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# Developing a value chain toolkit to support goat projects for smallholders: Learning from experiences of Nepal

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**Abstract.** The value chain analysis is generally conducted to build the competitiveness and development strategy of an industrial or commercial sector. It is also increasingly mobilized by development agencies to identify how small farmers or livestock keepers, small enterprises or other target groups can play a larger and more lucrative role in a particular value chain and how a value chain's structure or characteristics can be changed to enable it to grow in ways that benefit the targeted poor breeders. The objective of the paper is to present a methodology to analyze and consider value chain development from a concrete case in Nepal. This country has experienced a significant growth in the consumption of goat meat; supply does not meet the demand and is offset by animal imports from India. Production is mainly from very small farms and the level of technical knowhow of farmers and productivity are both very low; additionally, they are very dependent on traders to access the markets. A nationwide development strategy based on the analysis of value chains has been built collectively under the leadership of Heifer International in collaboration with several stakeholders including government agencies by associating technicians, scientists, representatives of the administration. Various participatory methods and mobilized sources of information were used to coherently integrate local projects in this strategy along with the objectives of the Millennium Development Goals. Those who participated during this process in Nepal have decided to mobilize their experience to formalize a general approach for the development of the goat sector to be used in other situations. The different participatory tools and methods are listed, the sources of information to be mobilized are identified and their relative relevance for analysis is discussed. This toolkit is designed to facilitate analysis of the complexity of relationships and balances of powers between the actors to define the most appropriate levers and act on the various links in the value chain for meat, dairy goat, and fiber commodities. This initiative is also a part of a broader study to scale up the success factors in the development projects of small family goat farms.

**Keywords.** Value chain analysis – Nepal – Development projects – Participatory methods – Goat sector.

## **Formalisation d'une approche participative par l'analyse de la chaîne de valeur en appui à la construction des projets caprins : Enseignements d'une expérience au Népal**

**Résumé.** « L'analyse de la chaîne de valeur est habituellement utilisée dans la construction de la stratégie de développement de la compétitivité d'un secteur industriel ou commercial. Elle est également de plus en plus mobilisée dans la préparation des projets de développement pour identifier comment les élevages familiaux, les petites exploitations ou d'autres groupes cibles peuvent s'insérer dans la chaîne de valeur de leur secteur d'activité et comment la structure de la chaîne de valeur peut être modifiée dans un sens qui bénéficie à ces éleveurs, leur permettre d'améliorer leurs revenus et développer leur activité. L'objectif de la communication est de présenter une méthodologie pour analyser et prendre en compte les chaînes de valeur mise au point à partir d'un cas concret au Népal. Ce pays connaît une croissance importante de la consommation de viande caprine; la production très déficitaire, compensée par une importation d'animaux depuis l'Inde est essentiellement réalisée par de très petits élevages dont la productivité est très faible, le niveau de formation très bas et très dépendant des intermédiaires pour accéder au marché. Une stratégie de développement à l'échelle nationale basée sur l'analyse des chaînes de valeur a été construite collectivement sous l'impulsion de l'ONG Heifer International en collaboration avec différents acteurs dont des agences gouvernementales en associant techniciens, universitaires, représentants de l'administration. Les différentes méthodes participatives et sources d'information mobilisées ont permis d'intégrer de manière cohérente les projets locaux dans cette stratégie qui intègre par ailleurs les Objectifs du Millénaire pour le Développement. Les différents

*acteurs de l'approche réalisée au Népal ont décidé de mobiliser leur expérience pour formaliser une démarche spécifique au développement de filières caprines qui soit applicable pour d'autres contextes; les différents outils et méthodes sont répertoriés, les sources d'information à mobiliser sont identifiées. Leur pertinence respective pour l'analyse est discutée. Cette boîte à outil vise à faciliter l'analyse de la complexité des relations et des rapports de forces entre les acteurs pour définir les leviers les plus pertinents et agir sur les différents maillons de la chaîne de valeur en production caprine pour les orientations productives laitière, viande ou fibre. Elle s'intègre par ailleurs dans une analyse plus globale pour monter en généralité et améliorer les facteurs de succès dans les projets de développement de petits élevages familiaux caprins.*

**Mots-clés.** Analyse de la chaîne de valeur – Népal – Projets de développement – Méthode participative – Secteur caprin.

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## I – Introduction

Developing implementation strategies and identifying key intervention areas have become a key objective for all types of project holders involved in both livestock development and poverty reduction. The issue is how to enhance the role of small holders and their collective organizations and improve significantly their standards of living by developing their activities with livestock. Goats are generally chosen as well adapted species for this purpose.

The concept of value chain had been used in several senses. The French “*filière*” approach developed by INRA and CIRAD introduced the concept by paying attention to how local production systems were linked to processing industry, trade export and final consumption; it focused on physical and technical relationships (CSA, 2013). For Porter (1985), the value chain is a tool used by a firm to determine a competitive advantage. The global approach mobilized here the term “value chain” to the full range of activities required to bring products (in our case goats, meat, fiber and dairy products) from the different phases of production to the final consumers (Kaplinsky, 1999, Kaplinsky and Morris, 2001). The value chain analysis can help to understand the distribution of earnings and why there is a gap between the incomes of the several actors and how to solve them. A value chain is efficient and optimized when all the actors operate in a way that maximizes the generation of value along the chain, and with the objective of development and poverty reduction for the benefit of the small holders. This approach highlights that the low supplier competency is a key barrier for the participation of small holders in a globally integrated chain. The concept of value chain encompasses the issues of organization, governance, and the power relationships among the various actors.

Value Chain Analysis has been little used until now in the small ruminant sector to make the value chain more effective for the smallholder goat keepers. A value chain analysis was conducted in Nepal to implement a program aiming to reduce the national import of goat by 30% through capacitating smallholders in the goat meat sector thus also reducing the poverty rate of the rural areas. This initiative has identified clearly at what levels of the value chain to intervene and to build an integrated strategy. From this experience, 12 participants from different organizations including experts, field trainers, project managers and public officers were engaged in a writing workshop to compile and articulate tools, methodologies and activities which could be planned for strengthening mutual connections between actors and improve the impact of goat-oriented pro-poor development projects.

After a synthetic presentation of the results of the Nepalese study and its consequences on the strategy undertaken, this article reviews the main steps to conduct a goat value chain study and identifies the most important levers to strengthen the value chains according to the several commodities for goat activities (milk, meat and fiber).

## II – The strengthening of smallholder enterprises of livestock value chain for poverty reduction and economic growth in Nepal

The comprehensive study of the Goat Value Chain in Nepal has been based on bibliographic review, collection of primary data and analysis of qualitative and quantitative data collected during several meetings, interviews and focus groups.

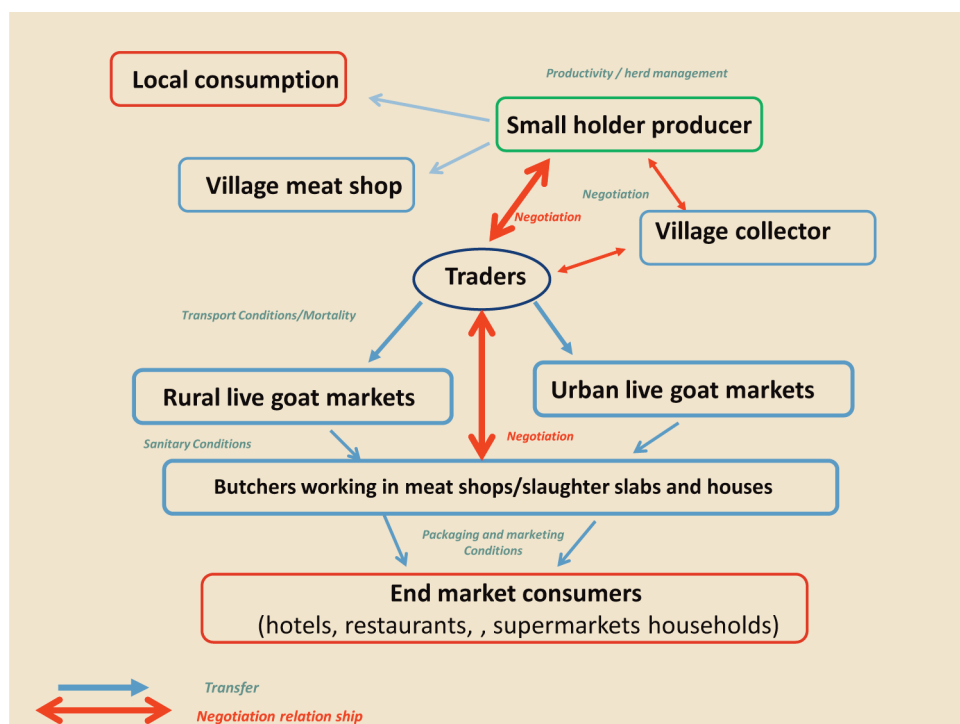
Nepal has a population of about 30 million inhabitants in 5.6 million households, of which 49.8% keep goats with average holdings of 3.3 goats /household (9 million goats in the Country). The National Gross Domestic Product (below 450 USD/inhabitant only) is very low and the poverty rate is very high, thus making Nepal a low income country (World Bank, 2014). Goats contribute 20% in national meat consumption with a current total supply of 61,375 MT but the domestic production contributes only 52,800 MT (86%) with a gap of 8900 MT covered by import (Shaha *et al.*, 2012).

The analysis has revealed that the lack of organization of the marketing channels causes important losses in the value chain. For instance, poor management leads to a high mortality rate and an average weight loss of 3 kg/goat between the places where the animals are bred and bought and where they are marketed (long distances in overcrowded trucks and cars, long periods in market places without water and forage, no sanitary controls). Conversely, the import from India or Tibet is well organized by specialized bigger traders and the weight losses are lower at only 2 kg/goat. Additionally, the breeders have a low capacity to bargain with the traders who do not practice weight-based pricing and always have the possibility to find animals on the import market. The study has given a clear idea of the structure of the value chain (see Fig. 1): The free on board prices (FOB) to the breeders are around NPR 355 kg carcass weight (USD 4/kg ) and 59% of the end market consumer price NPR 600 (USD 6.7)/kg. Value additions on FOB include the costs of the trader like transportation or stocking (12%), butcher's profit and meat processing costs (16%), etc., the trader profit being the difference between the end market prices, his costs and the FOB prices. Examples from monitored farms have also shown that production costs which are still higher than NPR 20/kg meat (USD 2.2/kg) could be significantly decreased thanks to more efficient use of regional specific techniques and know – how along with local resources. The main issues to improve the goat meat value chain in Nepal have been identified and focus on the livestock management techniques and the negotiating capacity of the goat keepers with the traders (see Fig. 1) and improve the sanitary and animal welfare conditions of trading. A collective organization of the breeders could help them for instance to negotiate directly with some nearest butchers and improve the carcass quality. These characteristics have been mobilized and discussed to build a more general goat meat value chain in other regions like in India, Maghreb and West Africa, where the market of goat meat has grown significantly.

## III – Developing a goat value chain tool kit

The first step of a Value Chain Analysis is to map the actors, assessing their characteristics, employment characteristics, the profit and cost structures and flows of products. The next one is to identify the distribution of benefits along the chain by determining who gets the profits as well as the balances of power and the tensions. Building on this information, it is possible to examine the effects of improvement in yields, quality, process technologies, product design (i.e. upgrading) on the profitability of each actor. During this third phase, the governance issues and the structure of interactions and coordination mechanisms existing between the actors must be identified.

To achieve these steps and apply them with specific elements for the goat sectors, the participants of the write workshop have listed several methods they used, to ease the analysis of a goat Value chain and specified for what purpose to mobilize a particular tool or method. A guide line for conducting a value chain analysis of the goat sector has been published (Bhandari and Thomas, 2013) in which, the tools to collect and analyze data were recommended (see Table 1). The main interest of this ini-



**Fig. 1. The general Goat Value Chain Framework built in Nepal.**

**Table 1. Main tools and methods used to collect data and analyze goat value chain**

- Preliminary information gathering and data collection;
- Case studies; consultation meetings; direct observation; focus group discussions;
- Structured interviews; gender analysis tools, resource mapping; key informant interviews;
- Knowledge, Attitude and practice (KAP) Survey; Market assessment (observation, interview, discussion);
- Situation analysis; SWOT analysis

tiative compared to more general tool boxes (M4. P., 2008) is to have focused on specific considerations and methods for the goats sectors and for each main commodity, meat milk and fiber; it also gave some examples of operational uses of these methods what would help future practitioners to analyze one's own situation. The mapping of production cycles of goats and local resources available are specific approaches to identify possible improvements. Participatory rural appraisal or village focus groups have been identified as important points to consider before preparing a development project based on goats and defining relevant objectives. Such approaches could ease the dialogue with the local small goat holders and also help the potentialities of their own know-how.

## IV – Discussion and conclusion

The toolkit has been based on the experience and exchanges of several technicians, public officers and project actors involved in the improvement of the goat value chain toolkit in Nepal. This pragmatic approach is not a turnkey method but has enabled its users to identify the specific knots and critical points to improve the value chain. For this reason, this goat value chain tool kit has been

included in a global study ordered by the International Fund for Agricultural Development IFAD to scale up the success factors of projects against poverty involving goats. Besides, it has reinforced the idea that preliminary studies and well documented information are indispensable for project designing. This lack of preparation and analysis with badly defined targets is often the cause of the failure of many development projects involving goats with examples in North Africa, Senegal, etc. (Dubeuf *et. al.*, 2014). The value chain analysis has focused also on the interactions between economic and technical factors and governance conditions for the successes of such projects.

The value chain analysis in Nepal has also illustrated how important it is to avoid the copy-paste modality to apply solutions from other contexts. Such approaches are costly but necessary investments before preparing and developing such projects and which are generally absent in most cases whether in developed European or other developed countries.

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