



Sharing labour to implement contour bunding

Nepal: जनशक्तिको आदान-प्रदान गरी भाँजो हाल्ने पद्धतिको कार्यान्वयन

Members of a community can work together to help prevent soil erosion and increase productivity by working collectively to establish contour bunds.

Over generations, the ethnic minorities of Nepal, who practice fireless shifting cultivation, known as 'gujulyaune', have successfully used contour bunding to control soil erosion, promote water retention, and increase crop production. Contour bunding is a proven sustainable land management practice in areas where the soil productivity of marginal, sloping, and hilly lands is very low. While it is both low cost and simple to implement, it does have the drawback that establishing contour bunds is very labour intensive. When members of a community work together to establish contour bunds the whole village can benefit.

By working collectively, a community can establish contour bunds that will benefit everyone and not individual farmers alone. The first step is to plan a course of action and to select the sites. Members of the community, who are thoroughly familiar with the landscape that the community inhabits, get together to discuss where the contour bunding will be most successful and benefit the greatest number of farmers. This planning phase is best carried out during the dry season before the rains begin. Once the sites are selected, everyone participates in the slashing of materials on the shifting cultivation lands. After the slashed materials have been allowed to dry for some weeks, the community assembles to gather these into rows that will form the bunds. Every member of the community participates according to their ability.

The steps for sharing labour to establish contour bunds in a community which practises shifting cultivation can be summarized as follows:

- The community meets to finalize a plan of action.
- Everyone participates in the slashing of shifting cultivation plots.
- The slashed materials are collected and allowed to dry.
- The slashed materials are formed into rows that will constitute the bunds.
- Everyone participates and eventually, the land between the bunds is prepared for the cultivation of crops.

Left: Members of the Chepang community discuss technical aspects of contour bunding. (BB Tamang)

Right: Many attended the community awareness programme which was held before the technology was implemented. (BB Tamang)



WOCAT database reference: QA NEP 26

Location: Tanahun and Gorkha Districts, Nepal

Approach area: Approximately 1–10 km²

Land use: Agroforestry

Type of approach: This traditional approach has been implemented for more than 50 years.

Focus: Mainly on conservation with other activities

Related technology: Contour bunding QT NEP 26

Compiled by: BB Tamang, LI-BIRD

Date: March 2010, updated March 2013

The technology was documented using the WOCAT (www.wocat.org) tool.

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Problems, objectives and constraints

Problems

The main stumbling blocks to this approach are a gap in the sharing of traditional knowledge, lack of the money needed for investment, community conflicts over allocation of resources, and overall poor social cohesiveness.

Aims/objectives

To increase crop yields and help to prevent soil erosion in communities that practise shifting cultivation by getting the whole community to participate in establishing contour bunds.

Constraints addressed

Major	Constraint	Treatment
Technical	Traditional knowledge on contour bunding is not shared	Technical information is shared when the technology is implemented
Minor	Constraint	Treatment
Institutional	Groups are not aware of how to mobilize for community empowerment	Raise level of awareness and enhance capacity on how to mobilize the community and on how to institutionalize the process
Financial	Individual farmers do not have sufficient resources to implement the technology on their own	By sharing labour everyone benefits without any outlay by individual farmers

Participation and decision making

Stakeholders/target groups



Land users, groups



Approach costs met by:

Land users	80%
Project (LI-BIRD)	20%
TOTAL	100%

Annual budget for sustainable land management component: USD 8

Remarks

- The cost of implementing this technology is dependent on the gradient of the slope and other geographical features, the local cost of the seeds or seedlings, and the availability of labour.
- All costs and amounts are rough estimates by the technicians and authors. Exchange rate USD 1 = NPR 73 in March 2010

Decisions on choice of the technology: The land users themselves decide on the technology during participatory discussions held in the community. This is a bottom-up approach.

Decisions on method of implementing the technology: The land users themselves possess traditional knowledge on how the technology should be implemented. Since some farmers have a better grasp of the technology than others, the different methods are discussed and the community as a whole decides what method is to be used.

Approach designed by: Land users

Implementing bodies: This technology is straightforward; the community of land users can implement it without external input.

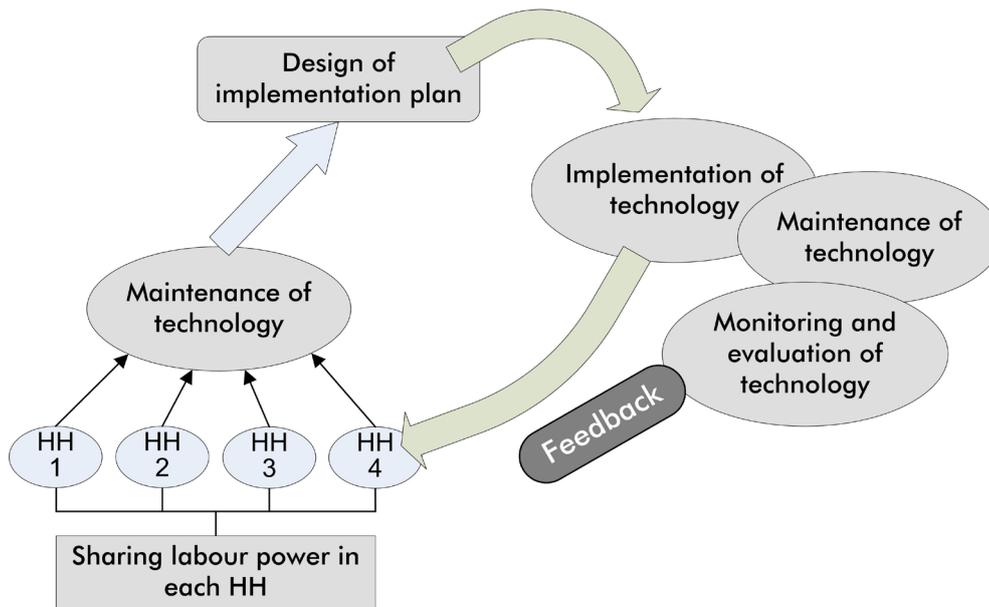
Land user involvement

Phase	Involvement	Activities
Initiation/motivation	Self-mobilization	Demand created by the community
Planning	Interactive	Through discussions the whole community is involved in deciding what sites are to be contoured and how the bunding technology is to be implemented.
Implementation	Self-mobilization	The whole community is involved in planning the sites, slashing the biomass, and forming the contour bunds.

Differences in participation of men and women: Both men and women participate equally

Involvement of disadvantaged groups: This is a sustainable land management practice in areas where shifting cultivation is practised. These areas have typically been inhabited by poor and marginal groups like the Chepang, Magar, Dalit, and Gurung groups.

Implementation of contour bunding technology by sharing of labour power



Organogram

Each household (HH) contributes labour and the community works together to implement contour bunding.
(AK Thaku)

Technical support

Training/awareness raising: Working together through site visits, farmer to farmer dialogue, demonstration areas, and public meetings, helped to raise awareness and to train all members of the community (both male and female). The whole community now understands the importance of working collectively for the common good.

Advisory service: None

Research: None

External material support/subsidies

Contribution per area (state/private sector): None

Labour: None

Inputs: None

Credit: None

Support to local institutions: None

Monitoring and evaluation

Monitored aspects	Methods and indicators
Biophysical	Land users regularly monitor the organic matter and moisture content of the soil and establish plants in bunds
Technical	Land users regularly monitor terrace formation and soil erosion
Socio-cultural	The community observes and comments on the degree to which contour bunding is implemented
Economic/production	Land users note crop production and how it affects their cash income
Area treated	Land users regularly monitor small patches used in shifting cultivation
No. of land users involved	The whole community participates in observing how many people are involved
Management of approach	The whole community participates

Impacts of the approach

Changes as a result of monitoring and evaluation: Gradually, farmers in other communities are also adopting the same approach.

Improved sustainable land management: Moderate improvements were noted. The approach was a good way of improving sloping land management.

Adoption by other land users/projects: A few other groups have followed suit. Those who implemented this approach cited improved soil fertility and the increased productivity of cash crops like legumes as a plus point.

Improved livelihoods/human wellbeing: Moderate improvements were noted; these were mainly due to the increased earnings from the production of cash crops. Earnings were invested on daily needs which improved livelihoods.

Improved situation of disadvantaged groups: Moderate improvements were noted in Chepang, Magar, and Dalit households who benefited from this approach and improved their livelihoods.

Poverty alleviation: Some poverty alleviation was noted among households who could increase the amount that they earned from cash crops. These households used the additional earnings on health care and education.

Training, advisory service, and research: Not applicable

Land/water use rights: Not applicable

Long-term impact of subsidies: Not applicable

Concluding statements

Main motivation of land users to implement: By working together, land users can help to prevent soil erosion and increase crop productivity for the entire community.

Social cohesiveness (affiliation to group): This approach helps to promote cohesiveness and improves the livelihoods of all who participate.

Sustainability of activities: This is a community-based approach; each community formulates its own rules and regulations.

Strengths and →how to sustain/improve

Effectiveness → Improve the approach by continuing to work together to design, plan, and implement.

Increases social cohesiveness → Continue to work collaboratively

Decreased workload → Over time, the group decisions that work best no longer need to be revisited and less time is spent in discussions.

Quick implementation of sloping land management measures → As the group learns to work together they can taking advantage of their synergy to quickly implement new measures.

Empowerment → Encourage the community with technical backstopping

Weaknesses and →how to overcome

Some members contribute more than others → Each member of the group needs to be made aware of how they can contribute.

Key reference(s): Regmi, BR; Aryal, KP; Subedi, A; Shrestha, PK; Tamang, BB (2001) *Indigenous knowledge of farmers in the shifting cultivation areas of Western Nepal*. Pokhara, Nepal: LI-BIRD

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