

Public, Private, Community Partnership (PPCP) in Timur (*Zanthoxylum armatum*) Value Chain: A successful model for conservation and livelihood promotion in Mid-West Nepal

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Context

Timur (*Zanthoxylum armatum*), commonly called boke timur in Nepal is named as *Tomar* in Hindi and Nepalese pepper or prickly ash in English. It is a small thorny shrub found in the sub-tropical to temperate regions (900-2500 metres from the sea level), from Kashmir to Bhutan. Timur has been established as an integral source of income for women, landless and unemployed people. The nature of the plant as its ability to grow in less fertile soil with very less disease and pest infestation; its availability in forests and the surrounding agricultural lands without affect in agricultural productivity; its usage as a terrace raiser for crop land; and long experience of the rural women and poor in collection makes it a suitable plant species for livelihood improvement of the poor.

Timur is naturally grown, as well as a transplanted shrub, in the barren lands and forests (community, leaseholds and private), and is regarded as a prioritised commodity for export with its potential of trading in raw and processed form for Indian markets and producing oil for European markets. Timur has a good demand since it is commercially used in ayurvedic medicines, spices (chutney), dentifrices (powder for cleaning the teeth) industry, and its aromatic essential oil in the fragrance and flavour industry, which is obtained by distillation of the dried fruit.

Timur is prominently found in the High Value Agriculture Project (HVAP) districts. Along with its abundance in the barren lands, surrounding areas of the croplands, and forests of the project districts; individual farmers have cultivated timur in their private lands as a hedge row in agro-forestry system and small patches of the community and leasehold forests.

Annually More than 250 MT is being traded along the three road corridors (Surkhet- Jumla, Surkhet-Dhailekh, and Surkhet/Chinchu - Jajarkot) of HVAP areas and around 2233 households are being engaged in the timur value chain. The collection practice is primitive and not scientific; usually the poor, women, and children collect timur in their leisure time manually by hands and sticks, and sometimes using traditional weapons like sickles for cutting stems and branches. In open access areas, early harvesting and lopping off of the branches or stems prevail, often resulting into fungus infestation in dried fruit which not only came as an issue of decrease in fruit production of the plant but also threat to conservation.

The timur sub-sector has important significance for its trade in Nepal because of its multiple functions and potential for rural livelihood improvement. It has become an important commodity with a good scope of increase in production by adopting proper management system, improving harvesting tools/methods, and proper post-harvest handling. However, small-holders farm producers may not do it alone; there is need of collaborative effort of public and private sector for the sustainable timur production and conservation.

Overview of the Public Private Community Partnership (PPCP) Model

Today, developing country governments and donors are massively pursuing public private community partnerships (PPCPs) to deliver growth and positive development outcomes in agriculture sector. In Nepal, PPCPs in agriculture are relatively new concept, though there are some large scale partnership model projects completed in other sectors.

Timur value chain is one of the sub sector of HVAP which facing problem of production, harvesting and market promotion. In timur value chain, PPCP involved three partners: the government (through the ministry of agricultural development/ HVAP project and District Forest Office (DFO), Dabur Nepal (a multinational company) as a private sector and Bhairam Community Forest User Group (BCFUG) as Community. HVAP along with its local partners was responsible for developing capacities of timur producers on harvesting, grading, storing and marketing. Moreover, increasing producers' access to finance, access to service and developing business linkages to traders can be considered major thrust of the project. The project has allocated various fund guidelines to support farmers, producer groups, traders, service providers. In Timur VC, HVAP is supporting to producers organisation in value chain financing, technology and equipment support, post-harvest operation, skill enhancement training, exposure, and business to business linkages. Similarly, Dabur Nepal provided financial support for nursery establishment of timur in addition to HVAP's support, additional seedling that produced in their own medicinal plant nursery, and buy back guarantee where DFO provides saplings transportation support services to the producers. HVAP contracted the local NGO in each districts to provide social mobilization services that includes training, financial management, monitoring, facilitation, communication, etc.

The HVAP project implemented timur VC sub project in 26 groups and cooperatives in Surkhet, Salyan, Jajarkot and Achham districts which is potential for timur production and playing crucial role to enhance the household income thereby contributing on the poverty reduction of the involved actors. Official records of District Forest Office, Surkhet indicates that more than 25 metric tons of Timur dry fruits are collected from Private lands and annually more than 94 metric tons traded from this district alone. However, poor knowledge of market, immature harvesting and inadequate knowledge of the farmers in nursery management and plantation, post-harvest technology of timur is hindering in extension of its commercial cultivation and promotion of trade in the project areas. It was therefore recommended through a PPCP involving Dabur Nepal, which had already proven its credentials through its Dabur honey production.

Partnership Agreement for Timur Green House Nursery Establishment

Realizing the field level problem on availability of Timur saplings, HVAP-PMU Surkhet, Dabur Nepal, District Forest Office of Surkhet endorse the concept of nursery establishment on last April 2014 (2071 B.S).

Signing in the preliminary note, four parties including BCFUG clearly defined the role and responsibility that HVAP, Dabur Nepal, DFO Surkhet district and BCFUG. As a consequence of the four parties' agreement, at present, the greenhouse nursery of Timur is in full of operation.

Although individual farmers were not involved as partners, their incentives to engage with PPCP model includes access to inputs, credit and technical advice on timur plantation, harvesting, grading and orchard management, which would increase productivity and give better quality yields, thereby boosting incomes.

Theory of Change

There is a clear theory of change in PPCP's model in Timur Value chain. First, in this PPCP model, the value added theory of change can be considered that the individual traders and groups of producers have access to finance as they have been receiving various grants from the project. The partnership with Dabur Nepal and working with close cooperation of DFO revitalize smallholder timru producer by giving farmers access to key inputs (seed, seedlings), improving farming and harvesting techniques and developing business to business linkages with local, regional, national and international buyers. Improving timur yields and productivity would improve farmers' incomes and strengthen livelihoods, thereby achieving project's goal of reducing rural poverty. Second, proposal of contract farming and buy back agreement from Dabur Nepal assured farmers to increase their income through maximizing timur production. Community would benefit from better linkages and crowding-in of various buyers (national to international) and benefit packages (social corporate responsibility) would improve community infrastructure and developing capacity to non-farm activities.

Success Cases

Establishment of timur green house nursery for seedling production in terms of conservation and expansion and buy back agreement of timur for market promotion can be considered best cases of PPCP model in timur value chain.

Case 1: Timur Green House Nursery

The HVAP's field experience in Timur cultivation observed that the domestication is a major constraint which is due to lack of seed, seedling and improved nursery. Moreover, the inadequate knowledge of the farmers in nursery management and plantation of timur is hindering in extension of it's commercial cultivation in project implemented districts. In addition to this, none of the farmers are establishing private nursery to grow the Timur saplings. Till now, what so ever done in Timur plantation, Timur wildlings are the only sources of saplings. During the interaction meeting with the Timur growers, it came in conclusion that due to unavailability of good quality of seedling of Timur; plantation activity is not so much proliferated. This is further accelerated not having a good nursery in project area for Timur saplings production. Establishment of Timur nursery for the supply of good quality of timur saplings is the only solution to overcome the prevailing problem of availability of the Timur saplings. Thus, the project approached Dabur Nepal, District Forest Office (DFO), Surkhet to establish satellite nursery at Bhairam Community Forest User Group (BCFUG) at Bhairamsthan, Surkhet to produce around 55,000 Timur saplings annually. Details of the project plan and outcomes mentioned below in the box.

Timur (*Zanthoxylum armatum*) Green House Nursery: Under PPCP Model

Background: It is a modern greenhouse nursery, 20 m (L) x 10 m (B) x 3.5 m (H) size (a replica of Medicinal and Aromatic Plants Nursery of Dabur Nepal established in Banepa, Kavre District) equipped with mist irrigation, cooling pad, exhaust fan and surface pipe irrigation constructed in premises of Bhairam Community Forestry Group (BCFUG), Khorke, Surkhet district

Objective: Establish greenhouse nursery to produce and supply Timur saplings as per the need of farmers and support them for plantation.

Project Investment: Total- Nrs. 2168,748 (20654 USD) where HVAP SDF Grant: NRs 16,94,385 (16137 USD); Dabur Nepal Contribution: NRs. 3,00,000 (2857 USD), Dabur Nepal Timur Sampling Contribution: NRs. 21,860 (208 USD) and Bhairam CFUG Contribution: NRs 1,52,503 (1452 USD).

Areas of Investment: The major support was for the construction of improved greenhouse nursery. In addition to this, provisioning of technical support for timur saplings production and develop linkage between Bhairam CFUG and timur cultivators.

Stakeholders Support Intervention: District Forest Office (DFO), Surkhet is responsible to provide technical support and Environmental Development Society (EDS) is for social mobilization

Outcomes and Way Forward: As per the plan and under the PPCP mode, a modern satellite timur green house nursery was established which will produce around 55,000 of good size of Timur sapling in yearly basis and within the period of three years it will produce 165,000 saplings. Similarly, the project has provided capacity building and nursery management training to the CFUG member for the sustainable management of greenhouse nursery.

Till now, around 19,850.00 saplings are produced in this greenhouse nursery and produced saplings are in the hardening phase (for plantation purpose, Timur saplings should be one year old in nursery stage) before plantation in field.

This initiative has resulted:

- 19,850.00 saplings are produced in this greenhouse nursery and produced saplings are in the hardening phase.
- Saplings so produced will be sold in NRs.15 per plant to the Timurgrower of project areas.
- It is expected that BCFUG will earn around NRs.750,000 per year from the sales of Timur saplings.
- As estimated, from the plantation of 50,000 plants will yield 125 MT of Timur dry fruits.
- Referring the average price (Rs. 250 per kg) of last year, it is expected to earn a net NRs.3,1250,000.00 per annum.

In addition, annually this region will also generate revenue of Rs. 1000,000.00. It is expected that around 2137 of the project beneficiaries HHHs (till the end of October 2015) will earn Rs.14,623 as an additional income besides the present net income of Timur (Rs.11238/HHs as of Fiscal year 2014/15).



Case 2: Contract on Buy Back Agreement (Dabur Nepal and MANE FILS, FRANCE)

Since 2013, HVAP is facilitating to the Timur producer groups in linking with the Multinational Company Dabur Nepal in purchasing of quality timur produced in project area giving opportunity to local traders as a middle persons to supply the required quantity of Dabur Nepal. Annually, traders received the purchase order from Dabur Nepal in response to the price quoted from local traders based on quality of produced. As a purchase guaranty of Dabur Nepal, producers' organisations are producing quality timur, which was possible in the technical guidance of HVAP. The produced merchandises passed the quality control of Dabur Nepal having the desired essential oil content and moisture level. Annually, Dabur Nepal purchase around 50 MT of quality Timur from this region only. As a consequent, the price of timur is increasing annually comparing with previous last two years. The annual increment in price is definitely supporting the livelihoods of producers, acknowledging in providing ample opportunity to produce quality timur in desired quantity.

In addition to this, based on the quality of Timur produced in Kebindedaha VDC (Timur Producers group Phulbari Swabalamban Ecovillage and Dalit Aguwa Krishak Samuha) of Salyan district, a flavour and fragrance company of France MANE FILS is also purchasing 5MT of Timur annually from this region. Annual demand and supply of required quantity is guaranteed in signing the agreement among the three parties (Local traders of Jayetpani, Salyan distirct, Himalayan Bio-Trade Limited (HBTL), Kathmandu base trading company and MANE FILS, France) in presence of HVAP as a witness. The price per kilogram of Timur provided by the MANE FILS to the producers is quite reasonable, which is also depends on desired and approved quality of MANE FILS. The tripartite agreement is based on the supply of quality timur from the groups to the local trader, how is responsible to dispatch the collected timur to HBTL for further export to MANE FILS France. The paid amount against the Timur received by MANE FILS directly goes to the members' household of the producers group through the HBTL. The role of the local traders is very significant; who will receive only a few percent of the trade volume in terms of price as a facilitator to manage the local trading business. The MANE FILS Company is agreed to purchase Timur only from these two groups in coming years too through proper agreement. Besides this, MANE FILS is also providing some support as a Corporate Social Responsibility (CSR) as per needs of the groups. This CSR is acknowledging as a significance development of Timur management and development in Salyan district.

“We were never on that position to send our kids to the nearby city for schooling and when children grow, they always go to india for job. Even my husband, he is in India for so long and whatever earning he does send is the only way to feed my kids. Well, Timur is not new for us. It used to grow-jus grow in the wild form and very few of us had practice to use it as a spices. We really did not know that it can be sold and it has economic value. But, when organization like HVAP came into our village then we discovered it as a money plant.

Though we are selling very few quantity of timur (5 MT) to MANE FILS, income will be suffice to raise our kids, and repair houses. Now, we found timur as a good business in our farm which not only raised our income but also help us to stop our husband and kids not to go India”.

Kumari Rokaya and her neighbours

Shera VDC, Kuvindedaha, Salyan

Despite some positive impacts of the PPP, there were a number of challenges that constrained. These included

- Delay in providing purchase order
- Infiltration of local vender to distorted the confined and settle market
- Time consuming in approval of Timur quality
- Despite of efforts of HVAP, some of the producers still in verge of quality production

Opportunities

- Technology Transfer
- Quality and quantity production
- Branding and Marketing
- Taking benefit from CSR Package

Lesson learned

- Quality and quantity production is the significant aspect of agreement to capture the market either national or international.

Way Forward

There are possibilities for collaboration with similar initiatives working in the same geographic locations. A single project could be limited in terms of technical and financial resources, so partnerships with the private sector are essential to pool resources. Various committees formed at the district and local levels also need to be utilized for resource mobilization. Learning from these projects could be taken up by subsequent projects. Hence, further efforts should be made mapping such private sectors and bringing them in timur value chain. However, mechanism should be developed to distribute maximum benefit for the people at the lower pyramid. Innovation is most required to conserve and promote timur farming in remote areas where the constraints are greatest.