## 8<sup>th</sup> International Conference on

## FISHERIES & AQUACULTURE

October 02-04, 2017 Toronto, Canada

## Constraint analysis on fish farming and extension needs in Northwestern Himalayas, India

Muruganandam Muthiah, Steve R Chipps<sup>1,2</sup> and P K Mishra<sup>3</sup> <sup>1</sup>South Dakota State University, USA <sup>2</sup>USGS Coop. Fish and Wildlife Research Unit, USA <sup>3</sup>Indian Institute of Soil and Water Conservation, India

Prevalence of ignorance and misconceptions amongst the ethnic communities brings extension related problems that affect adoption of improved technologies significantly in northwestern Himalayan region of India. Often, effective extension approaches are as essential as the development of technologies per se since ineffective extension of technologies would cause poor adoption of even the time-tested technologies. At this context, a survey was conducted to test the hypothesis that extension problems constraint and remedying them would improve fish farming. Fifty general farmers each from both foothill and mid-hill Himalayas totaling 100 drawn randomly covering various qualification and age status surveyed during 2005-15. In addition, 30 farmers and trainees of ICAR-Indian Institute of Soil and Water Conservation (ICAR-IISWC), Dehradun were interviewed. The problems-cause diagrams on lack of fish farming/integrated fish farming were drawn with help of villagers, field observations, expert opinion and limited farm surveys/experimentation and they included various socio-economic, socio-cultural, biophysical, technological and extension issues. We have identified high ranking misconceptions including negative apprehensions of farmers and ground-level constraints for fish farming, prevailing interfaces between water conservation and fisheries development attributes. Most farmers, up to 80% had over 15 mythical ideas about fish farming. Also, unscientific and faulty fish farming practices, such as stocking more fish seedlings, excessive water exchange or flow-through, application of no/little lime and fertilizers to maintain water quality and no surveillance for disease monitoring and control through regular netting and prophylactic/preventive measures were observed in all of the few existing fish farms. Lack of capital, critical inputs, proper ownership of ponds/water resources and knowledge were high-ranking problems in most cases (over 70%). Scientific and logical explanation on realities of over 15 superficial subscriptions and needed policy, extension approaches, institutional arrangements and support provisions are discussed. The scenarios observed/recommendations made here hold good for most part of India and other countries.

## Biography

Muruganandam Muthiah is Fulbright Visiting Scientist at Department of Natural Resource Management, South Dakota State University, Brookings, SD, USA. He is a founder Scientist of Fisheries/Aquatic Science Department at ICAR-Indian Institute of Soil and Water Conservation (ICAR-IISWC), Dehradun. At IISWC, he is Faculty Member and In-Charge of Fisheries Science. He has over 25 years' experience on Watershed-Based Fisheries/Aquaculture Research and Training. He has completed/handling 17 research/demonstration projects and published over 100 research/technical papers including five books, two manuals, six technology brochures and two theses. He organized two national conferences besides much training/camps/field demonstrations to diverse stakeholders. He is an active member in over 16 professional societies. He is recipient of over 12 professional recognitions including three National Fellowships and Fulbright award. He was resource person in about 70 national/international craining/extension programs. He has attended over 75 national/international Conferences/Symposia and many technical Workshops/Meetings and co-chaired few technical sessions. He also visited Auburn University, Alabama, USA as a visiting researcher.

mail2mmm20@gmail.com

Notes: