



IMPACT BRIEF

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Nepal

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

About the project

Objective. The primary objective of HVAP was to reduce rural poverty and improve food security through enhanced value chains for high-value agricultural commodities in the hill and mountainous areas of Nepal. The project employed a unique approach bringing different actors of the value chain together; smallholder producers were linked with input suppliers, traders, technical service providers, and financial institutions. The project also provided business literacy training and helped strengthen production and marketing by forming farmers cooperatives or groups, collectively called producer organizations (POs).

Financing. The project was co-financed by IFAD, the Government of Nepal and the SNV Netherlands Development Organisation. The total cost of the project was US\$18.9 million.

Timing. The project was approved in December 2009, and implementation was started in February 2011 under the supervision of Nepal's Ministry of Agriculture and Livestock Development. The project was completed in September 2018.

The project's theory of change

HVAP promoted inclusive value chain development by **strengthening the local capacity** of POs related to seven high-value agricultural commodities: apple, ginger, vegetable seeds, off-season vegetables, turmeric, *timur* (Sichuan pepper) and meat goats. The project established **contractual agreements between POs and agribusinesses**, facilitated business-to-business connections such as linkages between small traders and large traders, and provided capacity building and training (in areas such as credit mobilization and business literacy) to producers and traders. As part of this effort to develop inclusive value chains, HVAP **enhanced processing and market facilities** and strengthened institutional capacity by providing market information, support services, and infrastructure such as collection centres and cold storage facilities.

The project also helped strengthen service markets by providing technical training and market information to service providers such as agro-vets, trader associations and agribusinesses. It facilitated linkages among district-level commerce and finance departments, agriculture and livestock departments, and POs to ensure effective and timely service delivery. To ensure **gender balance and inclusiveness**, the project delivered awareness training on social inclusion and women's empowerment and required each PO to be representative of different ethnic groups, women and men, and people from different castes.

Project outreach and outputs

Determining the overall impact of the project requires first understanding whom the project reached and what outputs it generated.

Districts covered: **7**

Beneficiaries households: **15,965**

Total beneficiaries: **107,860**

Female beneficiaries: **47%**

Social inclusion (*Dalit*, *Janajati*¹ and other ethnic minorities): **25%**

POs supported: **456**

Market and processing facilities built or rehabilitated: **13**

Project impact

As part of IFAD's Development Effectiveness Framework, HVAP has been subject to a rigorous impact assessment.

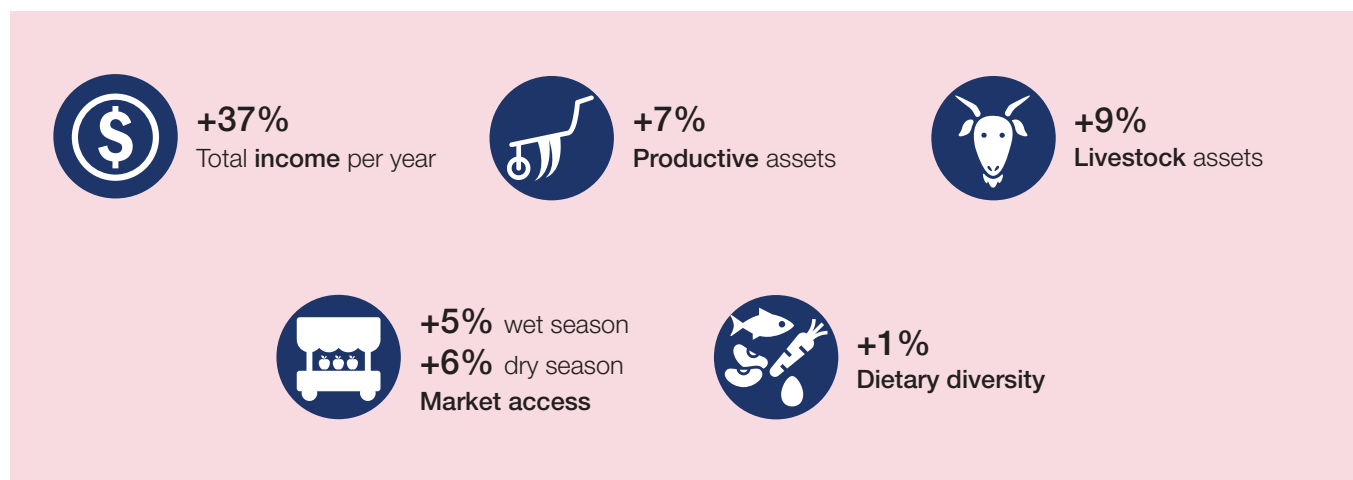
Data and methods

Estimating the impact of HVAP followed a mixed-methods approach using quantitative and qualitative surveys. A valid counterfactual group was created using both statistical methods and expert validation with project staff to reconstruct the targeting process used by HVAP when the project was originally designed.

This effort resulted in the identification of a set of treatment and control POs in all districts covered by the project from which household and PO surveys were conducted. In addition, household-level matching was performed to improve the quality of the counterfactual. This process resulted in the dataset used for analysis, which consists of data collected from 1,417 treatment and 1,457 control households in 117 treatment and 118 control POs.

Key impact estimates

Overall, the analysis shows positive impacts of the project on income, assets, market access, and dietary diversity of farmers in the treatment group.



The results show that HVAP was successful in increasing income in its target group. Specifically, households in the treatment group earned 37 per cent more annual income in the 12 months preceding the time of data collection—equivalent to an increase of approximately US\$500 a year.² This increase in household income is driven mainly by increases in crop income and livestock income of 50 per cent and 93 per cent.

It is worth noting that among the *Dalit*, *Janjati* and other ethnic minority households, crop income and livestock income increased by 92 per cent and 62 per cent, while the crop income and livestock income of households that are not *Dalit*, *Janjati* or other ethnic minority increased by 43 per cent and 99 per cent. This finding shows that the project led to differential increases in income components of those receiving the project. Meanwhile, treatment households appeared to be less reliant on remittances sent from migrated household members, which decreased by 32 per cent.

Among treatment households, ownership of durable assets, productive assets and livestock increased by 10 per cent, **7 per cent**, and **9 per cent**, respectively.

The project also increased market access among households in the treatment group throughout the year. They were **5 per cent** more likely to sell their produce to a trader during the wet season and **6 per cent** more likely to sell to a trader during the dry season.

Finally, the analysis shows that the project contributed to a 1 per cent rise in the dietary diversity of households in the treatment group. This increase in the dietary diversity score is driven by higher consumption of vegetables, fruits, and milk and other dairy products.

¹ *Dalit* and *Janjati* are socially marginalized groups within the caste system.

² US\$1 = 113 Nepalese rupees (December 2018).

About the brief

This brief draws upon the findings of an IFAD-funded impact assessment of HVAP in Nepal, which was prepared by Kashi Kafle, Kwabena Krah and Tisorn Songsermsawas.

The impact assessment report on HVAP is available upon request.

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Lessons learned

- The impact assessment of HVAP shows positive and significant impacts on income, assets, market access, and dietary diversity among farmers in the target group.
- The impacts on income are particularly strong for **crop income** and **livestock income**, both of which were the focus of value-chain development in the project. Livestock income increased at higher rates than crop income among households belonging to *Dalit*, *Janjati*, and other ethnic minority groups, whereas crop income increased more for other households in the treatment group. The project also increased market access and asset accumulation (in particular durable assets, productive assets and livestock assets).
- Results suggest that households in the treatment group have higher **dietary diversity** than those in the control group. This increase is driven mainly by greater consumption of vegetables, fruits, and milk and other dairy products. This finding is consistent with previous findings in the literature noting the relationship between agricultural interventions and food security.
- The **focused project design**, concentrating on small but linked interventions, contributed to consistent project logic and consistent sets of project interventions. This focused and consistent logic is more likely to deliver positive and significant development outcomes.
- Qualitative evidence suggests that the **small size of the cooperatives and POs** supported by the project allowed project staff to **engage** closely with beneficiaries and **provide sufficient technical support** to meet local demand.
- **A combined top-down and bottom-up** approach to engaging smallholder producers in the value chain resulted in the successful identification of an appropriate set of activities and interventions for project beneficiaries.

