



Democratising forest business: a compendium of successful locally controlled forest business organisations

Duncan Macqueen, Anna Bolin and Martin Greijmans
(Editors)



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Edited by Duncan Macqueen, Anna Bolin and Martin Greijmans

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August 2015

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Produced by IIED's Natural Resources Group

The aim of the Natural Resources Group is to build partnerships, capacity and wise decision-making for fair and sustainable use of natural resources. Our priority in pursuing this purpose is on local control and management of natural resources and other ecosystems.

Published by IIED, 2015

Macqueen, D., Bolin, A. and Greijmans, M. (eds.) (2015) Democratising forest business: a compendium of successful locally controlled forest business organisations. IIED, London.
See: <http://pubs.iied.org/13581IIED>

Design by: Eileen Higgins, email: ehdesign@virginmedia.com

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Cover photo: Bolivian rubber tappers

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Printed by Full Spectrum Print Media, UK on 100% recycled paper using vegetable oil-based ink.

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Nepal: Himalayan Naturals Pvt Ltd

Charcoal-briquette enterprises in Nepal: a green and fair value-chain development model

by Bishma P. Subedi, Sudarshan C. Khanal and Puspa L. Ghimire

With the cost of firewood and liquid petroleum gas steadily rising in Nepal, an alternative source of energy is gaining popularity with both domestic and commercial consumers in Kathmandu. Charcoal briquettes are a cleaner, more efficient and cheaper option – and there is one business which is driving the expansion of the market for its products while generating much-needed income for local communities. This chapter describes how Himalayan Naturals works with community forest user groups, community enterprises and private investors to produce and market high-quality and sustainably produced charcoal briquettes, and discusses both the successes and challenges the business has faced.

15.1 Context in which Himalayan Naturals operates

15.1.1 The enabling environment

Nepal is one of the most progressive countries in the world when it comes to community forestry. Over the past three decades the government of Nepal has gradually devolved management responsibility of national forests to local communities, allowing communities to harvest, use or sell forest products from these forests. The Forestry Act of 1993 and Forest Regulations of 1995 enabled the transfer of legal rights from the central government to local communities to manage and use specific forest areas. Presently the land under community forest management amounts to 1.7 million hectares, about 29 per cent of the total national forests (DoF, undated).

The devolution of rights to local communities has resulted in an increase of trees on farms and in community forest areas and has significantly improved Nepal's forest coverage and condition (FAO, 2009a; 2011). A recent national-level study found that Nepal's farm-forestry sector has a huge untapped potential for generating economic value of legal and sustainable products and services (Subedi *et al.*, 2014). Nepal's economy is primarily agrarian with the agriculture sector accounting for 37 per cent of the total GDP and employing about two-thirds of the total labour force. The forestry sector alone, if its full potential is harnessed, could generate economic value worth NRs373 billion (about US\$3.7 billion), a many-fold increase from the present value, and could create 1.38 million full-time job equivalents in Nepal (ibid).

The population of Nepal is almost as diverse as its biological heritage. More than 125 ethnic groups are spread out across the mountainous areas in the north, throughout the middle hills, and in the Tarai in the south. More than 123 languages are currently spoken in the country. These groups have developed and managed to adapt their livelihood strategies over time as environmental and socio-economic conditions have changed. This has given, over a long history of time, a multitude of artefacts and practices contributing to cultural wealth.

However, despite its richness in biological and cultural diversity and with a high proportion of the population economically active, Nepal is one of the world's poorest countries with a GDP of US\$694 per capita and almost one fourth of the population living below the absolute poverty line (CBS, 2011; World Bank, 2014). The country has undergone numerous and significant political changes since the 1990s. It has resolved a decade-long insurgency and although the nation was declared as a federal democratic republic in 2008, it is still in a post-conflict political transition phase. In this situation, the overall economy has been impacted, and Nepal has a slow-growing or stagnated economy, often reflected in the mixed progress in the development of infrastructure in the country.

Over the past two decades, the country has made significant progress in information and communication technologies (ICTs) including the Internet and mobile phones. About 80 per cent of the population of Nepal uses telecommunications and 72 per cent uses the Internet. Communication costs have reduced and are quite reasonable for businesses. This has helped to improve other business development services. For example, commercial banks have developed and provide innovative banking services such as mobile banking.

The electricity coverage in the country is low, providing access for less than half of the population. Because of load shedding almost throughout the year, which lasts for more than 12 hours a day during the winter and dry seasons, there is an intermittent supply to those with access to electricity. Road infrastructure is increasing, although most rural areas in the hills do not have adequate road infrastructure to reach services such as hospitals located at the district level. While the Tarai has a relatively high road density (22km/100km²), difficult terrains and lower road density in the hills (8km/100km²) and mountains (2 km/100km²) make transportation difficult, so that expensive air transportation is sometimes needed. These underlying conditions necessitate the need to work with locally available farm-forest resources to improve rural livelihoods and income-generating activities.

In this context, a number of NGOs have emerged to support communities in the sustainable management of their forests and for developing forest- and farm-related enterprises. One of these organisations, the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) has been working with local communities since the mid-1990s to establish forest and non-timber forest product (NTFP) enterprises. In particular, community-private partnership business models, help to link community enterprises with other actors further up the value chain to facilitate market access and value addition. In this context, ANSAB designed a project in 2007 with an objective of transforming natural resource-dependent rural communities into commercially viable and sustainable entities in nine mountain districts of Nepal. This project identified forest-based biomass energy as one product with the most potential, along with natural fibres, essential oils, soapnut and timber.

15.1.2 The operating environment

Energy in Nepal is supplied mainly by traditional sources, such as firewood, animal dung and agricultural residues, and followed by commercial sources, especially petroleum products, electricity and coal. Alternative energy sources include biogas, solar power, wind power and hydropower. Out of the total energy consumption of about 400 million GJ, nearly 78 per cent comes from firewood. Close to 90 per cent of energy is consumed for residential purposes,

especially cooking and heating, where firewood contributes to around two-thirds of the total household energy demand (WECS, 2010). Apart from residential use, firewood is also used by commercial consumers, such as agro-processing enterprises, hotels, restaurants and brick kilns. Brick-making industries and restaurants also use coal and consume about two-thirds of over 500 billion tonnes of coal imported to the country each year (TEPC, 2014).

In recent years, prices of firewood in urban areas have become very high and are now almost comparable with that of liquefied petroleum gas (LPG). Because of the increased cost and indoor air pollution associated with firewood, households have been increasingly using LPG for cooking purposes; almost all households in urban areas use LPG. Similarly, commercial users in urban and semi-urban areas are switching to LPG because of the limited supply of firewood and its increased cost. The government has subsidised the cost of LPG, and has recently formulated a policy of discriminating between costs for domestic and commercial consumers by using different-coloured LPG cylinders. While domestic consumers can buy LPG at subsidised rates, the subsidy is lifted for commercial uses. Once this policy is implemented, as the cost of LPG will become very high, commercial users will seek less expensive alternatives. Similarly, as small and cottage enterprises are more cost sensitive they are less likely to use or shift into using LPG.

Brick kilns and restaurants use coal, which emits more pollutants in the atmosphere and increases the country's dependency on imported fossil fuel. Charcoal provides an alternative for these industries as a clean and efficient fuel, while providing a source of income for small and cottage enterprises and helping the national economy. However, there are only a few small charcoal-making enterprises, which operate at the local level and do not regularly produce briquettes. They are not well integrated into the value chain and lack a supply chain, distribution network and distinguished market.

The raw materials for briquette-making enterprises are plants and plant parts not used for other purposes. Biomass obtained during forest and agriculture operations, such as rice husks, sawdust and veneer by-products can also be used for making briquettes. The raw materials are turned into char, which is then ground into a dust, mixed with clay and then formed into briquettes using moulds. The briquettes are then left to dry in the sun. For charcoal-briquette enterprises, community forest user groups (CFUGs) are the primary suppliers of raw materials with timber enterprises providing sawdust and veneer by-products on a small scale. Raw materials for making charcoal briquettes are available in significant quantities in forests. A recent estimate conducted by ANSAB shows Nepal has the potential to produce 34,764 tonnes of charcoal from community and private forests alone, by applying a minimal rate of conservative harvesting in these forests, which could easily reach up to 89,289 tonnes with optimal harvesting in these forests (Subedi *et al.*, 2014). This volume is 1,086 times greater than charcoal production levels in 2013 as estimated by FAO (2015).

The charcoal-briquette business is in the infant stage of commercialisation. There are several small-scale briquette projects in different parts of the country that have been supported by NGOs and donors since the 1980s, and which have been successful at the local level in building the capacity of local communities in briquette production. However, these charcoal-briquette businesses never became commercial ventures as they were not well integrated

into the market and, due to a lack of any sizeable market for charcoal in the country, there were doubts about expanding production. Financial lending to briquette-making and other farm-forestry enterprises is negligible. Banks and financial institutions have very limited knowledge of the sector and lack appropriate loan products. This in turn adds to the capacity constraints of these enterprises, which include their informal and unorganised nature of business, financial illiteracy, an inability to produce enough collateral and the reputation of the sector in general.

The Himalayan Naturals charcoal-briquette enterprise emerged as a unique pioneering community-private partnership to take advantage of both the raw materials available at community level and the latent demand for clean and highly efficient fuel at the final consumer level. Its base was formed in 2007 when ANSAB designed and piloted a project for developing a value chain based on community-based briquette production using otherwise-wasted biomass harvested from sustainably managed community forests. The objectives of the initiative were to increase the demand for community-produced charcoal briquettes in targeted markets of Kathmandu; enhance the production capacities of rural processing enterprises to meet the new demand and increase their revenues; integrate the processing enterprises in rural areas to meet the new demand with the development of a marketing platform in Kathmandu; and finally, to support local communities in their aspiration to meet their economic needs whilst taking into account ecological and equity concerns.

15.2 About Himalayan Naturals as a business

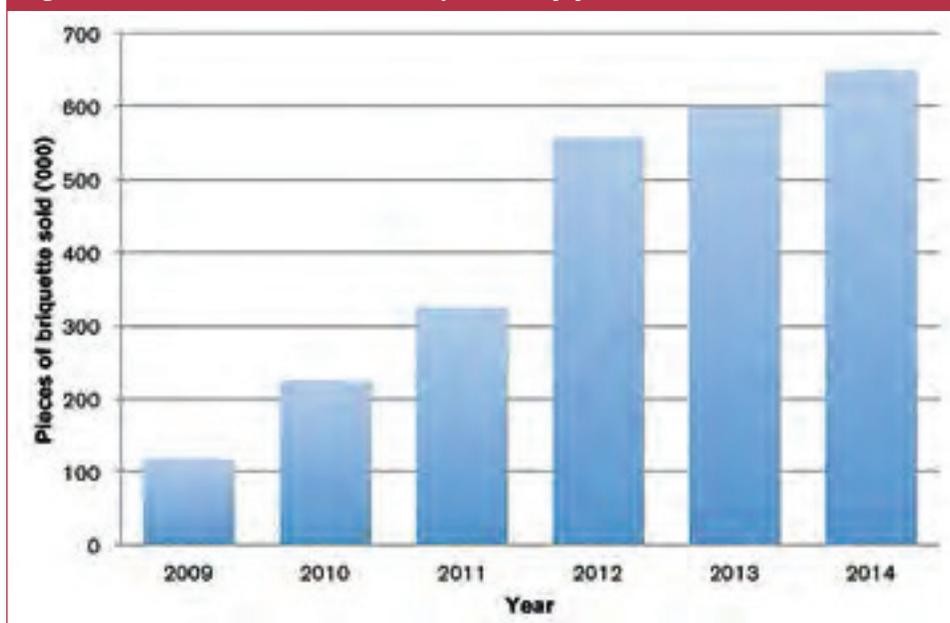
15.2.1 The vision

The business consists of 23 community-level briquette enterprises operating in 11 districts, and a lead marketing firm – Himalayan Naturals Pvt Ltd – operating at the national level. The initial set-up included shareholdings of community enterprises and private investors under the company name Himalayan Green Energy Pvt Ltd (HGEPL). This was registered later as Himalayan Naturals in November 2010 at the Office of the Company Registrar in Kathmandu. The company has remained as a committed lead firm in charcoal briquettes, consolidating the production and selling the products to urban markets while providing technology to the producers and accessories to end users.

Himalayan Naturals has a vision of promoting the livelihoods of rural communities while providing sustainable, cost-efficient, safe and environmentally friendly natural products to consumers in Nepal. To achieve this vision, the company's mission is to explore the market potential for community-produced natural products, while at the same time engaging with the entire value chain to improve product quality and organisation for production.

Over the past six years, sales amount to over 2.4 million briquettes and about 90,000 sets of stoves, mainly in Kathmandu. With an average of 117,000 briquettes sold in 2009, sales of charcoal briquettes reached 650,000 pieces in 2014 as shown in Figure 15.1. With this level of sales, Himalayan Naturals has been operating at a break-even point and has yet to make any profit. This is because it has been expanding its production lines such as pellets and commercial stoves and must also pay back loans from the bank. Revenues are expected to increase in coming years through increased sales of briquettes, pellets and stoves to urban markets.

Figure 15.1 Sales of charcoal briquettes by year



Since its establishment, the lead firm has been operated by a managing director, a production director and a production manager. It involves nine full-time staff at present, including a director of promotion and partnerships, a marketing director, an administration and accounts manager, a marketing officer, a sales officer, and an administration and accounts assistant. The two directors – promotion and partnerships and marketing – have recently joined the company and will use their expertise to expand the briquette business in the country. From the beginning, the company involved two other full-time staff members for market exploration and product marketing, who were originally overseen by the production director but are now managed by the marketing director. The company outsources experts for research and development and for technology as well as others. Last year, besides the full-time staff, 16 external experts were involved with the company.

The charcoal-briquette business currently supplies household customers. While the product is commonly used for baby massaging¹ the middle classes also use it for domestic space heating and barbeques. The business has the potential to expand to commercial consumers, such as cottage and small enterprises including different agri-food and forestry enterprises and hotels and restaurants in urban or semi-urban areas, which are switching to LPG.

1. This is a traditional practice in Nepal in both households and massage parlours, where briquettes are used to heat the room where the babies are massaged.

15.2.2 Business inputs

The raw materials for briquette making include weeds (eupatorium, lantana and ferns) or biomass obtained during regular forest operation such as cleaning, thinning or pruning. The production enterprises at community level source these materials from community forests. With technical support from ANSAB and district forest offices, the CFUGs have incorporated the use and management of residues from silviculture practices (including shrubs and twigs) in their CFUG management plan. According to these management plans, members are involved in harvesting raw materials for charcoal and charcoal-briquette production.

While the community-based briquette production enterprises have arranged finance through individual members in the community and CFUGs, Himalayan Naturals has arranged finance through equity investment from individual investors and the community, and through loans from the bank. As the bank loan is an overdraft and requires annual renewal at a high interest rate, it is hindering the company's profit. Himalayan Naturals is in discussion with banks and other financial institutions and hoping to qualify for deprived-sector lending, which has about half the current interest rate. There is also the potential for increased investment from the supplier communities, depending on the amount of products they supply to the company, as 2 per cent of their sales is reinvested in the company. Himalayan Naturals has also been supported by ANSAB and a few other development organisations in much-needed activities in infrastructure development, product research and marketing through their programme activities. Discussions with ANSAB and other development partners are ongoing about investing in a large production unit for manufacturing products for commercial consumers and reducing costs.

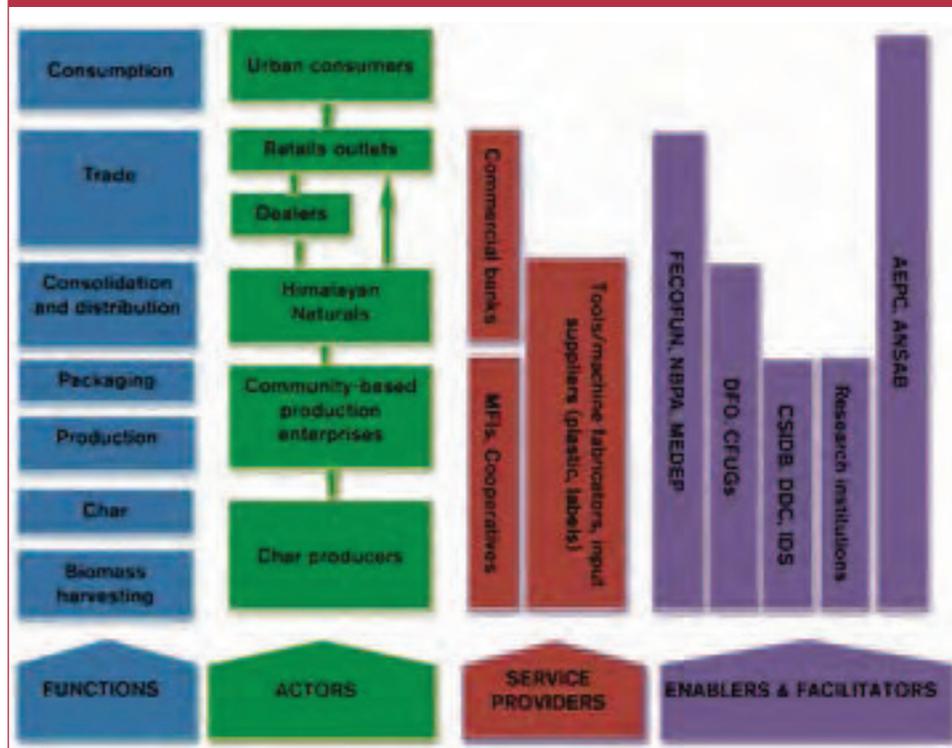
15.2.3 Main activities

The main activities of the charcoal-briquette business are harvesting the raw materials; production and transportation of char to the briquette enterprises; production, packaging and labelling of the briquettes at community level; transportation and marketing of the final product in Kathmandu. The business provides employment to about 200 individuals. Figure 15.2 presents the briquette value chain map. Of the total 23 community-based production enterprises working with Himalayan Naturals, over 90 per cent of the business volume is concentrated in six production enterprises in Sindhupalchok district (see Box 15.1 for the list of the six major enterprises currently working with Himalayan Naturals).

Box 15.1 Major briquette-producing enterprises currently working with Himalayan Naturals

Bolde Community Briquette Enterprise, Sindhupalchok
Chiple Community Briquette Enterprise, Sindhupalchok
Dovan Community Briquette Enterprise, Sindhupalchok
Pyukharkha Community Briquette Enterprise, Sindhupalchok
Sikre Community Briquette Enterprise, Sindhupalchok
Tamche Community Briquette Enterprise, Sindhupalchok

Figure 15.2 Charcoal-briquette value chain map



Harvesting raw materials for the briquettes is done by CFUG members who live close to the briquette enterprises, which the members use for producing char. The char is then transported to the nearby briquette-production enterprise. About 35 community members are involved in raw material collection, char production and transporting the char.

Briquettes are made in the community-based production enterprises. As stated before, major production activities occur in six production enterprises in Sindhupalchok districts. Presently, a total of 70 individuals (of which over 80 per cent are women), are involved in making briquettes. Packaging the briquettes employs an additional six community members.

Himalayan Naturals collects the briquettes from the production enterprises and then sells them in urban area, mainly Kathmandu. On behalf of the production enterprises, Himalayan Naturals arranges permits from the local district forest office to transport the briquettes to its warehouse



© ANSAB

Harvesting of raw material in the nearby community forest

in Kathmandu, from where they supply distributors and retailers. Himalayan Naturals also liaises with machine manufacturers (who supply the machinery required by the production enterprises) and accessories manufacturers (who supply the stoves which are sold with the briquettes). According to the managing director of Himalayan Naturals, because of the briquette business, an equivalent of about 50 people are employed in various retail outlets, 14 in stove and stove-stand production and seven in machine fabrication.

15.2.4 Technology and skills

The charcoal briquette value chain in Nepal is mainly organised by Himalayan Naturals. It starts at community level with the harvesting of raw materials and ends with consumers in urban centres, especially Kathmandu. CFUGs manage the forests from where biomass is harvested as per the CFUG operational plan. Charcoal is produced from this biomass by the members of CFUGs using the pit method of production, which is a low-cost method traditionally used by communities. It is then transported to their nearest briquette-producing enterprise.



Burning of raw material into char using the pit method before transporting it to the briquette-making facilities



The electric grinder used to produce char powder which is then mixed with clay and moulded into briquettes

© ANSAB

At the production enterprise facilities, the charcoal is ground using an electric grinder to produce a fine-quality powder. Briquettes of different size are produced by mixing charcoal powder with clay using a mixer that was specially developed after several rounds of experimentation. (Before ANSAB's intervention, grinding and mixing was done manually which was tedious and time consuming.) The mixture is manually pressed into moulds, after which the briquettes are left to dry in the sun.

Himalayan Naturals has a sales network of dealers, supermarkets, department stores, grocery shops and other retailers. It delivers its products to these stores and distributors using its own delivery vehicles. It also works with manufacturers who produce the stove accessories required for burning the briquettes. The stoves targeted at commercial customers (mainly small or medium cottage industries) are engineered with a fan to enhance fuel efficiency.



© ANSAB

Women pressing the char mixture into the moulds to produce the briquettes, which are then left to dry in the sun

15.2.5 Business partners

Himalayan Naturals itself collects the briquettes from the production enterprises and delivers to retail stores in Kathmandu. These retailers are the business's main business partners and deliver the products to the final consumers, including the Bhat-Bhateni Supermarket and Departmental Store (BBSM), a leading retailer with eight chains in Kathmandu. During the early years ANSAB staff, with expertise in marketing, promotion and expansion worked with Himalayan Naturals to create a network of retailers. They approached different stores in Kathmandu and established a relationship with BBSM, which agreed to provide space in its store for briquettes, stoves and other accessories. Now the staff of Himalayan Naturals are in regular contact with BBSM and other retail stores for the sale of briquettes.

15.2.6 Customer groups and product types

Currently three products are available for household uses: small beehive briquettes (5 inches x 3 inches); large beehive briquettes (5 inches x 1.5 inches), and stoves. The company sells beehive briquettes together with very simple and inexpensive clay or metal stoves in the urban market, mostly Kathmandu. Consumers buy these products, as a package or separately, in retail stores.

The company has also been working to produce larger briquettes and stoves for commercial consumers. Large briquettes will be customised to meet the needs of commercial buyers, especially small dairy producers and food processors, such as ketchup, sauce, beaten rice, pickles and noodle manufacturers. Pellet production for both domestic and commercial buyers is also under consideration and the company is working on product development.

15.2.7 Differentiation in the market place

Since the beginning, Himalayan Naturals has taken a socially and environmentally responsible approach to its business practices while bringing quality products to its consumers. It has underlined the community involvement and use of otherwise unwanted weeds, sustainably harvested shrubs and biomass collected from regular operations in

community forests. Similarly, the company has placed an emphasis on customer-friendly products and accessories. Briquettes from Himalayan Naturals are sold in appealing plastic laminated packaging, so the product is clean to handle, which has made it acceptable to department stores. As per customer demand, briquettes are available in two different sizes and come with relevant accessories. Himalayan Naturals briquettes are currently sold through seven dealers and in over 50 retail outlets across Kathmandu, thus making these products easily accessible to customers.

15.3 Who controls Himalayan Naturals?

15.3.1 Origin of the value proposition

Charcoal briquettes are a promising source of alternative energy, are proven to increase earnings for the poor, reduce health risks for women and children, and reduce the propagation of invasive alien species (in areas where invasive species are a problem, briquette making has been used as an incentive to harvest these plants). But although there was a latent demand for briquettes in urban markets and the potential for mass production in rural areas, charcoal-briquette production was not a commercial venture. So ANSAB designed and tried out several options, including involving the community members in marketing their products, and working with private traders to collect and market the products. However, community members lacked the relevant marketing knowledge and skills, and there was no guarantee that the community received a fair price for their products from private traders.

To overcome these issues, ANSAB established Himalayan Naturals, which would act as a lead firm with shares owned by community enterprises and private investors. Once these entities and structures were established, ANSAB became an advisory partner providing essential support to the lead firm in the initial stages of marketing the product and in strengthening the business and organisational capacity of the community enterprises.

15.3.2 Control over forest resource access

The long history of community control and access over forest resources in Nepal has been an enabling environment for community-based forest enterprises development. CFUGs are able to make key management decisions over their forest resources, thus empowering the communities to access and manage their forest resources and create viable enterprises. The conditions are that CFUGs have to prepare their own constitution and submit it to the local district forest office for a certificate of registration. They also have to develop their own operational plans to manage and use the resources in a sustainable way, and detail social arrangements and responsibilities within their groups.

For the production enterprise to access forest resources, they had to develop a forest resource inventory, a boundary survey, and a sustainable harvesting and forest management plan. These were the conditions that needed to be met for the Forest Department to handover the community forest to the users. Technical support from ANSAB helped CFUGs prepare operational plans for the rotational harvesting and form monitoring committees involving representatives from CFUGs and the enterprise to ensure the sustainable harvesting of raw materials. Now all CFUGs from where production enterprises source raw materials have included such provisions in their operational plans.

15.3.3 Control of the business

Being the lead firm, Himalayan Naturals plays a key role in controlling and managing the business. The apex body of the lead firm is the general assembly which consists of six representatives from six community enterprises and five individual investors. The assembly decides the overall plan and critical organisational-level issues. The managing director is authorised to take day-to-day decisions and ensure the smooth operation of the company for generating profits and is advised by the board of directors, consisting of five individual investors. In addition, there are regular meetings between the management committee, comprised of directors of different departments (see Figure 15.3) and line managers. Directors of each department independently execute their own plans and supervise, motivate and mobilise their teams. Within the governance of CFUGs and local community enterprises there is a good representation of women. For example, the CFUG executive committees have women members. Although there are no women in the general assembly, its representatives come from community forest enterprises, which are also members of the CFUGs.

The production enterprises have made capital investments of US\$2,500–8,000, of which about 75 per cent has come from individual community members and the remaining 25 per cent from the CFUG. Himalayan Naturals has made an investment of about US\$100,000. This involves an equity investment of US\$25,000 from five individual investors; US\$12,000 from the six community enterprises; and bank loans of about US\$70,000 with the collateral provided by the company staff.

Twenty per cent of the company is owned by the six community enterprises, 10 per cent by the employees of these enterprises and the remaining 70 per cent is owned by the five individual investors and dividends are paid to the shareholders accordingly. In addition, individual staff members of Himalayan Naturals and the production enterprises receive a fixed or waged salary. Investments, ownership structure and benefits were discussed in a series of meetings with the executive members of the CFUGs, members of the production enterprises and individual investors, and were finally decided by the general assembly.

15.3.4 Staff selection and roles

While the general assembly decides the overall plan and critical organisational-level issues, the managing director makes any final decisions in consultation with the directors who are more familiar with the daily needs of the enterprise. He is also involved in negotiations and partnership development and seeking support from donors and development organisations in line with the company's mission of promoting rural community livelihoods while managing their natural resources sustainably.

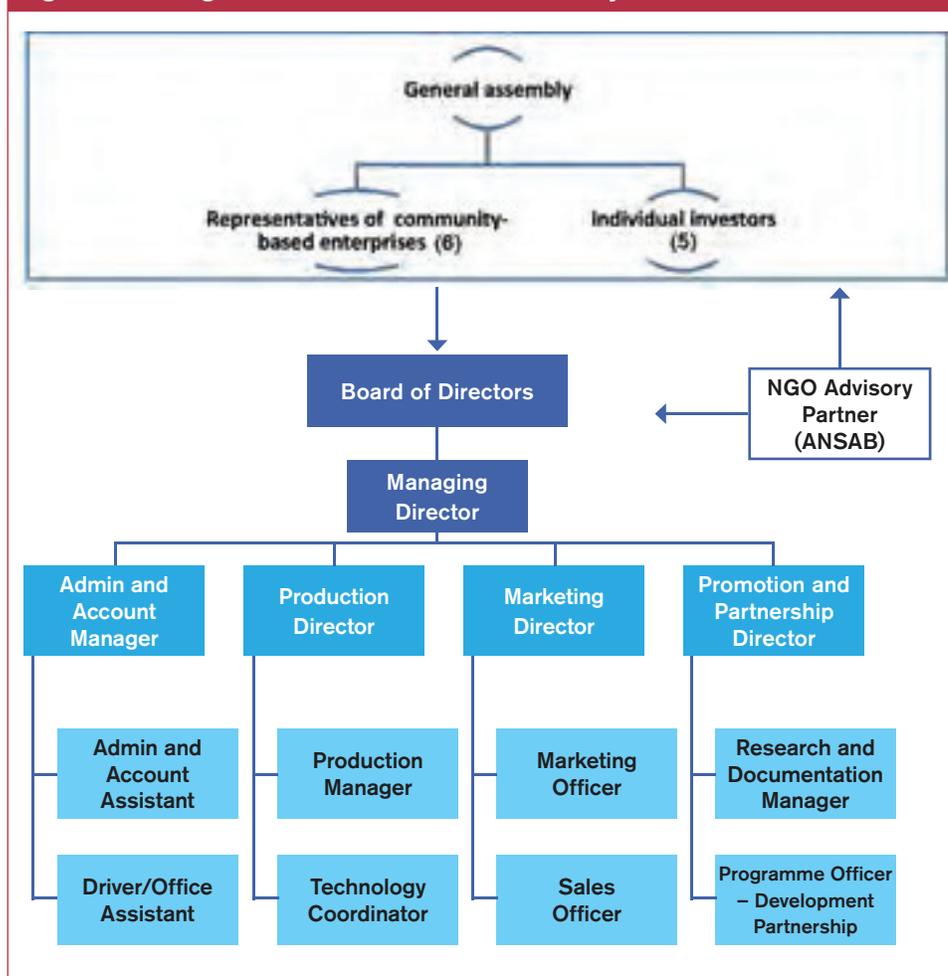
The company has developed a standard recruitment procedure for hiring qualified staff. As the enterprise has expanded, it requires staff experienced in business. The directors of marketing and of partnerships and promotion were recruited through personal networking by staff at Himalayan Naturals. For all staff, the company provides training to enhance skills and competences on different aspects of the supply chain, production and marketing. At the production enterprises, staff are recruited by the enterprises themselves and most of the recruitment is informal, as all employees are members of the CFUGs from where the briquette enterprises source their raw materials. Himalayan Naturals have also provided

them with training on specific tasks like collection, charring, grinding, binding, briquette making and packaging.

15.3.5 Delivery options

The managing director in consultation with the marketing and production directors chooses the delivery options. Besides delivering the products to retail stores and distributors using its own delivery vehicles, not many alternatives exist, because most consumers are located in urban areas while the producers are located in rural areas. As the business transaction volume is relatively small at present, there has been no need to consider alternatives such as assigning a wholesaler/dealer to cover one area. Another alternative would be for the community enterprises who supply the briquettes to Himalayan Naturals to deliver their products directly to the stores. However, quality assurance must first be ensured for this to be an option.

Figure 15.3 Organisational structure of Himalayan Naturals



15.3.6 Customer research

The initial customer research was carried out by the managing director. He designed the packaging materials with different pictures depicting the different uses of the briquettes for heating, cooking and massaging. He also worked on designing the website and social media. Currently, customer research, marketing and promotion are shared between the partnerships and promotion director and the managing director. The managing director focuses on reaching out to existing business contacts and meeting potential customers to negotiate and finalise contracts. The director of partnerships and promotion plays a more active role in reaching out to new customers and promoting the company's online presence.

While the managing director and other directors have participated in strategic meetings, the company staff have attended trade fairs and expositions to showcase their products. The managing director has also visited companies and participated in relevant trade fairs, sometimes at international level, which has been useful for enriching his knowledge of technology and services for expanding the consumer base. The directors have been engaging in social media, responding to customer feedback and organising demonstration kiosks in urban market centres.



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Burning of Himalayan Naturals briquettes using a clay stove at one of the demonstration kiosks in Kathmandu

At the start of the business the company developed some accessories such as stoves and tripods to meet different types of customer demand. Since then, the managing director has been involved in developing other accessories to drive customer demand for the product. Together with the technology coordinator he has designed a stove that can control airflow and which has given the users control over the rate of burning. To improve initial ignition of the briquettes, research is ongoing to develop complementary products such as ignition gel. The managing director has been pursuing development partners, technology developers and suppliers to collaborate on research and development for these types of products.

While the current briquette size is suitable for household use, there is scope to upgrade the products (pellets, briquettes) and accessories for market expansion especially to commercial users such as restaurants. The managing director visited China and India in 2014 to explore larger production units and technologies for large-scale production of briquettes.

15.4 How has Himalayan Naturals overcome key challenges?

15.4.1 Challenges to do with the value proposition

In these early stages of the charcoal-briquette business, the industry faces several challenges including political instability and the weak enforcement of laws and policies, affecting governance and increasing transaction costs. However, it has also faced specific challenges, such as raw material availability, the undeveloped and seasonal nature of market, inadequate financial access, and insufficient and under-developed infrastructure and technology. From the beginning, the charcoal business has addressed specific challenges to increase demand, source raw materials for briquette production, and develop optimal financial access and technology.

During the initial stage of the briquette business, ANSAB analysis identified a viable market opportunity to sell briquettes to the urban middle and upper classes and organised demonstrations in kiosks to build awareness of the product and its uses among biomass and LPG consumers in Kathmandu. Charcoal briquettes have now to a large extent replaced the use of wood charcoal for baby massaging in Kathmandu.

The production enterprises source their raw materials directly from the CFUGs. The partnerships developed with the CFUGs have resolved the challenge of raw material scarcity for briquette production. As the market has increased another challenge for Himalayan Naturals has been getting a large-enough supply of briquettes from the production enterprises due to the labour-intensive nature of production system. Several changes were introduced by advisory partner ANSAB to the traditional briquette-making practices and technologies, such as the improvement of grinders, adjustment of the ratios of charcoal, clay and binder, and the introduction of new mixer machines. These changes have helped to improve quality and efficiency for mass production. Furthermore, maintaining stock levels in the warehouse has optimised briquette production at community level in different seasons, helping to address the seasonal nature of the business.

The business has faced a major challenge related to access to finance, as there are no or very limited financial products available from the bank or financial institutions

in this subsector or for enterprises of its nature. Because community groups are part owners, it has been difficult to get enough collateral to take out a large loan. In addition, the individual members in the group entity are not capable of making a large investment. Although it is not possible to obtain enough investment at the community level, the good relationship of the company with the community CFUG members and the production enterprises and a clear ownership and benefit-sharing mechanism was helpful in generating enough finance to establish the production enterprises. Furthermore, the partnership between Himalayan Naturals with ANSAB and other development programmes has been helpful in accessing funding for developing infrastructure and building capacity with the communities.

15.4.2 Overcoming legal challenges to do with resource access

All the CFUGs that Himalayan Naturals and the community production enterprises source their raw materials from have secure tenure rights to their community forests. Resource access has been secured through the establishment of partnerships with the CFUGs. To ensure the continuous sustainable sourcing of raw materials, Himalayan Naturals has assisted the CFUGs in revising their operational plans for the rotational harvesting of the shrubs in the community forests. This has been facilitated through the formation of a monitoring committee involving representatives from the CFUGs and the enterprises.

15.4.3 Overcoming ownership and benefit-sharing challenges

From the start, Himalayan Naturals was developed as a lead firm with a clear ownership and benefit-sharing model for the communities and private sector involved in the chain. The community-based enterprises produce and sell briquettes to Himalayan Naturals, which sells the products to the urban market, generating revenue. Unit fees for the actors involved in each activity of the chain have been fixed and provided accordingly. Furthermore, there is an innovative provision for an automatic increase in shares for the supplier communities according to their total supply of briquettes. This structure has helped increased participation and as yet there have been no issues regarding ownership and benefit sharing.

15.4.4 Overcoming labour challenges

The clear ownership structure and benefit-sharing mechanism has helped to increase motivation among the community members to engage in harvesting raw materials, charring, briquette production and packaging at the local level. This has solved the issue of labour for production. For marketing the products, the company has dedicated personnel. Furthermore, to improve labour capacity in terms of product quality and consistency, with support from ANSAB the company has provided onsite training and technical assistance. There is also random quality testing of the products.

Regarding infrastructure, the areas where the briquette-producing enterprises are located have access to road and means of transport. There is also a warehouse for the maintenance of stock because of the seasonal nature of the business. The briquettes are produced during the summer as it is favourable for drying briquettes and also as the communities are less occupied with farming. Stock levels are maintained in the warehouse

ready for the peak consumption period (November to February, when temperatures in Kathmandu are at their coldest during the winter season). The company is also working in partnership with ANSAB and other development partners to access development funding so that they can invest in value-adding machinery for making briquettes.

15.4.5 Overcoming marketing challenges

Among the main marketing challenges are the multiple road checkpoints between the production enterprises at the district level and Kathmandu. These are transport verifications that vehicles have to pass. The government checkpoint system has been designed to control illegal harvesting and trade. However, these multiple checkpoints present an additional burden, often increasing the time and cost to the enterprise. The company has addressed this issue by coordinating with the district forest office, whereby the forest authority now seals the transportation vehicle at the point of origin and it is only re-opened at its destination. This has also helped the government to record the movement of the briquettes at district level.

Another main challenge was the undeveloped market. During the initial year of operation, ANSAB carried out extensive awareness-raising and marketing activities, for example by setting-up 40 one-day kiosks throughout Kathmandu to demonstrate the product and its multiple uses, producing appealing packaging for consumers, and creating a network of department stores ready to sell the product in the city. The organisation found that the demonstration booths in the targeted markets/neighbourhoods have had the most success in finding new consumers, showing the multiple uses of briquettes to the residents, disseminating marketing materials, providing a list of local retailers, and answering the public's questions. It is estimated that these efforts have increased product awareness among the total population in Kathmandu from a negligible percentage to about one-fifth.

Himalayan Naturals has also had some success in finding customers by showcasing their products at expositions and trade fairs and through social media. Community FM radios were also used for advertising the product. Although not on a large scale, a few development organisations are now using the briquettes to heat their offices; these organisations have learnt about the use of briquettes through expositions, trade fairs and staff networks. Some retailers have also been contacting Himalayan Naturals through social media, especially Facebook. The company has also been working in partnership with national retailers and distributors to move its products into the national market. They have developed distribution agreements, and provided them with credit sales agreements to retain them as customers.

15.5 Key lessons

15.5.1 Keeping down costs

The charcoal-briquette business involves different strategies and activities that have reduced the cost of developing and managing the business. Major strategies have included upgrading production processes and technology at the community level and developing products for commercial customers. Another important strategy was the mobilisation of resources for different activities in partnership with communities and development partners that would

otherwise have been difficult to obtain from private sector investment. This included initial one-time investment in infrastructure, the building where processing takes place, and machinery. Mobilisation of resources was possible once the communities understood the multiple social and environmental benefits of the business, which could be achieved through a one-time investment that was supplemented by the development partners.

At the community level, briquette production (including packaging) is finalised and ready for transportation to market centres. Involving community members in raw materials collection, charring, briquette production and packaging has optimised the number of actors involved in the chain thus reducing the cost of the final product. Furthermore, as the community members are themselves involved in production activities, it has reduced the amount of time needed for the production enterprises to recruit and train workers. The production enterprises in Sindhupalchok district have built storage facilities at the production sites, so that they do not need to rent land or space for storing char or the finished products.

Several changes made to the traditional charcoal briquette-making practices and technologies have helped to improve the quality and efficiency of mass production. These have included the improvement of grinders, adjustments to the ratio of char to clay, and the delivery of new mixer machines to the production enterprises.

Partnerships with communities, government and development partners have mobilised resources for different activities. For example, the costs of technological upgrades were contributed by ANSAB. Similarly, finance for the storage facilities in Sindhupalchok was provided by ANSAB, the government's Micro-Enterprise Development Programme (MEDEP) and other forestry programmes. Now, Himalayan Naturals has been seeking assistance from development partners and projects for larger production units that require a large upfront cost.

15.5.2 Retaining customers and willingness to pay

The easy handling of the briquettes due to the packaging and accessories has contributed to the success of the product. In addition, the social and environmental values of the business have been major factors for attracting customers and maintaining their willingness to pay. Because the business involves communities with a clear benefit-distribution mechanism and sustainable forest management, some individuals and development organisations, who value social and environmental causes, are using the product.

Currently, any profits go towards paying off running costs including salaries. Himalayan Naturals uses the remaining revenue to repay loans and reinvest in business expansion. Beyond this, any profit that is left is redistributed to the employees and the community members according to their percentage of shares. For example, employees receive 10 per cent and members of the production enterprises and CFUGs receive 20 per cent of the profit. Of this 20 per cent, 75 per cent goes to the individual shareholding members and other 25 per cent goes to the CFUG members. Seventy per cent of the total profit goes to the private investors. The community enterprises themselves coordinate the distribution of the profit to community members, in the presence of the production manager if needed.

15.5.3 Success factors

Having a clear vision for the design of the entire value chain and related development activities has been the main factor for the success of the charcoal-briquette business in Nepal. Activities include the lead firm working with other appropriate actors and stakeholders, the unique community–private partnership with support from the public sector and NGO partners, and strategic analysis and inputs from ANSAB incorporating two decades of participatory action research in the natural resource-based enterprise subsector. All have contributed to the commercial success of the charcoal-briquette business in Nepal, and Figure 15.4 presents the current business model in Nepal. This section discusses other major success factors in more detail.

Factors that influence the success of new production and marketing enterprises:

there are a number of important factors which influence the success of any enterprise and determine the context. These include the availability of the natural resources and characteristics of biodiversity (commercial value, production and production capacity, threats); local communities (property rights, production of goods, benefits and services, and institutional and technical capabilities to manage biological resources and enterprises), and enterprise (market, technologies, financial and other business development services). The minimum requirements for the operation of a successful enterprise are presented in Box 15.2. These were taken into consideration while establishing the production enterprises at the community level and the marketing company at national level.

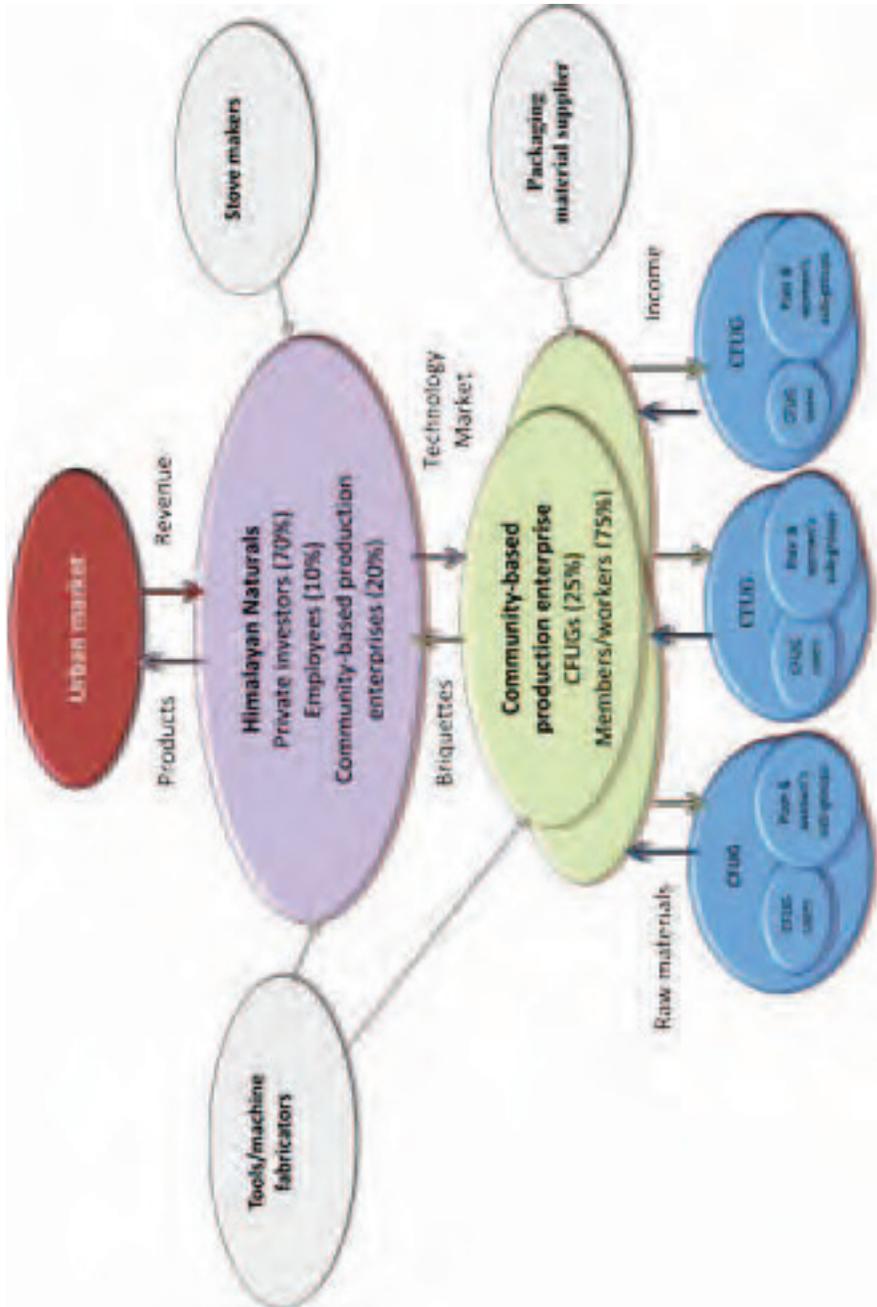
Developing a committed responsible lead firm with clear roles and partnership

structure: since its establishment, Himalayan Naturals has had a clearly stated vision, goal and set of practices. Its role as a lead firm has been to consolidate charcoal briquette-producing enterprises at the community level and sell their products to an urban market. It has also been building the capacity of the producers by providing training and introducing improved technologies to improve quality and decrease production costs. Furthermore, it has helped increase the participation of actors at the producer level of the chain while providing the poor, women and marginalised groups with a significant income.

Support from development programmes and agencies for commercialisation, sustainable raw material supply and creating a favourable policy environment:

support from organisations such as ANSAB has transformed these charcoal producers into enterprises. It has helped them to organise and build their capacity to sustainably harvest raw materials, develop their enterprises and participate in the value chain. Marketing activities in the initial years have built a market for charcoal briquettes in Kathmandu, and at the same time capacity building helped the production enterprises to meet their consumers' requirements. Capacity-building activities provided to selected members of the local community have improved their leadership qualities and entrepreneurial skills and have helped to initiate enterprise activities at the community level. Different civil society organisations, NGOs, government programmes and business membership organisations including the Federation of Community Forestry Users Nepal (FECOFUN) and the Nepal Briquette Producers Association (NBPA) have played positive roles in facilitating access to critical services, developing a market for business development services (BDS), and improving the policy and regulatory environment in the sector.

Figure 15.4 Organisational structure of Himalayan Naturals



Box 15.2 Minimum requirements for the establishment and running of a successful natural resource-based enterprise

1. Raw material availability: a long-term biologically sustainable supply of the targeted natural product in sufficient quantities is necessary for the enterprise activity to be financially viable.
2. Legal access to and control over the natural resources: collectors should be able to manage natural products harvesting and incorporate the enterprise activity into their overall forest management plans. Enterprise activities must comply with a range of legal requirements.
3. Equitable distribution of benefits: if community members do not feel the benefits are being distributed fairly there will be less incentive to protect the natural resources. The overall raw material source could become threatened as well as the commercial activity and the ecosystem's biodiversity.
4. Appropriate processing technology: is the technology compatible with the prevailing infrastructure and human resource conditions at the chosen location? Conditions to be considered include: transport and storage facilities; equipment/machinery availability; power or fuel required for the processing activity; and technical skills available.
5. Good management: people with knowledge of, and experience with managing proposed activities should be available to run the enterprise or they should be closely involved in its operations.
6. Commercial sustainability (also known as economic or financial viability): commercial sustainability is a simple concept. Sell the product at a price and volume that covers all the costs associated with the natural product enterprise with enough money leftover as profit.
7. Access to capital: start-up capital and ongoing working capital is needed for the enterprise.
8. Available and accessible market for the products: is there a market for the available quantity and quality of product? Is there adequate demand at the expected selling price? Who will buy the products?