

## Farmers' Perception on the Establishment of Knowledge Centres in Coastal and Tribal Areas of Gujarat

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### ABSTRACT

A study was undertaken in Gujarat to analyse the farmers' perception on the establishment of knowledge centres in coastal and tribal areas. Among the various services, all the respondents needed details on the aquaculture practices, market pricing, and e-mail/internet facilities in the centre for upgrading their knowledge in aquaculture and better communication among the fellow farmers and experts respectively. Farmers strongly agreed that the knowledge centre is necessary for coastal and tribal development. It is also essential for getting information quickly and useful for decision making in culture practices. The sampled respondents ranked lack of unity among the village people as the major challenge for implementation of the centre with a rank based quotient of 89.58 followed by the requirement of sustainability in both content and finance (85.00) and interest in usage of advance technologies like computer, internet etc. among the farmers (83.33). Adequate training to the farmers was suggested for better utilization of ICT tools. The training in advanced technology helps the farmers to increase their efficiency and profitability of aquaculture production. Overall opinion for the establishment of centre and the improvement of the initiatives are also discussed.

**Keywords:** ICT, knowledge centre, tribal farmers, Gujarat

### INTRODUCTION

Aquaculture is an important farming enterprise in the coastal agro-ecosystem which provides livelihood to about one million coastal fish farmers and other stakeholders (Shanthi *et. al.*, 2011). It contributes significantly to the socio-economic development of tribal communities and their prosperity. It is important that the technological improvements developed at the research institutes are communicated to the coastal and tribal farmers to meet their emerging requirements and sustain the productivity and livelihoods in the changing environments. More recent technological innovations increased the reach and speed of communication, culminating to digital technology. This digital technology led to the development of Information and Communication Technology (ICT) based tools such as e-Learning modules, expert systems, mobile phones, short video films, knowledge centres, databases, web portal for information dissemination through offline and online modes on various issues like agriculture and allied

sectors, governance, health, education, developmental schemes and guidelines. (Anandaraja *et al.*, 2006).

The reports (Saravanan, 2008) indicated that Asia's highest number of ICT projects and also 45 per cent of the world's ICT projects are implemented in India. However, village level ICT initiatives in Gujarat especially for farmers in coastal and tribal areas such as Dandi, Surat, Khursad, Mahuvas, Patri and Gandevi are almost non-existence. In addition, these areas possess vast resource potential for aquaculture development. The Central Institute of Brackishwater Aquaculture (CIBA), Chennai and Navsari Agricultural University (NAU), Gujarat facilitate the aquaculture development process in Gujarat. In this existing scenario dissemination of information in aquaculture and allied activities to the tribal and aqua farming community of Gujarat through ICT help to quickly disseminate the information and thereby enhance the knowledge of the farming community in aquaculture. The knowledge centres are the best information centres from where the operators provide various services to the

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community members through ICT. Delivering relevant and need based information and knowledge are the primary functions of knowledge centres using advanced information and communication technologies. Availability of timely information in local language or in several languages adds value to the centres. The Institute envisages that the establishment of knowledge centre could be useful for the development of tribal and coastal areas in the country.

In view of the importance of ICT initiatives in Gujarat, the present study was carried out to analyse the farmers' perception on the establishment of knowledge centre in Gujarat especially information needs of the respondents on the services of the centre their attitudes, challenges and suggestions towards the knowledge centre in Gujarat.

### METHODOLOGY

A sample of 30 tribal farmers each from Dandi, Surat, Khursad, Mahuvas, Patri and Gandevi were randomly selected from Gujarat, who had experience in aquaculture activities and knowledge in ICT, for assessing their perception for establishment of knowledge centre. Data were collected from the respondents by employing a well-structured and pre-tested interview schedule after briefing the ICT especially knowledge centre and its importance for disseminating information in aquaculture. Services required through the centre was measured by using a two point continuum and scored accordingly. It includes yes (1) and No (0). A two point rated scale, 1= agree and 0=disagree, was used where a respondent was asked to indicate their response about their attitudes towards the establishment of knowledge centre. Rank Based Quotient (RBQ) was used to analyse the challenges and the suggestions for the establishment of knowledge centre. The respondents were asked to rank the appropriate factors. The order of merit thus given by the respondents were converted into RBQ value by using the following formula (Sabarathnam and Vennila, 1996)

Rank Based Quotient (RBQ) =  $\sum (F_i (n+1) - i) / (N \times n) \times 100$

where,  $F_i$  - Number of respondents giving the particular point at  $i$ th rank

$i$  -  $i$ th rank

$N$  - Total number of respondents

$n$  - Number of ranks

The appropriate ranks were given based on the RBQ value.

### RESULTS AND DISCUSSION

The requirement of services through the centre is highlighted in Fig. 1. All the respondents (100%) required details on aquaculture practices, market prices, and e-mail/internet facilities in the centre for upgrading their knowledge in aquaculture and better communication among the fellow farmers and experts respectively. They also felt that through ICT facilities they can have access to prices and make critical decision of when and where to sell their produce. Matani (2007) and Mahalakhmi et al. (2008) stated that the accessibility of price details on a daily basis at their nearby centres will be useful for making the critical decision during the culture period. More than three fourth of the respondents required details on weather information (80%) and agriculture/horticulture/animalhusbandry related information (83%) especially kitchen gardens, poultry farming etc, for the establishment of alternative livelihoods in their respective areas. In addition most of the respondents ( %) required details on printing of documents (90%), downloading of government schemes and policies (83%), details of educational information (80%) and Frequently Asked Question (70%) related with cage farming of brackishwater finfish technologies. They felt that the information on computer education, examination results, job information will be useful for children and youth to enrich their knowledge and also to seek the availability of opportunities. Mahalakhmi *et al.* (2008) stated that most of the shrimp farmers used their computers for writing personal letters, accounting, figuring their net-worth, preparing bank statements and printing of documents.

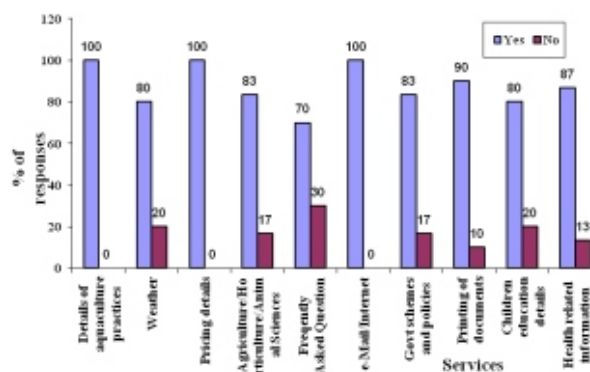


Fig. 1. Requirement of services through knowledge centre

Farmers strongly agreed that the knowledge centre is necessary for tribal development in coastal areas and it is useful for creating linkages with other organizations and universities (1.0) (Table. 1). Saravanan (2008) explained the requirement of ICT based dissemination initiatives in the form of centres in tribal areas for the upliftment of

tribal communities. The respondents also agreed that the centre will be useful for knowledge enhancement/ sharing (0.9), essential for getting information quickly (0.8), useful for taking decision in culture practices through the availability of timely information (0.8) and ease of communication (0.7) All the respondents strongly disagreed that the knowledge centre will be useless and unimportant (0.0) Table 1.

**Table 1: Farmers' perception for the establishment of knowledge centre**

Statements	n=30		
	Agree (1)	Disagree (0)	Average Score
Knowledge centre is necessary for coastal and tribal development	30	0	1.0
Knowledge centre is essential for getting information quickly	25	5	0.8
Knowledge centre is useless and unimportant	0	30	0.0
Knowledge centre is useful for taking decision in culture practices through the availability of timely information	24	6	0.8
Useful for creating linkages with other organizations and universities	30	0	1.0
Ease of communication	22	8	0.7
Useful for knowledge enhancement / sharing	27	3	0.9

The respondents ranked unity among the village people for implementation of the centre as the major challenge with a RBQ value of 89.58 followed by the requirement of sustainability in both content and finance (85.00), interest in using computer, internet among the farmers (83.33), solving hardware problems (79.58), availability of high speed Internet bandwidth for quick downloading of information (70.42), availability of power (56.67), usage skills of advance technologies among the farmers (40.42) and language (34.17) were the other order of challenges (Table 2). Mahalakshmi & Krishnan (2011) stated that one of the major constraints for the implementation of ICT centre like aquachoupal in Andhra Pradesh was ignorance of the farmers about internet based information system and lack of awareness about ICT based activities.

**Table 2: Challenges for the establishment of knowledge centre**

Statements	RBQ Value	Rank
Unity among the village people for implementation of the centre	89.58	1
Sustainability in both content and finance	85.00	2
Interest in usage of computer, internet	83.33	3
Solving hardware problems	79.58	4
Internet bandwidth	70.42	5
Availability of Power	56.67	6
Usage Skills	40.42	7
Language	34.17	8

The suggestions expressed by the respondents for the establishment of knowledge centres are mentioned in Table 3. Availability of need based aquaculture and allied sectors information was the first step to be considered to increase farmers' participation in the knowledge centre. Adequate training was also suggested for better utilization of ICT tools. The training in advanced technology helps the farmers to increase their efficiency and profitability of aquaculture production. Generating awareness among farmers about the usage of advance technologies like computer, internet is also the important step to be considered to increase farmers' participation in centre activities. The centre should be established in a place where farmers have easy approach. Efforts should be made to incorporate information modules targeted specifically towards women for increasing the involvement of women participants in centre activities and to empower women in technology dissemination programmes. Anandaraja *et al.*, (2008) stated that the involvement and participation of farm women in Transfer of Technology (ToT) has been neglected so far. Hence it is the need of the hour to empower farm women in technology dissemination programmes to achieve a holistic empowerment of society.

**Table 3: Suggestions for the establishment of knowledge centre**

Suggestions	RBQ Value	Rank
Need based aquaculture and allied sectors information	88.89	1
Adequate training should be given to the farmers	81.11	2
Creating awareness about the usage of advance technologies like computer, internet <i>etc.</i>	75.56	3
Establishment of centre at the public access location	75.00	4
Facilities should be reached to all level of farmers	60.00	5
Involvement of women participants in centre activities	58.71	6

Dissemination of aquacultural related information through knowledge centre will be cost effective, time saving and the speed of the communication is high. Though traditional extension systems are available, new technology and electronic media can provide opportunities to aquaculture extension educators for innovative and effective ways of information and knowledge distribution to various stakeholders. The study showed that the farmers are interested to establish the knowledge centre in coastal and tribal areas in Gujarat for taking decision in culture practices through the availability of timely information and also for creating linkages with other organizations and universities. It is also suggested that the centre should be established in a place where farmers have easy approach though the knowledge centre is required for tribal development in coastal areas, continuous effort is being made to improve the awareness about the usage of ICT tools and to establish the dissemination as well as the distribution system maintenance mechanism.

## CONCLUSION

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