



Agricultural value chains and its contribution to Sustainable Development Goals:

The case of High Value Chains on Hills and Mountain Areas (HVAP) in Nepal

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Abbreviations

ADS	Agriculture Development Strategy
AEC	Agro Enterprise Centre of FNCCI
ASDP	Agriculture Sector Development Programme
BDSP	Business Development Service Provider
DCCI	District Chamber of Commerce and Industry
DCED	Donor Committee for Enterprise Development
FNCCI	Federation of Nepalese Chambers of Commerce and Industry
GON	Government of Nepal
HVAP	High Value Agriculture Project in Hill and Mountain Areas
IFAD	International Fund for Agriculture Development
M&E	Monitoring and evaluation
MOALMC	Ministry of Agriculture, Land Management and Cooperatives
MSP	Multi-Stakeholder Platform (Process)
NGO	Non-governmental Organization
NPR	Nepalese Rupee
OSV	Off-season vegetables
PIF	Poverty Inclusion Fund – Supplementary Support to Poor households
PO	Producer Organisations
PPF	Production and Post-Harvest Fund
PSP	Private Sector Service Provider
RIMS	Results and Impact Management System
SDG	Sustainable Development Goal
SNV	Netherlands Development Organization

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Abstract

At this time Nepal is in 144th position on Human Development Index and nearly a quarter of the population is living below poverty line. Low developed economy, chronic poverty, food insecurity, and social exclusion remain major challenges for the country where around 80 percent of the population resides in the rural areas where subsistence agriculture and related activities are the prime sources of livelihood.

In response, the Government of Nepal and international cooperation agencies have committed to implement an Agriculture Development Strategy with the vision to advance in "a self-reliant, sustainable, competitive and inclusive agriculture sector that drives economic growth and contributes to improving livelihoods and food and nutrition security leading to food sovereignty". This in the context of the adoption of a new federal democratic constitution in 2015.

This study analyzed the results of the High Value Agriculture Project (HVAP) that was designed and implemented in the last 8 years with the goal of “reduce of poverty and vulnerability of woman and marginal in hill and mountain areas of the Mid-Western Development Region and integrate, specially, in high value agriculture value chains and markets in order to improved income, employment opportunities and abilities to respond to market demand and opportunities based on marketing agreements with private agribusiness” (HVAP, 2009)

The analysis explored how this kind of interventions make a case for context-specific interventions to achieve the Sustainable Development Goals (SDGs), the 2030 Agenda, that recognizes the importance on agriculture value chains playing a major role in poverty reduction, inclusiveness, food security, and climate change.

Results confirm that beneficiaries perceived significant positive effect in their household live conditions, especially in the increase of incomes, the reduction of food insecurity, improvement of gender and social inclusion, and the establishment of a new environment that reinforce resilience, strengthen farmer groups and habilitate new access to infrastructure and institutional support.

Keywords: Value chains, Sustainable Development Goals, poverty, food security, gender, social inclusion, resilience

Aim and objective of the analysis

The general objective of this study is to analyze and explore the contribution of HVAP to the SDGs, through the lens of evidence, particularly the following objectives:

- Asses the perception of small farmers about their conditions of life and the benefits generated by HVAP.
- Determine key decisions and strategies that allow achieving more sustainable impacts for small farmers, women and marginal groups
- Identify lessons learned and good practices that can contribute to replicate or scale the initiative in alignment with the SDGs

Limitations and assumptions of the study

The major limitations which were perceived and encountered during the practicum period are as follows:

- The study was based on the information provided by the beneficiaries, thus the reliability of data, to a great, extent correspond to their perception.
- Due to time and budget limitations, and in order to no duplicate HVAP program evaluations in place, all direct and indirect impacts and outcomes of the HVAP could not be studied.
- The questionnaires application were concentrated in farmers link that live in districts and villages that are possible to visit during the rainy /monsoon season. It was not possible to cover all districts that covered by the project.
- In respect with the SDGs the analysis was focused on the most relevant goals in the context of agriculture and the promotion of value chains in the context of Nepal: SDG 1: No poverty; SDG 2 Zero Hunger; SDG 5 Gender equality, SDG 8 and SDG 13: Climate Action

Context and Importance of the Problem

Nepal is predominantly a rural economy with over 80 percent of the population living in rural areas. In general, the Mid- and Far-Western Regions are far behind the other regions in terms of development indicators. The main poverty causes are the low access to basic public services (education, road, health, water supply, sanitation), the majority of agricultural production is for subsistence, households experience hunger seasons and limitations to high nutritive food.

Recent data from the World Bank (2015) reveal that 24 percent of the population lives in poverty and about 77% of the population earns less than \$2 a day. The average per capita agricultural landholding is less than 0.8 ha, enabling farmers to produce only about 6-months food consumption from their farms in low-production environments.

The poor are also concentrated in specific ethnic, caste and minority groups, particularly those of the lowest caste (Dalits) and indigenous peoples (Janajatis). And women also lag behind men in most aspects like less access to education, land property, assets, and incomes. Another issue is the feminization of agricultural labor conducted by high rates of men migration to other countries in order to find incomes and employment opportunities.

Nepal is also a landlocked country with a relatively closed economy despite their boundaries are with two of the fastest growing economies and more populated countries in the world, India in the east, west and south and China in the North. These lack of openness limit the degree to which actors in value chains benefit from exports and access to inputs and technologies that increase the productivity and quality of commodities.

In general, rural economy lacks of dynamism, there are very weak links between urban and rural markets and there is a deficiency of coordination and cooperation across the main actors of the value chains. Additionally, the post-harvest losses are very high and the aggregation

of value and differentiation of the products is insignificant, and not take advantage of its potential in natural resources, especially its fertile lands, water availability and forest cover.

High Value chains

Over the past decades, there has been an increment of projects designed to adopted value chains strategies that are capable to tackle poverty, increased incomes, productivity, guarantee food security, involve marginal groups and reduce environmental impacts.

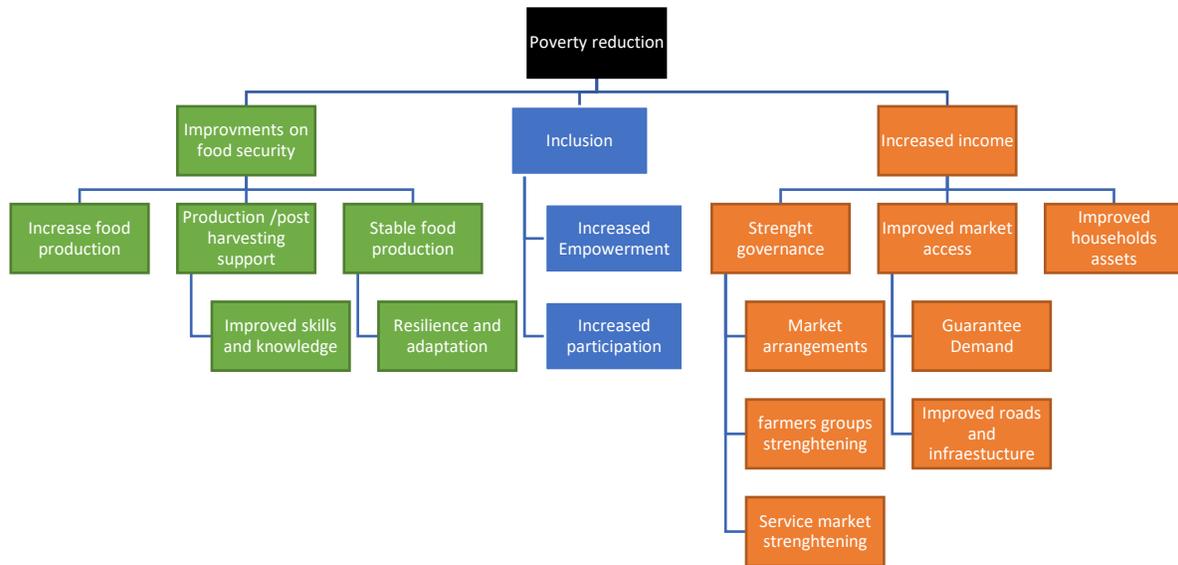
The value chain approach originally was established as a business tool to obtain more efficient and competitive results along the enterprise influence, but international development agencies and non-government organizations instrumentalized this approach in order to achieve development objectives.

Accordingly, to Kaplinsky (2000) A value chain “represents the full range of activities and services required to bring a product or service through the different phases of production and delivery, to the final consumer”. The term value chain also refers to the importance that value is added to products across one link to the next one in the chain through the combination of knowledge and resources (ILO 2006). From the organizational and institutional view, a value chain can be analyzed as the formal and informal arrangements that allow coordination and collaboration links across actors and at different points along the chain (Kaplinsky 2004).

Normally, the value chain interventions also incorporate an inclusive or pro-poor approach for its ability to “link farms and firms in remote regions to growing and emerging market opportunities (Riisgaard et al. 2010). These approach is based on the logic that “market liberalization and economic development represent necessary but not sufficient conditions for poverty reduction and that poor people need support so that they can participate in this value chain and derive a benefit from it in a way that creates growing prosperity in their (poor) communities and promotes equitable economic growth.”

Figure # 1 present the most common interventions of value chains in the context of rural and agriculture development and implemented primary by governments, NGO and cooperation agencies.

Figure 1 Inclusive value chain interventions



Sustainable Development Goals in agricultural value chains

In 2015 the United Nations adopted the Sustainable Development Goals (SDGs), that include 17 objectives and 169 targets that respond to a new agenda for social, environmental and economic development.



The SDGs establish a new global framework for more inclusive and sustainable development and their achievement will shape government and civil society policy and action at the global and national levels in the decades to come.

The SDGs:

- Are comprehensive in scope encompassing poverty eradication, food security, health, education, gender equality, access to water, sanitation and energy, economic growth, climate change and numerous aspects of environmental sustainability.
- Acknowledge the inter-connections between the social, environmental and economic dimensions of sustainable development. require striking a balance between socio-economic progress, sustaining the planet's resources and ecosystems, and combatting climate change
- Recognize that development challenges are inter-linked and cannot be tackled effectively in siloes
- Require unprecedented cooperation and collaboration between governments, non-governmental organizations, development partners, the private sector and communities
- All sectors are expected to incorporate the SDGs into their policies and operations and be accountable for their delivery.
- Increased awareness of the impact of agriculture on development, food security, climate change and wellbeing of the society
- Looks for solutions that can double agricultural productivity and incomes of small farmers at the same time that incorporate environmentally friendly practices

In this context, agriculture value chains are considered strategic because can pursue multi goals approaches that simultaneously contribute to achieving different goals.

After analyzing the 17 goals in the context of the agriculture value chain, the following are identified as the most relevant, interconnected, and can create positive externalities that contribute to achieving the SDGs. ¹



Ensuring that money is allocated to carry out policies that will give everyone equal access to social and economic opportunities

High value chains can contribute to decreasing poverty primarily by increasing productivity, adding value to products, increasing income, employment opportunities, reducing transaction cost and mobilizing the economy and social capital of rural territories. (Bandara, 2014).

The most common intervention also focuses its attention on the empowerment of people, development of skills, and dynamization of the economy under the dynamization of markets.



Ensuring safe, nutritious and sufficient food year-round Increasing agricultural production and income of small farmers and protect the variety of species of seeds, crops and farm animals

High value chains can contribute to food security in the dimensions of access, availability and quality of food primarily by the increase of production volumes, farm diversification, generating higher incomes, reducing postharvest losses, and upgrading technologies to use more efficiently natural resources and agriculture inputs.

¹ SDG 1 No poverty, SDG 2 End hunger, SDG 5 Gender equality, SDG 8 Decent work and economic growth, SDG 10 Reduce inequalities, SDG 13 Climate action, SDG 12 Responsible consumption and production, and SDG 17 Partnerships for the goals.

In the case of organic agriculture, the reduction of chemical pesticides, herbicides and fertilizers reduce health risks and impacts on the environment that can affect the food security in the long term.



Ending all forms of discrimination and violence against women and girls everywhere and encourage women and girls to have equal opportunities



Women and minority groups make significant contributions to agriculture farming, processing, and marketing, and play a key role in food security for his households. However, they face several barriers and inequality in access to land, assets, education, decision making, participation in local organizations and ownership of incomes, and feminization of agriculture.

Value chains interventions usually looks to close gaps between men, women and social groups, creating income and employment opportunities, expanding women farmers groups and guaranteeing participation in household and agriculture decisions.



Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all

“Lack of decent safe, viable farming livelihood for smallholder farmers is resulting in thousands of them (especially the next generation) abandoning the countryside to go to urban areas, threatening the availability of future food/crop supplies” (Business fight poverty, 2017)

The support to farmers in the transition from subsistence to commercial agriculture required the creation of decent job conditions, new economic opportunities and the establishment of support business (extension and financial services) capable to attract and maintain young farmers.

The possibility to instituted fair negotiation conditions across the actors in the value chains is also a tipping point to assure sustainable results in the long term.



Climate Action

Most projections indicate that climate change and climate variability will increase the risks in agricultural production systems affecting those people reliant on agriculture for their livelihoods. Furthermore, it is expected that climate change will reduce productivity, shift the production seasons, change pests and diseases patterns and alter the quality of crops affecting the prices, production, costs and incomes (MOAD 2011).

In this context, value chains have the opportunity to develop resilience capacities and create incentives for the sustainable management of natural resources, valuation of ecosystem services, protect biodiversity and access to differentiated markets.



Ensure sustainable production and consumption patterns

SDGs goals emphasize the externalities of agricultural production and consumption such as the greenhouse emissions, soil degradation and the alteration of ecosystems and water resources

with the intensive use of agrochemicals. Other concerns focused its attention on health issues and post-harvesting losses.

Sustainable production and consumption, therefore, become an integral part of strategies to achieve food security, poverty reduction, and climate change action that need to be addressed in value chains.

Strengthening sustainable food production with strategies like geographical indications, organic, agroecological, fair trade certifications, and traceability systems represent good opportunities to boost the value generation in value chains and improve access to remunerative markets.



Partnerships for the goals

Participate in partnerships with actors working on the same crop, issue or geographical area, who can share experience, technology, resources Enable participation of smallholder representatives in supply chain development activities and use their insights/feedback to inform decision-making.

An incentive to attract public-private partnership and collaborate with civil society organizations to enable such linkages is also needed in these production systems. Productivity and income growth through increased market participation by smallholder farmers is central in achieving the poverty (goals 1 and 8), nutritional (goals 2 and 3) and social goal of reducing inequality within and among countries (goal 10 institutional arrangements such as cooperatives were set up to remedy problems small farms face in accessing inputs, credit, agricultural R&D and output markets (Abraham, Pingali, 2018)

High Value Agriculture Project in Hill and Mountain Areas (HVAP)

HVAP was a new generation agriculture commercialization project of Government of Nepal (GON), financed through IFAD during the last eight years and with the participation of Agro-Enterprise Centre (AEC), the Nepalese Chambers of Commerce and Industry (FNCCI) and the Netherlands Development Organization (SNV) among other relevant stakeholders. (See appendix # 1)

The project was implemented in Province 6 covering seven districts: Surkhet, Salyan, Jajarkot, Dailekh, Achham, Kalikot and Jumla in Mid and Far Western Region of the country especially in villages covered by three north-south road corridors: Chhinchu-Jajarkot, Surkhet-Dailekh and Surkhet-Jumla roads and identified and intervened 6 value chains after an exhaustive process of identification, analysis and selection: (i) Apple; (ii) Ginger; (iii) Goats; (iv) Offseason vegetables (OSV); (v) Turmeric; (vi) Timur; and (vii) Vegetable Seed.

Figure 1 Map of HVAP districts



Source; HVAP hvap.gov.np/

The key beneficiaries of the project were the primary actors across the value chains: small farmers, farmer groups or cooperatives, input suppliers and agribusiness with focus in the involvement of poor and marginal groups (women, Dalits, Janajatis).

The overall goal of the project was the reduction of poverty and vulnerability of women and men by the improvement of income and employment opportunities to poor smallholder farmers, landless and agribusiness through development and upgrading of pro-poor value chains including support services and enabling environment development that promotes value chain growth and upscaling.

The objectives of the project were:

- Improved commercial relations and partnerships between agricultural/NTFP/MAP market operators and producers resulting in a profitable, efficient and market-orientated production of high value commodities by 13,500 beneficiary households.
- Increased participation of poor marginal producers in high value commodity value chains with improved access to agricultural/NTFP markets.
- Poor smallholder farmers and other rural producers benefit from sustainable increases in volume and value of production because of improved production/collection, value addition and sales of high value niche market products.
- Enhanced enabling environment and strengthened local capacity to support market-driven value chain.

It is important to note that the project was designed in the context of the Millennium Development Goals and also incorporated RIMS IFAD impact indicators related with food security, household ownership assets, literacy, Agricultural/livestock production groups formed/ strengthened, productive infrastructure constructed/rehabilitated, land under improved management practice and training in income generation activities.

The contribution of HVAP in the context of SDGs

In this chapter is presented the methodology and results of the study. which explore the perceptions of beneficiaries about HVAP performance in its final phase of implementation. It also presents the most relevant outcome and output indicators of the project associated with the Sustainable Development Goals and reported on June of 2018 by the Project Management Unit.

Methodology

Respondents level of perception was measured by using a combination of variables on a five-point Likert scale. The first section of the questionnaire had 15 questions about the status of household assets, economic status, food security, inclusion, natural resources, and characteristics of social organizations and value chains dynamics. The second section includes questions about HVAP performance in the same variables.

The objective of these questions was too identified the perception of beneficiaries regards their household living conditions and the contribution of the project respects the SDGs.

The data were collected with the support of the translator who guides the interview and questionnaires application in their local language.

Table 1 resume of data obtained during the months of July and August of 2018.

Variable	Number	Percentage
Actor		
Farmers	64	86%
Group producers	7	10%
Input suppliers	3	4,6%
Distribution of farmers by gender and castes		
Variable	Number	Percentage
Gender		
Males	20	31,25%
Females	44	68,75%

Total	64	100%
Caste		
Dalits	21	32,8%
Janjati	8	12,5%
Other castes /groups	35	54,68%
Total	64	100%

Table 2 Distribution of farmers by district and value chains

District	# farmers	Percentage	# Farmers / value chain	%
Surkhet	46	71,8%	Ginger: 9	14,06%
			Turmeric: 15	23,4%
			OSV: 14	21,8%
			Vegetable	
			Seeds: 9	14,06%
Dailekh	11	17,1%	Goat: 11	17,1%
Salyan	6	9,3%	Timur: 6	9,3%
Total	64	100%	64	100%

Question	Improved		Been stable		Worsened	
	n	%	n	%	n	%
Over the last 6-8 years, have the living conditions of the household:	64	100	0	0	0	0

Question	Higher		Same		Lower	
	n	%	n	%	n	%
Do you expect next year's income will be	62	96,8	2	3,1	0	0

Table 3 Perception of beneficiaries about the households living conditions. On a scale of 1-5. To what extent your household members can access the following factors or services:

Factors	Never (1)	%	Seldom (2)	%	Rarely (3)	%	Usually (4)	%	Always (5)	%
Employment	51	80%	10	16%	2	3%	1	2%	0	0%
Roads and infrastructure	3	5%	14	22%	31	48%	16	25%	0	0%
Sufficient Incomes	0	0%	2	3%	21	33%	39	61%	2	3%
Agriculture inputs	24	38%	1	2%	14	22%	23	36%	2	3%
Basic services	0	0%	12	19%	33	52%	19	30%	0	0%
Financial services	1	2%	2	3%	6	9%	43	67%	12	19%
Food availability	0	0%	1	2%	20	31%	39	61%	4	6%
Food quality	1	2%	10	16%	46	72%	7	11%	0	0%
Natural resources	1	2%	4	6%	15	23%	38	59%	6	9%
Adequate skills or knowledge	44	69%	11	17%	5	8%	2	3%	2	3%
Women and minority participation in decision-making positions	1	2%	0	0%	2	3%	14	22%	47	73%
Support from NGOs or other key stakeholders for development and poverty reduction	0	0%	4	6%	27	42%	27	42%	6	9%

Participation in decisions of your farmer/producers group	0	0%	0	0%	5	8%	38	59%	21	33%
Market and context information	0	0%	0	0%	11	17%	34	53%	19	30%
Communication and conflict resolution mechanism	0	0%	1	2%	3	5%	30	47%	30	47%

Table 4 Perception of beneficiaries about HVAP Performance. On a scale of 1-5 with 5 being an excellent performance, how would you rate the benefits generated by the HVAP program?

Benefit	Poor (1)	%	Fair (2)	%	Good (3)	%	Very Good (4)	%	Excellent (5)	%
Increase income	0	0%	0	0%	0	0%	50	78%	14	22%
Increase employment	60	94%	3	5%	0	0%	1	2%	0	0%
Improve agricultural productivity	0	0%	0	0%	3	5%	36	56%	25	39%
Increase traded volume of goods	0	0%	0	0%	7	11%	41	64%	16	25%
Improve the quality and value of products	0	0%	0	0%	4	6%	27	42%	33	52%
Improve rural infrastructure	0	0%	5	8%	24	38%	19	30%	16	25%

Improve support and extension services	0	0%	4	6%	24	38%	28	44%	8	13%
Decrease hungry seasons	0	0%	1	2%	26	41%	33	52%	4	6%
Improve availability and access to natural resources	1	2%	4	6%	16	25%	35	55%	8	13%
Improve agricultural assets	7	11%	3	5%	17	27%	22	34%	15	23%
Improve or create capabilities and skills	0	0%	0	0%	16	25%	36	56%	12	19%
Enhance participation in market relationships	0	0%	2	3%	18	28%	19	30%	25	39%
Increase participation of women and marginal groups (Dalits and Janajatis)	0	0%	0	0%	0	0%	13	20%	51	80%
Strengthens your organizational capacities	0	0%	2	3%	11	17%	39	61%	12	19%
Strengthens your business capacities	1	2%	3	5%	13	20%	32	50%	15	23%
Develop confidence among the VC actors	0	0%	7	11%	19	30%	29	45%	9	14%

The next table presents the primary results organized by SDGs categories and compared with the outcomes and outcomes of the project.

It is important to note that there are not representative differences in responses analyzed by gender, social minority group, district, or value chain.

Variable	SDGs	Beneficiaries perception	HVAP outcomes and outputs (M&E information)
Living conditions	All	<ul style="list-style-type: none"> • 100% of farmers perceived that over the last 6-8 years, their living conditions of the household were improved • 0% perceived that they <i>always</i> have access to basic services like water and energy 	<p>The POs/Cooperatives undergo a participatory wellbeing ranking exercise to ascertain the poverty level of the interested beneficiary households. The project included a PIF to support poorest households in value chain activities and 18 Spatial inclusion Funds that provide support in case communities are unable to join due to geographical barriers.</p>
Incomes	SDG 1 SDG 8	<ul style="list-style-type: none"> • 64% perceived that their household members usually have access to sufficient incomes • 96% stipulates that in the next year their household incomes will increase. 	<ul style="list-style-type: none"> • The average income increase per beneficiary is reported at NPR 30,467 against a target of NP 30,000 (see appendix # 2) • 90% of the POs/Cooperatives with the exception of 10% inactive POs/Cooperatives report profitable operations

<p>Productivity, quality and value of products.</p>	<p>SDG 1 SDG 8 SDG 12</p>	<ul style="list-style-type: none"> • The responders had strongly agreed that HVAP was excellent at improving productivity (39%), quality and value of products (52%), and enhancing participation in the market relationship between producers and buyers (39%) • 25% perceived that the project was excellent and 30% very good improving rural infrastructure • 48% of the responders perceived that rarely they have access to roads and infrastructure • It was noted that 38% <i>never</i> have access to agriculture inputs especially because they manifest that their agriculture system is organic or traditional and not need to buy fertilizers, pesticides or herbicides 	<ul style="list-style-type: none"> • The production volume increased to 27,528 ton against the target of 31,000 ton. • The sale value increased to NPR 1,270 million against a target of NPR 1,927 million. • 83% of the beneficiaries report higher farm gate prices compared to pre-project baseline • 83% of the beneficiaries report an increase in the area of production.
<p>Employment and skills</p>	<p>SDG1 SDG 8 SDG 10</p>	<ul style="list-style-type: none"> • About 80% of the beneficiaries perceived that the members of their households never have access to employment and 69% expose that they don't have sufficient skills and technical knowledge. (The farming activities were not 	<ul style="list-style-type: none"> • 75% of project beneficiaries report improved terms of trade after two years • 67% of producers who have received training adopted at least half of the technology

		<p>considered as an employment by beneficiaries).</p> <ul style="list-style-type: none"> • 94% perceived that HVAP attained poor results creating new employment opportunities • 56% stated that HVAP was (very good) and 19% (excellent) improving skills and knowledge 	<ul style="list-style-type: none"> • 131. service providers remain active after project facilitation
Food security and natural resources	SDG 2 SDG 13	<ul style="list-style-type: none"> • 52% manifest that the project was very good and 6% excellent decreasing hungry seasons • Only 6% of responders perceived that always have food availability and 72% manifest that rarely have access to quality food • 67% perceived that HVAP contributes to improve in a very good or excellent way the availability and access to natural resources 	<ul style="list-style-type: none"> • The project achieved a reduction in the length of both the first and second hungry seasons – by 38% and 20% respectively (midterm evaluation) • The post-harvest loss has reduced by 45% against the target of 33%. • % of direct beneficiaries reporting ability to withstand climatic shocks (irrigation, plastic tunnels, storage) • 1,247 households have obtained crop/livestock insurance policies

Social Inclusion	SDG 1 SDG 5 SDG8 SDG 10	<ul style="list-style-type: none"> • 80% stipulates that the project was excellent increasing the participation of women and marginal groups (Dalits and Janajatis) • 73% agree that women and minorities group always have access and participation to farmers groups and cooperatives. 	<ul style="list-style-type: none"> • Women are in majority in most POs/Cooperatives and occupy 47% of the leadership positions indicating substantial empowerment of women. • Women constitute 64% (target 60%) of the total PO members whereas Dalit (17%) and Janjati (14%) constitutes 31% (target 25%) • Of the 13,116 beneficiaries trained in 2007 in the social aspects (business literacy and numeracy, genders and social inclusion, social mobilization and exposure visits), 74% are women, 15% Dalit and 14% Janjati respectively • In terms of technical training (crop production, livestock production and post-harvest handling), the project has trained a total of 1,829 beneficiaries in the last year with the participation of 65% women, 14% Dalit and 15% Janjati
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<p>Governance</p>	<p>SDG 1 SDG 8 SDG 17</p>	<ul style="list-style-type: none"> • HVAP strengths business capacities and organizational capacities in very good or excellent way accordingly to more than 70% of beneficiaries • 39% agree that HVAP was excellent at enhancing participation in market relationships and 45% very good developing confidence across value chains actors. • Regards market and context information like prices, costs of inputs and insurances 30% perceived that always have access to it and 67% <i>usually</i> have access to financial services like credit. • 94% manifest that <i>they usually (47%) or always (47%)</i> have communication and conflict resolution mechanism in place 	<ul style="list-style-type: none"> • The project supported 151 POs/Cooperatives to enter into formal contracts with the agri-businesses/traders specifying the type of produce, volume and price • The project has mobilized in total supported 466 POs/Cooperatives of which 90% are active • 100% of Producer organization improved access to technical advisory services • The project has released NPR 488 million as a grant under four grant support windows. • 75% of involved agribusiness indicates an expectation of the continuation of the market arrangement after the project
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Lessons learned

- The principal reasons mentioned as a cause of the improvement of living conditions were the establishment of contracts between farmers groups and agribusinesses, the possibility to establish a diversified crops basket, the money received through remittances by their relatives, and the access to infrastructure and extension services.
- The preexistence of farmers group with good organizational and leadership skills was determinant to facilitate the intervention model of HVAP structured with grants schemes and formal arrangements across the actors in the value chains.
- As is noted, HVAP incorporates an inclusive business approach capable to create profitable value chains and contribute to poverty, food security, social and environmental goals of the SDG, especially for poor small farmers and their communities in territories that historically face issues to advance in its own development and well-being.
- To achieve these results, important decisions and strategies were defined and can offer lessons learned in order to replicate or escalate this kind of programs with a convenient adaptation of each specific context.

Road and territorial approach

- The value chain development was possible because the minimum conditions to mobilize the economy, market, and institutional support was assured:
- The building of the road network permits to connect farmers to agribusiness and allow the access to input suppliers, services providers, equipment and technologies.

- To achieve rural development, prioritizing local infrastructure investments like roads, collection centers, irrigation channels and agriculture extension services were vital.
- The territorial approach facilitates the understanding of competitive advantages, risks heterogeneity of actors, production, environment and geography challenges.
- Is essential that value chains strength the urban/rural market and the economic relationships

Market dynamics

- HVAP was designed on the basis that the establishment of stable business relationships among value-chain actors and the definition of demand /market strategy consists in the starting point to develop production base of small farmers and input suppliers.
- The starting point of implementation was a formal agreement where the producers and traders/agri-businesses decided what to grow, when to grow and at what farm gate price the product will be purchased by the traders/agri-businesses
- The process to identify, analyzed, evaluated and selected the value chains was exhaustive, transparent and open for multiple stakeholders. SNV was selected by GON to provide the technical experience and knowledge in the development and training in value chains.
- The shift of the role of primary beneficiaries from subsistence farmers to economic agents contributed to meet the conditions of market arrangements with agribusiness.
- The facilitation and engagement to the negotiation process between agribusiness and farmers assured clear and fair conditions related to price, quality, quantity and required support in logistics, equipment and market information.
- Progressively is important to advance in the add value generation across the links in the value chains and define differentiation strategies that allow higher prices of the commodities and new markets.

- Is important that producer groups do not depend only on one client, in that sense is necessary that producers groups developed capabilities in marketing and commercial relationships

Empowerment, co-responsibility and group mobilization

- HVAP defined to work with producers organizations (PO) already established, with some degree of commercial experience and led by risk-averse persons/households.
- PMU guarantee the good allocation of resources with a rigorous process to identify, formulated and evaluated business plans and upgrading investments that address critical infrastructure gaps
- The Co-financing Grants were designed in order to guarantee the participation of producers and sustainability of resources in time. It was required that each PO invest 15% of the required investments and complied with technical, financial and monitoring activities in order to receive the disbursements.
- Technical assistance, capacity building and group mobilization increase their chances of success in long-term, assuring a high return on the investments and constituted the base for social inclusion.
- The project provides support and differentiates interventions to communities more exposed to exclusion by geographical barriers and poverty conditions. The principal intervention was the establishment of 18 Spatial inclusion Funds.

Climate change and resilience

- The investments realized in primary infrastructure and establishing market relationships generated positive externalities in the social, environmental and economic dimensions increasing the well-being and living conditions of households. Nevertheless, the primary goals of HVAP were the increment of incomes, productivity and social inclusion.
- The efficient use of natural resources, the promotion of diversified production basket and the support build resilience to climate change impacts. (water efficient technology, especially drip irrigation, mulching, irrigation channels, collection and

storage centers, solar technologies, water tanks, etc.) are key issues for sustain and upgrade the outcomes and household live conditions

- Is important to incorporate in the monitoring and evaluation systems indicators related with the environmental dimension and the resilience skills of the actors across the value chain.
- The abundance of natural resources, the minimal or no use of chemical inputs, and the regional initiatives that support organic or agroecological Districts can create comparative advantages for agriculture and open new market opportunities in the long term.
- The access to crop insurance products is a key element to broke the poverty cycles of beneficiaries.

Social Inclusion

- HVAP success in gender and social inclusion mainly by the incorporation of a pro-poor, gender and minority group approach in their design, implementation and evaluation phase.
- The switch from survival producers to commercial and business actors create new spaces that allow the inclusion of women and marginal groups in the same process.
- The implementation of methodologies like participatory social maps and wellbeing rankings increase the awareness and empowerment of small farmers and communities.
- Capacity building and technical services incorporate an inclusive perspective (poverty reduction, food security, and inclusiveness of women and minority groups.)
- The decision to work with already established PO composed by members from different gender, castes and social groups is highlighted not only because guarantee participation of marginalized actors but also allows the starting new and more

equitable behaviors among their members that can be disseminated in their local communities.

- In relation with gender equity and inclusion, HVAP beneficiaries recognize big changes, especially with the recognition of the woman role in the agricultural practices and the opportunity to participate with more equality in taking decisions in their farmer's organizations or cooperatives
- In the case of Daylit and Janajatis castes beneficiaries, they also experienced an increment of participation and new opportunities to be involved in activities that are traditionally assumed by other castes groups like commercialization and post-harvesting activities.
- Is important to establish strategies related with the migration of men to other countries and try to establish a mechanism that allows investing the remittances in profitable and sustainable projects related with agriculture, infrastructure development, extension services and micro savings.

Stakeholder platforms

- HVAP incorporated innovative approaches as stakeholders platforms, evaluation committees for selected beneficiaries, resource allocation and the establishment of public-private dialogue that ensure co-financing schemes, strengthening local institutions and vision of agriculture and territorial development with a long-term vision.
- Involvement of key stakeholders as implementing partners (local NGOs ,local service providers, government agencies)²; the establishment of contract arrangements, the participatory selection of beneficiaries, and the implementation of

• ² GON had engaged SNV as the technical service provider and co-financier to identify and analyse value chains, develop strategies and action plans, mentoring of Agriculture Enterprise Centre (AEC) and PMU officials, strengthening of staff of District Chamber of Commerce and Industry (DCCIs) and other stakeholders,

a solid and decentralized monitoring and evaluation system, guarantee credibility and confidence of the outcomes and outputs generated by the project.

- HVAP has capacitated the members with a series of training, interactions with agri-business, BDSPs and stakeholders and a result there has been substantial human capital development at the grassroots level
- The HVAP experience contributes to the recent decentralization and federalism strategy in Nepal with the involvement of local actors as key players in the development of the region, the definition of institutional schemes, the transparency in the use of resources and the accountability process.

Way forward

Besides, the beneficiaries perceived progress in their development conditions they still face important gaps that required multipurpose intervention by the government and other stakeholders.

- The road corridor is underdeveloped, only covered a small part of the territory and faces a lot of risks associated with natural disasters.
- The access to education, employment opportunities, public basic services, nutritive and available food remain a major challenge. The presence of government in this areas needs to be stronger and multipurpose.
- The transition from subsistence to commercial agriculture required long-term process and continue support in order to enable the environment and strengthening local capacity to support market-driven value chain. Stakeholders platforms should continue in order to align actors, resources, strategies and monitoring the advancements at the local level.

- The federalism system that is in place in the last 3 years can offer new opportunities like the inclusion of local stakeholders, the identification and management of competitive advantages and the inclusion of grassroots actors.
- The cluster approach needs to enable the environment to upgrade the value chains, especially, with strategies that differentiate products in local and external markets, add more value in each link of the value chain, guarantee food security and reinforce the social inclusion process across the actors.
- The local infrastructure like channel irrigation, polytunnels, water efficient technologies and post-harvesting practices are significant to increase resilience against climate change and allow more availability of food.
- In order to continue supporting successful experiences of group producers, it is possible to put in place innovative schemes to allocate resources for funding their business plans. Crowdsourcing experiences like Kiva.org and the establishment of inclusive financial funds with remittance money can be studied as a solution.
- Is important to continue and escalate the M&E system in order to:
 - Track the results on the development indicators of RIMS at household, village and district level
 - Provide quality information to all stakeholders involved in the territory (government, NGOs, group producers, etc.)
 - Understand the key elements that upgrade the household living conditions and the results of each value chain

- Strategies that empower women, men and minority groups through business literacy skills, resilience capabilities and the increase of food production are important to contribute to the achievement of SDGs



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Appendices

Appendix 1 Stakeholders analysis

Actor	Power	Legitimacy	Urgency	Motivation	Assets	Needs
Farmers	2	3	5	Income increase Food security Tackle poverty Leadership	Land Traditional agriculture knowledge	Basic public services Access to markets (roads) Market information Entrepreneurship skills
Producers Groups/Cooperatives	3	4	4	Revenue increase Represent community interests Negotiate good conditions in value chain relationships Scale economies Facilitate access to agricultural inputs Guarantee margin groups representation Reduce transaction costs Catalyze public and development resources *Experience in Nepal in organizing farmers and communities	Credit/microfinance skills Knowledge of community needs Representative legitimacy in value chains Resources from development projects	Access to markets (roads) Farmers confidence and support Market information Access to finance mechanism Reduce transaction costs Skills to implement sub-projects (project management)



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				suggests that civil society are better equipped, more flexible and more effective than government in managing social mobilization and participatory approaches		
NGOs / Business Development Service Provider	4	4	3	Facilitate process that strength skills and knowledge of farmers and Producers groups Handle a major part of project implementation and be the main project designated experts implementing project activities in the participating communities.	Capital resources sound knowledge of local communities and customs expertise in social mobilization, group formation processes and participatory planning	Weaker in the technical aspects of agricultural production, post harvest handling and marketing
Agribusiness	5	5	3	Buy agriculture products that comply with quality and quantity requirements Guarantee access to stable product suppliers	Market knowledge Negotiation power Business assets	Suppliers database Fidelity and formal arrangements with suppliers Access to suppliers (roads)



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IFAD	4	5	2		Nepal was one of the first countries to receive financial support from IFAD. Provided a total of USD 130.9 million in loans for twelve projects.	Nepal qualifies for 50% loan 50% grant financing terms ²¹ . Resources to finish HVAP.
SNV	4	5	2	Partner with MOAC in project implementation. Assume overall responsibility for the implementation of Component 1, Pro-Poor Value Chain Development, and provide support, technical advice and Inclusion and Support for Value Chain Initiatives.	Technical knowledge and experience on inclusive value chains.	
AEC	4	3	3	Represent the private sector agribusiness community in the development of agriculture and agribusiness.	Market knowledge Partnership capabilities.	Continue with contract agreements and partnerships between VC actors.



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District Chamber of Commerce and Industry (DCCIs)	2	2	4	Promote business and industry while protecting the rights and interests of business and industrial communities.	information advisory consultative promotional services	Continue with contract agreements and partnerships between VC actors
Project Consultative and Coordination Group (PCCG)	3	4	3	Confront issues, debate constraints affecting the project, review project approaches, strategies Coordination with, government bodies, agribusinesses and other related projects/development initiatives operating in the project area	Stakeholders influence Resource mobilization Alignment of stakeholders interests	Replicate initiative in other regions/value chains of Nepal
Ministry of Agriculture, Land Management and Cooperatives	5	3	3	Improve the standard of living of the people through sustainable agricultural growth Policies regarding various aspects of the value chain	Policies Economic and political resources	Alignment of policies with donors interests Decentralization process



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District Agriculture Development Office (DADO)	2	3	4	Role in coordinating the work of the project in the districts, facilitate the harmonization of the project with the district development plans and help organize technical support from their crop and livestock officers. Assume prime responsibility for implementing the District-based Farming Systems/Food Security	Local knowledge of farmers and producers groups Government representation	Low coordination capabilities
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Appendix 2 HVAP Complementary Outcome and output indicators results

Table 5: Average household income increase by value chain

Value chain	Number of households covered (MIS data a/)	Average Household income from crops or Goat (NPR)		Incremental net income per household (NPR)	% increase of net income over baseline data
		Baseline data	As of 2017/18 data		
Apple	1,655	13,844	46,981	33,137	339%
Ginger	656	8,244	24,240	15,996	294%
Goat	2,832	28,741	45,176	16,435	157%
OSV	3,042	12,616	61,232	48,616	485%
Timur	927	6,464	46,966	40,501	727%
Turmeric	820	5,062	18,943	13,880	374%
Vegetable Seeds	258	1,534	8,349	6,815	544%
Total, average	10,190	15,567	46,034	30,467	296%

a/ Although 15,745 were households covered only 10,190 households have operating results and remaining are in varying stages of commencing their production activities.

Table 6: Productivity and post-harvest loss by value chain

Value chain	Number of households	Average Productivity		Post-harvest loses %	
		Baseline (kg/Ropani)	As of 2017/18 (kg/Ropani)	Baseline	As of 2017/18
Apple	1,655	168	147	13.9	11.1
Ginger	656	458	577	4.18	4.44
Goat	2,832	a/ 13	36	5.42	No data
OSV	3,042	472	542	6.73	3.10



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Timur	927	60	88	4.74	1.01
Turmeric	820	433	566	4.70	1.29
Vegetable Seeds	258	26	21	11.74	3.09
Total	10,190				
a/ Average number of goats (both adult goats and kids) per household;					

Source: IFAD. (2018). Supervision report. High Value Agriculture Project in Hill and Mountain Areas

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Photos





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