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Constraints in Transfer of Fisheries Technology in North Bihar

Sitamarhi districts of north Bihar situated in northern part of Bihar state; it's also connected with international boarder of Nepal. Awareness regarding impotence of diet in human health is increasing day-by-day. Bihar has emerged as a state in fisheries and aquaculture sector in India through development and production of host technologies for increasing fish production. Even with vast in increasing in production over the year it's able to provide about 9kg/ kaput to percent population (taking 56% at fish eater) against nutritional requirement of 11kg / kaput. The study focuses on the constraints on fish production in Bihar. It has vast water reservoirs in the form of river, lakes, ponds and reservoirs. The utilisation of compound water resources is 2.3 lakh ha. Although there are a good amount of transferable technologies available for transfer in farmer's field, there are some constraints in transfer of fishery technology, they are: (i) Flood (ii) Presence of Wet Land (iii) Unavailability Quality fish seed (iv) Unorganised marketing (v) Poor infrastructure facilities (vi) Poor cold chain maintenance (vii) Lack of awareness about scientific fish farming (viii) Lack of extension activities (ix) Dominance of Bighead (*Aristichthys nobilis*) species.

INTRODUCTION

District of North Bihar dominated with heavy network of large number rivers like, Ganga, Burhi Gandak, Sone, Kosi Gandak, Bagmati and Adhwara samooh and its tributaries. These rivers are seasonal or

perennial in nature but in monsoon time they collect heavy quantity of water from lower portion of Nepal and cross through northern part of Bihar and develop huge amount of flood. In fact, north Bihar is known as flood prone area due to large number of small rivers originated from Nepal region. Flood is an annual and regular visitor. Therefore, flood sweeps through north Bihar every year. Further intensity or virulence or violence of the flood may vary from time to time and from year to year. Flood is sure to come and is sure to devastate the land (Planning commission, 2009).

FLOOD

Different type of small and large rivers flowing in north Bihar but there are only Ganga river system is major river system in north Bihar and their tributaries such as Bagmati, Ghaghra, Budhi Gandak, Kamla, Koshi and Samooh rivers etc. and their small size tributaries present in different part of north Bihar. They are perennial or seasonal originated from different part of Nepal and enter in northern parts of Bihar in slope structure. This reason water current is very fast in rainy season and water of these rivers reached in plain area of Northern part of Bihar and spread in open field surrounding of rivers. This flood damage fish farming fields, agricultural crops, and horticultural crops, animal and also disturbed road and villages.

PRESENCE OF WETLAND

Coward in (1979) defined wetland as “lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water” so wetlands are man-made ditches, chaur, rice fields, jute fields, alluvial fans water logged areas, diara land, shallow lakes. These wetlands infected with heavy aquatic plants. These plants are rooted, submerged, floating and marginal. They create problems for aquaculture development, harvesting of capture fisheries and netting operations.

UNAVAILABILITY QUALITY FISH SEED

Any branch of agriculture and livestock, quality seed availability is the backbone of the particular field. In North Bihar very less number of organized and modernized fish hatchery available for quality fish seed production. Most Hatchery owner has no idea about inbreeding in seed production system. They use same brooder one generation to other generation of same species for fish seed production. This is the main factor for deterioration of fish seed quality. Mostly fish seed in different hatcheries affected by nutritional deficiency and affected by different type of fish diseases.

UNORGANISED MARKETING

For fish selling in Bihar there is no very highly organized fish marketing system. In North Bihar total fish production depends on local markets. Fish selling vender directly goes to farmer pond and rate of fish decide after harvesting on the spot so there is no pre decide rate some time it may getting higher rate, it may be low price of fish.

POOR INFRASTRUCTURE FACILITIES

This is major issue for development of fisheries sector in North Bihar. Different type of facilities needed for aquaculture development that is play vital role in fisheries sector like well-developed approach road, supply of electricity, mechanized net and gear, skilled labour, water drainage facility and unavailability of quality fish feed etc.

POOR COLD STORAGE CHAIN

This is also one of the major problems for harvesting and selling of fish. Approximate aquaculture production of Bihar dependent on fresh marketing due to absence of cold storage. Due to absence of cold storage facility, fish seller getting good price in day time but in evening time some fishes may be not sell then it sell low and minimum price. If better facility available for fish storage then no risk for selling on minimum price.

LACK OF AWARENESS ABOUT SCIENTIFIC FISH FARMING

In north Bihar very high number of pond and tank for fish culture they are private pond and government pond. Private pond managed by own land farmer and want to try fish farming in scientific and systematic way in very few points. They are use cow dung, inorganic fertilizer, supplementary fish feed and medicine etc. Government pond managed by fisheries cooperative societies on block level by their members. These ponds are small size to large in size, mainly situated nearby village and rear case away from village. This reason these ponds are very high polluted by village waste water directly open in to pond. Fish production of this type pond approximate dependent on natural production. Very few numbers of fish farmers used supplementary feeding and other activities in pond.

LACK OF EXTENSION ACTIVITIES

For development of fishery sector or any branch of field knowledge is play very important role for development. In present time fish farming in north Bihar increase day by day and also increase involvement of people in fish farming on their own land or lease land but in present time involvement of Fisheries Extension Officer, Subject Matter Specialist Fisheries of Krishi Vigyan Kendra and Fisheries Development Officer are very less number for provide fisheries knowledge to fish farmers. Without scientific knowledge in field of fish farming, production of fish constants or increase in very slow.

DOMINANCE OF BIGHEAD (*Aristichthys nobilis*) SPECIES

This is the most important factor in north Bihar constraint in transfer of fisheries technology. We know that Bighead carp fish totally banned fish for aquaculture system but fish farmers of north Bihar mainly Muzaffarpur, Sitamarhi, Sivhar, East Champaran, West Champaran, Darbhanga, samastipur, Madhubani, Sahrsa, Supaul, Araria etc are culture bighead carp in instead of Silver carp. As name denotes Bighead means mouth large size this reason water filter capacity of Bighead carp more than other carps. Bighead carp mostly feed on phytoplankton and it filters very fast phytoplankton from whole area of pond this reason

primary food chain disturbs by them. The development of zooplankton stop in fish pond this factor directly effect on Catla, Rohu and other filter feeder fishes. So fish farmer of north Bihar getting production of Bighead carp 2 to 3 time in a year but other major carp harvest more than after one year.

CONCLUSION

Constraints are the very vital issue in any field. In fisheries sector there are different type of constraints available that are responsible for decreases fish production. These are creates adverse effect on fish production direct and indirect and Aquaculture practice management.

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