

BATEAUX TRADITIONNELS

le trésor du Bangladesh

Enayetullah Khan et Yves Marre

Terre de superlatifs, le Bangladesh, plus grand delta de la planète est aussi le pays le plus densément peuplé. Inévitablement, ces particularités ont conduit à l'émergence de la plus grande, la plus diversifiée, et probablement la plus ancienne flotte du monde. Malar, Patham, Sampan, Baich, Dinghy, Kusha... Un paysage incroyable de bateaux pour les fleuves et pour l'océan.

Jusque dans les années 1980, la flotte était exclusivement constituée de ces merveilleux bateaux traditionnels, mais le progrès a pris la forme de deux évolutions techniques majeures : l'arrivée des moteurs et de l'acier comme matériau de construction. À partir de là, oublié le majestueux mouvement des voiles glissant silencieusement sur l'eau, oublié le savoir millénaire qui se transmettait oralement de père en fils... En quelques années, le Bangladesh a gagné en efficacité ce qu'il a perdu en magnificence. Les nombreux contributeurs de cet ouvrage sont les témoins de ces changements rapides dans la flotte. Les bateaux du delta forment l'extraordinaire patrimoine culturel et humain du Bangladesh. Il est urgent de préserver le savoir faire ancestral des maîtres charpentiers, et la mémoire des marins courageux.

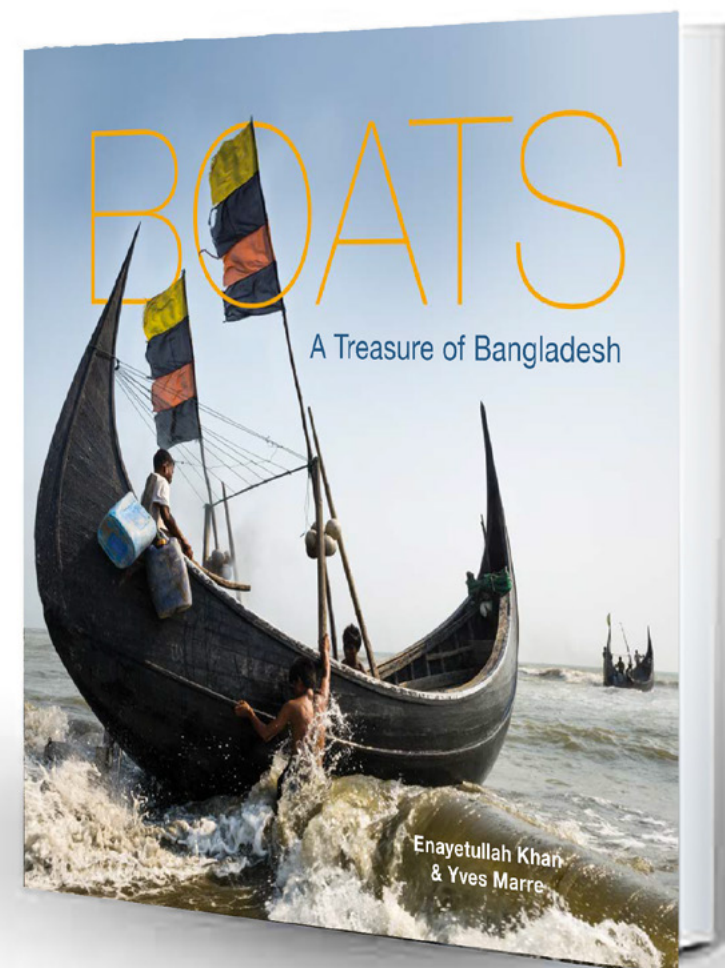
Nous sommes heureux et fiers de vous raconter l'histoire des bateaux du Bangladesh, outils des échanges, de la pêche, des réunions de familles, des rencontres de professions, de communautés, et malheureusement parfois, de catastrophes.

Malgré une certaine nostalgie, nous désirons poser les bases d'un futur riche de nouvelles entreprises que les constructeurs de bateaux vont vivre, armés de nouvelles technologies. Optimistes, nous menons notre réflexion sur les usages futurs de la flotte et des cours d'eau, pour relever les défis d'une population grandissante et de ses besoins en pêche, commerce, communication, sans éviter l'inquiétante question du réchauffement climatique.

Les bénéfices du livre seront versés au profit de la MSRS (Maritime Security & Rescue Society), la Société de sauvetage en mer du Bangladesh.

Enayetullah Khan est le fondateur et P-DG de Cosmos Group. Entrepreneur dans le secteur des media, il crée the United News of Bangladesh, et publie le Dhaka Courier. Passionné par l'histoire et les savoir-faire de son pays, il travaille à préserver et promouvoir les artistes et les trésors du patrimoine.

Yves Marre, navigateur français, est arrivé au Bangladesh il y a 20 ans, à la barre de son bateau. Sa fascination pour les bateaux traditionnels l'a conduit à reconstruire le plus grand voilier du pays et 4 autres bateaux disparus. Il a également créé une collection de plus de 60 modèles qui ont été exposés dans de prestigieuses musées.



Format : 29 cm x 29 cm

184 pages

Décembre 2014 : première édition en anglais

Objectif décembre 2015 : seconde édition en français



Contenu

Les sujets sont abordés dans le livre selon différents angles :

- des portfolios de grands photographes,
- des textes d'auteurs spécialisés, archéologues de marine, spécialistes de l'Asie du Sud, navigateurs, designer naval...
- des interviews de charpentiers, de capitaines, de pêcheurs...
- des travaux d'artistes locaux et des chansons populaires, liés au nautisme.

Introduction - Les bateaux dans la vie, au Bangladesh. Une courte introduction à propos du patrimoine et de son importance pour édifier une nation. Une carte et des informations clés pour comprendre le Bangladesh : situation, caractéristiques et richesses.

Partie I - Le plus grand delta du monde. Géologie, climat, un gigantesque delta et réseau de fleuves, le golfe du Bengale... Toutes les conditions sont réunies pour accueillir la plus grande flotte du monde.

Partie II - Des talents venus d'un autre temps. La flotte du Bangladesh est très ancienne et incroyablement diversifiée. Il existe une distinction entre la flotte de mer, qui a reçu de nombreuses influences extérieures, et la flotte de rivières, fruit d'un long processus à travers les siècles.

Partie III - Une longue histoire au fil de l'eau. Les bateaux traditionnels sont présentés par zone de navigation. Chaque bras de fleuve possède son type d'embarcation ! Les conditions de vie des pêcheurs et des marins sont dures : mousson, inondations, qualité médiocre et insécurité des bateaux, etc.

Partie IV - Un demi-siècle de révolution. Dans les années 1980, l'arrivée des moteurs révolutionne le paysage, les mâts et voiles sont très vite abandonnés. Grâce à la puissance des moteurs, les charpentiers construisent des bateaux de bois plus gros et plus beaux. Puis de nouveaux matériaux et technologies (comme la soudure) donnent lieu à des bateaux construits en acier.

Partie V - La richesse du patrimoine. La relation entre beauté, fonction et efficacité, issue des bateaux traditionnels, inspire le travail de Marc Van Peteghem. Des efforts sont fait pour créer et soutenir des projets de protection du patrimoine national. En conclusion, nous ferons une présentation de l'action de la M.S.R.S., la société de Sauvetage en Mer du Bangladesh.

Maquette

La maquette est moderne et se sert de la grandeur et de l'horizontalité du format. Les textes sont relativement courts, et laissent la belle part aux photos, afin de constituer un portfolio à la fois riche et aéré, agréable à parcourir. Le code couleur et les légendes rythment le livre et aident le lecteur à se repérer dans les pages, tout en livrant d'intéressants détails sur les plans techniques, sociaux et humains.

When my friend Enayet invited me to complete a book on the boats of Bangladesh, I felt both thrilled to discuss and share one of my favorite topics, yet also very anxious to not be able to do justice to the incredible richness of the largest and most diverse fleet of the world. Twenty years of sailing and boat building allowed me to witness the magnificence of the fleets and the vitality of their evolutions, but 900 pages are insufficient to narrate/expose all the different aspects of its past glorious achievements, its present evolution, and its brilliant future.

We made this book as an eye-opener and a personal testimony on an incredibly rich domain which deserves deep academic works and multiple theses. We request clemency of readers for all aspects that could not be covered.

Land of Superlatives, Bangladesh, home to the largest delta in the world is also the most densely populated country. These features have led to the emergence of the largest, most diverse, and probably the oldest fleet in the world. The exploration of the exceptional technical knowledge of Bengal allows a better understanding of its evolution. It reveals the development of heritage that has inspired a countless collection of poems, songs, and stories that constitute the fund of Bengali popular culture. This endeavor will help to recover skills that may find solutions to problems of connectivity and flood management. In the context of global warming and rising sea levels, the rediscovery of Bangladesh heritage in navigation and ship building, enlarges our understandings for holistic solutions. This book is another brick in this research and an invitation to this extraordinary nautical and cultural heritage of Bangladesh.

Enayyatlak Khan © Yves Marre

01 Introduction

BOATS & LIFE IN BANGLADESH

02 Part I

THE WIDEST DELTA IN THE WORLD

03 Part II

SKILLS FROM ANOTHER TIME

04 Part III

A LONG STORY OF BOATS AND NAVIGATION

05 Part IV

HALF A CENTURY OF REVOLUTION

06 Part V

THE IMPORTANCE OF HERITAGE

It has been my pleasure to read the book *Boats: A treasure of Bangladesh* that has come out under the direction of Enayyatlak Khan and Yves Marre. Very much a labour of love, it presents before the reader the rich tradition of boat making that has thrived in the lands comprising Bangladesh for centuries. As the reader learns quite early on in the book, even today Bangladesh is home to the world's largest fleet of boats. And yet this proud tradition, that depends so deeply on knowledge possessed and passed on, generation to generation, by the region's master craftsmen, is today under threat.

Even the thought that we may one day be deprived of the delight that is offered on a journey by boat especially a wooden boat, along one of the countless waterways that are such a distinct feature of Bangladesh's landscape, is heart-breaking. It is true that the demands of the 21st century means that more unforgiving steel-based mass produced and lower cost vessels are gaining in popularity. But if we want a truly holistic and long-term approach to Bangladesh's sustainable development, not just imported best practice but development that is attuned to the country's unique features, we must realize the central position that the humble *moaka* can still occupy in our future. This book's most important contribution may be to help our understanding of that.

Apart from containing a wealth of information that brings out the history behind an entire repository of this region's culture, the book is also interspersed with excellent photographs of scenes that were once ubiquitous, but undeniably growing rarer with passing time. The illustrations used to explain some of the technical mastery that informs the work of our naval carpenters are also presented very accessibly.

I commend the entire team behind the book for this timely initiative, since it is estimated that the last of our traditional naval carpenters may be gone within a generation. It gives me great heart to see that individuals from far-off lands, such as France, were involved so deeply in producing a book to celebrate an essentially Bangladeshi tradition. Let there be no doubt though, that the onus falls squarely on us - the current and future generations of Bangladeshis - to preserve this proud tradition.

*Muhammad Yasun
Nobol Lauriat,
Founder of Ganges Bank*



Bangladesh is a deltaic land covered by rivers and bordered by the Bay of Bengal, which opens to the Indian Ocean. This extraordinary and unique network of maritime routes and estuaries allow a better understanding of the extraordinary diversity of shipbuilding in Bengal. It was impossible to consider the context of Bengal without the support of a massive fleet of up to 10,000 vessels in the case of the rivalry between the Mughal Empire and the King of Arakan in the 17th century.

According to the Venetian traveler Francesco, in the 16th century, the Sultan of Constantople found it was less expensive to build its fleet in Chittagong rather than in Alexandria, which gives an idea of the historical importance of the naval construction sector in Bengal.

Shipbuilding developed widely in Bangladesh, opening new and promising markets. We believe that discovering and protecting our Naval heritage will provide us with a strong foundation to build a bright future.

Bangladesh's water resource consists of mighty rivers, the largest Bay of the world, estuaries, haors, beels, and canals.

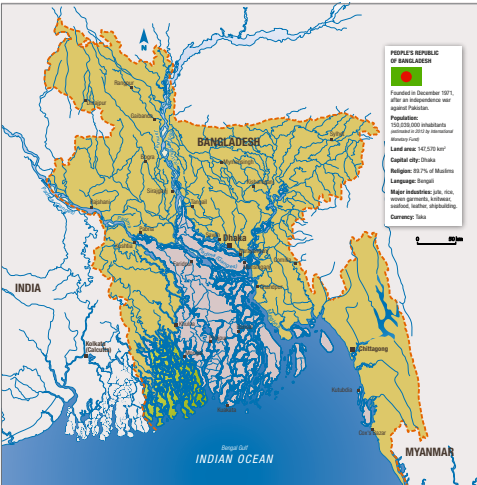
Muhammad Yasun, Author of The Great Moaka from the 10th century.



BOATS & LIFE in Bangladesh

A messenger carries 'Dhoti' in Bengal in the 18th century. In some places, such as Chittagong, boats and people have along the 'Dhoti' and network.





PEOPLE'S REPUBLIC OF BANGLADESH

Founded in December 1971, after an independence war against Pakistan.

Population: 155,030,000 inhabitants (number 10th in the world)

Area: 147,570 km²

Capital city: Dhaka

Religion: 80.7% of Muslims



Language: Bengali

Major industries: jute, rice, woven garments, software, seafood, leather, shipbuilding.

Currency: Taka



79 dB

registered in Chittagong, Dhaka, in average 50 km/h of speed, one cannot escape at 100 dB the air pollution.

57 million

average life expectancy: 73 years. On average, 5.6 people share the same square meter.

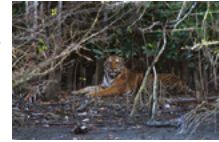





31.5 million **440**

70% of the population are under 30 years of age. Bangladesh is the world's largest country by a narrow margin. Population: 160 million (2018). Source: World Bank, UNICEF, 2018.

Upper left: A dining hall in Dhaka, the capital of Bangladesh.



Upper right: The vast Rajshahi rice fields, the largest of the Sundarbans.

approx. 9 billion

is expected to drink an apple a day due to the quality of the water here. Source: Bangladesh Water Development Authority.



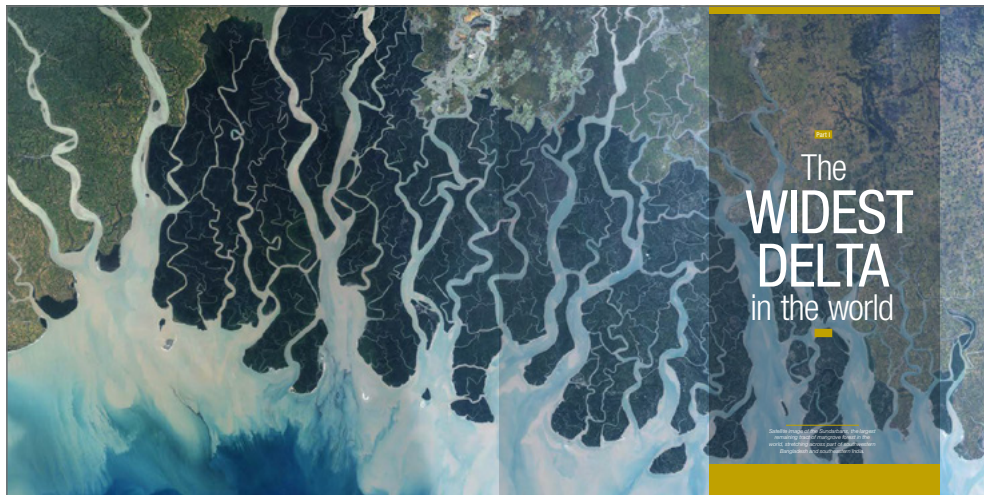
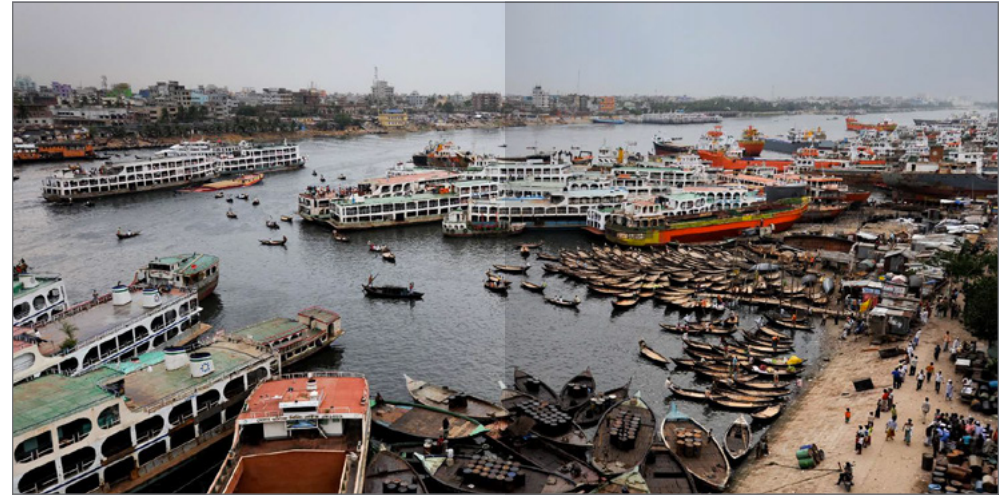
Lower left: Chittagong, the largest harbor of the country.



Lower right: Brick manufacturing.



Bottom right: Jute mill.



FACT

The **WIDEST DELTA** in the world

Subsiding lands in the Sundarbans, the largest mangrove forest in the world, are being reclaimed by the government.

Previous page: Geographical tourism in Dhaka, the fastest expanding and passenger water travel station in Bangladesh.

Left and right: Southern island of Nafara, Dhaka. Other islands are the first to be affected by rising sea level and other water way into the water table.

Right page: 5000 homes in old Dhaka. During the monsoon, 30% and up to 80% of its population is under water.



The most densely populated country and home to the largest delta on Earth, Bangladesh has the largest fleet of the world. Three large rivers, the Ganges, the Brahmaputra and the Meghna are pouring enormous volumes of water according to the same quantity of all the European rivers combined. Due to massive deforestation, the river and bringing 100 million tons of silt from the Himalayas, thus, clogging them at an increasing speed rate. Once upon a river silted. The waters of a thousand rivers. Bangladesh faces a serious crisis of river management which has led to the loss of more than half of the rivers and thousands of kilometers of waterways. Still, boats are needed anywhere, especially during the monsoon, water conservancy system from the neighboring Meghalaya (east part of Bangladesh). Annual floods renew the eternal cycle of fertilization and devastation.

Bangladesh hosts the largest fleet and number of sailors in the world.





15 Dhaka, houses of Bangladesh

Geography and monsoon
The Ganges delta lies at the foothill of the Meghalaya plateau, which receives the highest precipitation rate ever recorded. Precipitation in Chittagong in a single day amounts to as much rainfall as Oxford receives in one year. It rainfall averages 4915 mm in Chittag, 3078 mm in Chittagong. Bangladesh landscape transforms during monsoon season. The country profile from a subtropical monsoon climate characterized by wide seasonal variations in rainfall, high temperatures and humidity. Out of six seasons, there are three main distinct seasons in Bangladesh a hot, humid summer from March to June, a cool, rainy monsoon season from June to October, and a cool, dry winter from October to March. During monsoon season, much communication becomes possible thanks to boats. Boats travel, improved boats serve as life saving devices and float across the river flood



Navigation
The delta of the Ganges is a maze of the four rivers: Brahmaputra, Ganges, Meghna and Padma. The delta is a maze of the four rivers: Brahmaputra, Ganges, Meghna and Padma. The delta is a maze of the four rivers: Brahmaputra, Ganges, Meghna and Padma.

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20 Dhaka, houses of Bangladesh

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18 Dhaka, houses of Bangladesh

Two different fleets: river and sea
Historical architecture in the river rivers and their branches remained vernacular, due to its isolation, it is not true for coastal regions. Bengal belongs to both the South Asian and Southeast Asian worlds. Chittagong was under the control of successive kingdoms and cultures of Bengali, Tripura and Arakan, and it received their influence. Chinese navigators have left many traces of their trade body in the traditional fleet. There are still characteristic wooden sailing ships from the Chinese world, along the rivers in eastern Bangladesh. Some ships of the sea fleet could practice operations of the course of some rivers under favorable tide in the rainy season. Unlike an intermediate fleet used for inland sailing, or to transport from a port or an island, especially during the raids by the Portuguese and Arabians during the 16th and 17th centuries.

Flowers on board and haulers on the bank
help wooden ships going against the current and the wind.

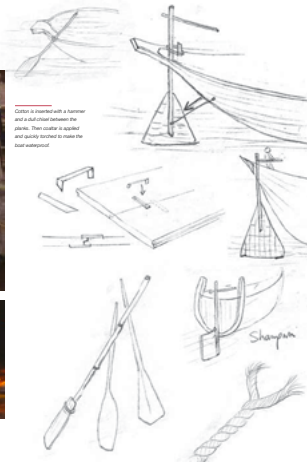
19 Dhaka, houses of Bangladesh



Control
Control is needed with a hammer and a Adul chair between the joints. This control is needed and usually required to make the boat sturdier.



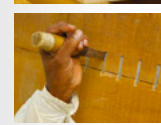
56 Dhaka, houses of Bangladesh



Cooking and Tarring
In order to waterproof and protect the hull, specialized workers fill the gaps between planks with cotton. After coating is applied to coat and protect the wood, it is quickly smoothed to help penetrate and seal the wood.



Rudder
Until nowadays the steering system of the river fleet could not be called a "rudder". It is simply the evolution and enlargement of the stern paddle or oar. Initially, when the vessel was pushing, the oar was using the stern fixed on a vertical post was tightly attached



Two different ways to assemble the stern oar: right and left: right for river boats, left for sea vessels.

ARDEL MOUJID AND ISLAM



When Yves Marie and Flavia came to visit their wives, Moujid and Islam followed the boat and its crew. They are very proud and happy for their friends but rare and beautiful boats.



Skills from another time

The boat is the biggest 60 feet long and the last made in the country. With 9 crew members (12 when using the sails), Moujid had been captain since 1996. Islam used to be the second on board, and became captain of the boat in 2012 (Yves Marie is a beautiful 60-foot 72-ton long, 3 crew members built in 1996. They were sailors on traditional boats, carrying goods on the main trade routes from Nagpur to Chandigarh. It is Nagpur when they met Yves and Flavia, who had come to the studio, which became the film. It is now an artistic museum piece for creating and takes visitors from the shore in the North, to the land in the South, a unique and breathtaking way to discover the wonders of Bangladesh.

How does it feel to be captain of these two traditional boats? We feel very confident running these wooden, traditional boats, more than the modern boats. We are proud of the boats of our country. On top of the huge sails, these boats are equipped with strong engines which require less work and crew members, hence there is less work for operating them. They have the ability to complete even trips and reach destinations on time. To travel with sails from Chandigarh to Nagpur when success wind blows, takes about 2 days. But when there is no wind, and you have to pull your boat from the riverbank, it takes about 10 days. With an engine, it is always one day and a half.

Who could blame the crew for mechanizing their boats and make them more profitable even if these technological progress reduces the employability of crew?

It is important to maintain the vessels? The boats are our living memory, they should be on the rivers, and admired museums. That is why we want them to be maintained. It is a very hard work, demanding and expensive. For example, the crew needs to replace these things every year. We are very attached to this kind of boat. We think we are lucky they still would exist on traditional boats, but they are important. The crew prefer the modern and boats are not preferred.

"The country boats are our living memory. They should sail on the rivers, and admired in museums."

There are no problems to adjust with the modern fleet, for they respect the boat, and always be far away from the way.

How did the people learn to handle traditional wooden boats? We are very attached to this kind of boat. We think we are lucky they still would exist on traditional boats, but they are important. The crew prefer the modern and boats are not preferred.

When Madhuk (Bangladeshi) comes aboard, everyone is impressed by the authenticity and beauty they allow to be built. The Bangladeshis also, they discover their past. We have wonderful moments when we are very happy to share this heritage with them.

During your navigations, what was the best performance you achieved?

We most always overtake according to our experience from the past, we have no modern equipment such as GPS. Docking the boat and maneuvering in some circumstances can be difficult, but generally it is ok. When the wind blows in the sails, the boat goes far to work the engine, at 15/10 km per hour. Otherwise, we go about 10 km. Although the engine is easier, the sails are traditional and beautiful, so we prefer using them.

What are your best moments, places? Memorable. At the conference of Padma (Ganges) and Jamuna (Brahmaputra) rivers, there are no other, and the water is very deep, so it is easier and more comfortable for us.

Hadim. The best moment is when many boats are gathered together in one place. We converse with one another. There are no boundaries, we are a brotherhood.

Both. All the sailors used to sing when they were sailing, when they had pulled the boats. Now, with the motor from the engine - it is impossible. This was about 20 years ago. We would use the fact were fully filled, and would go together to continue their life as a crew. It was for security reasons, the prices are very high, but danger comes from the water, the bad winds, the narrow of the river, and we could also help each other pull the boat.

JAMUNA



HOROWIA (SIRAJAZAN)
Building year: Unknown
Port of Bangladesh
Always Transport of goods
Capacity: 20 to 40 tons

Over 8 to 9 people
Length: 27 to 30 m
2 sails (Propeller/strapped)
4 crew, Suspended
triangular rubber

BACHU (DIP)
Building year: Padma
Port of Bangladesh
Always flying orange
Capacity: 20 to 40 tons
Length: 20 to 25 m
No sail, 20 to 40 tons

JORA NOKA
Building year: Unknown
Port of Bangladesh
Capacity: 2 to 4 tons
Over 2 to 3 people
Length: 6 to 7 m
1 sail (Rubber sheet)
2 to 4 crew, Suspended rubber

84

A long story of boats and navigations



FETI
Building year: Unknown
Port of Bangladesh
Capacity: 10 to 20 tons
Over 2 people
Length: 6 to 7 m
No sail, 2 crew

BAJRA
Building year: Unknown
Port of Bangladesh
Always Transport of passengers
Capacity: 7 to 10 people
Over 4 people
Length: 14 to 15 m
1 sail (Rubber sheet), 2 crew, Suspended triangular rubber

BAJRA
Building year: Unknown
Port of Bangladesh
Always Transport of passengers (bamboo)
Capacity: 7 to 10 people
Over 4 people
Length: 12 to 14.5 m
2 sails (bamboo sheet), 2 crew, Suspended rubber

A long story of boats and navigations



Marasa Mangal - মরাসা মঙ্গল

The story of Marasa Mangal begins with the conflict of the merchant Chandradhar or Chand Sadagar with Manasa.

Manasa was born as a son of god that had been captured by Venkai's mother was touched by Shiva's serenity. Venkai accepted Manasa as his son, and granted her a share of the profits that was produced when King Pitha ruled the Earth as a son. When Shiva saw Manasa, he was usually attracted to her, but she proved to him that he was her father. Shiva took Manasa to his home where he lived. Chand, suspicious of Manasa being Shiva's concubine, and attacked Manasa and her son. Shiva, angry with Manasa had killed her. Later, when Shiva was dying, Manasa cared him. On one occasion, when Chand killed her, Manasa reached her son with a plea of her penance. Finally, tired of quarrels between Manasa and Chand, Shiva decided Manasa and her son, but instead a companion for her from his form of essence, called Man or Manik. Manasa descended to earth to obtain human devotion. She was initially attacked by the people but then Manasa forced them to worship her by raising calamity on those who denied her power. She managed to convert people from different walks of life, including the Muslim ruler Husan, but failed to convert Chand Sadagar. Then to gain her son and insecurity Manasa one by one killed his six sons. At last Manasa converted against Lakshmi, Chand and

Sanku's seventh son. Manasa killed him but Bahub, Lakshmi's wife, found out water for nine months with the dead body of her husband and finally brought back the lives of the seven sons and the last property of Chand. As her, he is praised by offering a flower to the goddess with his left hand without even looking at her. This gesture made Manasa so happy that she returned all of Chand's sons and restored his face and fortune. The Bengali people say that after this, the worship of Manasa was popular forever more.



Form of Manasa-god Araya. The snake god was probably once included around 100 centuries, but he was a major deity. Different versions of Manasa-god also existed in the region, which were later absorbed into the Hindu pantheon. Manasa-god was worshipped in the form of a snake, and was believed to be the goddess of wealth and prosperity. The conflict between human beings and the goddess brings out the social dimensions of society, as well as the conflict between Arayan and non-Aryan. Shiva, whom Chand worshipped, was originally not an Aryan god, but over time elevated to that position. Manasa's victory over Chand suggests the victory of the indigenous or non-Aryan deity over the Aryan god. However, even Manasa is dedicated by Bahub. The poem thus suggests not only the victory of the non-Aryan deity over the Aryan god, but also the victory of the human spirit over the powerful goddess. Manasa-god is also remarkable for the portrayal of Bahub who represents the Aryan in Manasa's household, especially the Bengali woman's devotion to her husband.

PRIMA (GANGES)



88

A long story of boats and navigations



SARAI
Building year: Unknown
Port of Bangladesh
Always Transport of goods
Capacity: 10 to 15 tons
Over 2 people
Length: 10 to 15 m
1 sail (Propeller/strapped)
4 crew, Suspended rubber

Palash - Rangul "R" is the most trans-boundary river in Bangladesh, known in India as the Ganges river. It originates in the western Himalayas, near the Jammu/Jhelum region in Arunachal Pradesh and then the Meghna or Chandpur Padma - which means later known as Sunderb - in the sacred river in Hindu religion and is mentioned many times in mythology. The Vaitas, the Padma, the Brahmaputra and the Meghna rivers. In the Jammu, the Padma river is wide, and splits up into several channels flowing between constantly shifting sand banks and islands. Sunderb, which reduces its sailing capacities. For some 100 kilometers to the Ganges River forms the western boundary between India and Bangladesh. In spite of dredging, services are often getting grounded at the level of Ganges Padma.

Dams and bridges
After construction of the Farakka Barrage on the Ganges river, nearby the border of Bangladesh, the maximum flow in the Padma river was reduced significantly. The Padma Multipurpose Project will be the largest bridge of Bangladesh, and expected for completion in 2016. Later Shah Baidya and Haripur Bridge already cross the river upstream near India.

For some 100 kilometers the Ganges River forms the western boundary between India and Bangladesh.

118



A long story of boats and migration



Golden age for wooden boats

Half a century of migration



Fishermen

Fishermen in rural areas usually live a community life in villages along the water. They cooperate closely with one another not only in fishing, but also in economic and social activities. Traditionally, fishermen were local Hindus who believe their occupation to be sacred. This group has declined due to competition and sea migration. It is a cultural paradox that although highly valued in Bangladesh, people who catch sea creatures disappear, gradually merging into the community, especially "Khaligang", villages who are known as fisherman. Fishermen have their own folklore. Through their daily work, they sing folk songs such as *Bhatyali* and short songs, which have become folklore and are collected and themes taken from everyday life.

Fishing practices
In the inland waters, until recently fishermen mostly used more mechanized boats and traditional nets. They have recently started fishing with nylon nets. The sea-going fishermen generally use motorized boats and modern nets. Ancestral and ingenious methods for fishing still exist today – like fishing with *Amnashanti* (nets who dive and chase fish into the nets) – but they tend to disappear. Owners of fishing equipment use them for demonstration or by taking working partners with whom they share the total catch. The income from fishing is different and in accordance to the fishing practices. The unpredictability of seasons makes it impossible to respond to the position. A fisherman's average salary is around US\$250 (about a monthly *ladipacha* of 2046).



Half a century of migration



Member of the sea-transport board, president of the Chittagong Chamber of Commerce and Industry, and the second half of the 20th century

established in England until 1952. Then, I came to Dhaka and joined our family company, a *Khilnani* group, and more specifically, Chittagong Jute Manufacturing Company Limited (JCMCL), established in the early 1950s, the largest jute mill in the private sector. At that time, between the 1950s and the 1970s, the Joint Steamers Company (an association between the India General Company and the ANCI) was very powerful, with more than 1000 vessels, inherited from the British, it was a business based on trade over rivers and seas throughout the Indian Empire. The main harbor was Kolkata, and they went to reach Dhaka, on the banks of the Buriganga, as the capital of Eastern Bengal. The British built a hospital, university, roads. The city was very small, only 1 million inhabitants in 1951, compared to about 10 million in 2014. The railway

stopped in Dhaka, and there were no roads there. Before the British came here, Bangladesh was not developed at all, the sea was completely called "water door". Rivers and canals were very important for the economy. We had to use them to carry goods, it was less dangerous and saved time. Their vessels were used for industrial and long distance goods transport, instead of wooden traditional boats, which were mostly used for local transport.

How did the country develop in the following years?
In the middle of the 20th century, Bangladesh was only the backbone of *Khilnani*. All the goods were exported through this port. The Joint Steamers Company sold their ships, and a government organization took the lead on the sea, the Inland Water Transport Authority (IWTA). The department was first established in 1958 by the former East Pakistan government as East Pakistan Inland Water Transport Authority (EPWIATA). It was established for overall control, management, and development of inland water transport in the entire region. The only harbor connected with the sea was Chittagong. In 1964, the government decided to create a second strategic port in *Khulna*. An anchorage and a wharf had been built by foreign companies, then ruled by them during some time before going back into Bangladesh company hands. In Chittagong and *Khulna*'s harbors, the barges coming from the rivers met the cargo, which carried goods from river-continental waters. The ports were very efficient, with people loading and unloading the goods directly from the barges, to the ships at the anchorage, as

“Until 1965, a ship could go to Assam, but now, a boat can hardly travel farther than Narayanganj or Dhaka.”

there were no specific facility for exchange for exchange.
Could you describe a precious situation you have experienced in a boat directly?
We had a fleet of about 200 boats to carry the rice. It was in charge of the fleet carry rice from the mills and factories to the harbor on barges of 200 tons. We had between 25 and 30 boats. In these critical situations, the captain must use their own discretion.

What were the rivers like at that time? What has changed?
The rivers in some places are about 20 feet less deep than they were in the 1940s. Until 1965, a ship could go to Assam, but now, a boat can hardly travel farther than Narayanganj or Dhaka. The willow has increased due to the abandonment in Nepal and due to the maintenance of the waterways. More than 1 billion tons of rice go through the waters of Bangladesh every year. When the IWC was in charge, they had a fleet of small wooden boats, made in Bengal, to look after the rivers. They took much care, they made, checked the draft, it was not completely accurate, but at least we had some information. In addition, we saw some encroachments of the river. It is very complicated to control these actions, and make the perimeter of floods even more difficult. The disappearance of trees and forests is a major problem, because the land cannot absorb all the rain during monsoon, and it fills up the river even faster.

What do you suggest for the future?
The death of Chittagong harbor is not deep enough. It is a catastrophe we don't see the need and all. The private boats collecting only the need are unable to improve the depth of the river, as they cannot properly cut through the mud. These boats are in the poorest situation in an organized manner. Since the traffic on land is mostly congested, we should return to our gift from nature and invest in maintaining our waterways.

Each boat is unique because it is made exclusively for a particular need in a specific place. Moreover, the carpenters work without plans, and they transfer their knowledge by showing gestures to their apprentice. This heritage is disappearing as an increasing use. The engine multiplied the income of the boat-owners and sailors, bringing the traditional boat to its golden age. Thanks to the power of the engine, the carpenters could increase the size of their ships to its maximum, carrying more cargo.

With mechanization, boats are creating higher revenues. However, they pose a risk of disappearance of our vessel, just as a motorist will reach other world on land.



Half a century of migration

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