



A farmer-technician interaction programme; holding such programmes before implementing new technologies builds farmers confidence in the technology. (PARDYP)

Improving terraces with farmers (ເນໂປ)

Kisansangai gara sudhar (Nepali)

ຄຼີອະທິບາຍ

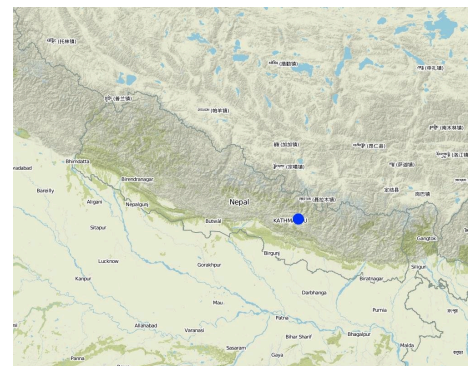
Participatory action research with multiple stakeholders for the demonstration and extension of improved rainfed hill terraces in Nepal

The traditional farming practices employed on steep sloping land in Kubinde village in Nepal's midhills led to soil and water erosion and low crop and fodder yields. The People and Resource Dynamics in Mountain Watersheds of the Hindu Kush- Himalayas Project (PARDYP) started work in 2001, with a small group of farmers from this village (who were also members of the local forest user group) and the Department of Soil Conservation and Watershed Management to identify and test an integrated approach for addressing these constraints. The approach taken was an improved hill terrace for rainfed conditions consisting of structural and vegetative measures. The aim was to demonstrate and test the technologies' potential for overcoming constraints related to farming sloping agricultural land. The specific objectives were, in association with the local farmers, to design a technology that solved soil erosion problems on sloping agricultural lands whilst at the same time increasing the land's nutrient conservation and production capacity. The local line agency office of the Department of Soil Conservation and Watershed Management was involved in developing the technology to make use of their experiences and to come up with a validated technology that the department could use in its own programmes.

Before implementing the terrace improvement work in Kubinde village, a terrace improvement committee was formed made up of local farmers. The awareness activities began in January 2001. Committee members were trained on subwatershed management and were taken to the International Centre for Integrated Mountain Development's (ICIMOD) Demonstration and Training Centre at Godavari and another ICIMOD site to show them potential soil and water conservation technologies including improved terraces. After the technologies were implemented, a number of farmer exchange, interaction and monitoring programmes were held to assess the technology and to promote it. Indicators were developed for monitoring the activity.

About half of the costs were covered by the participating farmers and the rest by PARDYP. The other incentives were training and extension, allowances for participants, national expert honoraria, and training material such as audio-visual facilities. These were all provided by PARDYP with the help of the line agency.

ສະຖານທີ່



ສະຖານທີ່: kavre Palanchok/ Kubinde village, Jhikhu Khola watershed, ເນໂປ

ການຄັດເລືອກພື້ນທີ່ ທີ່ອີງໃສ່ຂໍ້ມູນທາງພູມິສາດ

• 85.518, 27.75

ວັນທີເລີ່ມຕົ້ນ: n.a.

ປີຂອງການສິ້ນສຸດ: 2005

ປະເພດຂອງແນວທາງ

- ☐ ພື້ນເມືອງ / ທຸກໆຖິ່ນ
- ☐ ການລິເລີ່ມ ພາຍໃນ ນປະເທດທີ່ມີການນຳ / ນະວັດຕະກຳ
- ☐ ພາຍໃນ ການນຳ / ແຜນງານ



A farmer exchange programme underway – an important scaling-up approach. (PARDYP)

ເປົ້າໝາຍ / າຍຂອງແນວທາງແລະ ການປຶກສາສາສິດແວດລ້ອມ

ເປົ້າໝາຍ / ຈຸດປະສົງໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

Local farmers collectively solving problems by identifying and using the most appropriate local solutions. Local farmers designing, testing, and disseminating alternative technologies adapted to local conditions. Strengthening joint learning by farmers and development actors

The SLM Approach addressed the following problems: Weak institutional collaboration for addressing 1) poor soil fertility and land productivity; 2) soil and nutrient loss and excessive water runoff from sloping agricultural land; and 3) fodder scarcity. Lack of on-farm research for developing technologies that attend to farmers' needs.

ເງື່ອນໄຂທີ່ສະໜັບສະໜູນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

- ກຳລັງກັບກິດໜາຍ (ສິດນຳໃຊ້ດິນ, ສິດນຳໃຊ້ນ້ຳ): The existing land ownership, land use rights / water rights greatly helped the approach implementation: Because of private land ownership, there were no conflicts and hence the technology for deissmeination was well maintained.

ເງື່ອນໄຂທີ່ເຊື່ອງຊ້ອນໃຫ້ການຈັດຕັ້ງປະຕິບັດເຕັກໂນໂລຢີ ບົນພື້ນຖານແນວທາງ

- ມີຄວາມສາມາດ / ເຂົ້າເຖິງຊັບພະຍາກອນດ້ານການເງິນ ແລະ ການບໍລິການ: Government incentives are lacking Treatment through the SLM Approach: The technology is cost effective.
- ການກໍ່ຕັ້ງສະຖາບັນ: Lack of coordination among land users Treatment through the SLM Approach: Terrace improvement user group formed
- ຄວາມຮູ້ກ່ຽວກັບການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ, ການເຂົ້າເຖິງການສະໜັບສະໜູນ ທາງດ້ານວິຊາການ: It is not a priority area of line agencies Treatment through the SLM Approach: The approach relies on farmer adoption
- ອື່ນໆ: lack of awareness Treatment through the SLM Approach: Trainings , discussions and field visits

ການມີສຳນຶກສຳລັບ ແລະ ບົດບາດຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງທີ່ມີສຳນຶກສຳລັບ

ພາລະບົດບາດຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ ທີ່ມີສ່ວນຮ່ວມໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ

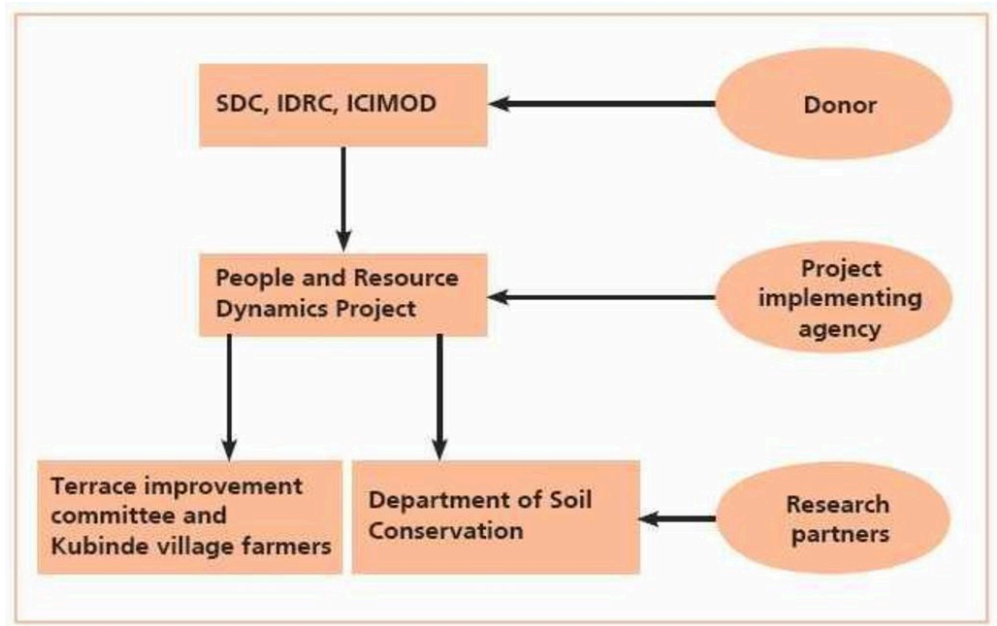
ແມ່ນໃຜ / ພາກສ່ວນໃດ ທີ່ເປັນເຈົ້າການ ໃນການຈັດຕັ້ງປະຕິບັດ ວິທີການ?	ລະບຸ ພາກສ່ວນທີ່ກ່ຽວຂ້ອງ	ຜົນລະບົດບາດ ຫຼື ຜົນທີ່ ຂອງພາກສ່ວນທີ່ກ່ຽວຂ້ອງ
ຜູ້ປຸງ / ຊຸມ / ນັກສຶກສາ / ຊຸມຊົນທົ່ວຖິ່ນ	Men and women land users worked equally	
ຜູ້ຊຸມຊົນ ການນຳຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ / ທີ່ປຶກສາດຽນກະສິກຳ		
ຄູອາຈານ / ນັກຮຽນ / ນັກສຶກສາ		
ອົງການຈັດຕັ້ງທີ່ບໍ່ມີຜົນປະໂຫຍດ		
ອົງການ ການປຶກສາຄຸ້ມຄອງທົ່ວຖິ່ນ		
ພະນັກງານຂັ້ນສູນກາງ (ຜູ້ຕັ້ງແຜນ, ຜູ້ສືບຕໍ່)		
health volunteers		

ການລວບລວມເອົາຜູ້ນຳໃຊ້ທີ່ດິນໃນທ້ອງຖິ່ນ/ຊຸມຊົນທ້ອງຖິ່ນ ໃນການຈັດຕັ້ງປະຕິບັດແນວທາງ ແຕ່ລະໄລຍະ

	ບົດປຶກສາ ການປັບປຸງ ການຊຸມຊົນເພື່ອຈາກພາຍ ນອກ ການຮຽນ ການສຶກສາ	
ການເລື່ອນຕົວ / ແຮງຈູງ ຈ	■ ■ ■ ■ ■	Group discussion; organised with local forest user group; selection of members for training and tours (12 men and 11 women); formation of terrace improvement committee.
ການວາງແຜນ	■ ■ ■ ■ ■	group discussion; survey , site selection , fodder / grass species selection
ການປະຕິບັດ	■ ■ ■ ■ ■	Terracing activities: measurement, soil excavation, and retaining wall construction
ຕິດຕາມກວດກາ / ການປະເມີນຜົນ	■ ■ ■ ■ ■	Done in a participatory way involving individual farmers, project staff, and Department of Soil Conservation staff
Research	■ ■ ■ ■ ■	Assessing performance of planted grasses and advantages and disadvantages of technology

ແຜນວາດສະແດງ

Project donors and implementing partners.



ການຕັດສິນໃຈໃນການເລືອກເຖິກໂນໂລຢີ ການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ

ການຕັດສິນ ຈາດໂຍ

- ຜູ້ມີ ຊື່ນຜູ້ມີ (ການລິເລີ່ມຕົ້ນຕົນເອງ)
- ຜູ້ມີ ຊື່ນຜູ້ມີ, ການສະໜັບສະໜູ້ ໂດຍຜູ້ມີຊື່ນຜູ້ມີ ການນຳ ຊື່ນຜູ້ມີແບບຍືນຍົງ
- ພາກສ່ວນກ່ຽວຂ້ອງທັງໝົດ, ເປັນສ່ວນໜຶ່ງຂອງວິທີທາງແບບມີສ່ວນຮ່ວມ
- ຜູ້ມີຊື່ນຜູ້ມີ ທີ່ກ່ຽວຂ້ອງກັບການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ, ມີການຕິດຕາມປຶກສາຫາລືກັບ ຜູ້ມີ ຊື່ນຜູ້ມີ
- ຊຸມຊົນຊາວສະເພາະດ້ານການຄຸ້ມຄອງ ດິນແບບຍືນຍົງຜູ້ມີຊື່ນຜູ້ມີ
- ນັກການເມືອງ / ຜູ້ມີຊື່ນຜູ້ມີ

ການຕັດສິນ ຈົບພິພາດ

- ປະເມີນເອກກະສານ ຄວາມຮູ້ກ່ຽວກັບ ການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ (ຫຼັກການທີ່ ຊຸມຊົນ ນັກນັດສິນ ກໍ່)
- ຜົນທີ່ ສູງ ຈາກການຄຸ້ມຄອງ
- ປະສົບການສ່ວນບຸກຄົນ ແລະ ຄວາມຄິດເຫັນ (ທີ່ມີປະສົບການສານ)

ການສະໜັບສະໜູ້ ໂຕໂນໂລຢີ, ການສ້າງຄວາມອາດສາມາດ ແລະ ການຄຸ້ມຄອງຄວາມຮູ້

ກິດຈະກຳ ດັ່ງລຸ່ມນີ້ ແມ່ນເປັນພາກໜຶ່ງຂອງແນວທາງ

- ການສ້າງຄວາມສາມາດ / ການຝຶກອົບຮົມ
- ການບົດການ ຫຼັກສຳຖານ
- ສະຖາບັນການສ້າງຄວາມເຂັ້ມແຂງ (ການພັດທະນາອົງການຈັດຕັ້ງ)
- ຕິດຕາມກວດກາ ແລະ ປະເມີນຜົນ
- ການຄຸ້ມຄອງ

ການສ້າງຄວາມອາດສາມາດ / ຝຶກອົບຮົມ

ໄດ້ສະໜັບສະໜູ້ຝຶກອົບຮົມໃຫ້

ແກ່ພາກສ່ວນກ່ຽວຂ້ອງດັ່ງລຸ່ມນີ້

- ຜູ້ມີ ຊື່ນ
- ພະນັກງານພາກສະໜັບສະໜູ້ ທີ່ມີກຳລັງ
- extensionists/trainers, teachers, school children/students, politicians/decision makers, Health volu

ຮູບແບບການຝຶກອົບຮົມ

- ການເຮັດຕົວຈິງ
- ຕົວຕະຫຼອດ
- ເນື້ອທີ່ສ່ວນທິດລອງ
- ກອງປະຊຸມ
- ຫຼັກສູດ
- Audio vidual learning

ກວມເອົາຫົວຂໍ້

Importance of Soil and Water conservation in local level, concept of sub watershed management, activities in other parts of a country regarding SLM, etc.

ການບໍລິການທາງດ້ານການໃຫ້ຄໍາປຶກສາ

ໄດ້ຮັບການບໍລິການທາງດ້ານການໃຫ້ຄໍາປຶກສາ

- ນິພົນທີ່ຂອງຜູ້ມີສິດສິນສູນຄືນຄວາມ

Name of method used for advisory service: Demnstration/extension of improved terrace technology;
Key elements: Participatory Action Research, Trainings and Farmer to Farmer visits, Participatory monitoring and evaluation; 1) Advisory service was carried out through: projects own extension structure and agents, government's existing extension system; Extension staff: project employees, govt. staff and farmers. 2) Target groups for extension: land users, technicians/SLM specialists; Activities: Farmer to farmer exchange, demonstration, trainings; Invited to trainings, field visits
Advisory service is quite adequate to ensure the continuation of land conservation activities; Various extension service agencies have secured funding for SLM programmes.

ການຕິດຕາມ ແລະ ປະເມີນຜົນ

bio-physical aspects were ad hoc monitored through observations; indicators: plant heighth, biomass production, usefulness of grass/fodder species technical aspects were ad hoc monitored by project staff through observations; indicators: views about technology socio-cultural aspects were ad hoc monitored through observations; indicators: species selection, change of agricultural practices economic / production aspects were ad hoc monitored through observations; indicators: changes in crop yields and patterns and the value of the land area treated aspects were ad hoc monitored through observations; indicators: survey, on-site verifications land users involved aspects were ad hoc monitored through observations; indicators: survey, number of land users applying for SWC management of Approach aspects were ad hoc monitored through observations; indicators: maintenance of terraces and hedgerows There were few changes in the Approach as a result of monitoring and evaluation: New ideas have been generated but strategies to implement them are yet to be in place. There were few changes in the Technology as a result of monitoring and evaluation: New varieties of grass, fruit and fodder species have been introduced

ການຄົ້ນຄວ້າ

ການວິໄຈ ຈຸດສູ່ການຮັກສາຫົວຂໍ້ປັບປຸງ

- ສັງຄົມ
- ເສດຖະສາດ / ການຕະຫຼາດ
- ລະບົບນິເວດ
- ເຕັກໂນໂລຢີ

Sociology: Looking at scaling up process; Ecology: Looking at the impacts of the technology at subwatershed level; Technology: development process.
Research was carried out on-farm

ການສະໄໝສະໄໝ ມາດຕະການການເງິນ ແລະ ອຸປະກອນຈາກພາຍນອກ

ງົບປະມານປະຈຳປີ ໃນກິດຈະກຳ ການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ ທີ່ເປັນສະກຸນເງິນໂດລາ

- < 2,000
 - 2,000-10,000
 - 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: national non-government (SDC, IDRC, ICIMOD): 65.0%; local community / land user(s) (Terrace improvement committee): 35.0%

ການບໍລິການ ຫຼື ສົງກະຕຸກຊຸກຍູ້ ດັ່ງລຸ່ມນີ້ ແມ່ນໄດ້ສະໜອງໂດຍຜູ້ນຳໃຊ້ທີ່ດິນເອງ

- ການສະໄໝສະໄໝ ມາດຕະການການເງິນ / ອຸປະກອນ ສະໄໝ ອງໄຫຼ່ຜູ້ມີສິດສິນ
- ຫຼຸດປັດໄຈເຂົ້າ
- ສິນເຊື່ອ
- ສິນເຊື່ອ ຫຼື ເຄື່ອງມືອື່ນໆ

ເງິນສະໜັບສະໜູນອຸປະກອນ / ສະໜອງໃຫ້ຜູ້ຊົມໃຊ້ທີ່ດິນ

ກະສິກຳ: ແນວພັນ, ແກນຸພັນ

ງົບປະມານມາດຕະການ
ງົບປະມານເຕັມສົມ

ແຮງງານຂອງຜູ້ມີສິດສິນ

- ການອາສາ
- ລຽງເຂົ້າ - ອາຫານ
- ຈັດການເງິນສິດ
- ສູ່ການສະໄໝສະໄໝ ມາດຕະການການເງິນ

ການວິເຄາະຜົນກະທົບ ແລະ ສະຫຼຸບລວມ

ຜົນກະທົບຂອງການນຳໃຊ້ແນວທາງ

ບໍ່
ມີ
ມີ
ມີ
ມີ

ການຈັດຕັ້ງປະຕິບັດ ວິທີທາງ ສາມາດຊ່ວຍຜູ້ມີສິດສິນ ນຳກັບຕັ້ງປະຕິບັດ ແລະ ບຸກລຸກສາ ເຕັກໂນໂລຢີ ການຄຸ້ມຄອງ ທີ່ດິນແບບຍືນຍົງ ດັ່ງ
Area expanded , about 100 percent of previously improved terraces was expanded. New variety of grass/ fodder species has been adopted..

Did other land users / projects adopt the Approach?

ບໍ່

The project's aim was not to promote the approach but the technology. However, similar approaches are followed by other programs as well from before; such as the District Soil Conservation Offices.

ສົງກະຕຸກຊຸກຍູ້ໃຫ້ຜູ້ນຳໃຊ້ທີ່ດິນ ໃນການປະຕິບັດການຄຸ້ມຄອງທີ່ດິນແບບຍືນຍົງ

- ການຜະລິດເພີ່ມຂຶ້ນ
- ກຸໝ່າຍ ລຸ້ນຂຶ້ນ (ຄວາມສາມາດ), ການປັບປຸງຄຸນ ສຸດຍ, ຜົນປະໂຫຍດ, ອັດຕາສ່ວນ
- ຫຼຸດຜ່ອນດິນເຊື່ອມໂຊມ

ຄວາມຍືນຍົງຂອງການຈັດຕັ້ງປະຕິບັດກິດຈະກຳຂອງແນວທາງຜູ້ມີສິດສິນ ສາມາດຈັດຕັ້ງປະຕິບັດຕາມແນວທາງ ຕາມໄດ້ໂດຍປາດສະຈາກການສະໄໝສະໄໝ ມາດຕະການການເງິນ?

- ບໍ່
- ແມ່ນ

- ຫຼຸດຜົນຄວາມສູງຂອງ ພື້ນຜິວ
- ການຫຼຸດຜົນພາລະວຽກ
- ການຊຸກຍູ້ເງິນ / ເງິນອຸດົມ ມູນ
- ກົດລະບຽບແລະລະບຽບການ (ລະອຽດ) / ການບັງຄັບ ຊື້
- ກຽດສັກສີ, ຄວາມກົດດັນທາງສັງຄົມ / ການຕິດຕັ້ງໜ້າສັງຄົມ
- ລວມເຂົ້າມາກັບການເຄື່ອນຍ້າຍ ຫຼັກ ໂຄງການ / ກຸ່ມ / ເຄືອຂ່າຍ
- ຄວາມຮັບຮູ້ທາງສັງຄົມ
- ພາສາ ແລະ ຄວາມເຂົ້າໃຈ, ສົມບັດສັນທຸກ
- ການປັບປຸງ ຄວາມຮູ້ແລະ ຄວາມສາມາດ ຂອງການຄຸ້ມຄອງ ທີ່ເກີນແບບຍືນຍົງ
- ການປັບປຸງຄວາມງົດງາມ
- ການຫຼຸດຜົນຂໍ້ຂັດແຍ້ງ
- environmental consciousness, moral, health

■ ບໍ່ມີສິ່ງອື່ນ

More than 60% of the total improved terraces in Kubinde village were built by the land users themselves. Widespread rapid adoption did not happen in other villages due to financial and labour limitations. Land users of Kubinde village continue to maintain the improved terraces.

ບົດສະຫຼຸບ ແລະ ບົດຮຽນທີ່ ສຳຄັນ

- ຄວາມເຂັ້ມແຂງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ**
- Technical knowledge and confidence increased from the training and field visits, interactions, and experience sharing (How to sustain/ enhance this strength: Such activities should be continued by incorporating other new ideas)
 - The approach led to the development of a team spirit among farmers (How to sustain/ enhance this strength: As above)

- ຄວາມເຂັ້ມແຂງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ່ອນຂັ້ນເບື້ອງ**
- The approach is based on building the capacity of farmers (both men and women) by involving multiple stakeholders in the development and adoption of the technology. (How to sustain/ enhance this strength: Approach should be to strengthen land users' involvement in SWC activities)

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສັ່ງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ນຳໃຊ້ທີ່ດິນ ວິທີການແກ້ໄຂແນວໃດ

ຈຸດອ່ອນ / ຂໍ້ເສຍ / ຄວາມສັ່ງ: ທັດສະນະມຸມມອງ ຂອງຜູ້ປ່ອນຂັ້ນເບື້ອງ ວິທີການແກ້ໄຂແນວໃດ

- Due to the conflict, which was on-going at the time, follow-up after a year of implementing technology was not possible and the monitoring was not done. This resulted in the adoption of the technology by other farmers not being carried out properly with, for example, farmers not maintaining the hedgerows as recommended. Also, the new terraces were not as good as they should have been. The technical experts need to visit the sites and identify gaps and encourage farmers to 'fill them'. For example, the benefit of hedgerow management needs to be demonstrated.

ເອກກະສານອ້າງອີງ

ການລວບລວມ Editors **ການທົບທວນຄືນ**

Madhav Dhakal Laura Ebnetter

ວັນທີຂອງການປະຕິບັດ: Jan. 19, 2009 **ປັບປຸງລ່າສຸດ:** June 26, 2017

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ການບັນຍາຍລາຍລະອຽດ ໃນຖານຂໍ້ມູນ ຂອງ WOCAT
https://qcat.wocat.net/lo/wocat/approaches/view/approaches_2549/

ຂໍ້ມູນການເຊື່ອມໂຍງຂໍ້ມູນການຄຸ້ມຄອງການນຳໃຊ້ທີ່ດິນແບບຍືນຍົງ
 n.a.

ເອກກະສານ ແມ່ນໄດ້ອໍານວຍຄວາມສະດວກໂດຍ

- ສະຖາບັນ**
- ICIMOD International Centre for Integrated Mountain Development (ICIMOD) - ເນປຳ
- ໂຄງການ**
- n.a.

ການອ້າງອີງທີ່ສຳຄັນ

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