



Riverbed Farming for enhancing livelihoods: cases from Koshi River basin

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Overview

- Agriculture is the major sector of Nepalese economy.
- Contribute about one thirds of the national economy and livelihood of more than 60 percent (CBS, 2014).
- 25% of the people are still below poverty line with daily per-capita consumption of energy less than 2220 Kcal (CBS, 2011)
- Therefore, the development of agriculture sector is key for the development of national economy.
- The DOA bears overall responsibility for the agricultural growth and development of agriculture sector.

DoA Objectives

Broad Objectives

To support and help achieve **food security and poverty alleviation** by the transformation of agriculture through diversification and commercialization

Specific Objectives

- To increase agricultural production based on geographical diversity.
- To support food security by increasing food production and maintained the internal supply of food stuffs.
- To increase the production and productivity of raw material for the agro-industries.
- To support the produces those have comparative advantages appropriate market management.

Specific Objectives (cont..)

- To increase the availability of off-farm employment by supporting small industries and enterprises.
- To support export promotion and import substitution of agriculture.
- To support **poverty reduction by increasing the opportunity employment for small, marginal and women farmers.**
- To screen and standardize the technologies by doing adoptive rise.

Other policy Provision

- **National Agricultural Policy, 2004** adopted Special Facilities for target groups to classifying farmers having less than half a hectare of land and lacking irrigation facilities, farmers belonging to *Dalit and Utpidit classes and other marginal farmers and agricultural workers* as target groups and providing them with special facilities;
- **27 point commitment** of Ministry of agricultural Development also comitted special targeted program, support and facilities for such groups.

DoA through District Agricultural Development Offices has implementing Riverbed farming as targeting small, marginal and women farmers to support **poverty reduction and improving food security.**

Riverbed farming

- Riverbed farming, i.e. cultivation of horticultural crops on seasonal riverbeds, has shown to be a promising measure to alleviate poverty of the landless and landpoor households of the Terai region in Nepal.
- Several governmental and non-governmental actors have initiated activities related to riverbed farming in different districts of Nepal.
- Seasonally dry riverbeds are an under-utilized resource that can be used for sustainable horticultural crop production
- Cucurbit vegetables are produced for household consumption and market sale.
- Besides that banana farming and fish farming are also in practices.

Major activities Implemented by DoA

Technical support

- ***Training and awareness raising:*** The Regional Agricultural Training Centre of the Department of Agriculture trains the local resource persons. Once trained, they help to raise awareness among landless and land-poor farmers of the advantages of riverbed farming and they also give them technical training and extension services.
- The District Agricultural Development Office provides Agriculture Service Centre level training and on the spot mobile training
- **Advisory service:** The District Agricultural Development Office provides plant protection expertise and technical backstopping

Major activities Implemented by DoA (cont...)

Support/subsidies

- Group formation and mobilization
- Subsidies on agricultural inputs such as seeds, organic manure, fertilizers (chemical as well as organic especially vermicompost), agricultural tools/equipment, bio-pesticides
- subsidies on Small irrigation scheme establishment and rehabilitation
- Subsidies for Youth Targeted Program-Vegetable farming,
- Fish mission

Coordination/Collaboration

- Coordination with INGOs/NGOs and other partners

Activities Implemented in Riverbed farming in the Districts

Activities Implemented by DADO, Sunsari

Youth targeted program on vegetable farming

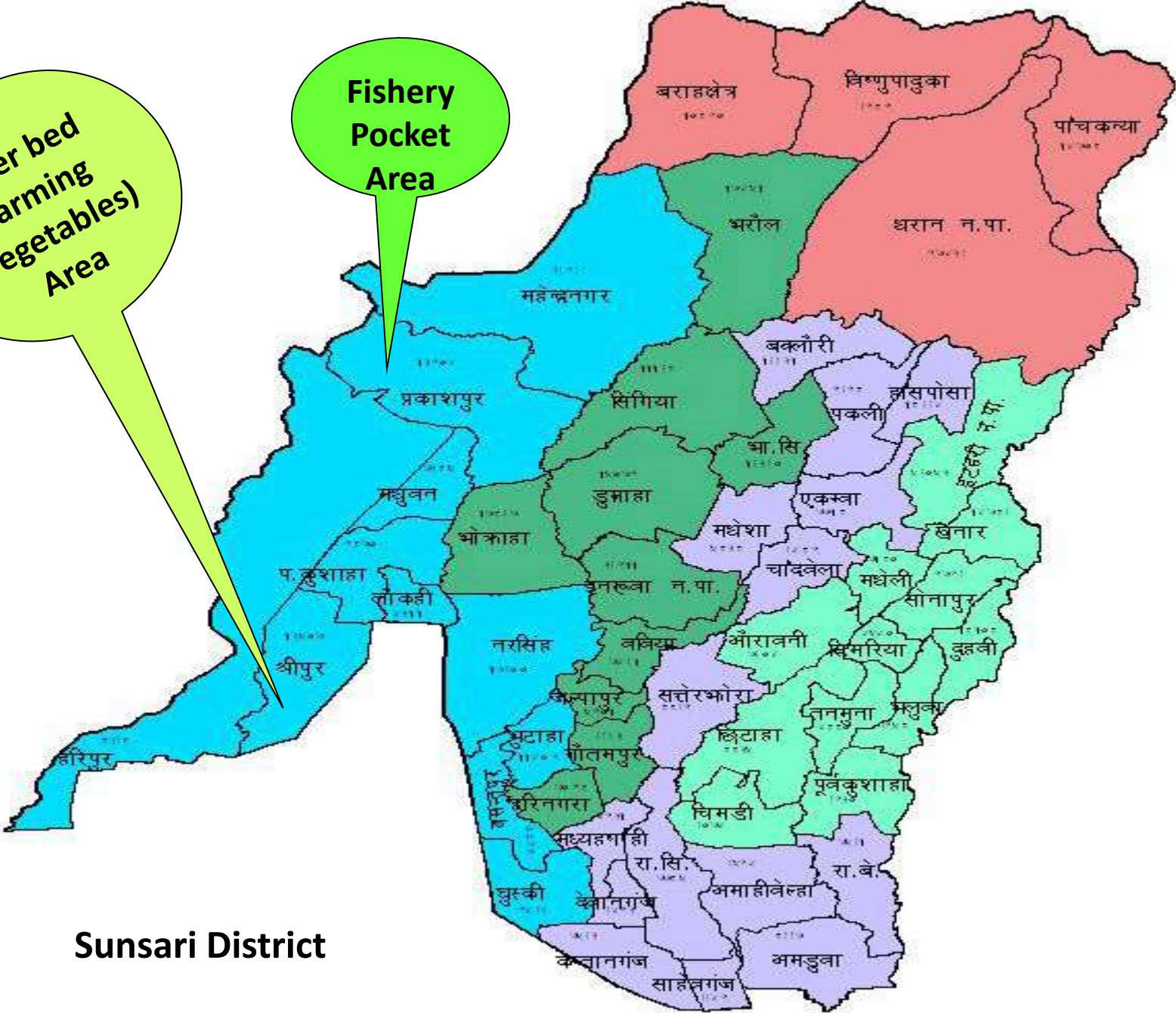
- Focused on youth, low income marginal people
- Specially cucurbits: Pointed gourd, sponge gourd, bitter gourd, watermelon, etc

Fish farming

- Focused on low income people
- Area: 70 hactre, Possibility: 420 hactre
- Farmers involve: 600
- Fish production: 245 mt (3.5mt/ha)

River bed Farming (vegetables) Area

Fishery Pocket Area



Sunsari District

Riverbed farming in Sunsari (Major - Pointedgourd)

Area: 350 ha.

Production: 4200 mt

Income: 8,40,00,000



Riverbed fish farming





District Agricultural Development Office, Saptari implementing Banana Farming program in 1000 Ha in river basin area



District Agricultural Development Office, Morang in collaboration with FORWARD implementing the program on Riverbed farming in Morang district

- Project Duration : 2012 -2016 AD
- Program Budget : NRs31 Lakhs (FORWARD) and 2 Lakhs (DADO) for the period Jan 2016 to June 2016
- In 345 farmers of 17 group of 9 Village Development Committee
- At the river bed of : Ratua, Bakraha, Nuna Bakraha, Chisa and Lohandra River
- Also coordinated with Agrovets and Agricultural Cooperative Association
- DADO supported through Youth Targeted Vegetable Program and Seed supports
- Farmers earned NRs 78 Lakhs Last year from 40 Ha of riverbed farming

Cucurbits in Riverbed farming



Present situation of the Riverbed farming



Some Issues

- Commercialization-*As poor, small and marginal farmer's involved*
- Sustainable Income generation
- Low investment due to poor access to financial institutions
- Technical knowhow of the farmer's and technicians
- Decreasing Soil fertility due to siltation
- Risk of recurrent of flood
- Changing course of river
- Appropriate selection of site
- Irrigation and fertilizer management
- Security threats on stolen of the produce
- Protection of crop from wild animal
- Crop insurance

Way forward

- By utilizing an under-exploited resource and enhancing farmers' production skills on marginal soils, leasehold riverbed farming increases marginal farmers' options for sustainably coping with the effects of climate change.
- So, riverbed farming could be part of a community-based adaptation to the impacts of climate change.
- Integration of other agro-ecological issues, such as agro-forestry and reforestation of the riverbanks, is an opportunity to both.
- DoA expect coordination, collaboration and supports for the improvement of the livelihood and food security of such marginal, small and landless households with all concerned stakeholders through existing as well as new initiatives and programs.

THANK YOU