

Short Communication

Fisheries Related Traditional Knowledge of Meitei Community of Manipur, India

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Abstract

Traditional Knowledge (TK) possessed by different communities is often closely linked to their way of life. The present study tried to document the TK of Meitei community in Manipur state in North East India, especially with reference to fisheries, through the Participatory Rural Appraisal method. Results showed that women are a very prominent presence in the fishery related activities in Manipur. They carry out fishing using traditional, simple and easy to manoeuvre gear. Women are also active in processing fish to meet household needs as well as for sale of dried, smoked and fermented fish in the markets. Marketing is almost entirely dominated by women, an example of which is the very unique exclusive women's market *Nupi Keithal*. Community fishing practices is also a unique cultural heritage of Manipur where women also participate along with the men.

Introduction

Women play an important role in small scale fisheries production and its development, which is usually undervalued and ignored while developing fisheries management plans and policy (Pauly 2006; Engelman et al. 2009; Sharma 2011). However, their contributions in reducing vulnerability and building resilience in a community are important (Engelman et al. 2009; Chen 2000; Kebe, 2009). The participation of women is affected by regions; social and cultural values and traditions; and technologies (Clayton and Savage 1974). Women are seen to be more involved in activities that require low investments

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and can contribute to family incomes (Francis 1995; Ogutu 1988; Medard and Wilson 1996). With the advent of technology, a movement has arisen to relook at traditional knowledge (TK) especially with the background that TK has stood the test of time and proven to be resilient and sustainable. According to the Convention on Biological Diversity (CBD), *Traditional Knowledge refers to the knowledge, innovation and practice of indigenous and local communities around the world*. Traditional knowledge can be a tool for sustainable development. In the case of fisheries, TK includes local skills, techniques, wisdoms, beliefs, costumes and folklore in relation to fishes held by the aboriginal people of a community over successive generations. The state of Manipur in north east India is largely populated by the tribal communities and among them the traditional knowledge system continues to dominate most aspects of their life and living. Unlike other communities and societies, women have always had an important position in Manipuri Society. The purpose of this study was to assess the traditional knowledge possessed by different ethnic groups in Manipur and to document them with regard to women's role and participation in fisheries.

Materials and Methods

The study was conducted in the state of Manipur in North East India which is situated between 23°83'N – 25°68'N latitude and 93°03'E – 94°78'E longitude. Based on the settlements of the identified target ethnic group/community, the Meitei, four districts viz; Thoubal, Imphal East, Imphal West and Bishnupur were selected for the study. From these four districts, 11 villages were further selected for conducting detailed investigations. Participatory Rural Appraisal (PRA) methodology was adapted to suit the objectives of the study as well as taking into consideration the limitations in the field. The discussions were kept flexible and care was taken to be sensitive to the lifestyle of the Meitei community. Investigations were conducted on different types of fishing gears, fishes used in traditional medicine, custom and beliefs. In the first stage information was collected from officials of Government Fisheries Departments and other governmental agencies working in the area, and in the second stage, a survey was conducted among fishers/farmers of the aboriginal community, particularly women of different areas. Triangulation of the information collected was done by information

collection from a cross section of individuals in the community who were selected randomly.

Results and Discussion

It was observed that like any other fisheries, men and women played differential roles in the Meitei community of Manipur as well. Women in the study area were equally active in fish harvesting along with the men. Interestingly, both women and men fishers use predominantly traditional fishing gears. Men (72%) dominated in the preparation and maintenance of gears and crafts. Modern gear was also observed but only 13% of the women respondents had ever handled such gear. Fishing was carried out either collectively (in certain seasons) or individually.

Community Fishing Practices

Community fishing is unique in terms of its cultural heritage of Manipur and it has played a significant role in the socio-economic and food security of the ethnic communities in the state. It has also ensured that there is better participation of women in the fisheries sector. In most cases, these practices are observed as a part of their traditional festivals or customs that have been ingrained in the community (Gurumayum et al. 2006). Some of the practices of community fisheries observed during the study are described below.

Long khonba: It is a type of community fishing exclusively performed by the women folk of Meitei community. Post monsoon, groups of women move to the waterlogged swampy areas, including shallow rivers, wetlands, marshy and other low lying paddy fields (Fig. 1) for fishing. *Long* is a type of gear made of bamboo splits which are woven into a half-elliptical shaped basket (Fig. 2). They also usually tie a bamboo basket called *Tongol* at their waists for keeping the harvested fishes (Fig.3). The indigenous gears are light weight and can be easily handled by the women folk.

Loo thumba (Fixing of 'Loo' trap): *Loo* is a conical shaped traditional fish trap made by splitting a large bamboo into different thin line rods which are tied together by threads of cane. It has a wide mouth opening and gradually tapers towards the end (Fig.4). With the help of these traps fishes are caught from rice fields or rivulets through infiltration. *Loo* is fixed in the narrow channels on the

bunds of the rice field. Along with the water current fishes are trapped inside the *Loo*. The trapped fishes are collected every 2-3 hours. *Loo* is a light weight gear and *Loo Thumba* is performed by both men and women (Fig. 5).



Fig. 1 Long Khonba Community fishing



Fig. 2 Long



Fig. 3 Tongol



Fig. 4 Loo/Looshang



Fig. 5 Loo Thumba' fishing

Ishitpa: *Ishitpa* is again carried out post monsoon in the swampy areas, wetlands, marshy or other low lying water logged areas generally in rice fields. A group of persons or members of family including the men, women and children participate in this fishing activity. The selected site is partitioned into two by creating a bund out of mud. Water from one portion is manually removed to the other portion using a scoop water bailer called *Istop*. The fish that are found in the area where the water has been drained are trapped using bare hands by the women.

Kommenba: This is again a unique fishing practice of the Meitei community in Thoubal district. It is carried out in the rice fields just after the rice is harvested. The fields will still be swampy and water logged. Straw from the harvested rice is spread over the fields leaving behind small stretches uncovered (Fig.6). Traditional traps called *Taichep* are fixed in these uncovered portions overnight (Fig. 7). They are rectangular traps one side of which is open with a inward valve. Thus, the fish which move inside are trapped and cannot get out. These traps are light weight, small sized and easy to handle operated both by men and women. As the oxygen level in the straw covered areas falls, fishes move towards the uncovered area where the traps are fixed.



Fig. 6 Kommenba



Fig. 7 Taichep

Phum namba: In the wetlands of Manipur, particularly Loktak Lake in Bishnupur district, many perennial, circular or semi-circular floating mats

called *phum* are constructed using weeds, macrophytes and other organic matter. These *Phums* are preserved for a few months. Sometimes, villagers including women add nutrients such as rice husk powder and other aquatic plants for encouraging fish aggregation inside the core of the *Phum*. All these *Phums*, along with the fish, are harvested during the lean season, usually October to March. This type of harvesting is known as *Phum Namba*.

Traditional gears used by women

Most of the traditional fishing gears in Manipur are fabricated using locally available, light weight and less costly materials and are proved to be women friendly (Chanu et.al 2015). They have evolved in conjunction with the fishing methods practiced and based on the operation. Most of the gears are pliable to both women and men.

The *Longthrai* is a scoop net made of nylon net fitted on a circular bamboo ring which is attached to a bamboo handle. The gear has a wider circular mouth and tapering end (Fig. 8). It is operated only in shallow waters, mainly small channels. *Longthrai* is scoop net. *Longoop* is a bell shaped trap operated by both men and women. It is made up of split bamboo strips with narrow mouth and broad bottom for operation in shallow water bodies (Fig. 9). It is immersed in shallow and muddy waters where the fishes are seen and trapped.



Fig. 8 Longthrai



Fig. 9 Longoop

Kabow loom is again a trap which is used with or without bait. The trap has

tapering ends and a broad middle which has a window with valve which prevents fish trapped inside from escaping (Fig. 10). Catfishes and other live fishes are mostly captured by these traps. One end of the trap is closed and the other end open with a detachable cover. Through the open end the fish trapped inside can be retrieved.

Nupee een is a fishing gear that is specially made for women. It is a popular and widely used gear operated in most communities of Manipur. The frame of the gear is made of two long bamboo poles of 10 to 12 ft which are tied at the middle. A net with a mesh size of 0.5 cm is fixed at the four ends of the frame. The flexible frames bend into an arc. A bamboo pole called a *Poura* is fixed at the middle of the cross and acts as lever for lifting the net (Fig. 11). One rope is attached to this pole to lift the net.



Fig. 10 Kabow Loo



Fig. 11 Nupee een

Post-harvest activities

Like women in other fishing communities Meitei women of Manipur are also active in post-harvest activities like sorting, packaging and preservation (Devi and Kanta Singh 2015).

Traditional methods of fish processing

Processed or cured fish is not only an important dietary food of the people in the region but also a means of livelihood especially for women (Devi and Bagga 2006). In Manipur, fresh fish and dry fish are equally preferred and in high demand. Different preservation and processing methods such as drying, smoking, fermentation, making fish paste etc. have been performed by women

since time immemorial.

Drying: Dried fishes are in high demand in Manipur. Large scale fishing is usually done during the rainy season. After selling raw fishes to traders/consumers, the unsold fishes are dried/smoked in order to prevent spoilage and preserved for use during the lean period. After sorting fish are spread over flat, shallow bamboo baskets called *Kharai* kept on bamboo poles and dried in sun for 7-15 days (Fig. 12). Another method employed was letting the fish dry from the heat over the burning embers of a kitchen hearth. The fish are spread on an iron mesh and hung over the fireplace at a height of 3 to 4 feet during night time (Fig. 13). It is the women who are actively involved in these activities.



Fig. 12 Sun Drying of Fish



Fig. 13 Smoking of fish in kitchen

Such processed fish is locally called as *Nga ayaiba* which were stored for the rest of the year. *Ngammu* (*Channa orientalis*), *Ngakha* (*Puntius manipurensis*), *Ngapemma* (*Colisa faciatus*), *Ngakra* (*Clarias batracus*), *Samjet nga* (*Anabas tesdudeni*), *Ngasep* (*Mystus bleekeri*), *Ngapai* (*Notopterus spp.*), are common fish species used for drying. Fish is also dried using a bamboo or metal skewer over the hearth. Fully dried fish are packed in baskets for market or stored in bamboo containers called *Ngarubak*.

Smoking: Smoked fish was also popular in the state. Many families have a separate area in the kitchen for smoking fishes (Fig. 13). Fresh fishes are spread over the '*Kharai*' over a raised platform fixed with bamboo poles. On the ground below a pit is dug where the fire is set and the smoke spreads over the platform. All the activities related with smoking are performed by women.

Fermentation: When the weather is humid, drying is very difficult and during

such times the semi-dried fishes are fermented, which is a choice food item of Manipuri people. The fermented fish is locally known as *Ngari*.

Small and medium size dried or semi-dried fishes (mostly, *Puntius sophore*, *Setipinna phasa* and *Gudusia chapra*) are kept in an earthen pot, tightly packed and the pot sealed airtight. Fishes are then allowed to ferment anaerobically in the earthen pot for about 4-6 months (Fig. 14). The final product is a solid sticky substance with a strong pungent odour. It is cooked and is also an ingredient in other dishes and is also consumed as such with rice

Grinding: Semi-dried small fishes (usually *Puntius* spp.) are ground into powder or paste form by mixing with slices of semi dried petioles of *Arum* (*Colocasia* spp.). Fish paste *Hentak* is prepared exclusively by women using a traditional grinder called *Sumbal* and it is stored in small earthen pots for more than one year (Fig. 15).

Manipuri women, including Meitei women, are also experts in marketing. *Nupi Keithel* is an exclusively womens' market. Women from far away districts bring and sell fishes and other items on a daily basis. This traditional market is about a century old.



Fig. 14 Fermentation of Fish in earthen pots



Fig. 15 Grinding of Fish in traditional mortar to make fish paste

Besides markets, *Nupi ngami marup* (*marup*=cooperative) are women fisher associations formed for promoting income generation through fish culture practices. The women members of *Nupi ngami marup* share common economic needs and undertake fisheries related activity by participating directly in decision making and sharing the benefits on an equitable basis. Associations strengthen the existing income generating activity of members and also help the

members to start new activities.

Conclusions

In Manipur, the Meitei women folk are engaged in different activities of fisheries in addition to their household work. Their participation in fisheries is strongly connected with Traditional Knowledge (TK) transferred over successive generations. Women fishers dominate in different fisheries activities in the state, except in fabrication of craft and gear. Traditional knowledge and practices have been sufficient to sustain livelihoods in the past but in a world of rapid globalisation pressure on resources has been increasing. Thus, this knowledge needs to be preserved for sustainable development in the region. Women cannot operate most of the modern tools and with time the traditional ways of doing things may be lost. However, a blend of traditional knowledge with modern scientific technologies may assist in economic improvement of the local community in the state.

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