

FTF-India: Expanding Nepal's Business Access to Improved Technologies for Agriculture (ENBAITA, 2015-2018)

In India, the private sector has been very successful at promoting low-cost and high quality agricultural inputs and technologies for small and marginal farmers. There is, however, a large unmet demand for these proven technologies outside of India. Nepal, a neighboring country in South Asia, is increasingly moving towards agricultural diversification and commercialization. Small farmers and those in remote locations often find it difficult to exploit opportunities that come with expanding markets. Women are especially disadvantaged due to limited access to inputs, resources, institutional credit, land, and extension services; which hampers their ability to grow crops profitably.

Recognizing the potential of low-cost Indian agricultural innovations in neighboring countries, USAID/India funded a three-year (2015-2018), \$1.7 million project which aimed to expand access to improved Indian agriculture technologies – hybrid vegetable seeds, micro irrigation technologies, and Integrated Pest Management solutions; by brokering private sector partnerships between Indian and Nepalese supply chain actors.

The project **FTF-India: Expanding Nepal's Business Access to Improved Technologies for Agriculture (ENBAITA)** was anchored by iDE Nepal, an NGO headquartered in Denver, which specializes in deploying market based approaches for sustainable growth. The project was designed to mainstream equitable gender participation. ENBAITA aimed to reduce poverty for smallholders in Nepal through access to Indian agricultural technologies in partnerships with Indian agro companies to develop last mile supply chains. Nepal has strong market opportunities in many high value subsectors with unmet domestic demand, large regional demand in South Asia, and overseas opportunities. Yet Nepal agriculture remains largely subsistence with the agro private sector largely absent from rural areas. This stems from market failures related to high transaction costs of working with many small farmers and the weak business environment. With project support, the Indian and Nepalese private sectors developed last mile connectivity through community business facilitators who marketed inputs; embedded training for technology adoption, and aggregated demand for a large number of small farmers to establish agricultural supply chains in Eastern Nepal. Farmers sold surplus produce through community-managed vegetable collection centers, providing a reliable conduit to negotiate prices with wholesale buyers. In three years, the project worked with 51,000 farmers in Eastern Nepal to increase their incomes by over \$21 million through vegetable production. More than 73% of the beneficiaries were women farmers.

ENBAITA validates the hypothesis that proven Indian technologies can be adopted or replicated at scale in other developing countries, more so in South Asia, because of agro-climatic and socio-economic similarities.

Over the last 15 years, iDE, working closely with government, private sector, and rural communities, has developed the public private **Commercial Pocket Approach (CPA)**. ENBAITA scaled CPA within the vegetable subsector, developing:

- **Supply Chains.** Establishing last mile supply chains for agricultural technologies using Community Business Facilitators (CBFs). CBFs are entrepreneurial farmers based in rural communities who receive commissions on the sales of agricultural inputs and provide training to their customers. ([See Technology Supply Chain Diagram](#))
- **Market Access and Information.** Developing community managed collection centers with investment from government for market access and services including climate smart crop calendars. Collection centers are overseen by Marketing and Planning Committees (MPC) elected by members that select entrepreneurs for management; over time many collection centers become cooperatives.



Pabitra Sharma is an ENBAITA trained CBF later trained by CABI/GON to be a Plant Doctor. She supports over 500 small farmer customers.

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- **Cross Cutting:** (1) Extending Climate Smart Agriculture supporting local adaptation plans. (2) Facilitating investments for irrigation / Multiple Use Water Systems. (3) Promoting Gender Equality and Social Inclusion through entrepreneurial opportunities, representation in MPCs, and equitable access to services. (4) Enabling IPM through local monitoring. (5) Enabling ICT as a trusted local source of information. And (6) improved nutrition through more diverse diets and increased income to improve access to nutritious foods and healthcare.

ENBAITA developed supply chains from Indian manufacturers, to national distributors, to regional wholesalers, to district dealers, to CBFs, ultimately providing smallholders access to complementing technologies. ENBAITA developed last-mile supply chains in 8 districts, serving as hubs to expand access to Indian agricultural technologies. This supported USAID's FTF Initiative and GON goals, transforming subsistence to commercial agriculture in Nepal. ENBAITA facilitated Indian technologies including IPM (PCI & T.Stanes), micro irrigation (Harvel Azud), improved seed (Namdari), Sun Flower Solar Pump (Future Pump), and more. The Indian agricultural companies co-invested in the last mile supply chains in Nepal, working with ENBAITA and national distributors. ENBAITA reached 51,515 small farmers, exceeding project goals.

Key impacts in the project period include:

- **Supply Chain:** Linked Indian and Nepalese private sector to build/strengthen agricultural supply chains in Western Nepal.
- **Income:** Increased the annual vegetable income of 51,515 HHs by over \$21 million through vegetable production. Incomes of project households increased by US\$225 per year.
- **Poverty:** 34% reduction, lifting over 100,000 people out of poverty (by the \$1.25/day standard).
- **Empowerment:** 18% of households became empowered (Women's Empowerment in Agriculture Index (WEAI)), 74% of households reached represented by women, 41% of CBFs were women.
- **Profile of HHs:** 73% of program participants were women, 20% women headed households, 15% 'dalits', and 44% from disadvantaged indigenous communities. About 55% of members in farmer groups were youth below 30 years of age.
- **Seeing is believing:** Established 55 demonstration plots to showcase Indian agricultural technologies and best practices to grow vegetables.
- **Farmer Collectives:** Formed new / reorganized 400 farmer groups in the use of improved Indian technologies.
- **Financial Inclusion:** 519 ENBAITA households accessed loans through Muktinath Bikash Bank with an average loan size of US \$549.81 (NPR 54,981). The bank disbursed US \$285,350 (NPR 28,535,000) to ENBAITA households.
- **Market Linkages:** Facilitated formation of and strengthening of 17 rural collection centers (CC) within communities, and linked 6000 households to collection centers.
- **Community Business Facilitators (CBFs):** Trained 156 CBFs including 8 CBFs later trained by CABI/GON to be Plant Doctors. The CBFs continue to serve and increase their farmer customers.
- **Trade:** \$1.4 m increase in the value of intra-regional trade of agriculture technologies.
- **Tuta Absoluta Tomato Pest:** ENBAITA working with the USAID IPM Innovation Lab and the Nepal FTF Initiative played a key role rapidly developing supply chains for Indian IPM products that successfully controlled the TUTA outbreak including over 46,500 lures sold to over 25,000 smallholders.
- **Benefit-Cost Ratio:** Increase in small farmer income to USAID investment by 13.6 to 1 over the project life.