

Nakina Van Panchayat (Community Forest Council) and Women's Self Help Group (SHG) Meeting (Jaclyn Bandy)

Community Forest Management in the Nakina Van Panchayat (Índia)

Van Panchayat

DESCRIÇÃO

Van Panchayats or village forest councils are a impressive example of grassroots community management of natural resources, where a specific administrative unit is locally elected by community members who are responsible for the management of activities related to the forest.

Main Characteristics: the forest council has an odd number administrative committee (9), which allows a majority rule to resolve issues. From each household, one person will have the rights to elect the committee. The administrative committee makes the rules and regulations to manage and collect the fuel wood, fodder and wood to build houses or other structures. It also has the rights to collect the charges of using forest resources or penalize trespassers. The government and other institutions recognize this committee and communities for the protection of the forest, which also make joint plans and programs under the consultation with the forest user group and administrative committee. Van Panchayats are under the administrative control of the District Magistrate, though technical assistance is provided by the Forest Department. Organizations can provide financial and technical support to the administrative committee to implement projects.

Main objectives of this approach are:

- ${}^{\bullet}\text{To}$ mobilize the communities for sustainable natural resource management and distribute forest produce in an equitable manner
- •To provide the financial and technical support for the communities to protect the forest's natural resources.
- •To promote technologies for the conservation of natural resources and to increase the livelihood of people
- •To encourage the people to establish tree plantations, fodder nurseries, biological and structural interventions for water conservation and maintain wildlife habitat

Methodology and Implementation:

To achieve the above mentioned objectives, the following methods were adopted: the first steps involved clarifying the status of forest utilization and local peoples' livelihood, activities and demands. Initially there was collaboration with the local people and forest department to demarcate the community forest and establish the Nakina van Panchayat in 1952 (according to the Forest Council Act 1931). Awareness-raising meetings informed the local people that the community forest health is determined by their own collective management. Over 30 years ago, Nakina Van Panchayat established a plantation area designated for the propagation of several broadleaved species. This has since been a growing enterprise, and encompasses an area of 7 hectares today. The Japan International Cooperation Agency (JICA) and Forest Department have assisted Nakina VP with this plantation. Despite these efforts there is still a gap in production. The community expressed this persistent availability gap of their fuelwood/fodder supply, and the necessity of maintaining the oak populations for groundwater recharge and spring rejuvenation.

LOCALIZAÇÃO



Localização: Nakina Village, Pithoragarh Bloc, Uttarakhand, Índia

Geo-referência de locais selecionados

- 80.175, 29.62437
- 80.17494, 29.62567
- 80.17362, 29.62818
- 80.16875, 29.62973

Data de início: 1952

Ano de término: n.a.

Tipo de abordagem

- Tradicional/Indígena
- Iniciativa/inovação local recente
- Baseado em projeto/programa
- The approach combines efforts between traditional systems/local initiatives/and projects funded by other organizations.

Under the KSLCDI (Kailash Sacred Landscape Conservation and Development Initiative) and with support from ICIMOD, G.B. Pant Institute of Himalayan Environment and Sustainable Development and Nakina Van Panchayat created a plantation area supporting oak and other broadleaved species over an area of 2 hectares (2014-2016) . The community also established a small oak and fodder nursery with support from the Uttarakhand Forest Department, NGO Swati Gramodyog Sansthan (SGS) and NGO Himalayan Sewa Samiti (HSS).

Stakeholders involved and their role:

1. Broadleaf Plantation (+30 years ago, community initiated)

Japan International Cooperation Agency (JICA), UKFD (Uttarakhand Forest Department)- funding, technical and advisory support

Nakina Van Panchayat and Nakina Community: participatory action in all phases of approach, planting, on-going maintenance

2. Oak Plantation

ICIMOD- funding

G.B Pant: project implementation, on-site advisory and technical support UKFD (Uttarakhand Forest Department)- technical and advisory support Nakina Van Panchayat and Nakina Community: participatory action in all phases of approach, planting, on-going maintenance

3. Fodder and Oak Nursery

Fodder Nursery: NGOs SGS, HSS- project implementation, provision of plants, planting techniques, and financial assistance

Oak Nursery- self-initiative by Nakina Van Panchayat and the forest user group (local People) UKFD: gave technical advice and provided financial support to Nakina Van Panchayat; distributed plants and grasses

G.B Pant: organized a 7-day capacity building training in Nakina Village and supported the plantation establishment; there are ongoing projects with Nakina to develop other parts of the forest

Comments on Approach: Land users are very pleased with the success of these approaches. However they stress the need to strengthen on-going communication between various stakeholders and supporting institutions for project optimization, as well as continual support and auditing post-project. More follow up with technical experts would be highly appreciated by the land users.



Nakina Sarpanch Mr. Jagdamba Joshi and Dr. Subodh Airi (G.B. Pant) hold a discussion about the community forest. (Jaclyn Bandy)

OBJETIVOS DE APROXIMAÇÃO E AMBIENTE PROPÍCIO

Principais metas / objetivos da abordagem

Main objectives of this approach are:

- •To protect and develop the forest under the jurisdiction of the Nakina Van Panchayat
- •To mobilize the communities for sustainable natural resource management and distribute forest produce in an equitable manner
- •To provide or seek out financial and technical support for the communities to protect the forest's natural resources.
- •To promote technologies for the conservation of natural resources and to increase the livelihood of people
- •To encourage the people to establish tree plantations (broadleaved species), fodder nurseries, biological and structural interventions for water/soil moisture conservation and maintain wildlife habitat.
- •Deep-rooted species like oak facilitate better ground-water seepage and enhance spring discharge rates for the communities downstream

Condições que permitem a implementação da Tecnologia(s) aplicada(s) sob a Abordagem

- **Disponibilidade/acesso a recursos e serviços financeiros**: Under the 1976 Van Panchayat Rules, the access and authority to control funds was greatly improved and the share of forest income was increased from 40% to 80%.
- Colaboração/coordenção de atores: In Uttarakhand, NGOs and civil society groups have historically played a strong advocacy role. The government (forest dept), NGOs, research institutions, and external organizations have been actively working together on various projects across Uttarakhand to support Van Panchayat Forest Joint Management (VFJM). For example, in 2015 total of 750 Van Panchayats in the state have been funded by the Japanese International Cooperation Agency (JICA), providing 85% of the financial support needed for forest restoration programs, as well as soil and water conservation.
- **Políticas**: Although there have been historical challenges around forest policies and resource use due to British colonialism, within the last 20 years or so there has been major change in Indian forest policies, Van Panchayat rules and people's participation in forest management. In 2006, the Indian parliament passed the Forest Rights Act, which for the first time, fully recognized the rights of people over forests and other related natural resources and made these rights independent of the encroachment of forest department.
- Governança da terra (tomada de decisões, implementação e aplicação): The joint forest management approach (between local people and government) supports coordination with the people, ownership and access to the forest resources. Each VP can make its own rules and needs as per needs and wisdom.
- Conhecimento sobre GST, acesso a suporte técnico: Technical support in the form of extensions services, trainings, and advisory support throughout project implementations are provided by various institutions.
- Mercados (para comprar entradas, vender produtos) e preços: Through this approach, the people are unique position and ability to develop alternative agriculture-based strategies (herbs, aromatic plantations). Uttarakhand has been declared as an Organic State and has recently received significant government funding to develop organic farming (as of January 31, 2018 about Rs 1,500 crore for three years has been sanctioned.)
- Carga de trabalho, disponibilidade de força de trabalho: Women are the effective managers of the rural household economy and forest resource use. They are active participants in the VP activities, either as official committee members or routine attendees of VP meetings

Condições que dificultam a implementação da Tecnologia(s) aplicada(s) sob a Abordagem

- **Disponibilidade/acesso a recursos e serviços financeiros**: A Forest Department official is placed inside each VP, controlling its activities as a joint account holder. VP proposals for using their income need prior approval from the Divisional Forest Officer, who may modify how the village institutions use their own income
- Colaboração/coordenção de atores: Today, the NGO movement is split into different camps and factions. The vast majority has been coopted to work as "private service providers" for several donor-funded projects, including the forestry project. Once they accept working on project terms, they effectively lose their critical and questioning voice. Consequently, the potential damage to the region's unique Van Panchayats from VFJM has been subdued by these changes.
- **Políticas**: Annual plans for VP forest management are actually written by Forest Department staff and subsequently implemented with the involvement of only the Sarpanch and/or some of the elected panchayat members. Villagers are provided only wage labour and are not actively engaged in the planning process.
- Governança da terra (tomada de decisões, implementação e aplicação): Still there are unrelenting difficulties between government support/response regarding forest management in the hill regions. While some governments and communities have governed forests sustainably, others struggle to mitigate degradation or lack commitment to manage forests sustainably, as there are vested powers in the Forest Dept that limit land-users opportunity to participate in the decision making process.
- Conhecimento sobre GST, acesso a suporte técnico: However the support is not consistent and on-site consultations with landusers is limited to the short-term projects
- Mercados (para comprar entradas, vender produtos) e preços: At the present time, the status of agricultural market development needs a lot of work. The most crucial factor appears to be linking the producer with the local markets. Current production is mainly for self consumption. Agricultural yields are not very high in Uttarakhand as a whole and also the productivity of the hill districts is generally lower than the state average.
- Carga de trabalho, disponibilidade de força de trabalho: Lack of employment has led to high male out-migration and lack of interest in forest management

PARTICIPAÇÃO E PAPEL DAS PARTES INTERESSADAS ENVOLVIDAS

Partes interessadas envolvidas na abordagem e seus papéis

Que partes interessadas/órgãos de implementação estavam envolvidos na abordagem?	Especifique as partes interessadas	Descreva o papel das partes interessadas
Il Isuarios de ferra/comunidades locais	Naikina Van Panchayat (9 members) Naikina Village (300 people)	
Pesquisadores	G.B. Pant	
Organização não governamental	Himalayan Sewa Samiti	
(30Verno local	District Magistrate Uttarakhand Forest Department, Government of India	
Organização internacional	ICIMOD JICA (Japan International Cooperation Agency)	Financial Assistance

Envolvimento do usuários de terra/comunidades locais nas diferentes fases da abordagem

Nenhum Passivo Apoio externo Apoio externo Automobilização Automobilização

Iniciação/motivação Planejamento Implementação Monitoramento/avaliação maintenance

Fluxograma

Tomada de decisão sobre a seleção da Tecnologia GST

As decisões foram tomadas por

- Somente usuários da terra (iniciativa própria)
- Principalmente usuários da terra, apoiados por especialistas em
- todos os atores relevantes, como parte de uma abordagem participativa
- Principalmente especialistas em GST, após consulta com usuários da terra
- Somente especialistas em GST
- Políticos/líderes

As decisões foram tomadas com base em

- Avaliação de conhecimento bem documentado de GST (tomada de decisão baseada em evidências)
 - Resultados de pesquisa
- Experiência pessoal e opiniões (não documentado)

SUPORTE TÉCNICO, REFORÇO DAS CAPACIDADES E GESTÃO DO CONHECIMENTO

As seguintes atividades ou serviços têm sido parte da abordagem

- Reforço das capacidades/ formação
- Serviço de consultoria
- Fortalecimento da instituição (desenvolvimento organizacional)
- Monitoramento e avaliação
- Pesquisa

Reforço das capacidades/formação

Foi fornecido treinamento às seguintes partes interessadas

Usuários de terra

Equipe de campo/consultores

Tipo de formação

Em exercício
 Agricultor para agricultor
 Áreas de demonstração

Reuniões públicas

Cursos

Assuntos abordados

Forest management, forest fire, plantation, spring restoration

Serviço de consultoria

Foi prestado um serviço de consultoria

nas áreas dos usuários da terra

Em centros permanentes

Fortalecimento institucional

As instituições foram fortalecidas / estabelecidas

Não

Sim, pouco

Sim, moderadamente Sim, significativamente

no seguinte nível

Local

Regional Nacional

Descreva instituição, papéis e responsabilidades, membros, etc.

Tipo de apoio

Financeiro

🖊 Reforço das capacidades/ formação

Equipamento

Mais detalhes

Monitoramento e avaliação

only executed by the village community to a small degree

FINANCIAMENTO E APOIO MATERIAL EXTERNO

Orçamento anual em USD para o componente GST

< 2.000 2.000-10.000 ICIMOD (Kailash Sacred Landscape Initiative)

Os seguintes serviços ou incentivos foram fornecidos aos usuários de terras

Apoio financeiro/material concedido aos usuários da terra

Apoio financeiro/material concedido aos usuários da terra

ANÁLISE DE IMPACTOS E DECLARAÇÕES FINAIS

their potentials to improve the resource base and their livelihoods.

Supply of material and resources necessary for the plantation and fodder nursery. Partial compensation for community manual labor

Outros incentivos ou instrumentos

n.a.

Não Sim, pouco Sim, moderadamente Sim, significativamente Impactos da abordagem A abordagem concedeu autonomia aos usuários locais de terra, melhorou a participação das partes interessadas? Van Panchayats come from a grassroots organization. In the case of Nakina Village, has improved coordination across a multitude of stakeholders, including the village, local government institutions and NGOS. / A abordagem propiciou a tomada de decisão baseada em evidências? As Van Panchayat members are given the freedom to control and manage forest resources, and external institutions have recognized the need to enhance their operations and decision-making processes through trainings (carried out by the Forest Department). Under one such programme at FRI (Forest Research Institute), Dehradun, training on Forest Panchayat management, plantation techniques and fire control methods was given to Nakina VP members. 1 A abordagem auxiliou os usuários da terra a implementar e manter as tecnologias de GST? With their own resources, indigenous knowledge, trainings and support from collaborative projects, the approach was a successful mechanism of formal organization for the village. Having legal backup to enforce the rules and regulations developed by the forest users themselves is an effective method to implement and maintain SLM technologies. 1 A abordagem melhorou a coordenação e a implementação economicamente eficiente da GST? Local NGOs like Swati Gramodyog Sansthan and HSS (Himalayan Sewa Samiti), Pithoragarh have given their support to Nakina Van Panchayat by providing plants and planting techniques and some financial assistance. T A abordagem mobilizou/melhorou o acesso aos recursos financeiros para implementação da GST? / There is financial resources available to the Nakina VP (via the joint bank account). This is largely due to the recent projects and remaining funds from external organizations (JICA, MNEGRA), however there is constrained space in accessing those funds as the Forest Department has the main authority for financial decisions. Mr. Joshi (Sarpanch, village head) does not have a comprehensive idea of the budget allocation for the village nor the direct freedom to $\ decide \ how \ to \ use \ these \ funds. \ However, \ he \ is \ personally \ close \ to \ the \ forest \ staff \ and \ regularly \ communicates \ the \ VP$ propositions and can get clarification on fund management and be granted access to the money with a staff member's signature. / A abordagem aprimorou o conhecimento e as capacidades dos usuários da terra para implementar a GST? Through instruments of education, motivation and persuasion, this approach has helped the VP an forest users realize

A abordagem aprimorou o conhecimento e as capacidades de outras partes interessadas? With coordinating NGOs, research institutions, the forest departments and land users, a triangulation of knowledge transfer is encouraged. This platform for the village communities to voice their needs and perceptions is essential for other stakeholders to effectively navigate the future course of these hilly regions and for recognition of true resource capacities.

A abordagem construiu/fortaleceu instituições, colaboração entre partes interessadas?

The approach and active engagement of the Nakina VP has helped different stakeholders realize the need to play more active roles in keeping the institutions alive and effective by brining the communities to the center stage of decision making and promoting participatory forest management at the grassroots level. All levels of organization need to be involved in the preparations of plans/schemes for economic development. G.B. Pant is currently orchestrating a project that will further develop Nakina Forest into a complete "Model-ecosystem Forest" as a leading example of VP forest management and regeneration strategies through more plantations and long-term springshed management.

A abordagem atenuou conflitos?

Ad hoc changes in village boundaries and poor boundary demarcation of village forests, inequitable distribution of forests among villages, and inattention to conflict management among villages have soured inter-village relations in many cases. However, the Nakina VP has been exceptional in mitigating disputes between forest resources and other villages. They are very open to collaboration and organizing with others, like VP members of the Digtoli village. In general, the good communication and neighborly relations have only been enhanced with the approach. This has been recognized by others (villages, external stakeholders)

 $\label{lem:concedeu} A \ abordagem \ concedeu \ autonomia \ aos \ grupos \ social \ e \ economicamente \ des \ favorecidos?$

A abordagem melhorou a igualdade de gêneros e concedeu autonomia a mulheres e meninas? According to Van Panchayat Rules, 2005, (Rule 7) 4 seats are reserved for women of whom one is for SC/ST. As members of the Nakina VP are led by acutely forest-dependent women, this provides more accessible space for community forest

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management to poor women and marginalized groups. This, being outside the framework of complicated bureaucratic procedures and controls, is an impactful initiative for immediate empowerment of such groups at the local level.

A abordagem encorajou os jovens/as próximas gerações de usuários de terra a se envolverem na GST? Mr. Joshi, the head of the VP, has actively been incorporating the younger generations in participatory processes, such as meetings and involvement in interventions. This is often tied with celebratory events in the forest, to merge the social/cultural and conservation aspect into one. However, due to economic opportunities and outmigration their is a lack of interest to participate in the VP and with agriculture activities in general, as it does not demonstrate a promising stable income. Modernity has drastically changes the peoples' aspirations and incomes. Mr. Joshi suggests that if there was a change in policy to fix a salary for committee members, the next generation would be involved and management activities could be carried out effectively with full-time commitment.

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A abordagem melhorou as questões de posse de terra/diretos do usuário que inibiam a implementação das tecnologias de GST?

1

Nakina VP demonstrates the vast potential of the approach, as they have institutionally restored the ownership and sustainable management of forest to the village community. However, there is dual control of the revenue and forest department on Van Panchayats. All administrative powers are vested in the revenue department and the technical powers are the forest department .This dual distribution of powers often leads to delay in decisions and can create confusion. Placing a forest department functionary as the joint account holder and member secretary inside Van Panchayats can shift institutional accountability to the Forest Department and away from forest users.

A abordagem resultou em segurança alimentar aprimorada/nutrição melhorada?

1

Due to protection of forest resources and improved forest resource, there has been more security of the fuel, fodder, water nexus in Nakina. This increased resource availability has in had direct and indirect positive effects for the land users, i.e. increased on-farm productivity from more fodder and drinking water availability via restoration of springs.

A abordagem melhorou o acesso aos mercados?



A abordagem resultou em acesso melhorado à água e ao saneamento?

1

The direct benefits of improved access to water by sustainable forest management were felt just recently by the people of Nakina Village (Dry season, 2019). The improved spring discharge in the Vaishnavi and Bhind Naula have allowed the village to be independent from using the neighboring village's spring water. Still, Nakina is dependent on external water sources to meet their domestic needs. These are unreliable, and consequently the village is still facing acute water shortages in the dry season.

A abordagem resultou em uso/fontes de energia mais sustentável?



Dried and fallen leaves (which are used as liter and for making compost), grasses, fuelwood, and timber for home construction all are provided by the forest. As the village access to energy (i.e. gas cylinders, electricity) is not always available, forest fuel is necessary to meet the energy needs. The Nakina VP plays a key role in managing these resources, and with SLM of the forest there is future potential to support the use of biofuels made from woody biomass.

A abordagem aprimorou a capacidade dos usuários da terra de adaptar-se a mudanças climáticas/extremos e atenuar os desastres relacionados com o clima?



The Nakina VP works to sensitize people about practices contributing to climate change and measures to reduce it. They are initiators to disseminate SLM practices for adaptation. In this sense, the VP acts as the main task force manage the land to cope with extreme events and equipping of local communities.

A abordagem resultou em emprego, oportunidades de renda?

1

Though there is more money and time saved by increased resource availability, the Van Panchayat can not really raise money and sell surplus forest produce from the area to the right holders for their domestic use. They need prior approval of the Divisional forest officer (OFO), an action which has yet to be taken. If Nakina VP decides to do this, they are permitted to sell fallen twigs, trees branches and grasses to the villagers.

Principal motivação dos usuários da terra para implementar a GSTAtividades de sustentabilidade de abordagem

Produção aumentada

 Lucro (lucrabilidade) aumentado, melhora da relação custobenefício

Degradação do solo reduzida

Riscos de desastre reduzido

Carga de trabalho reduzida Pagamentos/subsídios

normas e regulamentos (multas)/aplicação

Prestígio, pressão social/coesão social

Afiliação a movimento/projeto/grupo/rede

Consciência ambiental

Costumes e crenças, moral

melhoria dos conhecimentos e aptidões de GST

Melhoria estética

Atenuação de conflitos

Os usuários da terra podem sustentar o que foi implementado através da Abordagem (sem apoio externo)?

Não

✓ Sim

Incerto

The Nakina Van Panchayat has adopted certain methods for the protection and management of forest resource under their control. Depending upon the nature of forests and resource availability, each Van Panchayat can evolve its own method and mode of utilization of forest resources. Although external support is usually necessary for the establishment of plantations, the concept of the community driven forest management can improve the capabilities of local land-users and improve the management of their natural forest resources without extensive intervention from others.

CONCLUSÕES E EXPERIÊNCIAS ADQUIRIDAS

Pontos fortes: visão do usuário de terra

 The rules and regulations are devised by the Van Panchayat Village Committee for management of their forests. These are unique from one Van Panchayat to another in various management activities, such as division of forest land, management for grazing, lopping, plantation, collection of fodder

Pontos fracos/desvantagens/riscos: visão do usuário de terracomo superar

 Due to lack of financial resources, policy support and weakening management practices, many VP institutions have been less effective in recent years. Challenges and threats to VPs need to be re-examined on the local level; the potentials of conservation and

- and fuelwood and plantation. When the rules are acknowledged by the forest users, this can create a high-functioning land-management approach that fits the needs of the people and simultaneously preserves forest resources.
- The Van Panchayat system represents an integrated approach, emphasizing the need for people's participation in order to reach a balance between meeting needs of resource dependent communities and SLM/biodiversity conservation
- It reveals and merges the multi sectoral dimensions of the socioeconomic and ethical aspects of natural resource conservation (i.e. indigenous resource practices and cultural/religious orientation with forest management and nature)
- There is mutual agreement with committee members and villagers on the function, rules and regulations of the VP for forest management and the necessary collaborative effort needed by the community to carry out these tasks. (e.g. prevention of felling, accepting fines for encroachment and illegal resource extraction, equitable distribution, forest maintenance and protection activities)

Pontos fortes: a visão do/a compilador/a ou de outra pessoa capacitada

- In agreement with the landuser
- Responsibilities of the VP are successfully laid out in the law to
 ensure that forest land isn't diverted into another use, and the
 utilization of the forest products is done in the most advantageous
 way for the community.
- The approach effectively grants the decision-making power to use and manage forest equitable distribution of forest produces. It also offers the opportunity for socially marginalized people, specifically women, to be involved.

- resource management of the communities needs to be discussed and addressed with policy makers, and the major management decisions should assess the impact on the people's livelihoods and the socio-ecological implications for the long-term.
- A general improvement in attitude and participation of the community towards sustaining the VPs for the long run is necessary. Spread awareness that the VP can function as the backbone for the village's sustenance and prosperity. Encourage the next generation to participate by introducing policy that fixes a salary for committee members

Pontos fracos/desvantagens/riscos: a visão do/a compilador/a ou de outra pessoa capacitadacomo superar

- The content of the new VP rules suggest a loss of decision making space for the local villagers. The Forest Dept looks after the affairs of the VPs (Van Panchayat regulation 2005a). The Divisional Forest Officer (DFO), who is removed from the real situations, has the responsibility of formulating the management plan of the VP. Thus VPS members are not playing an active role in the management plan. It would be more effective if the government agencies act as the facilitator for these VP institutions. The villagers should be considered as stakeholders rather than beneficiaries, and have more power to direct and participate in the management plan.
- There is a need to improve the ability of the VP's to generate funds and improve management. Because of historical land-use patterns and exploitation of natural resources, the potential to promote income generating activities has decreased. VPs can be further developed by promoting horticulture and medicinal plant cultivation so there is less dependence on wild collection of resources and increased source of income. Ecotourism can be also be combined with this expansion effort and further diversified. In addition, strengthened partnership between the VPs, NGOS, and Forest Dept is required for development in the hill communities.

REFERÊNCIAS

Compilador/a **Editores** Revisor Jaclyn Bandy Hanspeter Liniger

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Pessoas capacitadas

Joshi Jagdamda - usuário de terra

Descrição completa no banco de dados do WOCAT

https://qcat.wocat.net/pt/wocat/approaches/view/approaches_5199/

Technologies: Reboisement https://qcat.wocat.net/pt/wocat/technologies/view/technologies_6222/

Technologies: Stone Wall Fencing and Firebreak for Forest Protection https://qcat.wocat.net/pt/wocat/technologies/view/technologies_5201/

Technologies: Broadleaf Plantations, Assisted Tree Regeneration and Fodder Nurseries for Sustainable Forest Management

https://qcat.wocat.net/pt/wocat/technologies/view/technologies_5243/

Technologies: Stone Check Walls and Check Dams for Soil and Water Conservation

https://qcat.wocat.net/pt/wocat/technologies/view/technologies_5210/

Technologies: Recharge Ponds and Recharge Trenches https://qcat.wocat.net/pt/wocat/technologies/view/technologies_5193/

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Instituição

- G.B. Pant Institute of Himalayan Einvironment & Development (G.B. Pant Institute of Himalayan Einvironment & Development) Índia
- ICIMOD International Centre for Integrated Mountain Development (ICIMOD) Nepal

Projeto

• Onsite and Offsite Benefits of SLM

Referências-chave

- Natural and Anthropogenic Impacts on Forest Structure: A Case Study of Uttarakhand State, Jaspal S. Chauhan, Alok S. Gautam, R.S. Negi, 2018;: DOI: 10.2174/1874213001811010038, https://openenvironmentalresearchjournal.com/VOLUME/11/PAGE/38/FULLTEXT/
- Forest Management in Kumaon Himalaya: Struggle of the Marginalised People, Ajay Singh Rawat, 1999: http://uttarakhand.org/reference/forest-management-in-kumaon-himalaya-struggle-of-the-marginalised-people/
- Van Panchyat Institutions at Crossroad: A Prospective Perception of Forest Dependent Stakeholders from Indian Himalaya, 2015, Aatif Hussain, Kaiser Iqbal, Subhasis Mahato and Nazir A. Pala, Department of Forestry and Natural Resources: Free online access, DOI: 10.5829/idosi.gjer.2015.9.02.94164

Links para informação relevante que está disponível online

- Stories of Success: narratives from a sacred land: http://lib.icimod.org/record/32844/files/SuccessStory.pdf
- Improving Forest Governance: Experience of Joint Forest Management in India: http://www.fao.org/3/XII/0774-A1.htm
- Policy Brief: Spring Revival through Sustainable Land Management (SLM) in the Himalayan Foothills: Uttarakhand, North India Author: Liniger HP, Bandy J, Year: 2020: https://www.wocat.net/en/projects-and-countries/projects/onsite-and-offsite-benefits-sustainable-landmanagement/-and-offsite-policy-briefs
- Video: SLM for Himalayan Spring Revival. Author: Liniger HP, Bandy J, Year: 2020: https://vimeo.com/429988881

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