

# Communication Sources Used by Fish Farmers and Field Extension Functionaries in Floodplain Wetland Fisheries of Assam : A Comparative Study

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## ABSTRACT

A study was carried out in 106 floodplain wetlands of Assam with the objective of ascertaining the preference of communication media use by the fishers of floodplain wetlands and extent of their use by field extension functionaries. Two categories of respondents namely 106 lessee fishermen and 30 officials lower level field extension functionaries constituted the sample of the study. The findings revealed that the interpersonal communication sources like consultation with FEO/ Beel manager was the most important sources for obtaining information by fishers. Demonstration and consultation with progressive farmers were assigned second and third rank. Field extension functionaries preferred group discussion as the main source of communication followed by Demonstration. The study has brought out that the interpersonal communication channels are still prevalent among the fishers of Assam.

**Key words:** Floodplain wetlands, Communication source, Fish farmers, Fisheries extension functionaries

## INTRODUCTION

India has extensive floodplain wetlands, defined as low lying areas bordering large rivers, which are seasonally inundated by the spillover from the main river channel. Floodplain wetlands are important fishery resources and contribute significantly to the Indian Inland fisheries. With the total area of nearly 3.74 lakh ha, the total fisheries resources of Assam is highest in the country. The floodplain wetlands (locally known as *beel*), extending over one lakh hectare in Brahmaputra and Barak river valleys, constitute the most important fishery resource of the state. There are about 1392 listed *beels* in Assam of which 423 are registered and remaining 969 are unregistered. These *beels* are distributed over the valleys of Brahmaputra (more than 92000 ha) in the northern and central Assam and Barak valley (about 8000 ha) in southern Assam. The *beels* are considered to be one of the most productive ecosystems owing to their characteristic interactions between land and water system. The floodplain wetlands, the prime fishery resources in Assam, are highly productive ecosystems providing livelihood

support to a large section of the population next only to agriculture (Choudhury, 1998; Chandra, 2010).

Using information is a key issue in the modern communication age. The real challenge is not producing information or storing information, but making people to use information. Timely availability of relevant information is vital for effective performance of managerial functions such as planning, organizing, leading, and controlling. Communicating information and knowledge from information resources or developers to extension clientele is an integral part of the extension process (Babu *et al.*, 1997; Balckburn and Flaherty, 1994). In fisheries development, role of communication is of paramount importance in transfer of latest technology from research station to the end users. Extension educators use a variety of communication channels to deliver their extension programmes. Numerous studies show producers (farmers or fishers) prefer a combination of communication channels when getting their information and specifically prefer a combination of interpersonal methods (Bruening, *et al.*,

1992, Dollisso & Martin, 1999; Israel, 1991; Kotile & Martin, 2000; Lasley *et al.*, 2001; Richardson and Mustian, 1994; Rollines *et al.*, 1991; Suvedi *et al.*, 1999; Trade & Whitaker, 1998; Vergott *et al.*, 2005; Hossain *et al.*, 2011). To make the fisher community informed in the use of any information, the field extension functionaries requires communication sources that can overcome the barriers of illiteracy and tradition and drive home the message effectively. In transferring information to the fishers, one has to take into account the preference of fishers for the particular information source and media. Out of many media sources fishers may use few depending on the credibility of information source and channels perceived by him. Considering the importance and role played by communication media in disseminating the fisheries information the present study was carried out with the objective of i) ascertaining the preference of communication media by the fishers of floodplain wetlands on wetland fisheries management ii) extent of use of communication media by field extension functionaries in providing information, and iii) to explore the difference and relationship between media used by floodplain wetland fishers and field level extension functionaries

## MATERIALS AND METHODS

**Location of the study:** The present study was carried out in 21 districts of Assam covering 106 floodplain wetlands. The floodplain wetlands were located in both Brahmaputra and Barak valley of Assam. The floodplain wetlands selected under study represents both capture fisheries and culture based fisheries. The surveyed wetlands were under multiple user regimes and represent all kinds of management regimes prevailing in Assam viz. community based fisheries management, individual management, co-operative management and open access were covered under the study (Chandra, 2009; Chandra & Sharma, 2011). The ownership of the wetlands was under different government departments' viz. department of fisheries, Assam Fisheries Development Corporation (AFDC), revenue department, panchayats etc.

**Data collection:** Two categories of respondents, namely field extension functionaries and fish farmers of floodplain wetlands constituted the sample of the

study. The first category of respondents comprised of fisheries demonstrator and junior fisheries officers, who were the first line of extension support to the fishers in Assam. At present around 150 persons are holding the post of Fishery Demonstrator and Junior Fishery Officer in Assam. For this study, a questionnaire was prepared and administered to 30 Fisheries demonstrator and junior fishery officer of five districts namely Goalpara, Darrang, Sonitpur, Nalbari and Kamrup (six field extension functionaries from each districts). Thus the sample from the first category comprised 30 respondents (20 percent of the total officers).

The second category of respondents comprised floodplain wetland fishers. 106 fishers (lease holder of floodplain wetlands locally known as mahaldar) comprised the second category sample. The wetland covered represents large, medium and small wetlands of Assam. The data were collected through especially prepared structured interview schedule. The beel fishers were asked through interview schedule to choose according to their own assessment the different media sources as applied in the transfer of technology and rank them. In all, 136 respondents constituted the total sample size.

## RESULTS AND DISCUSSION

Flow of information from the researcher to the end user is *sine qua non* for the sustainable production as well as productivity enhancement in inland fisheries and the development of fish farmers as a whole. The choice of a communication method by the extension agents generally depends on the number and location of the target audience and the time available for communication. Fishers need up-to-date information on sources availability and cost of inputs, also on the potential of different techniques and technology used for production and processing. It is important that this information is available in an appropriate format and language and that the fishers have the capacity to analyse it and act on it. The knowledge and information and its media should be appropriate so that the information shall not be distorted and easily disseminated to the end users for its early adoption. Underlying the target audience, including the methods by which they prefer to receive information, allows

educators to select communication channels accordingly and to transfer information efficiently (Bouare & Bowen, 1990, Radhakrishna *et al.*, 2003; Richardson & Mustian, 1994; Riesenbergs & Gor, 1989; Rollins, 1993).

**Communication media preference of fishers:** A critical analysis of data presented in Table 1, revealed that fishers considered the institutional interpersonal communication like field extension functionaries as the most important source of communication in transfer of fisheries technical information. Demonstration has been preferred as the second important source of information. It was followed by Progressive fishers of the area. As far as input dealer are concerned they were given lower rank by the fishers. This is due to the very minimal role of inputs except fingerlings for stocking in wetland fisheries.

**Table 1. Communication media preference of fishers (N=106)**

Communication Media	Fishers	Rank
Consultation with FEO/Beel Managers	48(45.28)	I
Demonstration	42(39.62)	II
Progressive Fishers	40(37.74)	III
Radio	34(32.08)	IV
Fisheries Publication	13(12.26)	IX
News Paper	32(30.19)	V
Exhibition	28(26.42)	VI
Television	26(24.53)	VII
Field day / Fish Farmers Day	19(17.92)	VIII
Input Dealers	9(8.49)	X
Educational film & Documentaries	6(5.66)	XI

Figures in parentheses indicate percentages

Regarding mass media sources, fishers considered radio as the most effective source of communication followed by news paper, exhibitions, television, fisheries publication and educational films and documentaries. Radio was considered most important among mass media sources because of its availability with majority of the fishers. News paper and Exhibitions were preferred source of mass media over fisheries publication. Though television is quite popular and

available in most of the fishers' house but shows related to fisheries information or technology was lacking.

**Use of selected media by field extension functionaries:** The result shows that the lower extension functionaries preferred group discussion as the main source of information delivery among interpersonal source of communication. Among mass media sources fisheries publication were preferred the most. Demonstration (63%) was ranked second (Table 2) in overall ranking. Fisheries publication (53%) and Field day/ fish farmers' day (43%) were ranked third and fourth in the extent of use selected communication media by field extension functionaries. Other extension methods were used by lesser number of extension functionaries' viz. Meeting with farmers (36%), television (23.34%), radio (16.67%), Drama (16.67%), Farm and Home visit (13.34%), Exhibition (13.34%) and News paper (6.67%).

**Table 2. Extent of use of communication media by lower extension functionaries of Assam (N=30)**

Communication sources	Field extension Functionaries	Rank
Group discussion	24 (80.00)	I
Demonstration	19 (63.33)	II
Fisheries publication	16 (53.33)	III
Field/ fish farmer day	13 (43.33)	IV
Farm and home visit	4 (13.33)	IX
Meeting with fisher	11 (36.67)	V
Television	7 (23.33)	VI
Radio	5 (16.67)	VII
Drama	5 (16.67)	VIII
Exhibition	4 (13.33)	X
News paper	2 (6.67)	XI

Figures in parentheses indicate percentages

It is quite clear from Table 2 that most of the lower extension functionaries were found using the methods like group discussion, fisheries publication as the most important communication source in transfer of technology. The use of mass media like radio and television by very small percentage of extension personnel was not a good sign. Probably non-

availability of electronic audio visual aids, cost involved and operational difficulties are some of the reasons hampering their use. With the evolution of satellite communication these two may become the most potent source of information sharing for the extension functionaries.

It is evident from Table 3 that only Demonstration was used according to the preference of the fishers. The fishers ranked institutional sources as the most important interpersonal communication source but extension functionaries ranked it as fifth important source. The extension functionaries need to understand the scope of using meeting with fishers and mass media sources i.e. radio, news paper and television as a tool of communication. Besides high preference of progressive fishers, have to be understood and considered for formulating extension strategies. The fisheries publication (extension literature) is targeted towards educated fishers, hence it is less preferred by the fishers. Field extension functionaries must understand that the use of multiple channels will only fulfill the information needs of floodplain wetland fishers. The choice of channel in which information is offered can have a tremendous impact on the success of the learning activity.

Perusal of the data revealed that fishers by and large utilized personal communication linkages over mass communication. Similar findings were reported by Gogoi (1984), Bhople and Thakre (1994), Singh *et*

*al.* (2003), Hai *et al.* (2003), Sangha (1979), Lakshminarayana and Varrabhadriah (1992), Maohammadi (2002). Field extension functionaries need to not only be experts in a particular subject matter but also be architects of relationships, learning processes, and environments that directly meet fishers' need to catalyse transformative learning (Franz, 2003; Percy, 2005).

Information seeking and sharing between research, extension and fishers are vital for the planned and regulated wetland fisheries development in Assam. The findings from the study provided insight on the floodplain wetland fishers preferences regarding various communication sources used. The finding appear logical because of the need for high intensity influence both for understanding of message and conviction leading to acceptance of innovation through personal contact methods followed by group mass contact methods or media. The extension machinery of the state especially first line of extension agents should consider using multiple communication channels to approach the inland fishers with technologies and practices that yield highly visible returns, and to use mass media for clientele operations that are large and widely spread. The findings will be used to provide extension agents of Assam with a better understanding of floodplain wetland fishers use of current information delivery methods.

**Table 3. A comparison of preference by fishers and use of different communication media by Field extension functionaries**

Fishers	Rank	Field extension functionaries
Consultation with FEO/beel managers	I	Group discussion
Demonstration	II	Demonstration
Progressive farmers	III	Fisheries publication
Radio	IV	Field/fish farmer day
News paper	V	Meeting with fisher
Exhibition	VI	Television
Television	VII	Radio
Field day / fish farmers day	VIII	Drama
Fisheries publication	IX	Farm and home visit
Consultation with input dealers	X	Exhibition
Educational film & doc	XI	News paper

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