ☐ ພື້ນເມືອງ / ທ້ອງຖິ່ນ
- ☐ ການລິເລີ່ມ ພາຍໃນ ປະເທດທີ່ຜ່ານມາ / ນະວັດຕະກຳ
- ☒ ພາຍໃຕ້ໂຄງການ / ແຜນງານ



Diagrammatic illustration of a two tank system where the source water is first collected into a tank which is dedicated for domestic use and spillover water is collected into for agricultural use ((IDE/Nepal))


Diagrammatic illustration of a one tank system where a single tank provides water both to the domestic tap stand and to fill up drip irrigation header tanks. (IDE/Nepal)

ເປົ້າ ໝາຍຂອງແນວທາງແລະ ການປົກປັກຮັກສາສິ່ງແວດລ້ອມ

ເປົ້າໝາຍ / ຈຸດປະສົງຫຼັກໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

The Approach focused mainly on other activities than SLM (Collect water from a small-scale source and distribute it both for domestic use and for the production of vegetables and high value crops)

• To provide a regular supply of water for domestic and agricultural use
• To supply water for micro-irrigation technologies such as drip and sprinkler irrigation systems
• To improve health and sanitation
• To help smallholder landowners improve their incomes and livelihoods as well as to adapt to climate change by having access to a regular supply of water so that they can grow crops regardless of changes
• To conserve water by using it more wisely

The SLM Approach addressed the following problems: The community needs to prioritize how it will partition the water for domestic use and for irrigation.

ເງື່ອນໄຂທີ່ສະໜັບສະໜູນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

- **ກ່ຽວກັບກົດໝາຍ (ສິດນຳໃຊ້ດິນ, ສິດນຳໃຊ້ນ້ຳ)**: The existing land ownership, land use rights / water rights helped a little the approach implementation: Since this approach uses small spring sources of water, there is usually only a minimum risk of conflict for water use. When the water source is registered with the local authorities, it helps to reduce potential conflicts over water rights between communities.

ເງື່ອນໄຂທີ່ເຊື່ອງຊ້ອນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

- **ສັງຄົມ / ວັດທະນະທຳ / ມາດຕະຖານ ແລະ ຄຸນຄ່າທາງສາສະໜາ**: Management and operation of system Treatment through the SLM Approach: Strong social mobilization is needed
- **ຄວາມຮູ້ກ່ຽວກັບການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ, ການເຂົ້າເຖິງການສະໜັບສະໜູນ ທາງດ້ານວິຊາການ**: Water supply insufficient to meet the demand Treatment through the SLM Approach: Increase the capacity of the storage tank
- **ອື່ນໆ**: The community often cannot agree whether to scale up the domestic or the irrigation water supply. Treatment through the SLM Approach: Concerned stakeholders need to confer and agree

ການມີສ່ວນຮ່ວມ ແລະ ບົດບາດຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງທີ່ມີສ່ວນຮ່ວມ

ພາລະບົດບາດຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ທີ່ມີສ່ວນຮ່ວມໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

ແມ່ນໃຜ / ພາກສ່ວນໃດ ທີ່ເປັນເຈົ້າການ ໃນການຈັດຕັ້ງປະຕິບັດ ວິທີການ?	ລະບຸ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ	ພັນລະນາ ບົດບາດ ໜ້າທີ່ ຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ
ຜູ້ນຳ ຊຸມຊົນ ທ້ອງຖິ່ນ / ຊຸມຊົນທ້ອງຖິ່ນ	This included women, men, dalits, janjati, brahmin, chhetri	
ຜູ້ຊ່ຽວຊານ ການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ / ທີ່ປຶກສາດ້ານກະສິກຳ		
ຄູອາຈານ / ນັກຮຽນ / ນັກສຶກສາ		
ອົງການຈັດຕັ້ງທີ່ບໍ່ຂຶ້ນກັບລັດຖະບານ	IDE Nepal	
ພະນັກງານຂັ້ນສູນກາງ (ຜູ້ວາງແຜນ, ຜູ້ສ້າງນະໂຍບາຍ)		

ການລວບລວມເອົາຜູ້ນຳໃຊ້ທີ່ດິນໃນທ້ອງຖິ່ນ/ຊຸມຊົນທ້ອງຖິ່ນ ໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ ແຕ່ລະໄລຍະ

	ບໍ່□ມ	ການບໍ່□□ລິຜົດ	ການສ□ຍເຫຼືອຈາກພາຍນອກ	ການຮ□ມມື	ການນ□□ ຫນ້າ	
ການເລີ□ຕົ□ / ແຮງຈູງ□ ຈ			■			The community comes to a consensus on their water needs. They identify a source that it is within the 3 km limit and investigate the water use rights.
ການວາງແຜນ				■		Technical aspects are dealt with; these include assessing the source to verify whether it has an adequate supply of water, assessing different schemes (for intake, take off, tap stands, and the like), preparing a design and estimating the cost, and discussing funding.
ການປະຕິບັດ				■		A users' committee is formed and the community provides unskilled labour. Technical assistance is provided by INGOs/NGOs.
ຕິດຕາມກວດກາ / ການປະເມີນຜົນ				■		The work is monitored by the users' committee but monitoring and evaluation of technical aspects are provided by INGOs/NGOs at different times during the project.
Research	■					

ແຜ່ນວາດສະແດງ

Organogram
(Adapted from
(Mikhail and Yoder 2008)

Procedural Steps of MUS Design and Implementation
Pre construction phase:
Project Initiation
Consultative meeting/application call
Scheme screening
Feasibility study and tentative costing
Scheme ranking and selection
Scheme appraisal
Formation of water users committee
Detailed engineering survey
Design and cost estimation
Approval/agreement
Preparation of work plan
Collection of fund for O & M and MIT kits
Agreement between WUC and contractor
Construction phase:
Procurement of materials and tools
Transmission section
Tanks, taps and distribution section
Testing
Post-construction phase:
Nomination of scheme operator and caretakers
Training: Scheme operation
Micro-irrigation
Project completion meeting/social audit
Evaluation phase:
Evaluation/feedback

ການຕັດສິນໃຈໃນການເລືອກເຕັກໂນໂລຢີ ການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ

ການຕັດສິນ□ ຈໂດຍ

- ■ ຜູ□ຄ□ □ີນຜູ□ດ□ຽວ (ການລິເລີ□ດ□ຍຕົນເອງ)
- ຜູ□ຄ□ □ີ□ີນຫຼັກ, ການສະ□ັບສະ□ ູນໂດຍຜູ□ຊ□ຽວຊານ ການນ□□ □ີ□ີນແບບຍືນຍົງ
- ພາກສ□ນກ□ວຂ□ອງທັງ□ົດ, ເປັນສ□ນ□ຶ□ ຂອງວິທີທາງແບບມີສ□ນຮ□ມ
- ຜູ□ຊ□ຽວຊານ ຫຼັກດ□ນການຄຸ□ມຄອງ ທີ່□ີນແບບຍືນຍົງ, ມີການຕິດຕາມປຶກສາຫາລືກັບຜູ□ຄ□ □ີ□ີນ
- ຊ□□ວຊານສະເພາະດ□ນການຄຸ□ມຄອງ ດິນແບບຍືນຍົງຜູ□ດ□ຽວ
- ນັກການເມືອງ / ຜູ□ຄ□

ການັດສິນ□ ຈົນພື□ຖານ

- ປະເມີນເອກະສານ ຄວາມຮູ□□ຽວກັບ ການຄຸ□ມຄອງ ທີ່□ີນແບບຍືນຍົງ (ຫຼັກຖານທີ□ຊ□ຍ□ ນການັດສິນ□ ຈ)
- ຜົນທີ□ □ັບ ຈາກການຄົ□ຄວ□
- ປະສົບການສ□ນບຸກຄົນ ແລະ ຄວາມຄິດເຫັນ (ທີ່□□□ມີເອກະສານ)

ການສະ□ັບສະ□ ູນັເຕໂນໂລຢີ, ການສ□ງຄວາມອາດສາມາດ ແລະ ການຄຸ□ມຄອງຄວາມຮູ□

ກິດຈະກຳ ດັ່ງລຸ່ມນີ້ ແມ່ນເປັນພາກໜຶ່ງຂອງແນວທາງ

- ■ ການສ□ງຄວາມສາມາດ / ການຝຶກອົບຮົມ
- ■ ການບ□ລິການ□ □□ປຶກສາ
- ■ ສະຖາບັນການສ□ງຄວາມເຂັ□ແຂງ (ການພັດທະນາອົງການຈັດຕັ້□)
- ■ ຕິດຕາມກວດກາ ແລະ ປະເມີນຜົນ
- ■ ການຄົ□ຄວ□

ການສ້າງຄວາມອາດສາມາດ / ຝຶກອົບຮົມ

ໄດ້ສະໜັບສະໜູນຝຶກອົບຮົມໃຫ້ແກ່ພາກສ່ວນກ່ຽວຂ້ອງດັ່ງລຸ່ມນີ້

- [ ] ຜູ້□□□ □ດິນ
- [x] ພະນັກງານພາກສະ□ □າມ/ ທີ່ປຶກສາ
- [x] Community

ຮູບແບບການຝຶກອົບຮົມ

- [ ] ການເຮັດຕົວຈິງ
- [x] ຕົວຕ□□
- [ ] ເນື້□ທີ່□ວນທົດລອງ
- [ ] ກອງປະຊຸມ
- [ ] ຫຼັກສູດ

ກວມເອົາຫົວຂໍ້

The approach provided training to the community through the users' committee, field staff, and an agricultural advisor. The local skilled body is trained during site visits. For the most part, information is transferred from farmer to farmer. Much of the training is hands-on.

ການບໍລິການທາງດ້ານການໃຫ້ຄໍາປຶກສາ

ໄດ້ຮັບການບໍລິການທາງດ້ານການໃຫ້ຄໍາປຶກສາ

- [ ] □ ນີ□ທີ□□ຂອງຜູ້□□□ □ດິນ
- [x] ສູນຄົ□ຄວ□

An advisory service is provided for the land/water users, but what is given is usually insufficient to help farmers learn new techniques such as micro-irrigation.

ຄວາມເຂັ້ມແຂງຂອງສະຖາບັນ

ສະຖາບັນ ໄດ້ຮັບການສ້າງຄວາມເຂັ້ມແຂງ

- [ ] ບ□□□ມ
- [ ] ມີ, □ ອີຍ□ □ງ
- [x] ມີ, ພ□ື່ມຄວນ
- [ ] ມີ, ຫຼາຍ

ໃນລະດັບດັ່ງລຸ່ມນີ້

- [x] ທ□ອງຖິ□
- [ ] ລະດັບພາກພື້□
- [ ] ແຫ່□ຊາດ

ອະທິບາຍສະຖາບັນ, ພາລະບົດບາດແລະຄວາມຮັບຜິດຊອບ, ສະມາຊິກ, ແລະອື່ນໆ.

ຮູບແບບການສະໜັບສະໜູນ

- [ ] ທາງດ□ນການເງິນ
- [x] ການສ□□ງຄວາມອາດສາມາດ / ການຝຶກອົບຮົມ
- [ ] ອຸປະກອນ

ລາຍລະອຽດເພີ່ມເຕີມ

village development committees, local governance and community development programmes (LCGDP), community forest user groups, youth clubs, and women's groups. Village development committees can invest in MUS and micro-irrigation technologies as specified in their guidelines.

ການຕິດຕາມ ແລະ ປະເມີນຜົນ

bio-physical aspects were regular monitored by project staff, land users through measurements; indicators: Project staff and land users routinely monitor the water source and other biophysical aspects to ensure that the approach remains sustainable. technical aspects were regular monitored by land users through observations; indicators: Commercial vegetable or high value crop production, micro irrigation, drinking water and sanitation socio-cultural aspects were ad hoc monitored through observations; indicators: MUS schemes help to improve sanitation and thereby reduce the incidence of waterborne diseases. They also help to improve livelihoods by making more fresh vegetables available both for immediate consumption and for sale. economic / production aspects were monitored through observations; indicators: MUS schemes help to reduce drudgery; the labour saved can be used in the production of vegetables and other high value crops. no. of land users involved aspects were monitored through measurements; indicators: From 10 to 80; on average 28 land users are involved in one MUS scheme management of Approach aspects were monitored through observations; indicators: Participatory approach with collaboration by government organizations, INGOs/NGOs and others to provide routine inspections and technical support There were no changes in the Approach as a result of monitoring and evaluation: The approach, as it is now put into practice, is a result of incorporating technological improvements that were originally identified through years of monitoring and evaluation. There were no changes in the Technology as a result of monitoring and evaluation

ການຄົ້ນຄວ້າ

ການວິ□ □ຈ□ຮັບການຮັກສາຫົວຂ□□□ປັ□

- [ ] ສັງຄົມ
- [ ] ເສດຖະສາດ / ການຕະຫຼາດ
- [ ] ລະບົບນິເວດ
- [x] ເຕັກໂນໂລຢີ

IDE has researched and implemented this type of MUS concept, system design, and methodology in Nepal since 2003; now other agencies also provide similar systems.

Research was carried out both on station and on-farm

ການສະ□ັບສະ□ □ູນທາງ□ນການເງິນ ແລະ ອຸປະກອນຈາກພາຍນອກ

ງົບປະມານປະຈໍາປີ ໃນກິດຈະກໍາ ການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ ທີ່ເປັນສະກຸນເງິນໂດລາ

- [ ] < 2,000
- [ ] 2,000-10,000
- [x] 10,000-100,000
- [ ] 100,000-1,000,000
- [ ] > 1,000,000

Precise annual budget: n.a.

Approach costs were met by the following donors: international non-government: 30.0%; local government (district, county, municipality, village etc): 26.0%; local community / land user(s): 44.0%

ການບໍລິການ ຫຼື ສິ່ງກະຕຸກຊຸກຍູ້ ດັ່ງລຸ່ມນີ້ ແມ່ນໄດ້ສະໜອງໂດຍຜູ້ນໍາໃຊ້ທີ່ດິນເອງ

- [x] ການສະ□ັບສະ□ □ູທາງດ□ນການເງິນ / ອຸປະກອນ ສະ□ □ອງ□ຫ້ຜູ້□□ທີ່ດິນ
- [ ] ຫຼຸດປັດ□ □າ□ເຂົ້□
- [ ] ສິນເຊື່□
- [ ] ສິ່□ຈູງ□ □ຫຼື ເຄື່ອງມືອື່□□

ເງິນສະໜັບສະໜູນອຸປະກອນ / ສະໜອງໃຫ້ຜູ້ຊົມໃຊ້ທີ່ດິນ

All MUS systems in Nepal are built by communities or community groups in collaboration with the government and NGOs. The fact that MUS systems provide multiple benefits is seen as a plus point for institutions looking to invest in community projects.

ການວິເຄາະຜົນກະທົບ ແລະ ສະຫຼຸບລວມ

ຜົນກະທົບຂອງການນໍາໃຊ້ແນວທາງ

ການຈັດຕັ້ງປະຕິບັດ ວິທີທາງ ສາມາດຊ່ວຍຜູ້ນຳໃຊ້ທີ່ດິນ ໃນການັດຕັ້ງປະຕິບັດ ແລະ ບໍາລຸງຮັກສາ ເຕັກໂນໂລຢີ ການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ
The approach supports sustainable land management because micro- irrigation technologies promote optimal use of water and help to retain nutrients in the soil. Similarly, the production of high value crops and vegetables further increases the fertility of the soil.

ການຈັດຕັ້ງປະຕິບັດ ວິທີທາງ ສາມາດສ້າງຄວາມເຂັ້ມແຂງ ທາງສັງຄົມ ແລະ ເສດຖະກິດບໍ
The wellbeing of marginalized and socio-economically disadvantaged groups improves significantly.

Did other land users / projects adopt the Approach?
Since the reduction in drudgery and the improvements in livelihoods are so great, many communities would like to implement this approach. INGOs/NGOs can help with the financial and technical aspects of implementation.

ສິ່ງກະຕຸກຊຸກຍູ້ໃຫ້ຜູ້ນຳໃຊ້ທີ່ດິນ ໃນການປະຕິບັດການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ

- [x] ການຜະລິດເພີ່ມຂຶ້ນ
- [x] ກຳໄລເພີ່ມຂຶ້ນ (ຄວາມສາມາດ), ການປັບປຸງຄ່າ ສ່ວນຮັບຜົນປະໂຫຍດ, ອັດຕາສ່ວນ
- [ ] ຫຼຸດຜ່ອນດິນເຊື່ອມໂຊມ
- [ ] ຫຼຸດຜ່ອນຄວາມສ່ຽງຂອງ ພິບັດ
- [ ] ການຫຼຸດຜ່ອນພາລະວຽກ
- [ ] ການຊຳລະເງິນ / ເງິນອຸດ ໜູນ
- [ ] ກົດລະບຽບແລະລະບຽບການ (ລະອຽດ) / ການບັງຄັບໃຊ້
- [ ] ກຽດສັກສີ, ຄວາມກົດດັນທາງສັງຄົມ / ການຕິດຕໍ່ພົວພັນທາງສັງຄົມ
- [ ] ລວມເຂົ້າກັນກັບການເຄື່ອນໄຫວ ໂຄງການ / ກຸ່ມ / ເຄືອຂ່າຍ
- [ ] ຄວາມຮັບຮູ້ທາງສິ່ງແວດລ້ອມ
- [ ] ພາສີ ແລະ ຄວາມເຊື່ອຖື, ສົມບັດສິນທຳ
- [ ] ການປັບປຸງ ຄວາມຮູ້ແລະ ຄວາມສາມາດ ຂອງການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ
- [ ] ການປັບປຸງຄວາມງົດງາມ
- [ ] ການຫຼຸດຜ່ອນຂໍ້ຂັດແຍ່ງ
- [x] well-being and livelihoods improvement

ຄວາມຍືນຍົງຂອງການຈັດຕັ້ງປະຕິບັດກິດຈະກຳຂອງແນວທາງ
ຜູ້ນຳໃຊ້ທີ່ດິນ ສາມາດຈັດຕັ້ງປະຕິບັດຕາມແນວທາງ ເອງບໍ (ໂດຍປາດສະຈາກການສະໜັບສະໜູນຈາກພາກສ່ວນພາຍນອກ)?

- [ ] ບໍ່ແມ່ນ
- [x] ແມ່ນ
- [ ] ບໍ່ແນ່ນອນ

Since the approach was requested by the community as a whole, they all have a vested interest in seeing that it remains sustainable. When technical support is needed, it can be obtained from the concerned agencies.

ບົດສະຫຼຸບ ແລະ ບົດຮຽນທີ່ ໄດ້ຮັບ

ຄວາມເຂັ້ມແຂງ: ທັດສະນະມູມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ

ຄວາມເຂັ້ມແຂງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ້ອນຂໍ້ມູນເອງ

- A reliable water supply for both the domestic and irrigation needs of hill farmers (How to sustain/ enhance this strength: The continued involvement of the community, the government, and assisting INGOs/NGOs.)
- The MUS is a simple gravity system that does not require either sophisticated equipment or training. (How to sustain/ enhance this strength: Continue to investigate how it can be simplified even further)
- A MUS system has a minimum lifespan of ten years and is easy to install even in remote areas. (How to sustain/ enhance this strength: Continue to investigate how it can be improved even further)
- MUS is well suited to the dual purpose use of water for both domestic and agricultural use. (How to sustain/ enhance this strength: Continue research and development to see how it can be improved even further.)

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສ່ຽງ: ທັດສະນະມູມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ ວິທີການແກ້ໄຂແນວໃດ

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສ່ຽງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ້ອນຂໍ້ມູນເອງວິທີການແກ້ໄຂແນວໃດ

- Installation costs can be a challenge for very poor communities. It can only irrigate small areas (0.1-0.15ha). Installation costs can usually be recovered within 1 year when the irrigation water is used to produce high value crops.
- The intake and reservoirs need to be inspected regularly. Either devise a means to ensure that inspections are conducted regularly or find a system that requires fewer inspections
- Reservoir tanks and intake pipes can deteriorate over time and pipes and joints can start to leak. Local skilled labour can be employed to carry out needed repairs. Pipes and fittings should be checked regularly. Routine inspection and maintenance are essential.
- Costs can be high when imported materials are needed for repair and maintenance. At the outset, some money needs to be set aside for operation and maintenance costs; additional funds should be collected by charging monthly users' fees.

ເອກກະສານອົງອີງ

ການລວບລວມ
Shreedip Sigdel

Editors

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ບຸກຄົນທີສຳຄັນ

Shreedip Sigdel (shreedip.sigdel@icimod.org) - ຜູ້ຊ່ຽວຊານ ດ້ານການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ
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ການບັນຍາຍລາຍລະອຽດ ໃນຖານຂໍ້ມູນ ຂອງ WOCAT

https://qcat.wocat.net/lo/wocat/approaches/view/approaches_2532/

ຂໍ້ມູນການເຊື່ອມໂຍງຂໍ້ມູນການຄຸ້ມຄອງການນຳໃຊ້ດິນແບບຍືນຍົງ

n.a.

ເອກກະສານ ແມ່ນໄດ້ອ້ານວຍຄວາມສະດວກໂດຍ

ສະຖາບັນ

- ICIMOD International Centre for Integrated Mountain Development (ICIMOD) - ເນໂປ
- iDE Nepal (iDE Nepal) - ເນໂປ

ໂຄງການ

- n.a.

ການອ້າງອີງທີສຳຄັນ

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