



Connecting People's Capacities

SNV Nepal Forest Products Sector Case Study:

The Seabuckthorn Experience: *Starting a Value Chain from Scratch*

This case illustrates SNV's activities in promoting the value chain development of seabuckthorn (from scratch) in the Karnali region – the remotest and poorest part of Nepal's Himalayas. It was initiated at the end of 2006 in the district of Mugu with the intention to support and steer the Rural Enterprise Assistance Programme – also supported with SNV advisory services – to a value chain approach. Local juice processing enterprises in the four districts of Karnali have been supported to increase their technological and institutional capacity through training in juice processing techniques, hygiene promotion, increasing market linkages and linking them to projects which can provide equipment support. In addition, two local NGOs, Rural Community Development Centre (RCDC)-Mugu and Sustainable and Equitable Development Academy (SEDA)-Nepal have been mobilised with resources to support collector groups in order to promote sustainable natural resource management and increase their bargaining power. Seabuckthorn berries are now commercialised for juice production and its seed oil could be a very potential diversification in the near future.

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Introduction

The Karnali region includes the four districts of Mugu, Humla, Jumla and Dolpa located in the north-western mountainous regions of Nepal. Karnali is one of the remotest areas in Nepal, only Jumla has recently been connected by a seasonal dirt road. Unreliable air services remain as the primary means of access to the region. As a result, Karnali, with about 290,000 inhabitants, is isolated from the rest of Nepal and its population suffers, as approximately 90% live below the poverty line.



Seabuckthorn Berries

In the past, Seabuckthorn (*Hippophae* varieties) used to be a common and wild tree in the Himalayas of Nepal. However, the struggle to survive in these food-insecure areas and limited arable land has led to a massive cutting of this plant. As a legume, the soil under seabuckthorn trees is relatively fertile. However, so far only a small percentage of seabuckthorn berries have been used for local medicinal production. On the other hand, China, Mongolia, Russia and even Canada are cultivating seabuckthorn on massive scale. Seabuckthorn berries contain large amounts of vitamin C and precious anti-oxidants. Along with seabuckthorn juice, the oil extracted from seabuckthorn seeds is even more precious, fetching several hundred dollars per litre depending on quality. The plants also conserve soils due to their strong and extensive rooting – a quality China is exploiting by spraying seabuckthorn seeds from airplanes over its vast eroded and high altitude plateaus. Although other organisations have taken up the value chain of seabuckthorn in other parts of Nepal, its juice/products has yet to make a large-scale breakthrough into larger markets across the country. This is

what SNV seeks to do, as the effective development of the seabuckthorn value chain provides opportunities to create much needed income and employment in the Karnali.

Challenges & Opportunities

- The remoteness of the Karnali district – and the limited accessibility to the region – increases costs of transporting finished products, creates difficulties for purchasing equipment and inputs, and constraints in linking collectors and enterprises (semi-processors) to larger markets.
- Making juice is not so difficult; however meeting the hygienic requirements of established juice companies or government food laboratories is a major challenge for juice processing enterprises.
- In several cases the remaining seabuckthorn stands are still government forest, which function as common properties. Therefore some form of community ownership is needed so that sustainable resource management can be promoted.
- A value chain analysis of seabuckthorn conducted by SNV in 2006, illustrated a considerable demand for seabuckthorn juice in larger towns, and also its commercialisation is technologically and economically feasible.

Clients

In this value chain, SNV is working with two sets of clients; (1) five juice processing enterprises located in Karnali; and (2) two Karnali NGOs, the Rural Community Development Centre (RCDC)-Mugu and the Sustainable and Equitable Development Academy (SEDA)-Nepal.

Previously, Rara Juice Products in Mugu was the only functioning enterprise in Karnali. However, through two juice processing trainings by Alternative Herbal Products (AHP) – a private juice company in Kathmandu – four other local enterprises like the Ramdev Fruit Processing Center and Seabuckthorn Juice Industry, have been registered and begun juice production for their district markets in Jumla, Dolpa and Humla. SNV, with piecemeal support from other projects, has already realised sufficient production levels for the local district markets, and now as a next step, SNV wants

these local enterprises to be enabled to sell their juice to the larger towns of Nepal – which could easily increase income and employment opportunities for the Karnali by ten-folds.

Rural Community Development Centre (RCDC)-Mugu and Sustainable and Equitable Development Academy (SEDA)-Nepal have been mobilised by SNV to promote the sustainable resource management of seabuckthorn by collector groups.

Involvement & Roles of other Stakeholders

- **Alternative Herbal Products (AHP):** A juice company located in Kathmandu which already has a forest based juice (wood apple) on the market. Not only is AHP a good future market linkage for the five enterprises, but they also provide excellent juice processing trainings.
- **Rural Enterprise Assistance Programme (REAP):** A micro-enterprise development programme which aimed to establish value chains in the Karnali and which selected Seabuckthorn as its first product in the Karnali.
- **Western Upland Poverty Alleviation Project (WUPAP):** after initiation by SNV and REAP, WUPAP has been promoting seabuckthorn for its leasehold forestry groups.

Other stakeholders like Village Development Committees and District Development Committees have been providing piecemeal support throughout this assignment.

SNV Intervention

In order to enable Karnali enterprises to break into larger markets, their efficiency, hygienic standards, and market linkages need to be enhanced. Through SNV's mediation and support, AHP was identified as an ideal partner to disseminate juice processing training and act as a possible business partner to the five local enterprises. Either with SNV's LCB funds or through funds of others, we have organised juice processing trainings in all four districts. The trainings focused on good manufacturing practices and identifying the hygiene risks in the juice making process. In addition, REAP, WUPAP and others provided additional support to the local enterprises in improving their hygienic standards by providing new stainless steel equipment and processing space.

Both for achieving hygiene and increased volumes of juice, it is essential for the entrepreneurs to become better organised, inclusive and business-oriented. Through the Nucleus for Empowerment through Skill Transfer (NEST), a local capacity builder, SNV provided business planning training to all enterprises. SNV also organised an exposure trip to a community owned juice factory in the Nepal's Terai region, so that the entrepreneurs could get a clearer vision of the required processing and hygienic standards. Because of the hygienic requirements, SNV made the difficult decision to promote individual enterprises instead of community managed. In this way, collectors don't bear any risks, but if the enterprises meet the processing standards they will be rewarded.

SNV also spent a substantial amount of time with fund-brokering and advisory support to RCDC-Mugu and SEDA-Nepal to strengthen the capacity of seabuckthorn collector groups. RDC-Mugu was granted funding by the UNDP-Global Environmental Fund-Small Grant Initiatives in early 2008. As a result it supported the formation of seabuckthorn berry collectors' groups – in 50% of the cases they are already existing community forestry groups – to increase their bargaining power with the local entrepreneurs. And order to guarantee a sufficient resource base and ensure sustainability, RCDC-Mugu has supported the collector groups to set up nurseries and will provide training on pruning to increase production. In addition SEDA-Nepal received € 70,000 from IUCN-Netherlands at the end



Juice Processing Training



Seabuckthorn Nursery in Mugu

2008 for up-scaling the practices promoted by RCDC in Mugu to the three other districts of Jumla, Dolpa and Humla.

Also a lot of coordination has to be taken up by SNV because of the remoteness of this area, as even telecommunications, the ordering of equipment and the coordination between clients and local capacity builders are challenging. However, through SNV coordination, several development projects and organisations in Mugu have provided support to Rara Juice Products, and its processing centre is starting to look 'professional' – certainly for Karnali standards. SEDA-Nepal, with its funding will make sure the other enterprises will improve

their processing units as well.

SNV Nepal's aim for 2009 is to ensure considerable sales of seabuckthorn juice to AHP and at least a sufficient supply to a few Kathmandu supermarkets the whole year round.

Outcomes

- Increased capacity of five juice processing enterprises in terms of production, quality and improved market linkages. In 2006 it was only Rara Juice Products in Mugu selling juice locally – basically a business of one household. Due to involvement of SNV and others, which started end of 2006, we have seen a steady increase. In 2007 three enterprises bought NRs. 31,000 worth of berries (900 kg) for juice production. In 2008 five enterprises bought NRs. 201,000 worth of berries (4100 kg) from collector groups.
- Collector groups – which are currently only organised in Mugu – have managed to bargain with Rara Juice Products on a more beneficial pricing mechanism. Before the intervention, Rara Juice Products was using a flat rate of NPR 30/kg berries, now it is offering up to 50/kg. The rationale for the pricing mechanism is based on the distance the collectors have to walk to deliver their berries; the further the collectors have to walk, the higher the price they receive.
- Organisation of seven collectors groups in 2008 in Mugu – from only one in 2007.
- The Mugu collectors groups have established two nurseries and about 4000 saplings have been successfully distributed to farmers and planted on barren community forestry land.
- As our value chain analysis has shown, the real money is in the seed oil which is in high demand by the cosmetic and pharmaceutical industry, and this year we discovered that 2 companies are competing to buy all the available seeds for oil testing. Hopefully this demand for seed will lead to a 10-20% increase in berry prices in the near future.



Examining the final product

Impacts

- 425 households earned on average of only USD 6 each in 2008. The figure is not something to be proud of yet but considering that in 2006 it was just one household, the increase is substantial. Furthermore, we have good reason to believe that this increasing trend will continue in years to come, especially if the marketing to the larger towns through AHP or other traders will be successful. We have calculated a demand of 60-70,000 bottles of seabuckthorn squash by comparing it with sales of similar juices in the health-focused, up market juice squash segment.

Lessons Learned

This case has illustrated the opportunities, challenges and interventions in setting up a value from scratch. Here are some of the lessons learned:

- As results and impacts in the beginning are by definition small, starting a value chain from scratch requires long term commitment – while many organisations would like to see quick impacts with minimal resources.
- Not only are risks of failure greater, as there are more unknown factors involved which you will only discover once you start implementing, but also failures will be clearly visible. In retrospect, in an existing value chain the actors would probably help you identify most of these factors without much difficulty.
- Although our value chain analysis covered many issues in depth, including social inclusion, possible conflict over resources, market demand estimation, identifying at least one committed market channel (AHP), and even the hygiene challenges, we did not reconsider that perhaps a non-food or at least a non-liquid food would have fewer challenges. A comparison with other possible value chains, new or existing was not made. Since establishing a value chain analysis manual within SNV in 2008, this mistake will hopefully not be made again.
- Taking a serious potential buyer into the whole process right from day one has probably been our single best decision in the whole case. This quickly established a common vision for all: very important if you want to start from scratch.
- An interesting and important question arises – especially relevant to new value chains – is when to increase competition by involving more outside traders? Too early might mean a minimal return on investment for these outside companies and they might drop out. Too late might mean you will miss some good opportunities.
- Some people make a distinction between production system (district level), core supply system (hopefully AHP in the future) and marketing system (supermarkets and consumers), which is also helpful for analysing this case. In this scenario the core supply system and the marketing system are already well matched: AHP already has a juice on the market, has its retailing set up and has done marketing campaigns before. The remaining challenge is to match the production system with the core supply chain. If proven successful, we might see a seabuckthorn juice launch end of 2009.



SNV is dedicated to a society where all people enjoy the freedom to pursue their own sustainable development. We contribute to this by strengthening the capacity of local organisations.