

# Potential scope and prospects of domestic fish market in Kawardha District, Chhattisgarh, India

B. Nightingale Devi\*, H.K. Vardia and Anirudh Kumar

College of Fisheries, Chhattisgarh Kamdhenu Vishwavidyalaya, Kawardha (Dist. Kabirdham) - 491995 India.  
Email: chnchan5@gmail.com



Fisheries have been recognised as significant sector in the state of Chhattisgarh as prospective entrepreneurial enterprise as well as potential source for income. Nevertheless, it has been opined that the fisheries sector contributes to the livelihood of a large section of economically underprivileged population in India (Ayyappan and Krishnan, 2004). More than 250,000 people of the state, basically the economically weaker section of the society, depend on this sector as reliable occupation for their livelihood. Despite vast inland fisheries resources in the form of reservoirs, rivers, tanks and ponds, Chhattisgarh is yet to achieve self-sufficiency in fish production. Insufficient understanding of existing marketing network also contributes to extended marketing channels and marginalisation of fishers. Institutional changes are therefore important to improve the economic prosperity of fishers who are often exploited by middlemen (Rao, 1991). Moreover, a well organised marketing network is essential for distribution of fish at reasonable prices (Goswami, et al. 2002). No information or data is available on the fish market in spite of the growing importance of fish trade in the state. With this background, the present study was undertaken with

regards to the socio-economic status of different stakeholders in the fish market and to understand the prevailing marketing system, market flow of fish, marketing channels and constraints that act as hindrance to the growth of fish markets in Kawardha District.

## Socio-economic profile

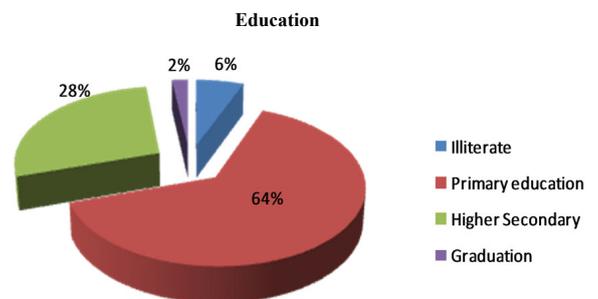
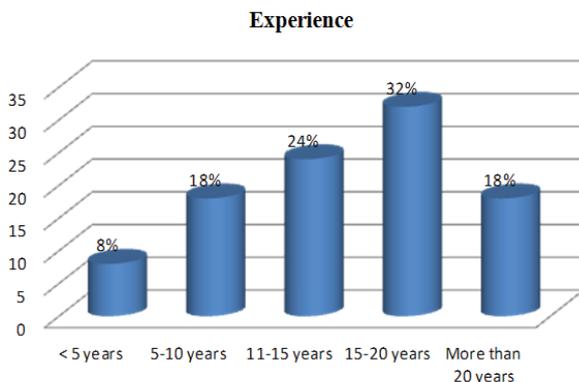
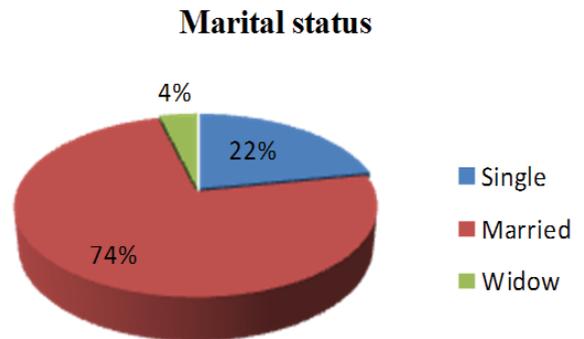
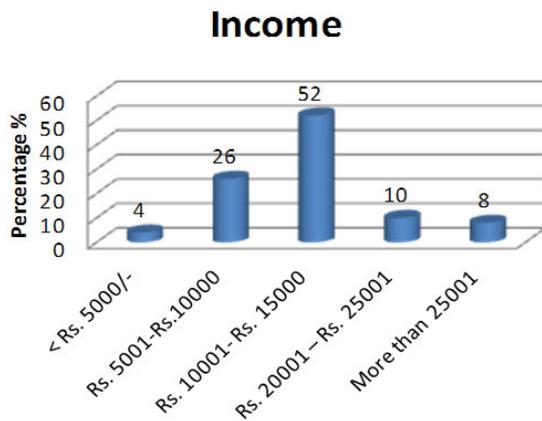
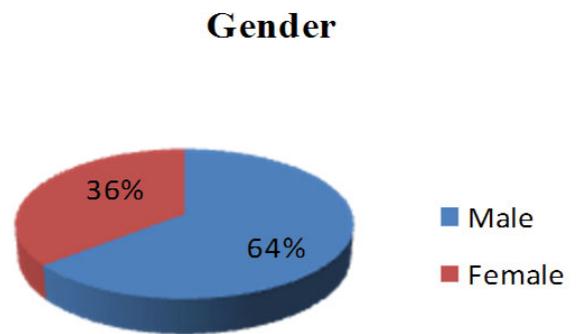
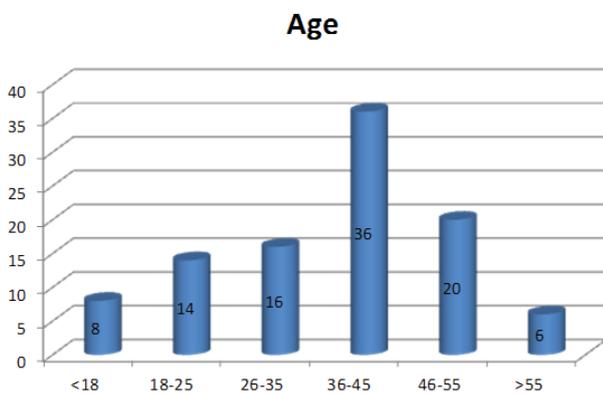
Figure 1 shows the socio-economic profile of the fifty respondents. It was observed that majority of them (36%) were in middle age (36-45 years) and 8% were below the age of 18 years which consisted largely of children who were engaged in sale of semi-processed fish products like smoked and sundried fish; only 6 percent of respondents were above 55 years of age. Young adults (18-25 years) and adults (26-35 years) respondents were 14.00 percent and 16.00 percent, respectively. Most of the respondents engaged in various market activities of fisheries were male (64%). This indicates the male-oriented nature of this sector in the study area. Regarding marital status, 74 percent of the respondents were

married and 22 percent were single and 4% were widowed. It was interesting to note that most of the respondents in the fish market attained primary education only (64%) and only a very meager proportion (6%) were found to be illiterate. Furthermore, 28% were educated up to higher secondary level, while only one of the respondents was a graduate. Most of the respondents (64%) had joint families while remaining 36% have nuclear families. As summarised in Figure 1, 52% of the respondents were earning Rs.10,001- 15,000/- (US\$ 154 – 230) monthly followed by 26% who had a monthly income of Rs. 5,001-10,000/- (US\$ 77 – 154). Eight percent of the respondents were earning more than Rs 25,001/- (US\$ 384). Only two respondents (4%) had monthly income below Rs. 5,000 (US\$ 77) per month. Experience-wise a majority of 32 percent fell into the category of 15-20 years and 18

percent of them had experience of more than 20 years in this field and 8 percent were below five years of experience, which consisted mainly of women and children.

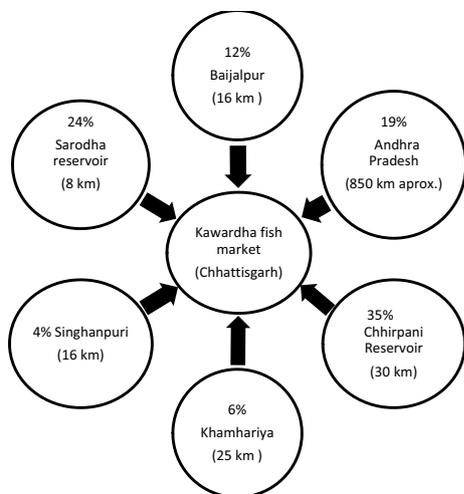
**Market Infrastructure:** The existing market infrastructure is of traditional one with no permanent structure; shed seller's sold fish on their previous occupancy using plastic sheets and aluminium containers on the semi-cemented floor in an open system. There is no fixed timing for the market and usually it starts at around 2.00 pm until the stock is exhausted or the unsold fish were either smoked using straw or bamboo twigs and branches or sundried for sale later. The source of water in the market is a hand pump. The drainage system in the market is very poor. Supply of electricity is good throughout the market. The mode of transportation is mainly by privately owned motor vehicle or bicycle.

**Fig.1. Socio-economic profile of the respondents (N= 50).**



The flow of fish to the Kawardha fish market is presented in Fig. 2. Fish are supplied from different locations of the state as well as outside the state. 35 percent of fish were from Chhirpani Reservoir, 24 percent from Sarodha Reservoir and 12%, 6% and 4% from Bajjalpur, Khamhariya and Singhanpuri, respectively and 19% from outside the state. The commercially important species were mainly the Indian major carps which were also imported from Andhra Pradesh (19%), indicating a high demand of fish in the study area.

Fig 2. Flow of fish to Kawardha fish market.



### Species diversity in market arrivals

Table 1 shows the diversity of fish species available in the market. Arrivals of fish species vary with the season. Locally available species were observed more in winter and the wet season compared to summer. Commercially important species are available throughout the year. Besides fresh fish, semi-processed products such as smoked and sun-dried fish are also available in the market, which are sold mainly by women and children of a different age group.

### Market channels

The study revealed that the market chain of freshwater fish includes wild fish collectors, middlemen, local fish traders, wholesalers, transporters as well as the fishers. The locally

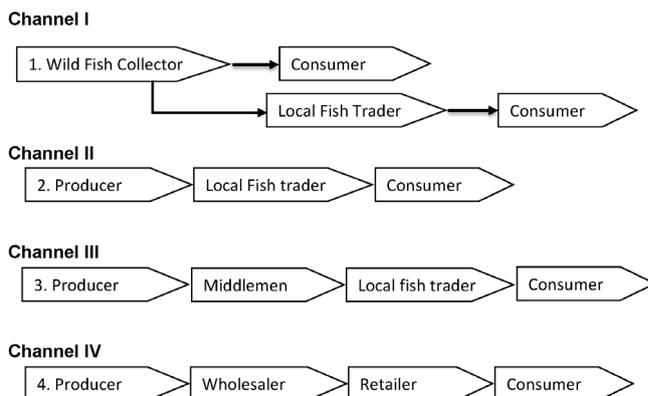


Table 1. Fish species available in the market.

Name	Scientific name	Retail / kg
<b>Locally available fish species</b>		
Climbing perch	<i>Anabas testudineus</i>	120
Murrel	<i>Channa striatus</i>	150-200
	<i>Channa punctatus</i>	100
Goby fish	<i>Glossogobius sp.</i>	60-100
Eel	<i>Mastacembalus armatus</i>	180
Mola	<i>Amblypharyngodon mola</i>	100
Tilapia	<i>Oreochromis sp.</i>	50-80
Magur	<i>Clarias batracus</i>	150-200
Singhi	<i>Heteronoptis fossilis</i>	250
Loach	<i>Lepidocephalus guntea</i>	120-150
Feather-back	<i>Notopterus sp.</i>	80
Tengra	<i>Mystus sp.</i>	150
Puntius	<i>Puntius sp.</i>	50
Chinghri	<i>Macrobrachium choprai</i>	100
Freshwater shark	<i>Wallago attu</i>	200-250
<b>Commercially Important species</b>		
Catla	<i>Catla catla</i>	140
Rohu	<i>Labeo rohita</i>	120
Mrigal	<i>Cirrhinus mrigala</i>	100
Common carp	<i>Cyprinus carpio</i>	120
Grass carp	<i>Ctenopharyngodon idella</i>	100
Silver carp	<i>Hypophthalmichthys molitrix</i>	80-100
Pangus	<i>Pangasius sp.</i>	80-100
Bighead carp	<i>Hypophthalmichthys nobilis</i>	120-150
<b>Locally processed fish</b>		
Traditional smoked fish	All varieties of fish	Number basis
Sun-dried fish	Prawn, <i>Puntius sp.</i>	Number basis

Source: Primary survey.

Fig 3. Existing marketing channel in the fish market.



available indigenous species were collected by wild fish collectors and they directly sell to the consumer or else supply local traders. The high value fish species were sold to wholesalers and retailers through middlemen or directly by local fish traders. The disposal of fish is undertaken in the following prominent market channels as shown in Figure 3.

The market demand for fish is high while price of fish is also very low compared to other markets of the state, hence disposal of fish has never been a problem for the fish traders.

## Constraints

The major constraints are mainly related to the unorganised marketing system prevailing in the study area. Some of the major setbacks of the present market are mentioned below:

- Low market price of fish as compared with other fish markets of the country.
- Lack of cooperative marketing organisation.
- Inadequate credit facilities for purchasing necessary inputs.
- Lack of knowledge on hygienic handling of fish which affects the quality of fish.
- Lack of transport, storage, ice and parking facilities.
- Inadequate awareness among the stakeholders on available schemes of central and state government.

## Conclusion

Although the domestic fish markets play a significant role in the livelihood of the rural population the state is lagging behind in terms of an organised fish marketing system with a proper strategy and institutional arrangement. The present fish marketing system requires modernisation and demands a needs-based training of the stakeholders with assistance from concerned line departments of the state government. A lack of transportation and communication facilities has restricted the sale of fish to low prices from limited outlets. In order to curb constraints from time-to-time awareness and upgrading of



knowledge through capacity building programmes, exhibition, front line demonstration by the concerned departments and SAUs, scientists and experts is required. It has also been concluded that state government's interventions will help to go a long way in the development of fish markets in the district and so also in the state.

## References

- Ayyappan, S. and Krishnan, M. 2004. Fisheries sector in India: Dimensions of Development. *Indian Journal of Agricultural economics* 59(3): 392-412.
- Goswami, M., Sathiadhas, R. and Goswami, U.C. (2002) Market flow, price structure and fish marketing system in Assam - a case study. In: *Proceedings of National Conference on Fisheries Economics, Extension and Management, 2002, CIFE, Mumbai.*
- Rao, P.S. 1991. Traditional trade of fish and aquaculture products in south and Southeast Asia. *Journal of Fisheries Economics and Development*, 1(1): 3-25.

