THE IMPACT OF RADIO AND MOBILE-WIRELESS (ICT) IN FISHING INDUSTRY
A case-study of Muttom Region in Kannyakumari District

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ABSTRACT

The advent of Information and Communication Technologies (ICT) has profoundly altered the socio-economic scenario of the world today. It has been observed that in recent years there has been an increased emphasis on the use of information and communication technologies to address developmental concerns throughout the world. The Indian fishing industry has attracted a large part of this attention, which is centered on the use of Information and Communication Technologies to address the issues in fishing industry. Information and Communication Technologies including the use of mobile/wireless communication and radio have played a significant role in this modernization process. These technologies that are in use in today's fisheries, however, remain fairly rudimentary. This article describes the use and effectiveness of mobile communications and radio aboard offshore fishing. The research was done in Kanyakumari district. The research relies on the concepts of 'instruments' and 'usages of the ICT'. The main objective of this paper is to analyze the use of ICT in terms of its usefulness and information sought and communication targets based on series of survey. It points to the prevalence of interchange of communication in on-shore and off-shore and frequent use of mobile communications and radio to cope with the modern changing world. The conclusion will also show how fishing community is organized in cognition-sharing networks.

Keywords: component; ICT, fisherman community, mobile radio

I. INTRODUCTION

The world is now passing through the first decade of the new millennium. This is the era of Information Technology, and Biotechnology. The world has witnessed a great leap in the field of communication and technology during the last twenty-five years. No such similar leap has been seen in the entire history of humanity. The new millennium is the era of digital technology. The methods and tools, which were used to explain the nature, style and life vision of humans, became irrelevant in the new digital age of communication. We have to find new tools and methodology to define the human nature and its progress in this increasingly complex world.

Today, rapid changes are the quest for the practical application of expertise in everyday life. Technology has succeeded to bring its expertise to the fingertips of the ordinary people who can easily make use of a computer and mobile phone technology to meet any of their needs better, faster and cheaper. A second factor seen in the progress of the technical world is the success of networking where many experts pool their expertise to achieve common targets. The third factor that seems to underlie technical progress is the attention given to formulating clear goals and efficient strategies to reach them. Successful enterprises have stimulating vision and effective strategies to reach them.

According to Britannica Encyclopedia, fishing is one of the oldest employments of humankind. It is also one of the primary forms of food production that ranks with forming and probably predates it. The fishing industry employs more than 5 million people worldwide. India is one of the major countries engaged in marine fishing. The fishing communities largely are considered to be under the category of marginalized society, who does not interact very much with the mainstream of the society. In the past two decades, the life-pattern of the fishing community has undergone a rapid change. Traditional fishermen have taken up to modern methods of fishing like mechanized boats, usage of devices for spinning potential fish zones, and other tools of communication for the effective methods of fishing.

Keeping this scenario of the progress of the modern communication technology as a backdrop, this paper attempts to find out the use and eventual impact

of communication tools such as radio and mobile-wireless by the fishing community of Muttom in Kanyakumari District.

Indian Fishing Industry

Fishing industry is one of the most important trades in Indian economy. This industry is unorganized at the primary level, but with the formation of fishermen co-operative societies, this scenario has been changing. Usually the fishermen go for fishing in the early morning between 2 A.M. - 4 A.M. and return at midday. Otherwise, they go for fishing at midday and return in the middle of the night. But, now- a- days a large number of fishermen have started going on fishing trips of anywhere between 4 – 12 days.

Fishing at sea is described as one of the most dangerous occupations in the world. Based on statistics maintained by countries on fatalities at sea, it is estimated that about 24,000 deaths (Samudra Report No. 43 March 2006) occur annually. The problems are more acute in small-scale fisheries where safety and health aspects are totally neglected and, in the absence of reliable statistics, it is difficult to get a clear picture of the issues that confront the small-scale fishers. While the government has paid little attention to this growing problem, the fishers themselves appear least concerned about their safety and health, continuing to brave the perils of the sea, and living on the edge. Over-exploitation of the coastal fish stocks has forced more and more small-scale fishers to move offshore in pursuit of fish.

Indian Coastline

India covers the range of 3.28 million Sq.Kms. This is the seventh largest country in the world. The land frontier of the country is 15,200 kms, and the total length of the coastline is over 7500 kms, and is blessed with rich fishery resources in its Exclusive Economic Zone (EEZ), which covers 2.08 million Sq. kms. There are about 3202 marine fishing with a population of about 3.2 million people. These people completely depend on these 2.02 million sq. kms for their livelihood. Orissa has the largest (641) number of villages. The literacy rate of the Indian fishermen is 56.5% at varying levels of education. The total fish production of India constitutes about 2.5% of the total world production.

Tamil Nadu is one of the important coastal states in the East coast, having a coastline of 1076 kms, continental shelf of 41,412 sq. kms, and an EEZ spread over 0.19 million sq. kms. There are 13 Coastal Districts and 591 fishing villages. It ranks fourth in fish production in the country and accounts for about 25.7% of the total active marine fishermen.

Communication Tools in the Fishing Community

Seetha Rama Rao (1993) defines development as 'Utilization of natural resources for conferring the maximum possible benefits to the poor and oppressed population, while avoiding long term damage, other destructive side effects and imperialist trap'. A similar debate prevails on whether Information and Communication Technologies are crucial for the process of development. Some consider it as a luxury, while others see the access to information and communication as not a luxury, but instead see them as essential part for the sustained development of individuals, communities and nations.

Information and communication activities are a fundamental element of any rural development activity. Rural areas are often characterized as information-poor and information provision has always been a central component of rural development initiatives. The rural poor typically lack access to information vital for their lives and livelihoods. (IJEDICT- volume 2, issue 3, August 2006). Wilson (2004) points out that rural people are often unaware of their rights, such as entitlements to improve access to the information they need when it comes to the sale of produce.

Mobile Phone and Fishing Community

In 2003, in collaboration with Sonatel (the Senegalese phone operator), Alcatel, IDRC and Info Dev, the Senegalese telecommunications company Manobi began to provide fishermen with real time weather reports and market prices using WAP and SMS technology via mobile phones. The interactive technology enabled fishermen to input fish stock information for marketing as well as departures and estimated times of return so that local fishing unions could be alerted in emergencies.

For the purpose of the study the researcher had chosen three northern districts, Kasaragod (Region I), Kannur (Region II), and Kozhikode (Region III). The three districts have five fish auctioning centers. For the three districts mobile service became available first in Kozhikode (Kozhikode city, effective January 29, 1997), followed by Kannur (Kannur city on July 6, 1998, and

Thalassery on July 31, 1998) and then Kasaragod (Kasaragod city and Kanhangad on May 21, 2000). Mobile phones spread widely among fishermen and buyers.

The phones are widely used for fish marketing. Before the introduction of mobiles almost all sales were conducted through auction on the beach. When the fishermen were able to access mobile phones they began carrying a list of prospective buyers. Fishermen call other fishermen and agents from different markets before deciding where to sell their catch. This results in a virtual auction, and committing to a price while at sea. In general, phones were bought by the largest boats first, since they faced the largest potential gains to arbitrage and were more likely to be able to afford the phones, which were initially expensive.

The Role of Apam Community Radio

Another communication medium that brought about a major benefit to the fishermen from Moore was the Apam Community FM Station. According to a study, every dawn before the fishermen embarked on their fishing expeditions, they would wait and listen to the weather forecast for the day on the radio in their own language before they went to sea. This service of the Station to them was more valuable to them than anything else in their vocation or trade. It helped them avoid storms and other unpredictable hazards at sea. Besides, relevant information, education, entertainment and other motivational programmes that the station was broadcasting to mobilize the rural folks for development as far as communication was concerned, the people were allowed to go to the studio to undertake some traditional performances themselves (Mawutodzi K. Abissath Mobile Phone)

Benefit of new Media and Communication Tools in the Fisheries

Communication technology is increasingly affecting societies. Every sphere the human life is influenced by the modern communication methods. The world is thus made small. In former times, fishermen assessed weather forecast from the color of the sea and sky, and by the direction of the blowing of the winds. These were the sources of indicators to go fishing. But now- a- days fishermen use modern communication tools like radio, mobile phone, to assess the prevailing condition of the weather, market situation and also of the emergency state of affairs while fishing.

Media communication plays a vital role in the fishing industry. This helps in development of the fishing community at large, and provides consumers with better quality of seafood. At present the fishermen from Tamil Nadu utilize communication devices like Radio, Mobile telephone, to a good extent. Media communications technologies are being used across the fisheries sector, from resource assessment, capture or culture to processing and commercialization. mobile phones used for trading, information exchange and emergencies, radio programmes are used to promote life style with fishing communities and Web-based information and networking resources. A wide range of technologies can be adapted and introduced in all but the most remote communities and, once appropriated by users, can have positive impacts on their lives.

Among all the communication tools Mobile Phones have a phenomenal impact on users world-wide, so much so that they have become indispensable. Their ingenuity was an integral part since their inception. The impact they have on the masses is incredible. It gets you thinking, if it is the technology or the resourcefulness which makes them so indispensable. Mobile Phones have impacted the lives of many to such extent that it is not merely restricted to the elite but is also one of the most common gadgets owned by almost every individual. So what has added to their rising popularity? Is it the standard voice function or much more than that? This article will analyze the impact of such factors in fishing industry today.

II. METHODOLOGY

The research design includes the details about the procedure, the objectives, and research questions, sampling plan, methods and techniques of data collection. this research was based on data from the fishing community of muttom village of kanyakumari district.

III. METHODS OF DATA COLLECTION

Primary and secondary data were collected for this study. The primary data was collected from 250 respondents, through a self-structured survey questionnaire and ethnographic analysis of fishermen community. The secondary data was collected from early literature and research studies.

IV. SURVEY METHOD

The survey method was found very appropriate and the uses of communication media such as Radio, Mobile Phones, and wireless, in the fishing industry. Simple random selection and probable sampling technique was used for selection of the respondents.

The researcher covered 194 males and 56 females totaling 250 respondents. The samples drawn are more or less proportionate to the total number of fishers in the village. Keeping in view the objectives of the study and literature review the variables were selected as independent and dependent variable. The key method followed was random sample questionnaire.

V. RESULTS AND DISCUSSION

The collected data were coded in numbers and entered into SPSS statistics. In this regard cross tabulation were carried out. Then based on the researcher's hypothesis, tables were made and statistical tests were done for the final findings.

Table 1. Frequency of the usage of Radio and Mobile Wireless

Media	1day	2days	3days	4days	5days	6days	7days	No use
Radio	6.4	9.2	8	17.2	10	2.4	28.8	18
Mobile phone / wireless	0	3.6	0.4	0	0.8	2.4	70	22.8

According to Table No.1, the maximum of 70 per cent respondents answered that they use mobile phone/wireless all the 7 days in a week, while radio was used by 28.8 per cent of the people. We may conclude that mobile usage is more by the fishing community in this given situation.

The present study reflects R.D' Costa in his research on new modes of media and communications in villages has found out that the fisher-folk use more of mobile and wireless than any other media for effective communication. (R. D'Costa:2001).

The result in the table no. 2 shows that 44.4 percentage of the people use radio to know the weather forecasting while fishing. The reason may be that radio broadcasts programmes or announcements regularly on weather conditions. Radio also broadcasts certain most reliable methods of predicting the inclement weather condition with the use of latest technology. The method of operating a radio is very easy for all age groups and the cost of buying a radio is very cheaper for economically poor people. Another 64 per cent use mobile phones to get in touch with others. As most people use mobile and wireless on both on-shore and offshore they found it easy to contact their home people even while fishing far away in the sea. It has become very useful for assessing the market situation.

Table 2. Purpose of Using Communication Tools

Purpose	Radio	Mobile phone Wireless
Weather fore cast	44.4	5.2
Market situation	8.8	3.2
Listen to general programme	10.2	10.4
To get in touch with others	3.6	64
For entertainment	33	17.2
For fishing	0	0

The present finding reflects the pattern of Prof. P. Ramachandran study on "The Challenges of Human Development and Effective Communications" Where he brings out this aspect very forcefully. According to Ramachandran, modern man prefers to use effective communications and likes to communicate as fast as possible. He is concerned more about his time and money rather than his other worries. He states modern and fast functioning media have become very effective in communications than any other forms of communications. (P. Ramachandran – A Quarterly Review for Justice-Development and Social Change. Vol. 1. No. 2. June 1997. p. 14)

Table 3. Use of Media in off-shore and on-shore

Media	Off-shore	On-shore
Radio	72.4	27.6
Mobile phone/ wireless	55.2	44.8

The above table reveals that three forth of total respondents use Radio while fishing. This shows that Radio can be used anywhere whether on-shore or off-shore. While fishers could use Radio, listen to film songs, news, to hear cricket commentaries, weather forecasts and many other programmes. Mobile phone usages are 55.2 per cent while they are fishing. It is to be noted that almost every family is having more than one mobile and is used for frequently in both off-shore and on-shore. From this we can say

that communication medium connects people from sea to shore.

Table 4. Media that gives appropriate programmes to help fishermen and safe guard them from dangers

Media	To a great extend	More or less	No use
Radio	33.2	44.4	22.4
Mobile phone / Wireless	34.8	15.6	49.6

Concerning the appropriate programmes to help fishermen and safe-guarding measures from dangers it is noted that 33.2 per cent of the respondents say that radio gives them the appropriate programmes whereas 22.4 say that it is of no use to them. We see the margin is very narrow so one could conclude that radio could be more useful to the fishermen to help them to use measures to safe-guard from dangers.

In the study made among the Machilipatnam fisher-people after the Tsunami by Dr. Karan Doss, he points out the difference between medium such as internet and mobile in today's context. The study brings out more powerfully that most people do not prefer using internet at any cost. Even Tsunami has not brought out this social change among them. They are not at ease with this medium for its complexity. On the contrary mobile has become a domestic tool in many houses. (Dr. Karan Doss Vol. III. January-March, p. 78).

Table 5. Immediate information about the calamities happening in the sea.

Media	Immediately	Slowly	No use
Radio	43.6	32.4	24.0
Mobile phone/wireless	55.2	9.2	35.6

Mobile phone/wireless serves the purpose of communicating the calamities happening in the sea very faster than any other media. As it is stated in the table, 55.2 per cent state that they are helped more by mobile phones/wireless Due to effective signal method the fishermen could get the information quickly by mobile. As there are as many mobile companies as possible, so it is easy to get signal for faster information to avert any calamities. Fishermen while on-shore could communicate easily to each other of this calamity when noted in their mobile. Mobile undoubtedly plays a major role in providing immediate information about calamities happening in the sea. About 43.6 per cent of the respondents' opinion that Radio gives immediate information about natural calamities, about one forth of total respondent says it is no use. Since Radio is instant, medium it is widely covered both off shore and on shore. Radio programe inform the fishermen about natural calamities. The mobile phones play a vital role, to inform natural calamities to the respondent. About 55.2 per cent say mobile gives immediate information while 35.6 per cent opinion it gives information slowly. Mobile is two-way communication. It could easily be reached in all the directions. With the use of free hand mobile phone, dissemination of information about natural calamities through it EMS/MMS/SMS is done.

VI. CONCLUSION

This study is an amazing journey into the simple yet powerful fishing community of Muttom of Kanyakumari district in this jet-set age. Along with participant observation a well-worked out questionnaire was followed to discover the facts of the study. In the final analysis they obtained data affirmed that the majority of the respondents (70%) answered that they use mobile phones/wireless all the seven days in a week, while radio was used by 28.8% of the respondent. These variations show since the education of people is low they are unable to use the new communication tools.

As we analyze table No. 2 On the purpose of using media, we come to the conclusion that 44.4% of respondent use radio to know of the weather condition while fishing. The reason may be that radio broadcasts or announcements regularly on weather conditions may help them. As the method of operating radio is easy for the fishing folk it is easy to handle for the business. Amazingly 64% use mobile phones to interact with others. As most people use mobile and wireless on both on-shore and off-shore they found it easy to contact their home people while fishing and also for marking facilities.

Table No. 3 Brings out very forcefully that three forth of total respondents use Radio while fishing. This shows that Radio can be used anywhere whether on-shore or off-shore. While fishers could use Radio, listen to film songs, news, to hear cricket commentaries, weather forecasts and many other programmes. Mobile phone usages are 55.2 per cent while they are fishing. It is to be noted that almost

every family is having more than one mobile and is used for frequently in both off-shore and on-shore.

Table No. 4 High lights the fact that 33.2 per cent of the respondents say that radio gives them the appropriate programmes whereas 22.4 say that it is of no use to them. We see the margin is very narrow so one could conclude that radio could be more useful to the fishermen to help them to use measures to safe-guard from dangers.

Table No. 5 Mobile phone/wireless serves the purpose of communicating the calamities happening in the sea very faster than any other media. As it is stated in the table, 55.2 per cent state that they are helped more by mobile phones/wireless Due to effective signal method the fishermen could get the information quickly by mobile.

It is a common factor that the usage of mobile phone has come to conquer the market in every aspect of human life. The research study highlights the issue that the mobile phone among the fishing community plays a significant role in their on-shore and off-shore activities. In this process it is discovered that the mobile technology plays a more useful and vital role in its utility and effectiveness among other tools of communication. Advancement in technology has made possible, the usage in fields like business and internet marketing. Smart phones are the most ideal forms of business phones which not only ease communication but also enhance business communication and work related tasks and transaction in fishing industry. The most basic phones which fall in the highly affordable bracket are a boon for communication in the fishing community. Thus, mobile phones have carved a prominent niche as well, more so in recent times, with the ever-growing importance for effective communication in on-shore and off-shore. It is partially true that traditional modes of communication like radio, however, have taken a backseat with technological progress. This study has presented that mobile phones have impacted the present era phenomenally and handsets that offer entertainment, internet options, email facility and social networking facilities are a boon for mobile technology.

Mobile phones are equipped with internet access, GPS, Audio capability, and FM radio. Modern mobile phone comes with an inbuilt camera which can compete with many digital cameras as well. This technology has proved to bring the fishing community to one-group and most importantly it provides them with a sense of belonging to their fellow workers and partners in the fishing market. It also provides a sense of security and help is just a dial away in the state of emergency in the deep sea.

Finally, the longer term challenge for this community is to know more about the modern communication technology and make use of it for its efficiency for its business. According to the findings of the study the mobile technology and radio play a vital role in the order of usage. Though the study reflects only a tiny portion of the fishing community's usage of the modern communication technology however, the study throws a challenge of pursuing the modern communication technological methods by the fishing communities for its social, economical and commercial life. Information Technology never tires of up gradation which is a positive aspect, as mobile phones and the embedded technologies will continue to improve in the years to come, adding to the rising popularity of cellular phones.

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