A Whitley Fund for Nature and Pragya partnership project

LOTTERY FUNDED

Project guide

Water Access and Wasteland Development for Marginalised Groups in Himalayan Cold Deserts

India / 2006-2011

How the project evolved

The Whitley Fund for Nature invests in local environmental leaders through the 'Whitley Award', a funding and profile prize that helps recognise and scale-up conservation success stories around the world. WFN builds long-term relationships with its Whitley Award winners, offering support, contacts and advice. Together, the winners form the global Whitley alumni network, and when funding allows, the most successful reapply competitively for Continuation Funding after the conclusion of their original Whitley Award work.

Gargi Banerji, Director of the Indian NGO Pragya, won a Whitley Gold Award in 2000 for her work with marginalised communities of the Indian Himalayas. Following a series of very successful grants, in 2004 WFN decided to partner with Pragya more closely, to assist in the development of an ambitious project plan for 'Water Access and Wasteland Development' which would be eligible for international funding from the UK's Big Lottery Fund. The project would give Pragya the opportunity to become a world leader in the field of sustainable development in the Himalayan high-altitudes, continuing their critical work to conserve the last wild areas of this region whilst supporting community economic development.

The resulting £516,429 grant over five years marked a key watershed in both the development of WFN and Pragya, enabling each to develop capacity for international partnership and shared learning. Detailed understanding of each other's management structure, project organisation, monitoring and financial systems has formed a central part of the project's subsequent success.

From the beginning, the project has followed rigorous reporting and communication protocols. Pragya field officers undertake monthly project monitoring and WFN held detailed quarterly monitoring calls with Pragya, working together to overcome challenges and report accurately back to the Big Lottery Fund. Pragya also maintains an exceptional level of interaction and commitment with the cold desert stakeholders, critical to project success.

WFN WHITLEY FUND FOR NATURE

PRAGYA
Development without destruction
Empowerment for enabling choices

Pragya and WFN
A long-term partnership

2000
Gargi Banerji, Director of Pragya, wins the Whitley Gold Award for conservation and sustainable use of medicinal and aromatic plants in Lahaul and Spiti, cold desert areas of North India.

2001
Pragya's national profile is raised and its expertise confirmed through its role recasting the Government Desert Development Programme.

2002
Whitley Gold Award paves the way for Pragya winning a significant multi-year grant from the European Commission and receiving commendations for its project.

2003
WFN gives ongoing support to Pragya's work by awarding £25,000 Continuation Funding for further developing sustainable communities in India's cold deserts.

2005
WFN awards a further £30,000 to Pragya to enable the organisation to build capacity and grow to meet the challenge of its new role as a leader in high altitude community sustainable development.

2006
Big Lottery Fund awards a five year grant of £516,429 to WFN for the WFN/Pragya project entitled 'Water Access and Wasteland Development for Marginalised Groups in Himalayan Cold Deserts'.

2009
Successful Big Lottery Fund monitoring and evaluation visit.

2011
Project completion and sustainable project outcomes confirmed.

The environmental and social challenges

Himalayan cold deserts are a harsh terrain with isolated small villages located at altitudes above 8,000 feet. Severe winters, an arid climate, unproductive soil and minimal water resources are characteristic. Water needs have historically been met solely through glaciermelt. Desertification is increasing, droughts are frequent, forests and pastures are overexploited and arable land is limited by lack of irrigation. However, soil and moisture conservation and irrigation interventions can help make the region's vast tracts of wasteland – community land previously under cultivation and now abandoned – useful again. The impact of droughts can be minimised through mitigation and coping strategies even in an environment becoming increasingly unpredictable as a consequence of climate change.

The cold desert society is patriarchal and closed. The family's eldest son inherits all the arable land, leaving younger sons reliant on pastoralism. Women own no property and most are not allowed to study or earn. The economy is agro-pastoral and existence is at subsistence level. Infrastructure and welfare facilities are grossly inadequate and the influence of cold desert people in national politics is minimal due to their remoteness and low population density.

Since 1995 when its work began, Pragya's understanding of the marginalised nature of these peoples has expanded, and so too has its goals. Pragya focuses on achieving environmental sustainability and helping communities establish more equitable social relations with the rest of India, whilst maintaining a deep respect for local traditions and culture.

Project outline

Aim:

The overall aim was to equip disadvantaged cold desert groups with the skills to gain improved access to land and pastures of higher productivity, improved incomes and reduced vulnerability to droughts and other environmental shocks. The project has increased the ability of local people to live off the resources available, without resorting to encroachment into wild areas, overgrazing of grasslands, or unsustainable use of woodlands and other natural resources such as springs to survive. To achieve this, sustainable management of land, water and common property resources needed to be established in a way that nurtures the fragile ecosystem.

Geographical area:

The four districts of Kinnaur, Lahaul & Spiti, Chamba and Leh were selected for this project due to:

- severe disadvantages in terms of natural resources and livelihoods, escalating desertification and shrinking water resources
- impoverished, marginalised population dependent on a subsistence, natural resource based economy
- the most remote area, least addressed by Government and NGOs

Intended beneficiaries:

- landless and marginal farmers
- women
- semi-pastoralists
- Tibetan refugees
- communities of remote, cold desert blocks

Project activities:

1. **Wasteland plantations to benefit landless and marginal farmers:** reclamation of 21 wastelands, with the introduction of irrigation facilities, soil and moisture conservation measures, the cultivation of medicinal plants as cash crops and market linkages for their sale.

2. **Small agricultural initiatives for women:** establishment of 35 women's Self Help Groups for developing homestead kitchen gardens and other collaborative endeavours.

3. **Common property resources management:** mobilisation and training of 120 communities in sustainable use and the regeneration of common property resources through 21 women's Common Property Resource Management Groups, establishing fodder farms, woodlots and medicinal plants nurseries, and training of 140 pastoralists in sustainability and improved grazing management.

4. **Water conservation and management:** establishment of 240 household snow/water harvesting and sanitation facilities through 21 Women's Domestic Water and Sanitation Committees. Also protection for 21 natural springs, initiation of suitable irrigation technologies and micro-water management structures at 21 sites, along with introduction of technologies to minimise water loss.

5. **Community watershed initiatives:** training on watershed mapping and shared learning across 21 watersheds, demonstrating appropriate watershed management techniques.

6. **Drought mitigation:** training in drought mitigation techniques, establishing storage facilities and seed banks for emergencies, and carrying out extensive relief and rehabilitation work for victims of natural hazards in the area.

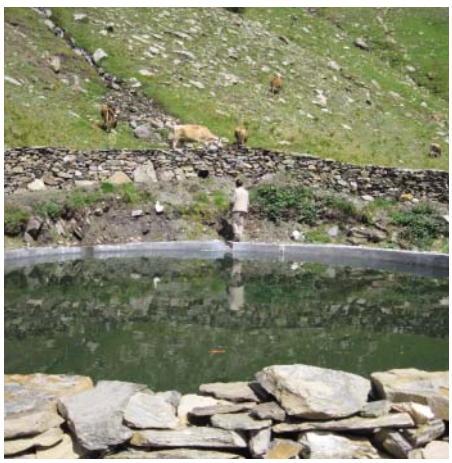
Results

Beneficial impacts on the environment:

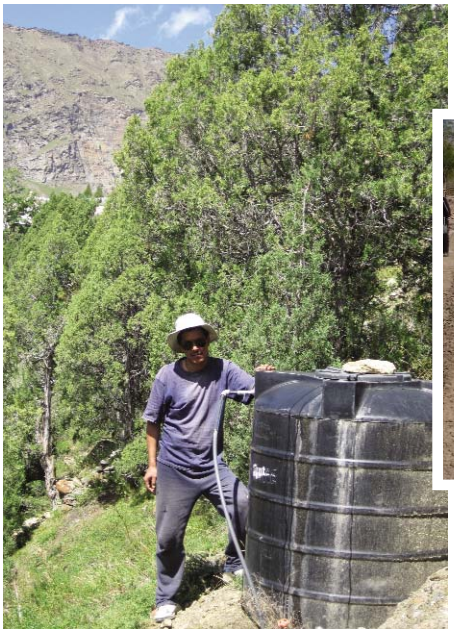
1. Revitalisation and protection of springs: Interventions have enhanced infiltration at the feeding grounds of 21 natural springs. Reduced use of the discharge zones and plantation of herbaceous species around spring outlets have helped protect springs from degradation. 3,780 people involved in the participatory surveys have reported a significant increase in the discharge of the springs – meaning more water for all.

2. Reduced run-off, erosion and siltation: Interventions, including snow-pits and check-dams, have reduced snowmelt run-off down cold desert slopes which has recently increased in pace and volume as an impact of climate change. Run-off causes topsoil erosion, land slippage and avalanches, and excess siltation of streams and rivers. A survey in August 2009 of those trained in these irrigation measures found 95% agreed that both the environment and community will benefit as a result of project measures.

3. Moisture conservation: Interventions to enhance infiltration have helped conserve soil moisture. Snow fences which harvest snowdrift in conjunction with snow pits and gabion walls have increased moisture content in grasslands as well as sub-surface flows to wastelands and agricultural fields. Increased soil moisture will in turn reduce desertification and soil erosion by wind, and improve vegetation cover and the regeneration of natural cold desert species.



4. Enhanced irrigation and water utilisation: Improved harvesting and better storage, distribution and utilisation of water, have helped enhance water availability across 320 hectares of agricultural land in 3 villages, and across 20 hectares of 21 wastelands, improving agricultural productivity and reducing the need to bring more natural areas under cultivation.



5. Reduced overuse of wild areas and species: Education of 2,256 pastoralists on conservation and the management of common property resources has been accompanied by the establishment of 7 community woodlots, 21 plantations covering 3 hectares of wastelands, fodder farms, nurseries and kitchen gardens for medicinal plants. These measures have helped further reduce pressure on wild resources.

6. Decrease in livestock and grazing pressure: Over 228 metric tonnes of fodder are now harvested from fodder farms, so reducing the stress on natural grasslands. 48% of the 82 watersheds surveyed showed a decline in the number of grazing livestock over the course of this five year project, with further declines expected.

7. Greening of wastelands: Data collected in 2006-07 showed a 79.5% reduction in forest cover across 57 watersheds surveyed in Himachal Pradesh over the past 30 years. To address this escalating desertification, wastelands have been greened with native tree, fodder and medicinal plant species. Not only have 1,931 landless and marginal farmers achieved land access this way, but multiple beneficial ecological impacts – on soil, vegetation and microclimate – have also resulted.

8. Sustainable livelihoods via medicinal and aromatic plant (MAP) cultivation: This region holds some of the rarest and most valuable MAP species in the world, but before PRAGYA began its work, wild take was uncontrolled and increasing, with little benefit from MAP sale reaching local people. Part of the project built on earlier work to encourage the cultivation of MAPs to reduce wild take, increase income per household and offer the potential of a long-term secure livelihood. 746 women have found a route to economic empowerment for the first time through MAP cultivation in kitchen gardens. 97% of project beneficiaries surveyed in August 2009 indicated that they would use additional incomes generated from MAP cultivation for accessing a better lifestyle (smokeless cook-stoves, solar lanterns, children's education). 79% felt additional incomes could be used for further investment in large-scale cultivation, which will help reach higher volume buyers and higher revenues.

9. Improved Law enforcement regarding wild MAP trade: In 2007, Pragya was commissioned by the Indian Government's National Medicinal Plants Board to prioritise medicinal species for conservation and cultivation, for inclusion in its schemes and policies. As a result of such collaborations and advocacy over the years, the regulations protecting wild plant products are more rigorously enforced than ten years ago.

10. Direct community protection of sensitive sites: 12 sites with a concentration of threatened species have been made Community Protected Areas. Beyond this project, 6 high altitude wetlands in Arunachal Pradesh, along with their surrounding buffer zones, are now protected by the region's Community Heritage Councils. 18 Community Heritage Councils across the Himalayas are monitoring the wild areas in their respective valleys and controlling extraction as a result of this and other Pragya initiatives.

CASE STUDY

Example of beneficial impacts on communities – Enhancing resilience to climate change

Sumdho is a small village comprising 53 households at an altitude of 15,000ft in the Nyoma Block of Leh district, not far from the Chinese border. Agriculture is severely constrained at this altitude, and the people of the village grow only a subsistence requirement of wheat, their staple food crop, during the short, single cropping season. They are semi-nomadic, rearing sheep and yaks which the menfolk shepherd in distant pasturelands in the summer.

In August 2010, the catastrophic floods triggered by a cloudburst that hit Leh damaged nearly 40% of the houses in the village leaving them uninhabitable. The resulting mudslides sealed the natural spring that was used for drinking water and floodwater ripped through the state-constructed food warehouse destroying the rice, sugar and pulses stored there.

Thankfully, the other food warehouse set up in Sumdho in 2009 as part of this project withstood the floods and its supplies remained protected. The 10ft x 12ft x 8ft moisture-proof and rodent-proof structure has polyurethane foam walls and can withstand severe weather conditions, retaining its optimum temperature for food storage. At the time of the flood, there were nearly 5 tonnes of foodgrain in the warehouse which helped the people of Sumdho survive the long, agonising wait for the roads to be cleared 15 days after the cloudburst.

Other outcomes

Business

Access to market is often a key limiting factor on the profitability of community-led MAP cultivation. Buyer-seller meetings at national level were held with select buyers resulting in a multi-year sales contract being secured with Indian company Dabur (Revenues of US$910m), covering three MAP species in the Lahaul and Spiti project area. The company now employs a full time professional in the district who provides technical support and conducts meetings with farmers in this and neighbouring districts with the intention to secure further sales contracts. The Herbal Research and Development Institute of India has provided planting materials to farmers in Chamoli district and is exploring options to procure large quantities of some species from communities there. Such business may not only increase local incomes, but – crucially – has improved the environmental sustainability of trade.

Policy

Two national level workshops on cold desert environmental threats and management were held by Pragya, with the involvement of high-level government officials and policy makers

Advocacy

More than 18 ground breaking reports and documents for the dissemination of project learning have been published, including reports on international market prospects for sustainably sourced medicinal and aromatic plants in India, environmental threats in cold deserts, agricultural practices, disaster management, irrigation technologies and many other training manuals and guides.

Examples of challenges overcome

A project of this scale in a remote, impoverished region with a harsh climate necessitated determination and the ability to adapt and respond to difficult situations:

■ **Geographic isolation, landslides, unpredictable snow storms and droughts:** Despite natural obstacles, rigorous project management has meant all activities have been completed to plan. The environmental challenges have tested the project outcomes and illustrated their value.

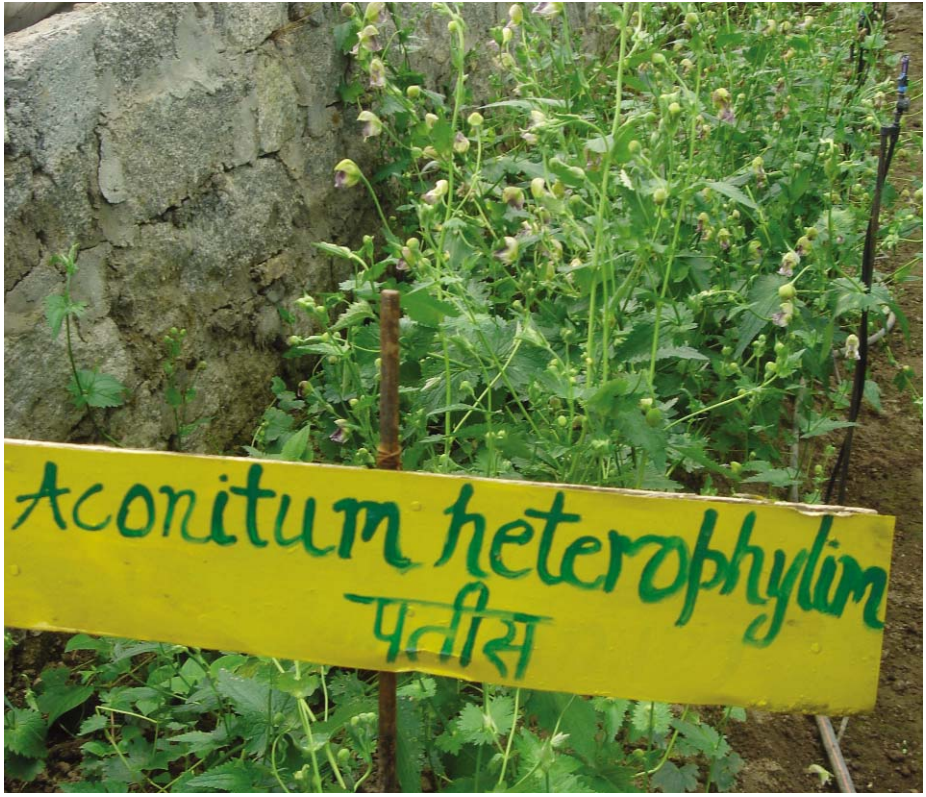
■ **Social pressures on women:** Training and awareness camps had to be timed to fit with women's responsibilities in the home. Significant steps have been taken to build confidence in women and a survey conducted of those involved in the project showed 70% were highly satisfied with the processes put in place by their Self Help Groups (SHGs). By encouraging opportunities for women to come together to discuss common issues, SHGs have made steps towards self-empowerment in a way that does not confront local traditions.

■ **Concerns over disharmony regarding household water/snow harvesting:** In Lapchang village in Lahaul and Spiti district, household water and snow harvesting infrastructure were established for the most disadvantaged home clusters as determined by the village council so as not to cause discord between households. This method was then replicated in other villages.

■ **Lack of agreement between farmers:** Open discussion and debate allowed groups to settle issues internally and achieve resolutions broadly acceptable to all involved.

■ **Short summers:** the region's productive agricultural period runs for only five months, from May to September. It took significant management and motivation from the start to prioritise farmers' time so as to achieve the project goals in such a short farming season and in the context of their other vital livelihood activities.

■ **Lack of farmer confidence in new technologies:** In a survey conducted in August 2009, whilst 83% of farmers said they were aware of new irrigation technologies, only 63% of male and 40% of women farmers had adopted them. Great effort has been put into convincing farmers of the benefits of adopting new technologies, and confidence is slowly increasing.



Project sustainability

The project was designed to be self-sustaining within its five year life. All project milestones were achieved to schedule and the broad, long-lasting and far-reaching achievements for the sustainability of the project are:

Ecosystem

Where intervention has taken place, the fragile Himalayan ecosystem has gained resilience through participatory conservation and efficient use of natural resources and will sustain long term benefit – for people and biodiversity – from greened wastelands and a carefully managed water supply.

Natural Resources

The planned household harvesting, irrigation assets, wasteland plantations, fodder farms and woodlots are in place, whose target group owners have all now been trained in their sustainable use and maintenance.

The profits derived from the medicinal and aromatic plant sales will both meet expenses on further cultivation cycles and wasteland development, provide supplementary incomes for men and women and generate sustainable capital for reinvestment in the cultivation process and future crops without degradation of wild habitats and species.

Incomes

Significant capacity has been built in community-based organisations in the region and links have been built with relevant Government schemes which will help to ensure project continuity.

Support Network

Pragya field officers, continually working in the project areas on a range of Pragya activities, will provide ongoing support whilst the community continue to develop capacities for undertaking project activities themselves.

Education

Ongoing awareness raising and education continues to engage communities and increase understanding of the benefits of the project both to themselves and to the ecosystem, particularly the ability to effectively manage droughts and other natural events.

Trade

Access to medicinal and aromatic plant trade routes has been secured via the signing of the multi-year sales contract with Dabur, which has employed a professional to work in the field and provide technical support to farmers.

Conclusion

This project can be considered a blueprint for sustainable MAP livelihoods and improved water access in cold desert regions. Further to our end-project dissemination activities, other organisations working in similar regions are encouraged to get in touch. There is much expertise to share!

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India / 2006-2011

Whitley Fund for Nature

A UK registered charity recognising outstanding nature conservation leaders around the world through project funding and international profile.

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