

## Application of Indigenous Knowledge: a Case of the Shampan Boatmen

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**Abstract:** Despite modern technological advances in air and ground transportation, inland waterways continue to play a pivotal role in the communication sector in Bangladesh. There is a strong river network in Bangladesh and the Karnaphuly is one of those where Shampan boats ply in good numbers. Among country boats Shampan is a special name, which is related to the name and tradition of Chittagong and Karnaphuly River. Most of the Shampan boatmen are illiterate but possess a unique navigation technique that help them to sail through the rivers skillfully. In other words, they have some local or indigenous knowledge by which they make and row Shampan. The Shampan are also different from other country boats in shape and it is imperative to reveal their indigenous sailing knowledge before it disappears due to introduction of new technology.

**Key words:** Indigenous knowledge, Shampan, Boatmen

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### INTRODUCTION

Shampan is a typical country boat, plies in the Karnaphuly river and adjoining creeks for several generations, a section of people are economically dependent on making and sailing the Shampan. But the number of Shampan, which is traditionally non-mechanized, is continuously decreasing. If this process further continues, there will be no Shampan in near future. A special skill is needed to make and sail Shampan. Unlike the ship mariners the Shampan boatmen are not educated, they don't know much about modern technique and they even don't use any equipment like compass, radio or telescope but are making and rowing Shampan successfully for a long time.

Shampan boatmen, who are living from hand to mouth by hard labour, are serving the society greatly. Their miserable socio-economic condition is stagnant. Government and non-government organizations are not intervening to develop their life status. In 1991, it was estimated that more than 200,000 country boats had installed shallow engines and the number is increasing continuously. The traditional sailing boats are rapidly vanishing and giving way to noisy and busy, small mechanized vessels. If the ongoing process goes on the traditional sailing boats and the life around them will soon be remnants of the past. However they still serve the riverine community transportation of cargo.

**Relevant literature:** There is no anthropological study on indigenous navigation knowledge of the Shampan boatmen. However, there are few studies on country boat in Bangladesh, which can be spoken of, as relevant to the context of the study.

Jansen<sup>[1]</sup> has drawn a vivid picture of boats and boatmen of Bangladesh. The study deals with the river, inland water transport system and traditional system of building inland water boats and rapid mechanization of the country boats of Bangladesh. He, with the help of Trygve Bolstad, presented many pictorial illustrations in the book, which helps a reader to understand the kinds of country boats in Bangladesh. The photographs used in the book were taken during several trips to Bangladesh in the period of 1988 to 1991. In the introduction, he stated that the way of life for the 120 million people who live in Bangladesh is to a large extent governed by inland water. Later the author spoke that since mid 1980's there has been a dramatic change in the country boat sector. During the last two decades, many important routes once open to mechanized vessels have had to be abandoned. In the conclusion, the author made a prediction that in the near future, man made intervention in the river and waterways system, particularly in the form of embankments, may pose a threat to operation of the country boats.

Lewin<sup>[2]</sup> in his work "We the Navigator" described indigenous or local knowledge of the Pacific Ocean navigator. The author stated how people navigate with the help of cloud, how they steer by the stars, use of wind compasses. Much of the navigational knowledge in many places was secret; it was an arcanum limited to a selected circle of society; and obtained remains unknown some of it now. Fortunately, revealed through Lewin's labour simply because questioners did not know enough to ask the right questions, which often still remain unasked. Many skills vanished under the impact of the overwhelming technology of the western world, before the questions could be asked.

The author briefly discussed the indigenous navigation knowledge of the navigators of the Pacific Ocean. The most accurate direction indicators for Pacific islanders, still used in many parts of Oceanic, are stars low in the sky that have either just risen or are about to set, that is horizon or guiding stars.

Johnson and Mahelona<sup>[3]</sup> have shown that the Polynesian navigator could be trusted on the Ocean. In the structure of his universe, space and time and motion were dimension fitted into a scheme by which one could go from point A to point b following along course X given wind as power, Canoe as vehicle and the planets and upon them he depended. This book documents how many stars were known. It catalogues what remain of star secrets taught over a millennium ago by an ancient priesthood long since buried in forgotten sanctuaries.

Irwin's study is concerned with two distinct episodes of voyaging and colonization. The first began some 50,000 years ago in the tropical region of island southeast Asia, the continent of Australia and its Pleistocene outliers. The second episode began after 3500 years ago and was a burst of sophisticated maintain and Neolithic settlement in the remote Pacific. The emphasis of this book follows available information, such as archaeological evidence is presented in detail in so far as it relates to colonization. It is rather concerned with Pacific Navigation and the archaeology of early settlement.

There is also a study on the pattern of inter-island voyaging in the remote pacific, after colonization and how this contact systematically affected the patterns of development that followed. The rest of the chapter provides a background sketch of pacific islands and the prehistory of their settlement, a summary of arguments about navigation, exploration and colonization, a description of Pacific weather patterns and a brief account of the main themes of 200 years of previous debate on these matters.

#### **Operational definition of some concepts**

**Indigenous knowledge:** The term indigenous or local knowledge is used to refer to that knowledge which is generated and transmitted by communities, over time, in an effort to cope with their own agro-ecological and socio-economic environments. The knowledge is generated and transferred through a systematic process of observing local conditions, experimenting with solutions and readapting previously identified solutions to modified environment, socio-economic and technological solutions<sup>[4]</sup>.

We are still unsure what indigenous knowledge is. Put simply, it is local people's knowledge, what ordinary folk know<sup>[5,6]</sup>. In this study the term 'indigenous' also

refers to local and local knowledge by which Shampan boatmen make and row Shampan.

**Majhi:** The sailors who ply Shampan in the inland waterways of Bangladesh are called Majhi.

**Shampan:** One kind of country boat, which is generally made of wood, found mainly in Chittagong, which has a special shape and size. The two sides row it, which makes this totally different from other boats. Now Shampan is in mechanized as well as non-mechanized form.

Shampan of small size generally used for carrying passenger as well as goods. Cargos Shampan carry mainly salt, rice, sand, etc. It is also used as passenger's carrier. Passenger and Cargo Shampans are almost same. But generally Passenger Shampans are 'U' size and Cargos are 'V' size.

**Navigation:** Navigation, a word derived from the Latin "navis", ship and "agere", to drive, originally denoted the art ship driving, including steering the sails. The skill itself is even more ancient than the word and it has involved over the course of many into a science and a technology that encompasses the planning and execution of safe, timely and economical operation of watercraft, aircraft and spacecraft.

In this study navigation indicates the way of sailing non-mechanized boat as well as mechanized country boat, especially Shampan of the Karnaphully river.

**Objective:** The aim of the study is to reveal the indigenous navigation knowledge of the Shampan boatmen of the Karnaphully River of Chittagong region of Bangladesh.

#### **MATERIALS AND METHODS**

The need for indigenous knowledge research is emerging with the participatory movement<sup>[5,6]</sup>. By following that the researchers conducted the fieldwork with the participatory movement in three Ghats (Charpatharghata Bridgeghat, Avoymitraghat, Sadarghat) located at Kotwali and Patiya thana under Chittagong district. They also collected some information from Kalurghat about wind forced Shampan because they are not available at the above mentioned three ghats.

Data were collected mainly from key informants. And in doing so the elderly Shampan boatmen and boatmakers were interviewed. The objective of the present study has been achieved through the application of different methods of investigation including empirical field investigations and generation of primary data and

analysis and interpretation of secondary data sources. Different methodologies and techniques have been used such as informal interview, participation, observation, use of audio recorder, use of camera, general and focus group discussion in this research work

**Major findings:** Every adult Shampan boatman knew well how to steer a Shampan. A Shampan boatman learns the rowing skill from his father or elder brother. They have been in this profession for several generations. The skill has been transmitted from one generation to the next through oral tradition and practical dictation.

**Astronomical data reading:** When there was no radio, compass or other modern scientific equipment's that can help a Shampan boatman to drive boats they took help of astronomical data. From "The Arab Nowbahar" by Solaiman Nadvi we come to know that they used to place their position in the vast sea by keeping their hands on their faces looking through the space before their fingers. They tried to watch how many stars could be seen through the gaps of two fingers. Now-a-days young Shampan boatmen only know that their forefathers used astronomical data for sailing.

Several indigenous techniques used for sailing, by the Shampan boatmen were revealed by the empirical study. These are:

**Shatchanni:** The Shampan boatmen row their boat at night by the help of the moon, a cluster of star locally called "Shatchanni" and a star named "Shooktara". According to them Shatchanni always rises up in the east. It roughly looks like a question mark and always faces the east. The indicator helps them to easily detect the direction. They also know that its time of rising varies half an hour every night. For example, if the Shatchanni rises at 8 p.m. tonight, it will rise at 8:30 p.m. on the next night. Generally when the Shatchanni come on top of the head it always 12 midnight.

**Shooktara:** The Shampan boatmen also take help from "Shooktara". Shooktara generally rises up at 3 in the night. Some time they fix the time of clock to see the Shooktara. It was their opinion that Shooktara is the brightest star in the sky and, they believe that a clock may show incorrect time but never the Shooktara.

**Wind and cloud:** The Shampan boatmen know that during the winter season wind blows from north to south for 6 months and in the rainy season it blows from south to north direction for the other six months. Generally in a cloudy day wind blows from the direction of cloud.

Pal or sail made of thick cloths, is a medium of sailing. Shampan when the current is in favor but now-a-days wind forced Shampan is rare. The researchers found only 8 wind forced Shampan in the Kalurghat close to Chittagong town. They do not use the pal or sail always. Generally the shape of a pal (sail) is square. If the wind speed increases, the Shampan sailing becomes easier.

**Oceanographic knowledge:** Shampans are now small in size. Generally a Shampan does not go to deep sea. Although the boatmen do not need any maritime knowledge but they do possess some oceanographic knowledge. They know when the wind will be strong and speedy. Shampan boatmen sail their boat mainly in the river Karnaphully. They have adequate knowledge about the river.

**Current or direction of tide:** Shampan boatmen have commendable knowledge about the time of the ebb and tide, which help them rowing a boat smoothly. If a high tide comes in the 12 noon of a day there will be low tide at 12:30 of that night. They did not learn it from any book. Experience taught them. A Shampan boatman sails his boat 50-60 kilometer away from the Charpatharghata Bridge Ghat. He also goes to Kalurghat, Bashkhali, Moheishkhali and close to the sea. It is noticeable that, they never go to voyage in the deep sea.

## CONCLUSIONS

Indigenous knowledge, known as local knowledge, is unique to every culture and society. For thousands of years it has been helping people to solve their problem. In this way indigenous navigation knowledge help the Shampan boatmen to survive themselves.

The Shampan boatmen use astronomical data, knowledge of wind and current direction as part of their indigenous knowledge. They have no modern scientific equipment but have been rowing Shampan for a long time in the Karnaphully River without much trouble. Now it is needed to take initiatives to preserve their knowledge. To meet the demand of age, they are mechanizing their boats. Situation compelled them to accept this change.

Result of this study shows that without any formal education, Shampan boatmen are able to tell the exact time by looking at the stars in the sky. By the direction of wind they can easily detect whether the boat is going to north, south, east or west. These are the result of the observation by them for hundreds of years.

Traditional Shampans are part of national heritage. But now-a-days a huge number of Shampans are being mechanized. If this trend of mechanization continues, they

**APPENDIX**

Glossary of local terminology

Local Term	English Meaning
Shampan	a special kind of country boat mainly found at Chittagong in Bangladesh
Shatchanni	Name of star, Cluster of stars
Ghat	Station for Shapman boatmen
Shooktara	Morning star
Majhi	Sailor of Shampan boat
Ghat toll	Revenue collected from Shampan boatmen
Pal	Sail
Karnaphully	Name of a country river

Criteria Considered in the selection of informants

Broad Criteria	Specific Criteria
Age	Young or old
Ownership	Owner or non-owner of Shampan
Education	Educated or illiterate
Religion	Hindu or Muslim or others
Experience	For how many years he is in this profession
Ethnicity	Belong to ethnic group or not
Mechanization	Owner of a mechanized or non-mechanized boat
Learning Process	How did individually learn?
Kinds of Boat	Passenger or Cargo
Sailing Process	Wind or row

will disappear in near future. Shampan boatmen are serving to the locality and nation. The community of boatmen pays the fixed toll to the government. Therefore, it is necessary to take proper initiatives to preserve the indigenous Shampan's technology and associated skill in this modern era.

In Bangladesh, a few researches have been conducted on the country boat. But there is no research especially on indigenous navigation knowledge as well as the indigenous sailing knowledge of the Shampan boatmen. This study suggests conducting further research on Shampan boat as well as boatmen to explore other aspects, which could not be conducted in this work. In fine, it can be stated here that the topic mentioned above could be a small contribution to preserve the rich cultural heritage, which the traditional country boats represent in Bangladesh.

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