

ACHIK-MANDE MANIFESTATION

(A CULTURAL REFLECTION OF
GARO COMMUNITY)

By,

Rifat Ara Mostofa

ID: 12108017

Seminar II



Inspiring Excellence

Submitted in partial fulfillment for the requirements
For the degree of Bachelor of Architecture
Department of Architecture
BRAC University
Spring 2016

CONTENTS

ABSTRACT	2
CHAPTER 1: INTRODUCTION	
1.1 Project background	3-4
1.2 Aims and Objectives	5
1.3 Programs and facilities	5-6
1.4 Project brief	6
1.5 Methodology	6-7
 CHAPTER 2: LITERATURE REVIEW	
2.1 A brief of Garo community	8-10
2.2 Current Situation	
<i>2.2.1 Educational sector</i>	11
<i>2.2.2 Socio-cultural sector</i>	11
<i>2.2.3 Socio economic sector</i>	12
2.3 Employment and economic status	12-13
2.4 History and background of the “Garo” Community	
<i>2.4.1 Population and Distribution</i>	14
<i>2.4.2 Emergence of Garo Society in Bangladesh</i>	15
<i>2.4.3 Family Structure and Cultural Practices of Garos in Bangladesh</i>	16-17
 CHAPTER 3: SITE APPRAISAL	
3.1 Site Analysis	18-20
3.2 Site Surroundings	20-22
3.3 Photographs	22
3.4 Climatic condition	22-24

3.4.1 <i>Climate graph</i>	
3.4.2 <i>Temperature graph</i>	
3.4.3 <i>Climate Table</i>	
3.5 SWOT Analysis	24-26

CHAPTER 4: CASE STUDIES

4.1 Jean-tarle Tillbaou Cultural Center	27-33
4.1.1 <i>Story behind the project</i>	
4.1.2 <i>Concept of the Project</i>	
4.1.3 <i>Climate of the Project</i>	
4.1.4 <i>Thermodynamic principles & Development of the building design in relation to natural ventilation system</i>	
4.2 Yorkin Community, Talamanca, Costa Rica	33-35

CHAPTER 5: PROGRAMME AND FUNCTIONAL ANALYSIS

5.1 Main Function	36-37
5.2 Programmatic layout and area	38-43

CHAPTER 6: CONCEPT & DESIGN DEVELOPMENT

6.1 Introduction	44-45
6.2 Studies and Analysis	45-47
6.3 Conceptualization	47-49
6.4 Design Development	50-51
6.5 Plans, Sections, Render & Model Images	53-62

CONCLUSION	63
-------------------	----

BIBLIOGRAPHY

List of Figures

Fig 1: Bangladesh map and location of the site

Fig 2: an overview of Garo population

Fig 3: The emergence of Garo society

Fig 5: Site location on the map

Fig 5 : Site surroundings and analysis

Fig 6 : Access to the site

Fig 7 : Site surroundings

Fig 8 : Site photographs

Fig 9: Climate graphs of the site area

Fig 10: Site forces

Fig 11 : Photographs of Jean-tarle Tllbaou Cultural Center

Fig 12 : Interior photographs of Jean-tarle Tllbaou Cultural Center

Fig 13 : Plan of competition entry with cases on both sides of the circulation spine and Drawing of the Kanak huts

Fig 14 : Ventilation and pressure differential diagram

Fig 15: Yorking community, Costa rica

List of Diagrams

Dia 1 : Programmatic layout and flowcharts (source: Mostofa, 2016)

Dia 2 : functions and required area (source: Mostofa, 2016)

Dia 3 : Studies of Garo architecture

Dia 4 : Conceptual diagram of the project (source: Mostofa,2016)

Dia 5 : Detail studies of their activities

Dia 6 : Concept and zoning

Dia 7 : Design consideration

Dia 8 : Form derivation

Dia 9 : Masterplan

Dia 10: Ground floor plan and First floor plan

Dia 11: Blowup plans

Dia 12: One point perspective and details

Dia 13: Structural axono

Dia 14: Perspective views of the project Dia 15: Model images

Acknowledgement

In writing the acknowledgement for this paper, I would like to start off by thanking Almighty Allah for granting me with such courage and patience. And then I would like to thank my parents for whatever I am today. Another person who has inspired me in each and every mean is my elder brother. He has been the constant element of support.

I would like to express my gratitude to the studio teachers, Shams Mansoor Ghani, Dr. Mohammad Habib Reza, Dr. Sajid Bin Doja, Naim H Klbria. Besides studio teachers I would like to thank Dr. Huraera Jabeen for always guiding me and inspiring me. Thanks to Khondaker Hasibul Kabir for inspiring me by sharing his knowledge and also Ar. Suhailey Farzana for helping me with information and resources.

Apart from the teachers , there would be some seniors from whom I have learnt a great deal. Thanks to my first amla Ar. Syed Mahmud for always showing me the right path and being such a great inspiration. Another senior Ar. Sumaiya Saiffee , from whom I got motivation, guidance and support and want to thank her from the bottom of my heart. I also would like to thank Asif bhaia, Rayeed bhaia, Brishti apu, Refat apu.

Special thanks to Fadel Samad Faruq for believing in me and supporting me.

Thanks to my fellow classmates Tasmia Kamal Proma, Sumaita Tahseen, Muntasir Hakim and Rayma Habib, with whom I started my journey and who were beside me all the tough times. in every way.

Thanks to all my junior mates Shuvro Sarkar, Fariha Rashid, Meem Zaman for making it possible in such a beautiful way. Thanks to Doito Bonotulshi for her support as well.

Last but not the least, thanks to Mohammad Ridwanul Bari without whom it was impossible. Thanks to him for always standing beside me and helping me to do whatever I wished for. Words cannot express my gratitude towards him.

ABSTRACT

Among all the different groups Garo is one of the major tribes of Bangladesh. They are mainly refugees from Mongolia to this region through Tibet. They also live in The Indian State of Meghalaya. The present population of Garo community is near half a million among the world and the total population of Garo in Bangladesh is 25000. The Garo tribe mainly lives in the northeast part of Bangladesh which covers Mymensingh, Haluaghat, Dhobaura, Netrokona, Dinajpur, Jamalpur, Nalitabari, Shanamganj, Modhupur. The culture and lifestyle of this tribe is very unique and interesting, though they are now highly influenced by the mainstream society and are also not much aware of the new technologies and advancement. This project aims to reflect their culture and aspiration through architecture which can help in building the scale of the community and also improve their condition.

CHAPTER 1: INTRODUCTION

1.1 Project background

1.2 Aims and Objectives

1.3 Programs and facilities

1.4 Project brief

1.5 Methodology

1.1 Project background

According to the estimation report, there are more than 370 million ethnic people spread across 70 countries worldwide. Among them, nearly 70 different ethnic groups can be found in Bangladesh. The Garos are basically called indigenous people in Meghalaya and neighboring areas of Bangladesh. They are the second largest tribe after khashis in Meghalaya(Jalil,2011). The Garos refer themselves Achik Mande. Achik means Hill and Mande means people. Garos are the original forest dwellers in East region of Bangladesh. They have special dependency and relationship on forest for their daily needs. The garos have their own culture, society, religion, dress, ornaments, furniture and festivals. It is assumed that the Garos first immigrated to Garo hills from Tibet and settled down in Garo hills (East-west Garo hills) finding both providence and security in this enchanted territory and claiming in their own. Garos are living in the region of Garo hills which consists Haluaghat, Dhobaura, Birishiri, Myemensingh district. Though they are being known as “Khudro-Nri-Goshti” or tribal people but they are not satisfied with this title. They claim themselves as the indigenous people of Meghalaya and nearby region.

The term “Indigenous people” is used today to describe those groups which has had ultimate control of their lands taken by later arrivals and who are subjected to the domination by others.

There are an estimated one hundred and fifty million tribal individuals worldwide, consisting around forty percent of indigenous individuals. However, althoughnearly all tribal people are also indigenous, there are some who are not indigenous to the areas where they live now.

It is important to make the distinction between tribal and indigenous people because tribal people have a special status of acknowledgement in international law (Ahmed,2012). The Garos, as a tribe has an individual distinction as one of the few remaining matrilineal societies of the world. The Garos had their own religion, but now they have accepted Christianity (Khan,2003).

Haluaghat is the sub district of Mymensingh and is a place where Garo and Bangalees both live.

1.2 Aims and Objectives

This project aims to give them a platform of recognition by not only preserving their culture, but also building the scale of the community, to locate all factors of their culture and aspirations and to gather new skill and improve their condition. Somehow if the project can justify itself, create this place as comfortable and enhance their learning process as it is their own place, people and culture.

So the project aims to,

- help them to create their own area or identify a place so that they can enhance their own knowledge.
- promote their culture, religion, language to groom them and make them a unique part of the nation.
- keep the natural element as much as possible and respect their history.

Architecture is just a tool by which their cultural aspiration can be manifested to groom themselves as self sufficient in every sector without harming their culture.

Culture, heritage are the elements which can be a part of a human's identification. It can be a passion of everyone's and can bring a community to it's core and make them strong.

1.3 Programs and facilities

As the project claims the development and advancement of the community by reflecting their culture, language and bring them together. The programs are categorized by economic and cultural aspects.

It includes

- Multipurpose hall
- Open air theatre
- Souvenir shop
- Admin block
- Museum
- Library
- Training center
- School
- Dorm
- Cafeteria

1.4 Project brief

Project type: Cultural Institute (Public)

Site location: Haluaghat

Area: 8.7 acre

Client: Ministry of indigenous Culture and Ethnicity, Bangladesh.

1.5 Methodology

For building the concept of the project, reviewing many literatures has been done, as well as reviewing Govt. and non Govt. official documents, official reports, articles on garo people and their history to get proper information. To analyze the situation, some

interviews have been taken and surveys were done from the Garo community. Primary data sources were newspaper report, interviews etc. secondary data sources were relevant articles, books, reports from different organizations. Apart from quantitative research, some qualitative research has been done to establish the reasons and situation. The interviews and articles directly reflect their existing situation, where books and relevant articles helped to analyze the situation.

CHAPTER 2: LITERATURE REVIEW

2.1 A brief of Garo community

2.2 Present situation

2.2.1 Educational sector

2.2.2 Socio-cultural sector

2.2.3 Socio economic sector

2.3 Employment and economic status

2.4 History and background of the “Garo” Community

2.4.1 Population and Distribution

2.4.2 Emergence of Garo Society in Bangladesh

2.4.3 Family Structure and Cultural Practices of Garos in Bangladesh

2.1 A brief of Garo community

At least 350 million (mill) people worldwide are classified as indigenous, and about two million indigenous people of 45 different distinct ethnic communities live in Bangladesh (Costa & Dutta 2007, GOB 2008). These indigenous people of Bangladesh have distinctive social and cultural practices, languages and customs that are commonly referred to within the communities as 'Adivasis'. The existence of these people with their traditional way of life and culture that has been practiced for centuries has enriched the cultural and social diversity of the region. Among the indigenous people, the Garo population is one of the largest indigenous communities in Bangladesh, comprising approximately 0.1 to 0.13 mill people (Islam 2008, Burling 1997, Drong, 2004). They live in the north-eastern part of Bangladesh, with the highest presence in the Gazipur, Mymensingh, Netrokona, Tangail, Sherpur, Jamalpur and Sylhet districts. In India, the Garo people live in the Meghalaya region.

The Garos are mainly distributed over the Kamrup, Goalpara and Karbi Anglong districts of Assam, Garo Hills and few in Khasi Hills in Meghalaya, and substantial numbers, about 200,000 are found in greater Mymensingh (Tangail, Jamalpur, Sherpore, Netrakona, Mymensingh) and capital Dhaka, Gazipur, Sirajgonj, Rangpur, Sunamganj, Sylhet, Moulvibazar districts of Bangladesh. It is estimated that total Garo population in India and Bangladesh together is about 1 million. (Chiran, 2013)

Garos are also found scattered in the Indian state of Tripura. The recorded Garo population was around 6,000 in 1971. In a recent survey conducted by the newly revived Tripura Garo Union revealed that the number has increased to about 15,000, spreading to all the four districts of Tripura.

Garos also form minority in Cooch Behar, Jalpaiguri, Darjeeling and West Dinajpur of West Bengal, as well as in Nagaland.



Figure 1. General location of the Garos in Bangladesh: shaded in gray

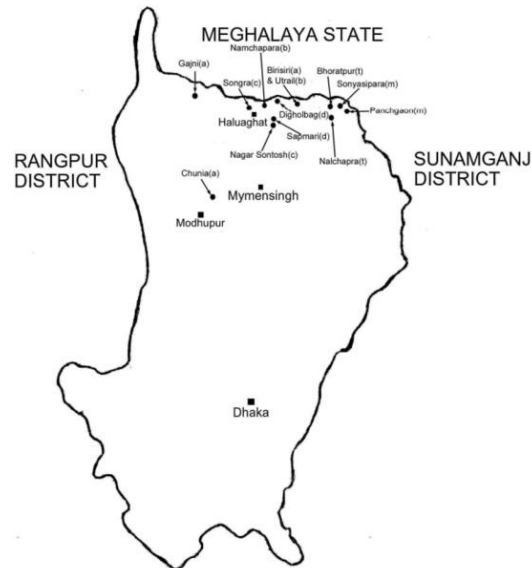


Figure 2. Approximate location of villages visited. (Attong village now spelled A'tong.)

Fig 1: Bangladesh map and location of the site (Source: HRCBM, Maps of Bangladesh)

The land of the Garos is much like that of Bangladesh: flat, fertile, and prone to floods. They live near beautiful rice fields that are green or golden, depending on the season, and their land is traversed by many big and small rivers. By geographical features, the area where the Garos live does not stand out as being out of the ordinary in Bangladesh. Geo-politically speaking, the land of the Garos can be quite narrowly defined. While Garos can probably be found in most of the main cities, especially Dhaka, it is certain that northern Dhaka division constitutes the land of the Garos in Bangladesh. In fact, the strip of land that stretches from the border of Rangpur district (of Rajshahi division) in the west as far as Sunamganj district (of Sylhet division) in the east, from the Meghalaya border in the north to Madhupur sub-district in the south can be considered the southern outpost of the greater Garo community who live in the Garo Hills of Meghalaya state, India.

2.2.1 Educational sector

Indigenous peoples mainly live in isolated areas where the mainstream of national economies and development support are not available. The areas they live in lack basic infrastructure such as roads, markets, schools and health facilities. Indigenous peoples also enjoy fewer opportunities in education and skills development compared to their mainstream counterparts.

2.2.2 Socio-cultural sector

Many differences can be seen in indigenous people. Socially, economically, politically, and culturally they are very different. The indigenous people mainly practice Buddhism, Hinduism, Christianity and Animism as their religion. Each group has its own distinct language, culture, religion and customs. The mainstream population knows little of the indigenous cultures of the country and because of this they are ignorant of the ceremonies and rituals that the indigenous people celebrate. With the help of different organizations, like Bangladesh Adivasi Forum, Jatiyo Adivasi Parishad, Bangladesh Adivasi Odhiakar Andolan, Society for Environment and Human Development (SEHD), the indigenous people are now organizing various cultural events in the capital city and district towns. Aboriginal's organizations now celebrate the International Day of the World Indigenous Peoples every year on 9th August and the Santal Upsurge Day on 30th June. But there is no government initiative at all in this regard (Tahmina, 2007). On these occasions, different indigenous communities come together, share their happiness and express their demands in front of the mass population. Media coverage and attention of the civil society of these events are making the mass population aware of the indigenous culture. These activities are very recent so the impact is still not visibly effective. (Unlocking The Potential, 2005)

The culture of the indigenous peoples is regarded as inferior. The Social Science textbook for 4th and 5th grade students published by the National Curriculum and Text Book Board (NCTBB) inform readers that indigenous peoples lead backward lifestyles, eat whatever they find here and there, live in forests, and that the diet of Santals, Garos

and Marmas consist of animal products mostly. Indigenous peoples contested this discriminatory portrayal of themselves. Mr. Sanjeeb Drong, General Secretary of Bangladesh Adivasi Forum said that this issue was taken to the NCTBB for rectification; however, till today no attempt has been taken to change the information in the textbooks. Furthermore, in Banglapedia published in 2003 by the Asiatic Society, the different indigenous peoples were described in a derogatory manner.

2.2.3 Socio economic sector

Agriculture is used to be the main occupation of the Garos. About 90% of the Garo people are directly involved with farming, and land is their primary livelihood. It was found that 90 to 95% of the Garo families had their own land in the past. But now only 10 to 12% of families have some form of land ownership. According to available literature and the results of our FGDs, the Garos lost their lands and properties due to illiteracy, unfavorable environmental conditions, political ignorance, carelessness, lack of awareness of good land management practices, ignorance about the Land Act, poor settlement surveys, etc. The Garos still depend on subsistence economies, despite technological advancements. About 90% of the Garos are now landless, even though they are still indirectly involved in agriculture (day labor, sharecroppers, etc.). As a result, they are being forced to change their professions to earn sufficient wages. Now the Garos are moving away from the forests to seek urban jobs with Government and private offices, garment stores, beauty parlors, tea gardens, factories, police and military services.

2.3 Employment and economic status

Indigenous people get less priorities in the field of lucrative govt. and non-govt. jobs. Even after having proper education they don't find good jobs that easily. The racial distinction is the only reason behind this. Though the government has reserved 5% of the jobs in the Bangladesh Civil Service (BCS) for indigenous people but it is hardly practiced. According to the quota system, 1483 indigenous persons should be given BCS jobs, but indigenous activist stated that the total amount is far lower than that. On the other hand, they said, no measures have been taken on the part of the government

to provide quotas to indigenous peoples for overseas' employment (wherein each year thousands of Bangladeshi laborers are sent to Middle East and South-East Asian countries). So it is evident that, even though Government is claiming to have a proper quota system, there is no sign to show that, this is actually working, and indigenous people are unsatisfied with this. Mass eviction, social and political problems lead indigenous people to a crisis of earning livelihood in their village and they lack the opportunities in their very own land. As a result, many of them migrate to cities where better options of livelihood are available. As an example, we can see many GARO girls working in the beauty salons in cities and jumma youths working on EPZs. One of the beauty salon worker, KHUKU RANI told, that she had to come to city because it was not possible for her family to bear the expenses anymore due to not having good harvest and also market crisis. So, she took training in a local center and came to city. But she complains that for being an indigenous people, she faces various problems of wage discrimination. And many of them face mental or physical assault also. But these opportunities are also limited to some communities, most of the communities are not even aware of them.

The most important challenge Garo people face now is the statutory rights to land. They live in and around the central deciduous Sal (*Shorea robusta*) forests, which is State forests i.e., legally they are the illegal occupants of the forests. The existing law on Vested Enemy Property Act does not recognize their entitlements to the land or land ownership. They claim that they are the aborigines of the area and as such, regard themselves as the traditional and legitimate owners of the land. However, the Government does not want to recognize them as the indigenous people of the area. Moreover, they now suffer from the threats of extinction because of the State Forest Department's policies and programs on eco-park establishment (eco-park with concrete wall in its all boundary which will limit the accessibility of the Garo people to their dwelling houses inside the forests) and participatory social forestry programs (rural elites and non-Garo people become the major beneficiaries of this program excluding most of the Garo people).

2.4 History and background of the “Garo” Community

2.4.1 Population and Distribution

In Bangladesh, the Garos are generally found in the north-eastern border area of the greater Mymensingh region especially, in Tangail, Mymensingh, Netrokona, Jamalpur, Sherpur and in Sunamganj and Moulavibazar of greater Sylhet (Sangma 2010). There is no precise information on Garo population in Bangladesh (Ball, 1999). The following table provides a summary of Garo population in Bangladesh.

Table 1. An Overview of Garo Population in Bangladesh

Year	Population	References
1991	68,210	Population Census 1991 (BBS 1991)
1993	1,02,000	Gain 2005
1997	1,05,000	Sangma 2010
1997	1,00,000	Burling 1997
2005	1,20,000	Lewis 2009
2010	1,25,000	Joshua project 2011
2010	1,30,000	Drong, 2004

Fig 2: an overview of Garo population (source: Ali,2010)

The ‘Garo’ is one of the larger ethnic minority groups living in Bangladesh. Basically, two groups of Garos are found in Bangladesh, namely Achick or Hill Garos who live in thickly clothed forest areas and *Lamdani* or plain Garos who live at the base of Garo Hill in the greater Mymensingh (Sattar 1971, cited in Das & Islam 2005) It is estimated that the total population of Garos around the world is approximately half a million, and about one-fifth of them live in Bangladesh (Chowdhury 2007, cited in Ahmed et al.

2010:133), which means more than 10 million Garos have been living in this country.

However, they always remain behind the curtain and we know very little about them.

Their life style, family pattern, marriage system, inheritance system, norms, values, social system, food habits, housing pattern, dressing, language, cultural and religious festivals seem to be different from mainstream Bangladeshi people as well as other tribal communities (Milton 2002).

2.4.2 Emergence of Garo Society in Bangladesh

The Garo is an ethnic group of ‘*Tibeti Borman*’, a branch of the *Mongolian* Human race. Scholars have identified the aboriginal dwelling place of Mongolians to be the adjacent areas of mid-Asia and ethnologists opine that this is also the aboriginal dwelling place of Garo community. They used to live in Sinkiang, province of China, from where they moved to the Northern side of *Tibet* and lived there for many decades (Jengcham 1994). However, unfavorable and hot weather of *Tibet* and increase of population propelled them to move to the north-eastern side of India. Allen (1906) has stated that “Garos lived at the bank of *Eang Sikiang* and *Huanghu* river of China. This was the original dwelling place of Garos. Afterwards, they came to Assam from China”. There is no concrete information when Garos entered into Indian sub-continent. But Anthropologists assume that Garos entered into Indian sub-continent during pre-Aryan era. They started living at *Coachbihar* of India and thereafter got scattered at the different areas of Indian sub-continent. In the early years of the 9th century, Garos migrated to Bangladesh from ‘*Tibet*’. They started living at the Garo hills of Mymensingh where they lived until the 13th century under the ‘Garo Empire’.

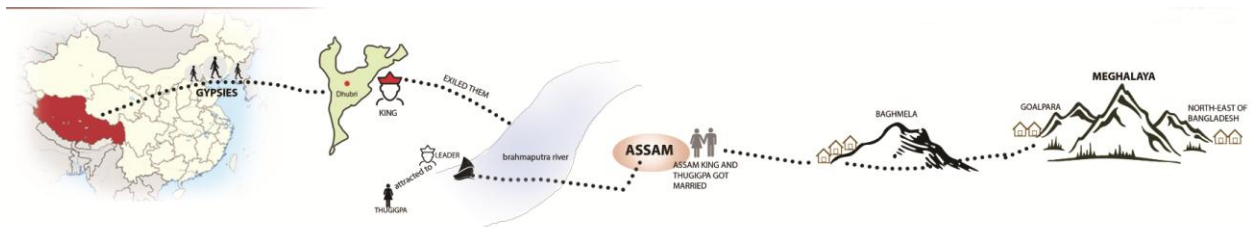


Fig 3 : The emergence of Garo society (Source: Mostofa,2016)

This area of Bangladesh was covered by deep forest which attracted them as they like to live in the hill areas and it is also suitable for cultivating *zoom* (a kind of agriculture product grown only in hill areas). The Garo Empire expired with the assassination of the last king Baissa Manda in 1280. In the meantime, they disseminated in the various areas of Bangladesh (Jengcham, 1994). Still now, Garos are living in some hill areas of

Mymensingh, Netrokuna, Tangail, Gazipur, Sylhet, Sunamganj, Jamalpur and some other places of the country.

2.4.3 Family Structure and Cultural Practices of Garos in Bangladesh

Usually, traditional joint, nuclear and extended families are found in Bangladesh. The size of families is larger in rural areas than that of in urban areas. Garo families are relatively larger in size. According to traditional values of Garos, there is no scope for the newlywed couple to form a new family. A person is supposed to go to his wife's house after getting married. In some cases, the husband lives permanently in the family of wife and becomes the member of that family. Among Garo community, the youngest daughter of a family is called *Nokna* and elder daughters are called *Agettey*. The husband of *Nokna* is called *Nokrom*. It is the responsibility of *Nokrom* to take care of wife's father and mother until their death. If he does so, he can be owner of all the properties of wife's family. But he has to seek permission from wife and her other relatives in order to use the properties. But if he is the husband of *Agettey* daughter, he gets the opportunity to live there temporarily. Husbands of *Agettey* daughters have to form a new family after living few years in the wife's parent's house. However, nowadays, some Garos are not interested to live in their wife's parent's house. It is worth mentioning that, in Garo families, only *Nakna*, is the successor of family property. *Abetteys* are deprived of family property. The family of Garos is matriarchal in nature. Women are the head of family and also owner of family property. Males are deprived of family property. Children adopt *Mahari* (descent) of their mother instead of their father. Therefore, women enjoy highest status in the family as well as in the community (Chakma, 2000). Apart from enjoying high social status, Garo women occupy significant role in the labour force. Garo women's level of education is higher than their male counterparts'. Their participation in socio-cultural and economic activities is also greater than male Garos' (Islam et al. 2009). Garo women work outside the family to earn livelihood along with performing domestic duties within the family. Garo families are like an institution of informal education. Family is responsible to provide basic education to the children regarding their own norms, values, religious pursuits, etc. Children learn

their own traditional cultural pattern in the family. They also get habituated to practice various religious functions. Families teach children about socially acceptable behaviour and the rituals of Garos.

Children take the title of their mothers and adopt the descent of their mothers instead of their fathers. The Garos who follow Sangsarek religion used to practice two types of marriage, namely 'bridegroom capturing' and 'Thunapp'a marriage'. In 'bridegroom capturing marriage', a girl chooses a boy for marriage. Thereafter, some people from her clan and family captured the boy of her choice in night and bring him to the girl's house. The couple live together from that night if boy also likes her. Otherwise, the boy leaves the house that night. Then some young men of the girl's clan again capture the boy and bring him to the girl so that they can sleep together. At this time, boy usually does not escape. In 'Thunnapp'a marriage', girl cooks a dish and sends it to the man of her choice through a female. She follows without appearing before the boy that whether he takes the food or not. If boy takes the food, it is assumed that boy accepted the proposal. Then girl also joins the boy and eat with him. If the boy does not take food, the girl goes to him late at night and to sleep with him. If the boy still refuses her then he leaves the village (Ahmed et al., 2010). However, these types of Marriages are hardly seen among Garos of Bangladesh.

CHAPTER 3: SITE APPRAISAL

3.1 Site Analysis

3.2 Site Surroundings

3.3 Photographs

3.4 Climatic condition

3.4.2 Temperature graph

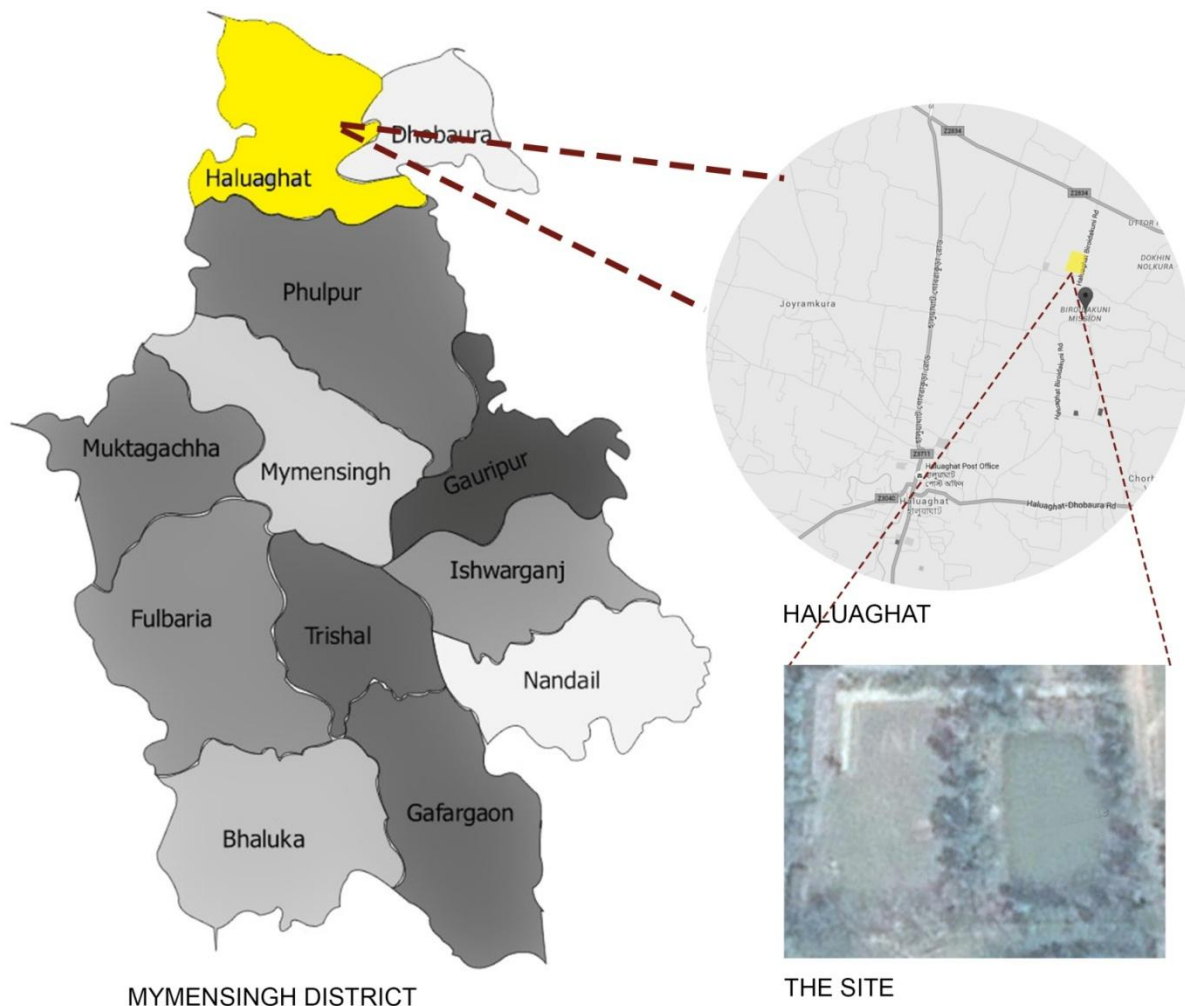
3.4.1 Climate graph

3.4.3 Climate Table

3.5 SWOT Analysis

3.1 Site Analysis

The site is located in Halughat Upazila in Mymensingh District. It is bounded by the Meghalaya state of India on the north, Phulpur upazila on the south, Dhobaura upazila on the east and Nalitabari upazila on the west. The site is situated 5 km away from Dhaka – Phulpur highway. This particular site was chosen because of the density of garo people are quite a good number here.



Source: Google map

Fig 4: site location on the map (Source: Mostofa, 2016)

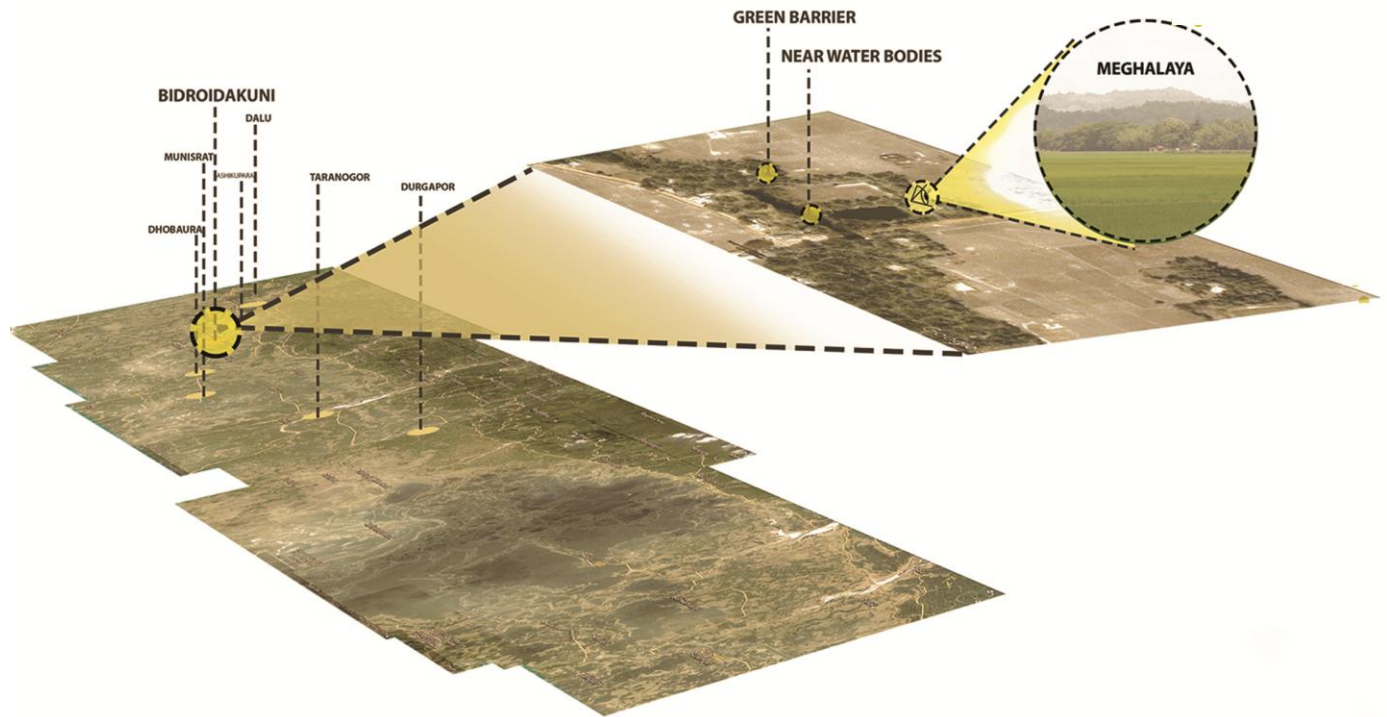
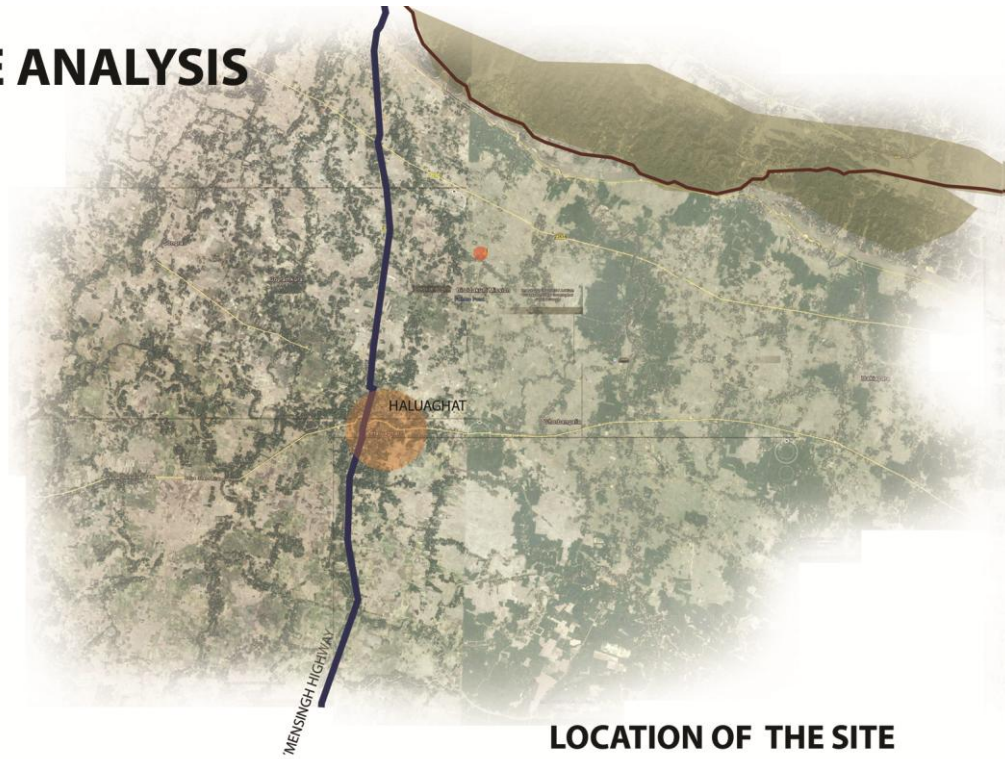


Fig 5: site surroundings and analysis (Source: Mostofa, 2016)

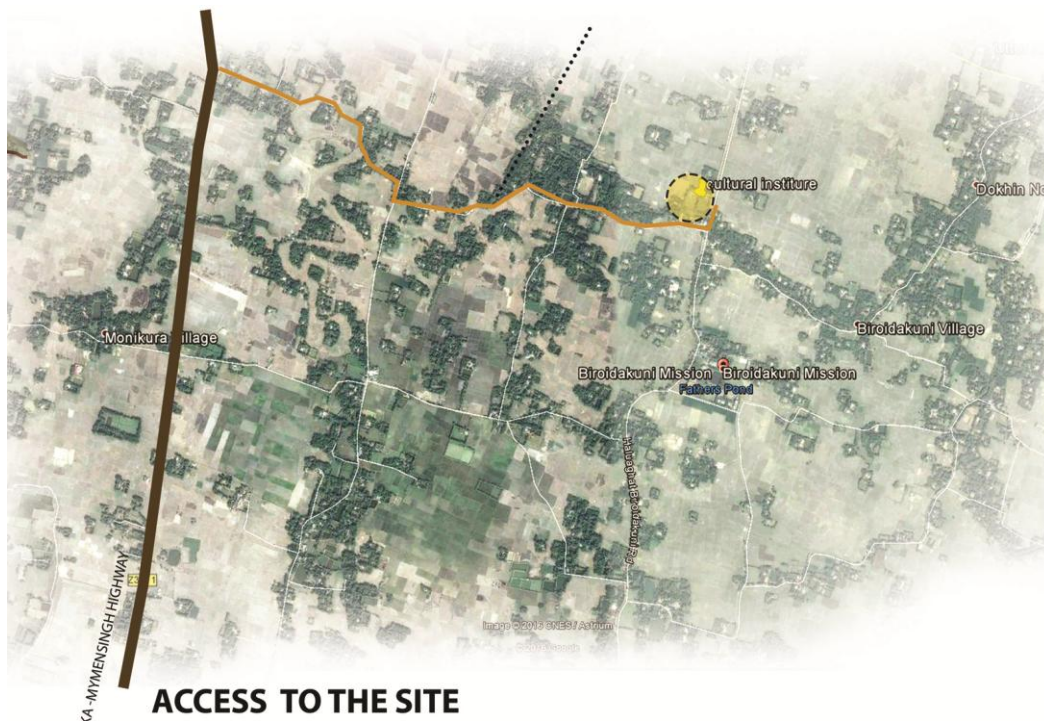
3.2 Site Surroundings

The site is surrounded by some other small villages of Garo ethnic groups. Basically the site is a wonderful piece of nature surrounded by the great Meghalaya hill and lowlands. The Dhaka –Phulpur highway is just beside the site. Hence, communication is not a very big problem but also not too advanced. There is a mission which is called Biroidakuni mission and a Minister’s home just beside the site. There is also a high school (Rangrapra High School) beside the site. Otherwise the site surroundings are Dokkhin Nolkura village and Biroidakuniu Village.

SITE ANALYSIS

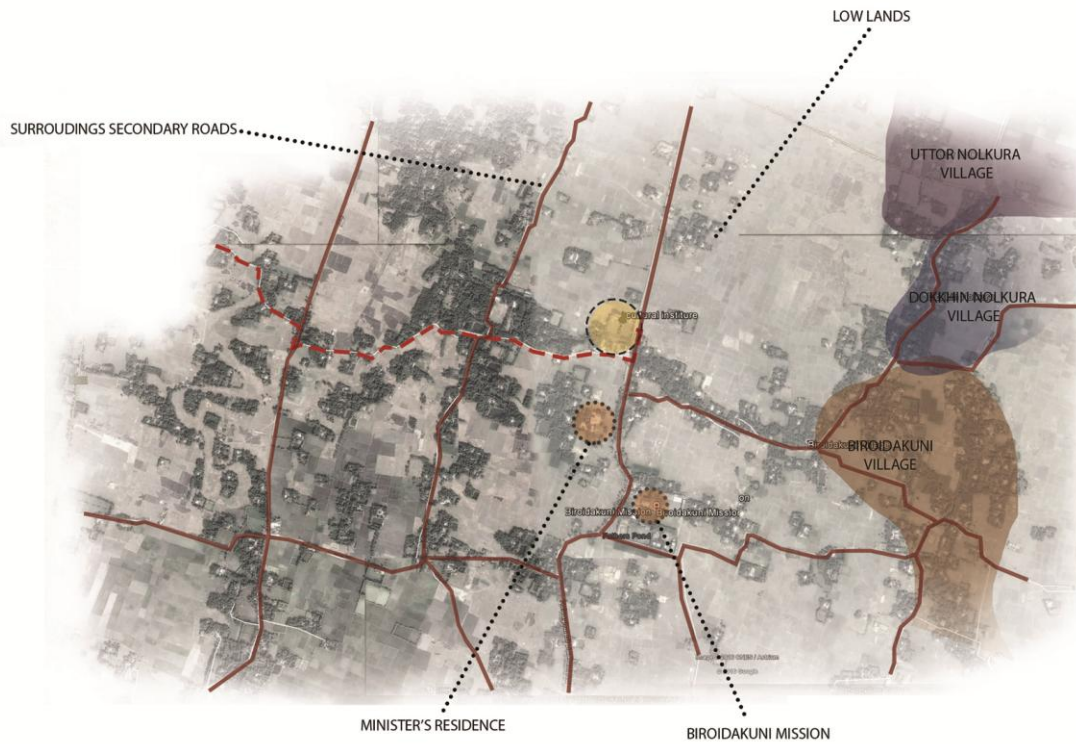


LOCATION OF THE SITE



ACCESS TO THE SITE

Fig 6: Access to the site (Source: Mostofa,2016)



EXISTING SITE CONDITION

Fig 7: Site surroundings (Source: Mostofa,2016)

3.3 Photographs

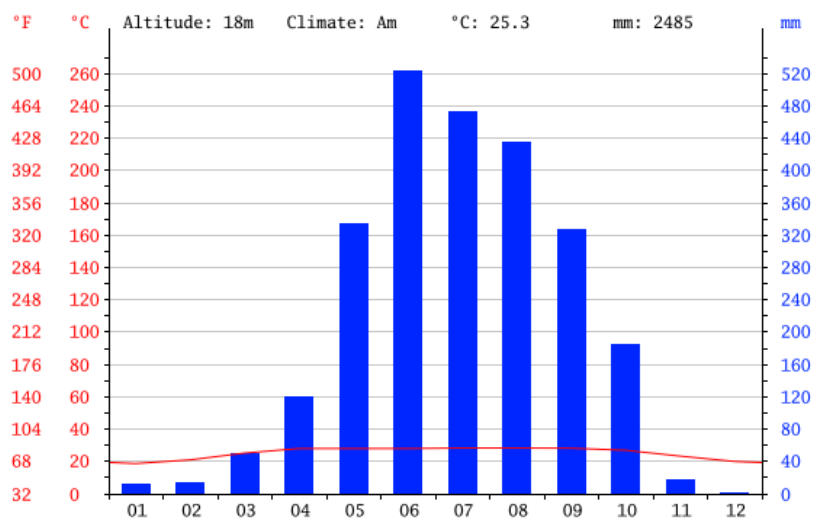


Fig 8: Site photographs (Source: Mostofa,2016)

3.4 Climatic condition

Haluaghat has a tropical climate. During most months of the year, there is significant rainfall in Haluaghat. There is only a short dry season. The climate here is classified as Am by the Köppen-Geiger system. The temperature here averages 25.3 °C. About 2485 mm of precipitation falls annually.

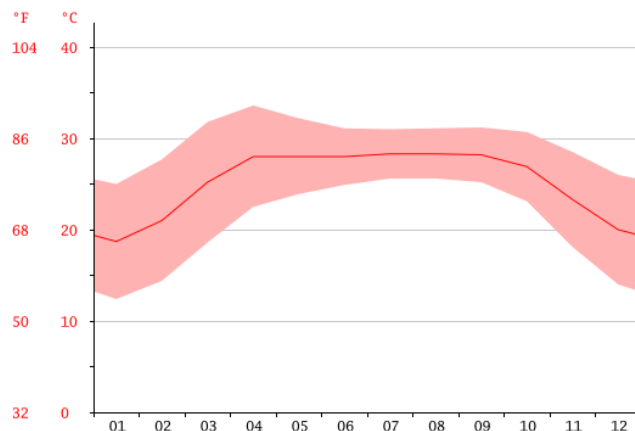
3.4.1 Climate graph



The driest month is December, with 1 mm of rainfall. Most precipitation falls in June, with an average of 523 mm

3.4.2 Temperature graph

Source: climate data org.



The warmest month of the year is July, with an average temperature of 28.3 °C. In January, the average temperature is 18.7 °C. It is the lowest average temperature of the whole year.

3.4.3 Climate Table

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	12	13	49	120	334	523	472	434	326	184	17	1
°C	18.7	21.0	25.2	28.0	28.0	28.0	28.3	28.3	28.2	26.9	23.3	20.0
°C (min)	12.4	14.4	18.6	22.5	23.9	24.9	25.6	25.6	25.2	23.1	18.1	14.0
°C (max)	25.0	27.7	31.8	33.6	32.2	31.1	31.0	31.1	31.2	30.7	28.5	26.0
°F	65.7	69.8	77.4	82.4	82.4	82.4	82.9	82.9	82.8	80.4	73.9	68.0
°F (min)	54.3	57.9	65.5	72.5	75.0	76.8	78.1	78.1	77.4	73.6	64.6	57.2
°F (max)	77.0	81.9	89.2	92.5	90.0	88.0	87.8	88.0	88.2	87.3	83.3	78.8

Fig 9: Climate graphs of the site area (Source: climate data org.)

The difference in precipitation between the driest month and the wettest month is 522 mm. The average temperatures vary during the year by 9.6 °C.

Wind Direction:

South Wind Direction South Weather in Gobrakura

Wind Speed:

3.1 ms / 11 km/h / 7 mph

3.5 SWOT Analysis

Strength

- Located just beside the Dhaka-Phulpur Highway which is one of the most important highway
- Not very far from the city

- Some schools are built here
- Existence of natural elements adds more value to the site. (Such as a view of Meghalaya hill is directly seen from the site)
- Variation of vegetation can be seen in the site.
- Maintenance would be easy because of the location as the area is surrounded by many Garo communities.
- It can be open for the general people and perform as a bridge for diversified cultures.
- For the location it can be most potential site for a national level museum.

Weaknesses

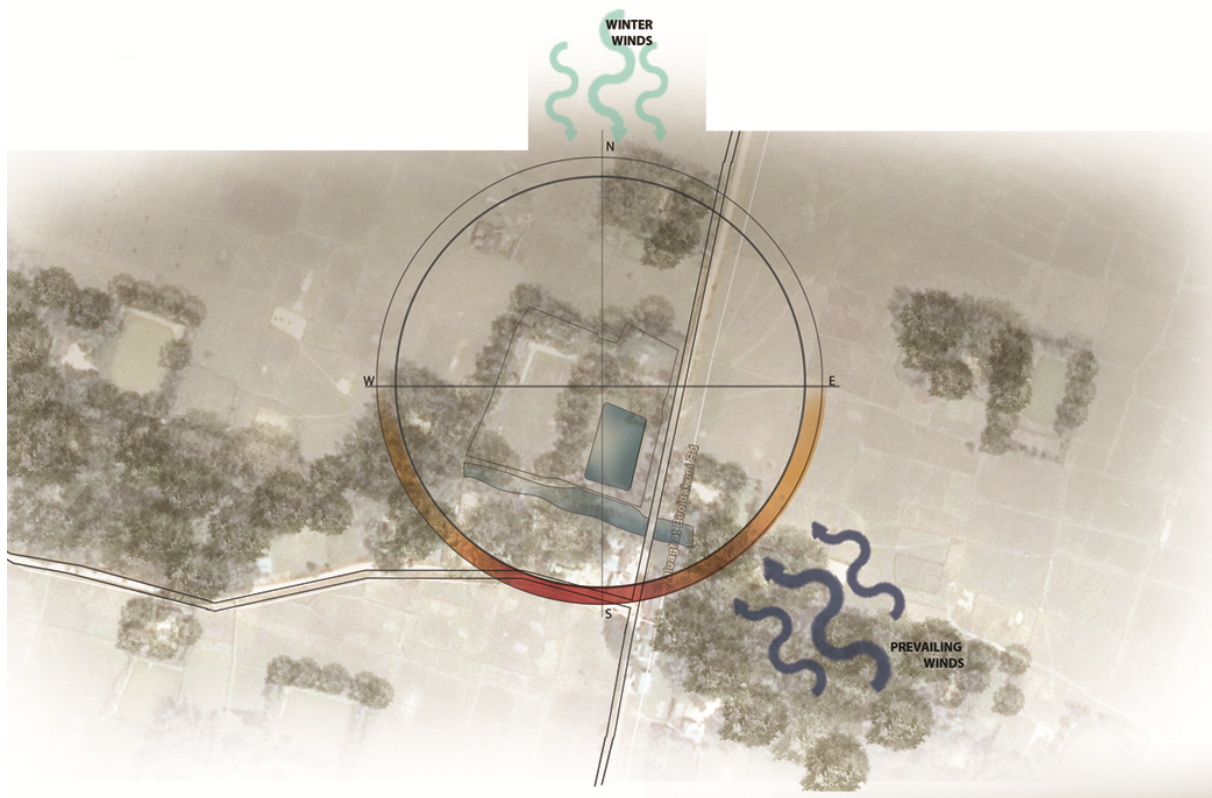
- The site is away from the capital.
- Transport from the main capital can be a problem.
- The unique building style of Garos are being changed due to natural disaster and for the influence of mainstream society.
- Floods occurred during rainy season.
- Materials which are not local and which are costly are being used. Example-brick, concrete, rod, polythin.

Opportunity

- Scope of development as there is school, and saving concept are being evolved
- As there is water stream, fishing related center might be helpful here
- Natural beauty is the plus point of the site which will create peaceful environment for any sort of environment
- This site can create a very potential place and location for a national level cultural complex which is required for the given project.

Threats

- Direct natural view might get interrupted for the building of the museum.
- Many migratory birds may not find the land as safe as before.
- Natural vegetation of the land might get disturbed.



Site forces

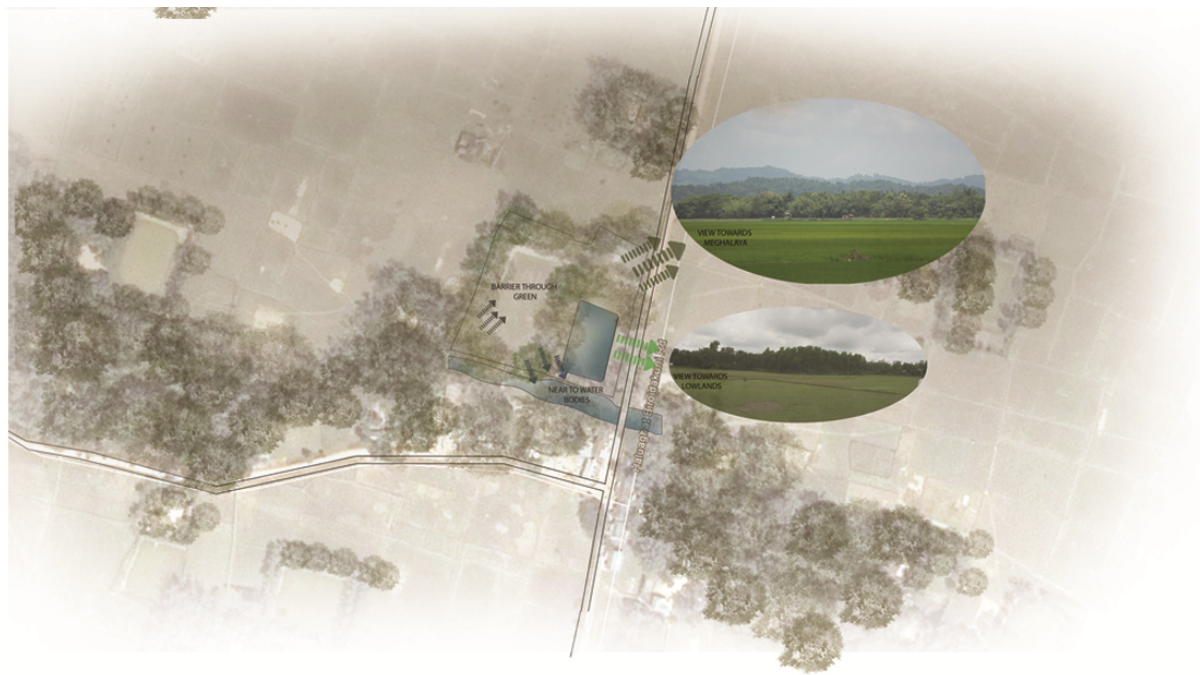


Fig 10: Site forces (Source: Mostofa, 2016)

CHAPTER 4: CASE STUDIES

4.1 Jean-tarle Tilbaou Cultural Center:

4.1.2 Concept of the Project:

4.1.1 Story behind the project:

4.1.3 Climate of the Project:

4.1.4 Thermodynamic principles & Development of the building design in relation to natural ventilation system

4.1.4.1 Competition Entry

4.2 Yorkin Community, Talamanca, Costa Rica

4.1 Jean-tarle Tilbaou Cultural Center:

Site Area: 7650 sqm

Building dimensions: small : 63 sqm ; medium : 95 sqm ; large : 140 sqm

Height 20,22 and 28 meters respectively

Floors: 2

4.1.1 Story behind the project:

The Centre was named after Jean-Marie Tjibaou, a Kanak independence leader who was assassinated in 1989. The Kanak people are widespread throughout the Pacific region, above all in New Caledonia where they account for nearly 410/o of the island's entire population. The island, is a French territory that is on its way to gaining its autonomy. During the negotiations for the island's independence, the local authorities requested the French government to fund the construction of a large cultural center that would be dedicated to Kanak culture. In 1990, within the sphere of President Francois Mitterand's 'grandstravaut', an international invitation-only tender was established for the realization of the project. The center was officially inaugurated by French Prime Minister Lionel Jospin in 1998. The site was located on the Tina peninsula, to the east of capital city Noumra. This spectacular location, between the open sea and the protected lagoon, is set against the backdrop of the mountains and the promontories jutting out into Magenta bay. The scope of the competition was quite broad: the project would have to be designed to honor traditional Kanak culture, while at the same time providing a focal point for the inevitable development of its society. The centers activities include exhibits, special events, as well as performances involving music and dance: the objective was to ensure that, despite its adaptations, the Kanak culture would not lose touch with its historical roots.

The spirit of the Pacific is ephemeral:

Traditional Kanak buildings are boom in unison with nature and make use of its perishable materials; for this reason, the village's continuity over time is not bound to the survival of each individual building, but rather to the preservation of a specific

construction scheme. Building upon this civilization's typical deep bond with nature, the project followed two main guidelines: on the one hand evoking Kanak construction capabilities, while on the other hand making use of modern materials, such as glass, aluminum, steel and advanced lightweight technologies, in addition to traditional materials, such as wood and stone. The Centre is not contained within one building alone: it's a combination of "houses" and open spaces with trees, of various functions and pathways, of fills and voids. While surrounded by the sea on three sides, the site is covered by thick vegetation and is traversed by a number of winding pedestrian paths that lead into the "villages": clusters of buildings which are intrinsically bound to their surrounding environment and, with their semicircular layout, delineate open public spaces. The various parts of the complex are connected by a covered, and slightly curved, walkway, which runs along the ridge of the promontory. The constructions are curved structures, similar to huts, made out of wooden beams and arches: archaic-looking dwellings with interiors that are furnished with all of the comforts that modern technology has to offer. These ten large monothematic environments open up directly onto the Centre's internal roadway, thus creating a transition from a compact space to an unexpectedly ample outdoor area. The external boards are of different widths and are spaced unevenly: the slightly vibrating optical effect obtained in this manner enhances each building's affinity with its surrounding vegetation.

4.1.2 Concept of the Project:

Renzo Piano's JearrMarie Tjibaou Cultural Center, located in New Caledonia, a French territory in the South Pacific. Those cases are also a highly articulated environmental system which allows for natural ventilation of the building. In examining the building's development, as well as the thermodynamic principles used, it is clear that the cases are not created out of a desire for a specific environmental system. Rather, the cases and the remainder of the building were adopted to accommodate this natural ventilation system.

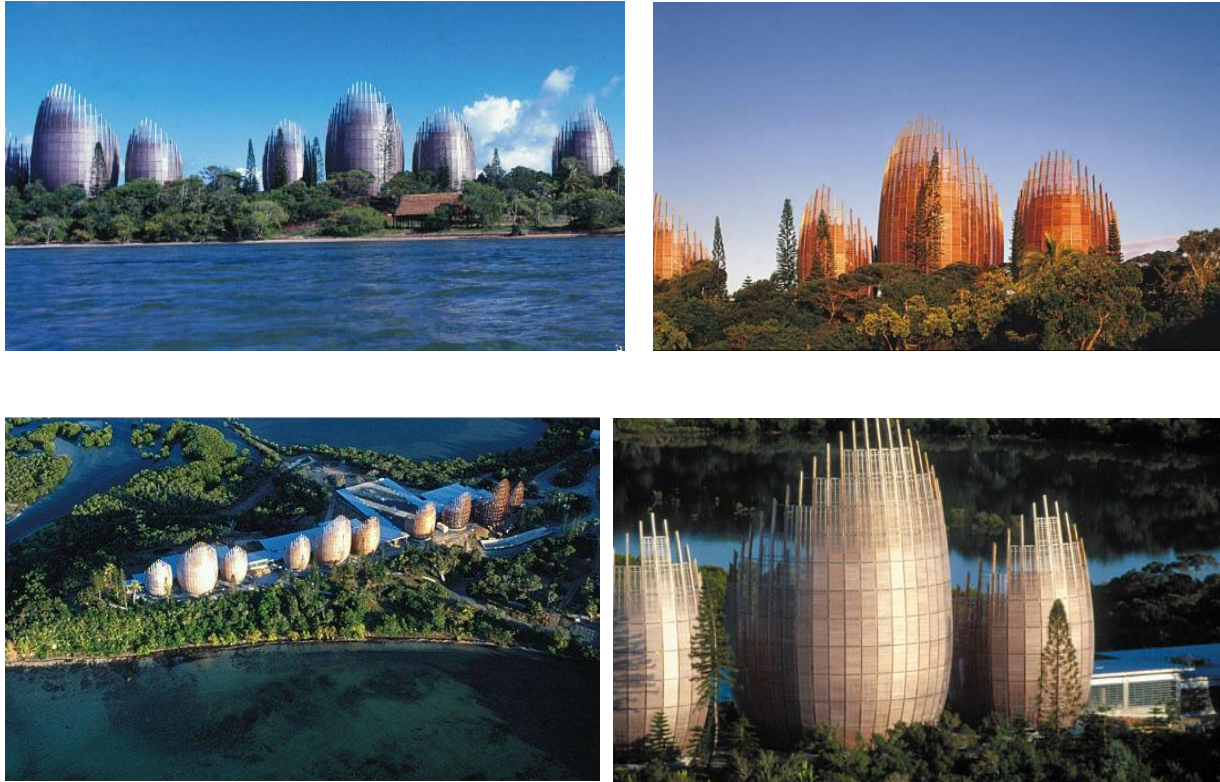


Fig 11 : Photographs of Jean-Marie Tjibaou Cultural Center (Source : [Bridgette Meinhold](#), 2011)

4.1.3 Climate of the Project:

New Caledonia is an island in the Pacific Ocean about 1600 km east of Australia. The Jean-Marie Tjibaou Cultural Center is located on a thin peninsula near the island's capital, Nouméa. Running east-west, the 1000 foot long circulation spine runs along the peninsula's ridge. On the more protected lagoon side are four Mode mist, flat-roofed glass and steel pavilions. On the bay side are the 10 wooden cases with their curved facades towards the prevalent winds coming across the ocean. Renzo Piano received the commission for the Jean-Marie Tjibaou Cultural Center, a \$33.4 million arts and education complex, through an international design competition held in 1991. The center was a gift of the French government to the territory to promote and preserve the native Kanak culture. Natural wood, glass, and steel compose of the building. Three different programmatic spaces are contained within the building. The first, mostly public space contains the entry, a theater, exhibition spaces, cafe, and gift shop. The middle section contains offices for visiting scholars, a library, a computer and media room, and

more exhibition spaces. The third part, located at the end of the peninsula, is administrative offices and educational facilities. The climate in Noumea is considered to be 'oceanic tropical'. There are only moderate variations in temperature as from a winter minimum of 65 degrees Fahrenheit to a summer maximum of 93 degrees Fahrenheit. The average relative humidity is about 75% RH with average monthly maximums of 90% RH and minimum of 60% RH (Barfi 26).

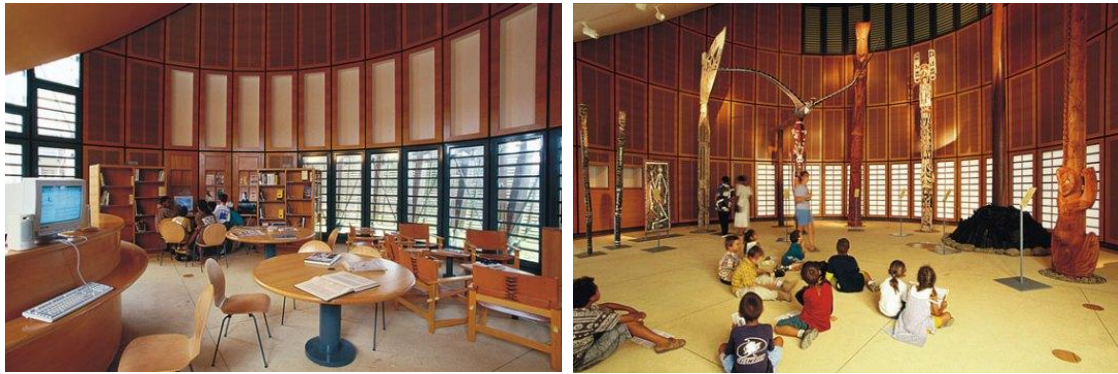


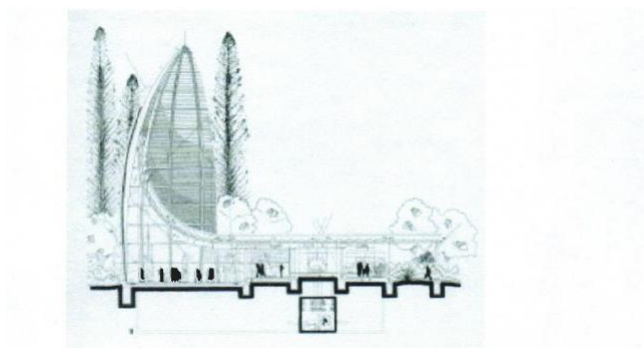
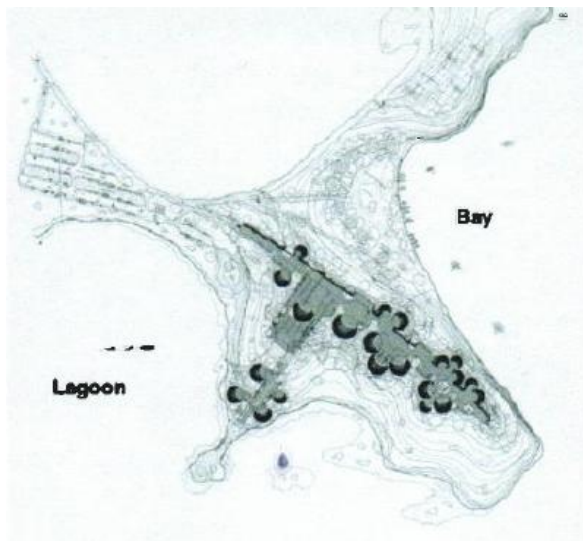
Fig 12 : Interior photographs of Jean-Marie Tjibaou Cultural Center (Source : [Bridgette Meinhold](#), 2011)

4.1.4 Thermodynamic principles & Development of the building design in relation to natural ventilation system:

The Jean-Marie Tjibaou Cultural Center was designed with the desire to utilize natural ventilation. Throughout its development and in its final design, two main principles are used to achieve natural ventilation: stack ventilation and ventilation due to wind forces. From the beginning of the project, Piano desired the incorporation of a natural ventilation system. Additionally, the engineering firm, Ove Arup, stressed the benefits of low technology because of the expense of importing and maintaining mechanical equipment (Banfi, 26). This system, however, did not generate the initial form of the building. As the design progressed, the natural ventilation system was further incorporated into the design and exerted formal changes upon the building.

4.1.4.1 Competition Entry

In the original scheme, the cases were found on both sides of the circulation spine. These cases were inspired by the traditional huts of the Kanak people. In fact, in this initial scheme, the cases were arranged into distinct groups which were thought of as 'villages'. These cases also brought to establish a relationship with the surrounding vegetation, especially the tall evergreen trees (Buchanan 192, Zabalbascoa 4). Piano even went as far as proposing that local materials be used for the cladding and replaced periodically replaced by the community (Buchanan 192).



Sectional drawing of the competition entry showing the original form of the cases



Photograph showing relationship between the forms of the final cases and the Kanak huts

Fig 13: Plan of competition entry with cases on both sides of the circulation spine and Drawing of the Kanak huts (Source : Fahmee, 2013)

VENTILATION DUE TO WIND FORCES | pressure differential created by incoming force of wind

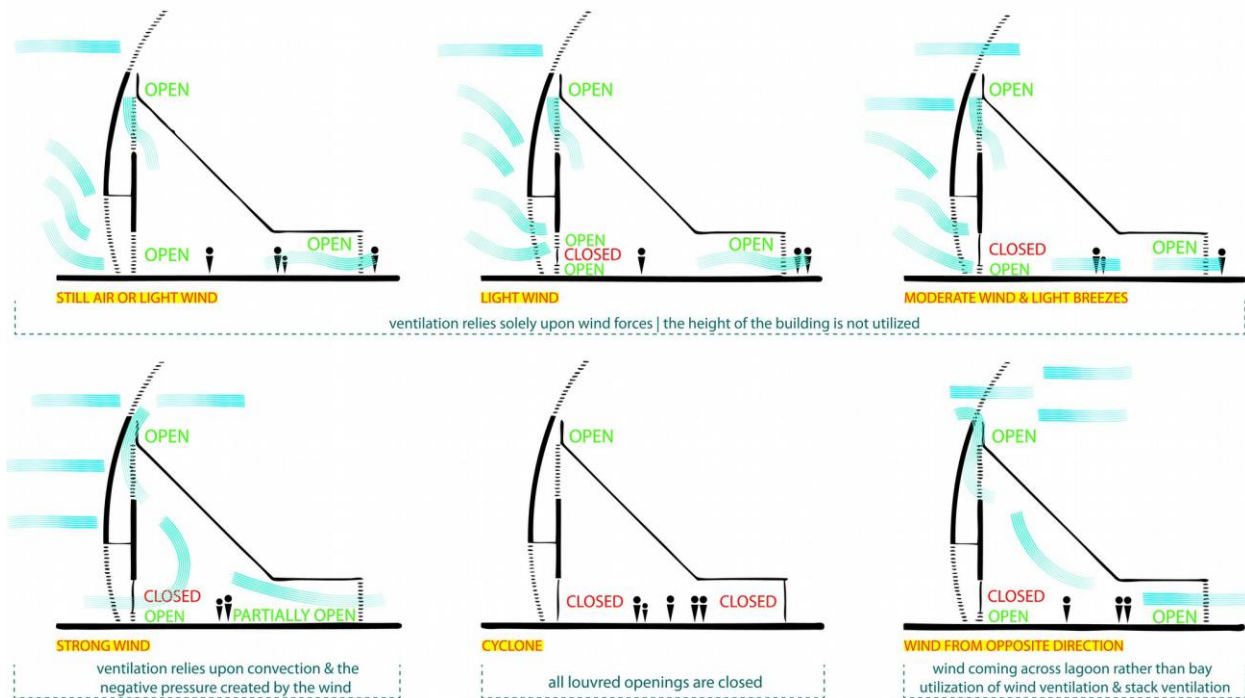


Fig 14: Ventilation and pressure differential diagram (Source: [Bridgette Meinhold, 2011](#))

4.2 Yorkin Community, Talamanca, Costa Rica

The Bribri are an indigenous people of Costa Rica. They live in the Talamanca(canton) in Limón Province of Costa Rica. They speak the Bribri language and Spanish. There are varying estimates of the population of the tribe. YORKIN community is situated along a river of the same name which serves along part of its course as the boundary between the countries of Panama and Costa Rica. The community is habited by the BriBri people. It is principally a farming community with the main economic base in the organic production of cacao and bananas as well as many subsistence crops.



Fig 15: Yorking community, Costa Rica (source: <http://www.ateccr.org/>)

This community is always trying to retain their very own culture and identity, as they know it is their pride, and will be shameful to lose the identity. Until now they have kept their life as it is, very natural and unique, and this is what attracts the tourists most. So the economy has flourished because of tourism, but still then they were self-sufficient as in 1985 with the help of NGO the women of this community organized themselves and made a group called Women Artisans Group, in order to diversify agriculture and develop because earlier they were thriving with it. They made some hostels which they call "Women's House". The women group makes souvenir here at a small scale which is a now very good business. Tourists are very much attracted to learn the local techniques. The tourists are taught here the traditional method of making roof with palm leaves which work perfectly. These people made two ecologies in their simple local method, which are very close to nature. They have built a hanging bridge with rope and

wood connecting mountains where tourists can hike, enjoy the view. This community has no electricity, no telephone, but they have been facilitated with solar power, now they have installed solar power system with fixed antenna and use cell phones with the power. Each family is a piece of tropical forest itself. The families are benefitted from the women's artisan group. But protecting environment has been their top most priority, they protect 1,235 acres of forest (UNDP,2013). They have some missions which are

- They promote culturally and ecologically sound tourism and small-scale, locally owned businesses.
- They stimulate conservation through education and by helping local families derive economic benefits from their natural resources.
- They arrange memorable activities for visitors to Talamanca and help visitors participate in sound eco-tourism activities.

This community is very hospitable, they invite people to come and share the knowledge and tradition. So it can be seen the community participation has made them prosper without hampering their unique tradition or culture. But they were facilitated with some training and technological method to do so. But very successfully they have retained their identity; it was possible because of their participation and humble wish and cooperation of other citizens of the nation.

CHAPTER 5: PROGRAMME AND FUNCTIONAL ANALYSIS

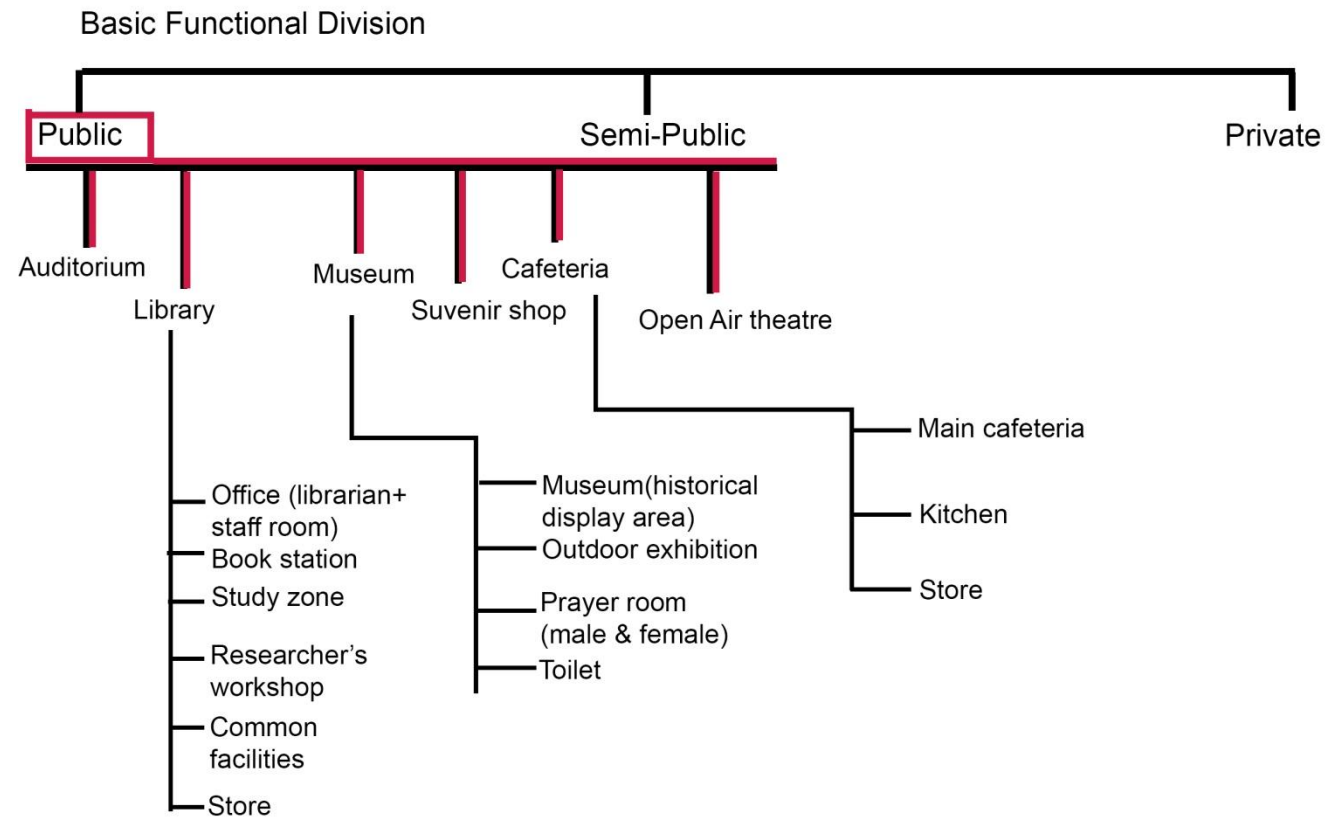
5.1 Main Function

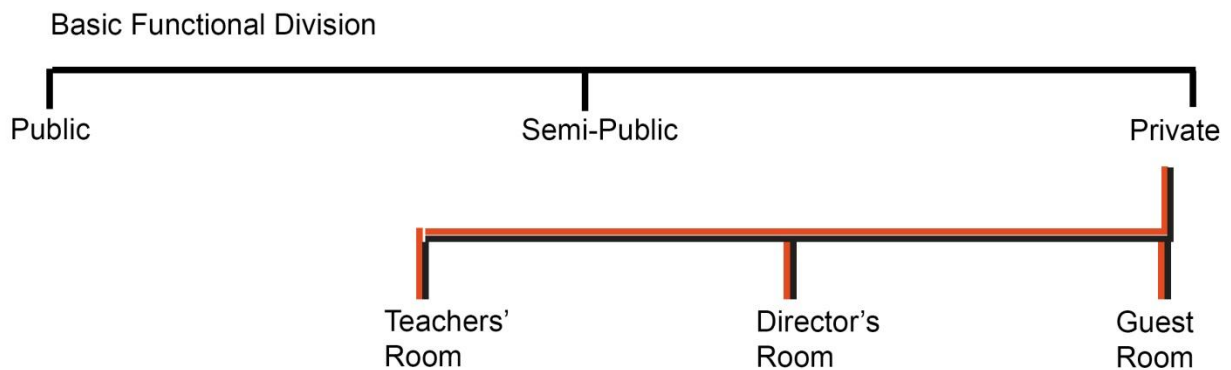
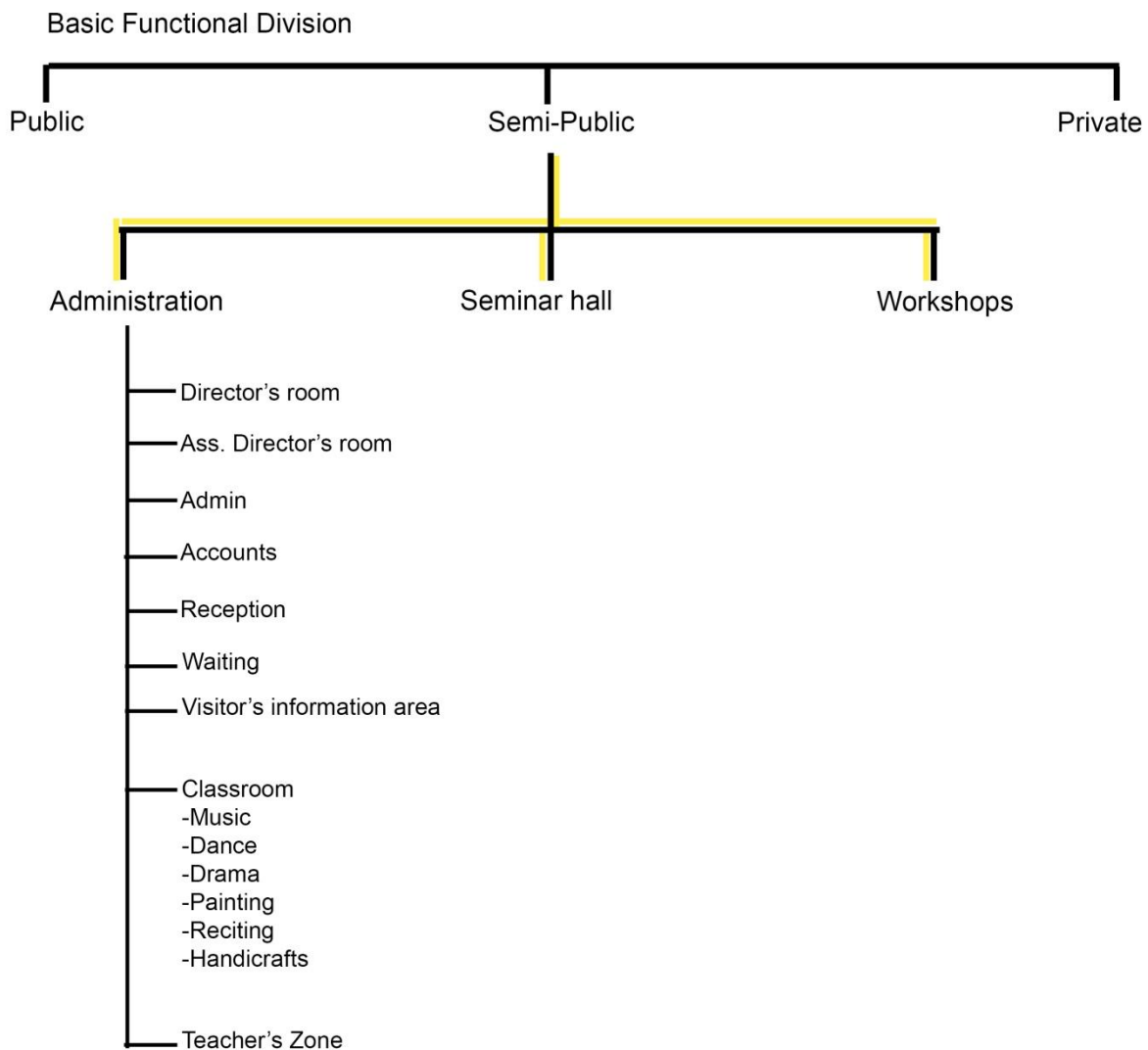
5.2 Programmatic layout and area

5.1 Main Function

- Multipurpose hall (this function is needed for the occasional functions and programs due to their religion and culture)
- Library (to gather their history at the same time to enrich their knowledge so that they are able to be developed as the mainstream society)
- Museum (to exhibit their culture and tradition and also their history so that their existence is proved and justified)
- Administration (to take control of all the facilities and also to provide classrooms for the daily co curriculum activities)
- Souvenir shop(for the guest to buy the things of their handmade and so that they can increase their business)
- Open Air theater (to gather and create a center space for interaction and to provide multiple facilities)
- Service (to control all other facilities)
- Cafeteria (to provide food for the guest, workers, student and also to create a social gathering place)

5.2 Programmatic layout and area





Dia 1 : Programmatic layout and flowcharts (source: Mostofa, 2016)

PUBLIC ZONE

SI no.	ZONE	SPACE	USER NO.	TOTAL AREA (Sqft.)
1	Multipurpose Hall	Meeting Room	500	6000
		Other Room		2000
		Store		500
2	Library	Library Office (Librarian+ Staff Room)	5	1500
		Book Station		1500
		Study Zone		2000
		Researcher's Workshop	10	1500
		Common Facilities		200
		Store		300
3	Museum	Historical Display area		3000
		Outdoor Exhibition Area		4500
		Toilet	4	500
4	Training Centre	Bamboo Handicrafts workshop		1200

		Handloom workshop		1200
		Bamboo Treatment workshop		600
		Tutors		400
		Staffs		400
		Stores		300
		Head Authority		100
		Rest Room		200
		Toilet		500
		Dining		200
5	Cafeteria	Cafeteria Seating	80	2000
		Kitchen		500
		Store		300

SEMI-PUBLIC ZONE

SI no.	ZONE	SPACE	USER NO.	TOTAL AREA (Sqft.)
1	Administration	Director's Room	1	250
		Asst. Director's Room	2	500
		Administration	4	500

		Accounts	2	250
		Reception + Waiting	5	300
		Information Desk		150
		Store		200
		Toilet		200
2	Classroom	Classroom (Music, Dancing, Drama, Painting, Recitation)	8	9000
		Teacher's Room		800
		Child Care (Kitchen + Lobby)		900
		Health Care		400

PRIVATE ZONE

SI no.	ZONE	SPACE	USER NO.	TOTAL AREA (Sqft.)
1	Dorm + Guest Room	For 15 rooms	2	2250
2	Other	Supervisor	2	200
		Staff	4	400
		Dining		1000
		Kitchen		400

		Pantry		200
		Store		100

Dia 2 : Functions and required area (source: Mostofa, 2016)

CHAPTER 6: CONCEPT AND DESIGN DEVELOPMENT

6.1 Introduction

6.2 Studies and Analysis

6.3 Conceptualization

6.4 Design development

6.1 Introduction

The Garos near Haluaghat have been changing a lot because of mainstream society. To work it as an institute first they need to be recognized not only just as the part of the nation but also a unique part of the nation. This should be done not only by preserving their culture, but also they can gather new skill. What the institute need id they will own this institute to improve their condition. The process can work more like in that way , firstly the institute needs to be sustainable/showcasing their culture to generate activities which can bring income, also establish it as a resource center. By making this institute center for the community it will help in the pathway of settlement and it can also recreate the settlement pattern. Basically , this place will become a community meeting point for them.

Aim of the project

- The main motto of this project is not only promoting culture, but also provide them with the knowledge of sustainable architecture.
- Conservation of land, resource, natural setting, use of local materials, building techniques, which are mostly creating an indigenous identity.
- To create an urban generator of excellence and creativity of local resources is born.
- A place of ideal rest for tourists.

6.2 Studies and Analysis

Garos are one of the largest ethnic minority groups in Bangladesh. After studying or analyzing their lifestyle....

Matrilineal

Garos are one the tribe which is matrilineal by its inherit. Women are head and owner of family property. Children adopt their father's name. The number of garo literate women are more than the number of garo literate men.

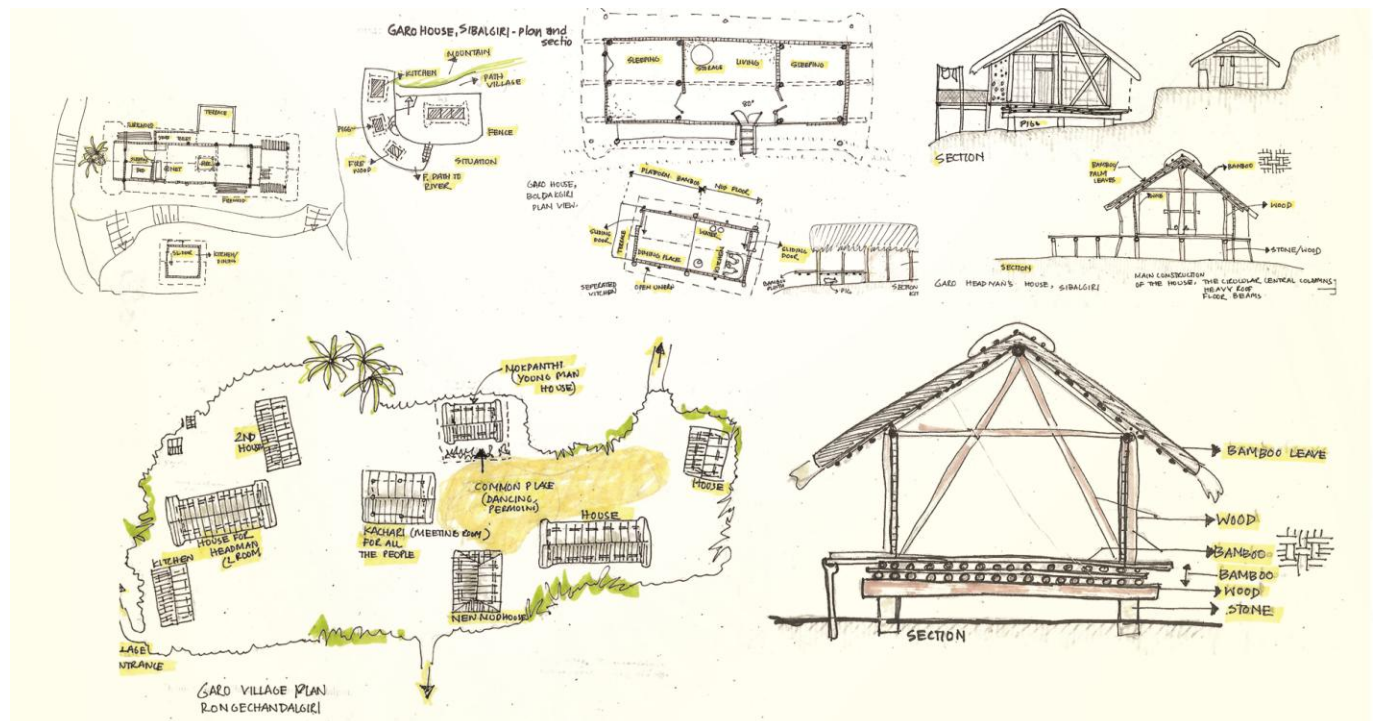
Religious pursuit

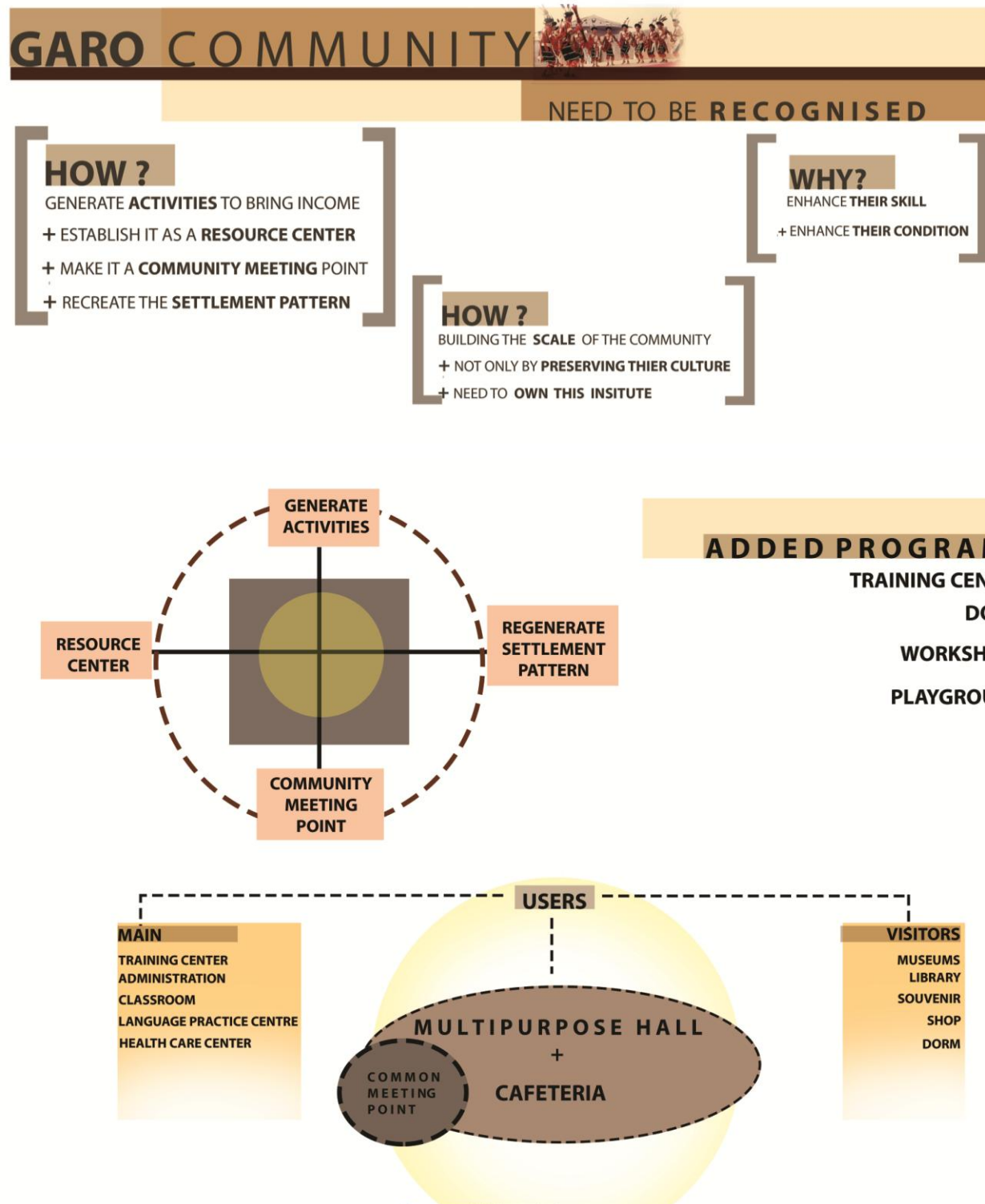
Garos believe in natural world, the presence of sun, moon, stars, thunder, rain. Main god has created the whole world who controls the small gods.

Other than that garo woman controls the all households activities. They together build their house. They have been using local materials previously, such as bamboo. Though now that have moved on to more permanent materials.

Basically when they migrated they brought new materials, construction techniques, space organization and new architecture style.

The studies show that garo village had a basic simple layout, which consists of having a kachari (meeting room for all), a multiple houses and a nokpanthi which is the dorm for young boys. The main space of the village udes to be the central performing space, which used o be the most active place where they used to be unite altogether.





Dia 4 : Conceptual diagram of the project (source: Mostofa,2016)

EXPERIENCES



NO BELONGINGESS
PRIVACY
+ VISUAL CONNECTION



NATURE
GREEN PATCHES
LANDSCAPE BARRIER



HUMANITY
UNITY THROUGH MY RELIGION



HOSPITALITY / WELCOMING
DESIGN OF A MORE WELCOMING
ENTRANCE

GARO PEOPLE



" GAROS ARE THE ORIGINAL FORESTDWELLERS IN EAST REGION OF BANGLADESH "

GARO LEADER: NOKMONG

JAMSARENG: A ROOM FOR STORING SEASONAL FRUITS AND GRAINS / ALSO USED FOR SLEEPING

GARO GIRLS: NORMIL

YOUNGEST DAUGHTER: NOKNA

GARO MEN: PANTE

YOUNGEST SON IN LAW: NOKROM



WANGALA: CELEBRATED IN OCTOBER AND NOVEMBER

MEN :

-PERFORM HARDWORKS LIKE PLOUGHING, CUTTING, BIG TREESDIGGING THE SOIL, PREPARATION OF THE LAND FOR PLANTING AND ALLWORKS IN CASE OF RICE CULTIVATION.

-FISHING

WOMEN :

-HOUSEHOLD.

-MANAGING HOMEMADE.

-HELPING IN AGRICULTURE FIELD IN SOWING, SEEDING AND HARVESTING.

-FUELWOOD COLLECTION FROM FOREST FOR DAILY COOKING .

THE ACTIVITY OF GARO MEN AND WOMEN

50 % - DEPENDENT ON SHIFTING CULTIVATION
50 % - USE OF PART OF JHUM PLOT PERMANENTLY FOR A AREACA NUT , ORANGES , TEA, PINEAPPLES

WOMEN USED TO DO HANDICRAFTS OR OTHER WORKS IN THEIR LEISURE TIME :

-WEAVE BASKET AND UTENSILS, PORTABLE BASKETS FOR POTTING CLOTHS
-MADE OF BAMBOO AND CANES

WEAVING :



HANDICRAFTS:

" ARE WELL KNOWN IN NORTH-EAST INDIA FOR THEIR HANDICRAFTS AND TEXTILES "

ITEMS:

CHARI (CHOROKO , WINNOWNING NET (GITCHERBA) , BAMBOO SPOON, RICE STICK , BAMBOO BASKET, HOUSEHOLD FURNITURE , MAT (JAM) , CONICAL BASKET (KERA OMONG , WINNOWNING FAN (RUAN)

THEY HAVE **SPECIAL AND PARTICULAR RELATION AND DEPENDANCY ON FOREST FOR THEIR DAILY NEEDS :**

THE MAIN COMPONENTS :

TREES

CROP

LIVESTOCK

HOMEGARDEN PLANTS :

AKASHMONI

ECULYPTUS

GAMAR

JURUL

JIGA

MAHAGONI

SEOUN

RAINTREE

SILKOROI

SISSO

MEDICAL PLANTS :

HOMEGARDEN

AMLOKI

ARJUN

BOHERA

DURBA UHASH

HORITAKI

SHATAMULI

TULSI

THANKUNI

PARTICAL

ARJUN

BOSHERA

HORITAKI

NEEM:

FEVER , STOMACH , TROUBLE AND MALINA

TENTUL

TIMBER SPECIES:

AKASHMONI

ECULYPTUS

GAMAR

JURUL

JIGA

MAHAGONI

SEOUN

RAINTREE

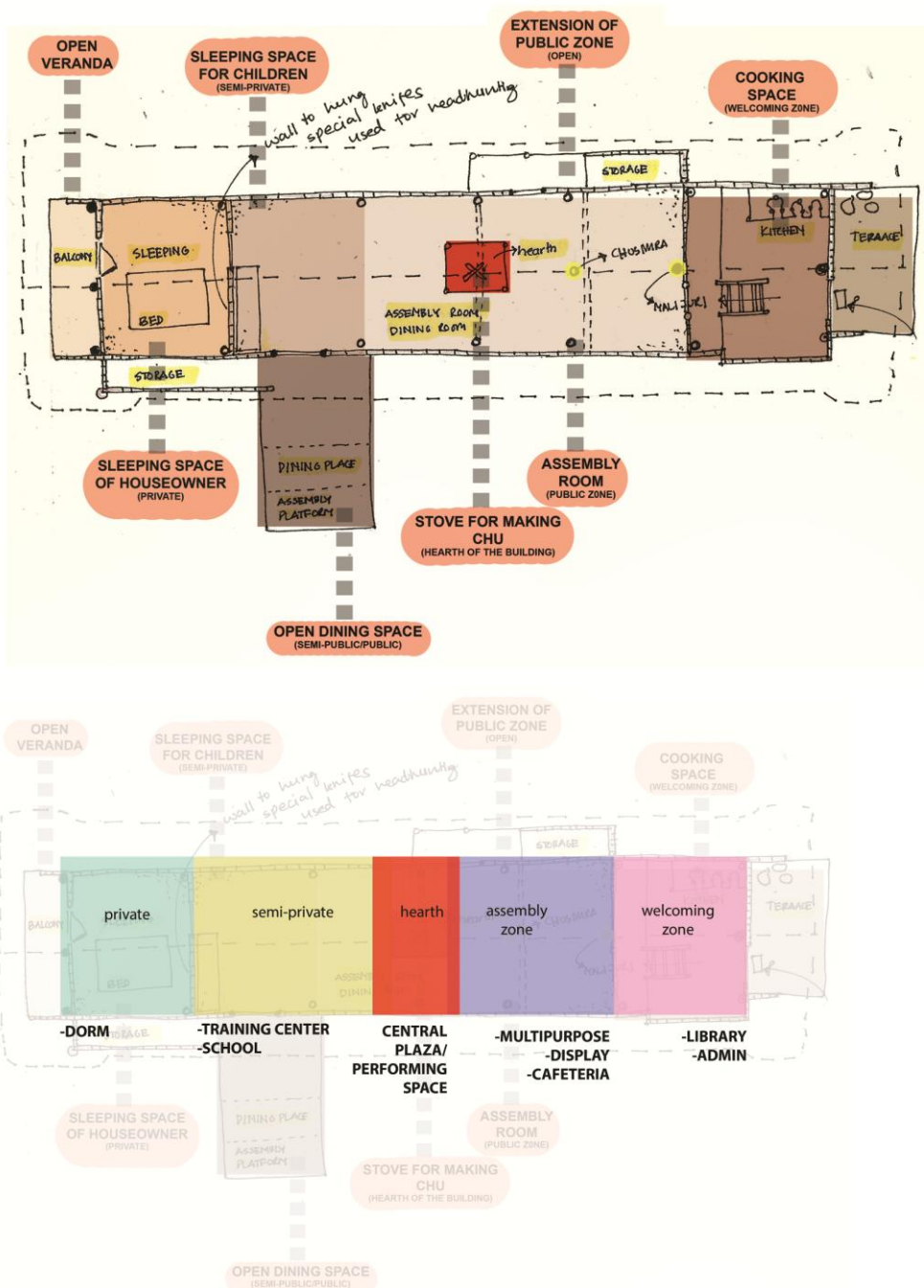
SILKOROI

SISSO

Dia 5 : Detail studies of their activities (source: Mostofa,2016)

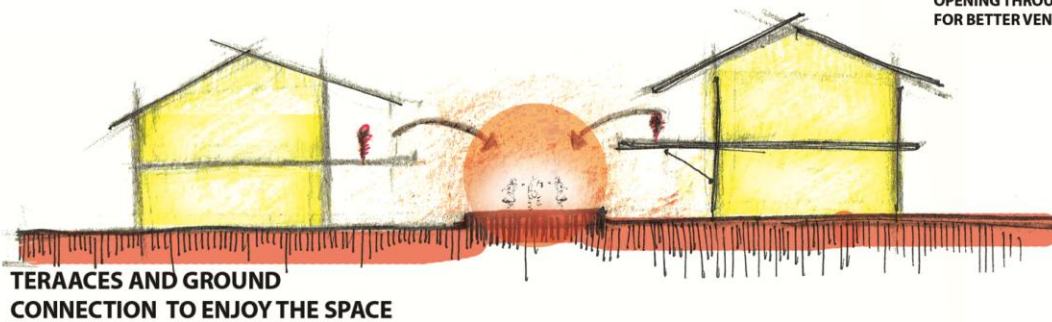
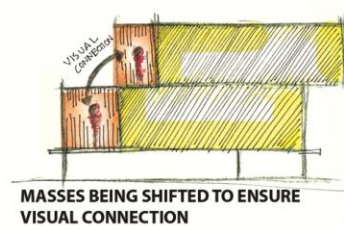
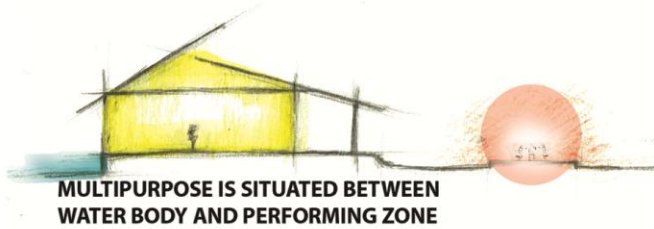
6.4 Design development

The first initial concept was to derive the spaces or zoning would come from their headman's house. Thus the zoning was created as such...

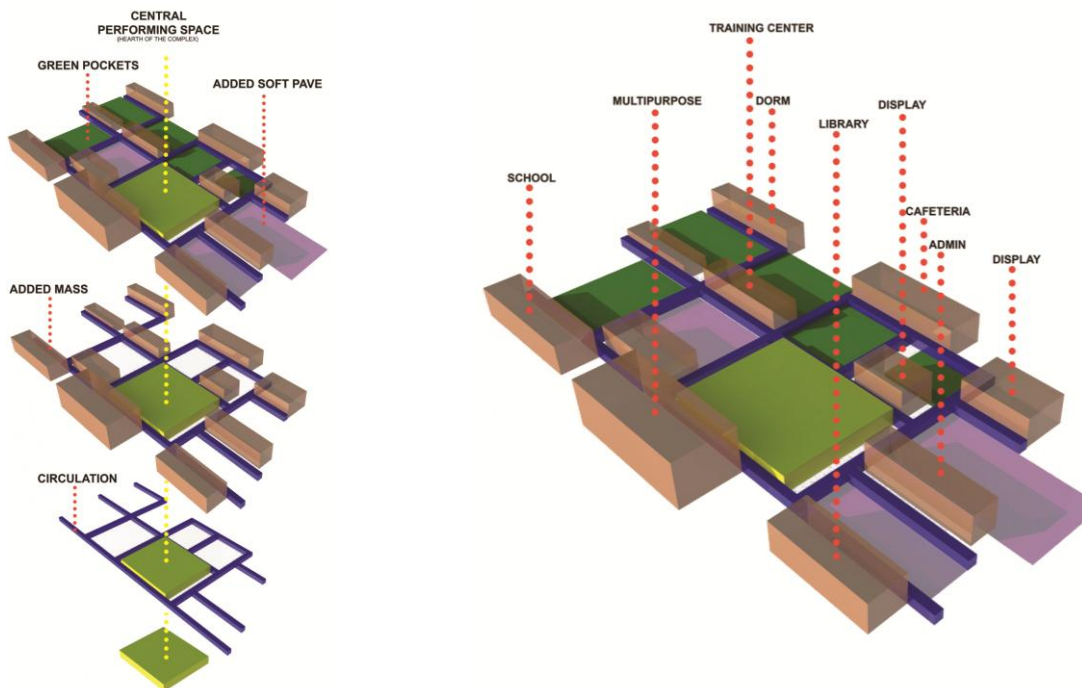


Dia 6 : Concept and zoning (source: Mostofa,2016)

DESIGN CONSIDERATIONS



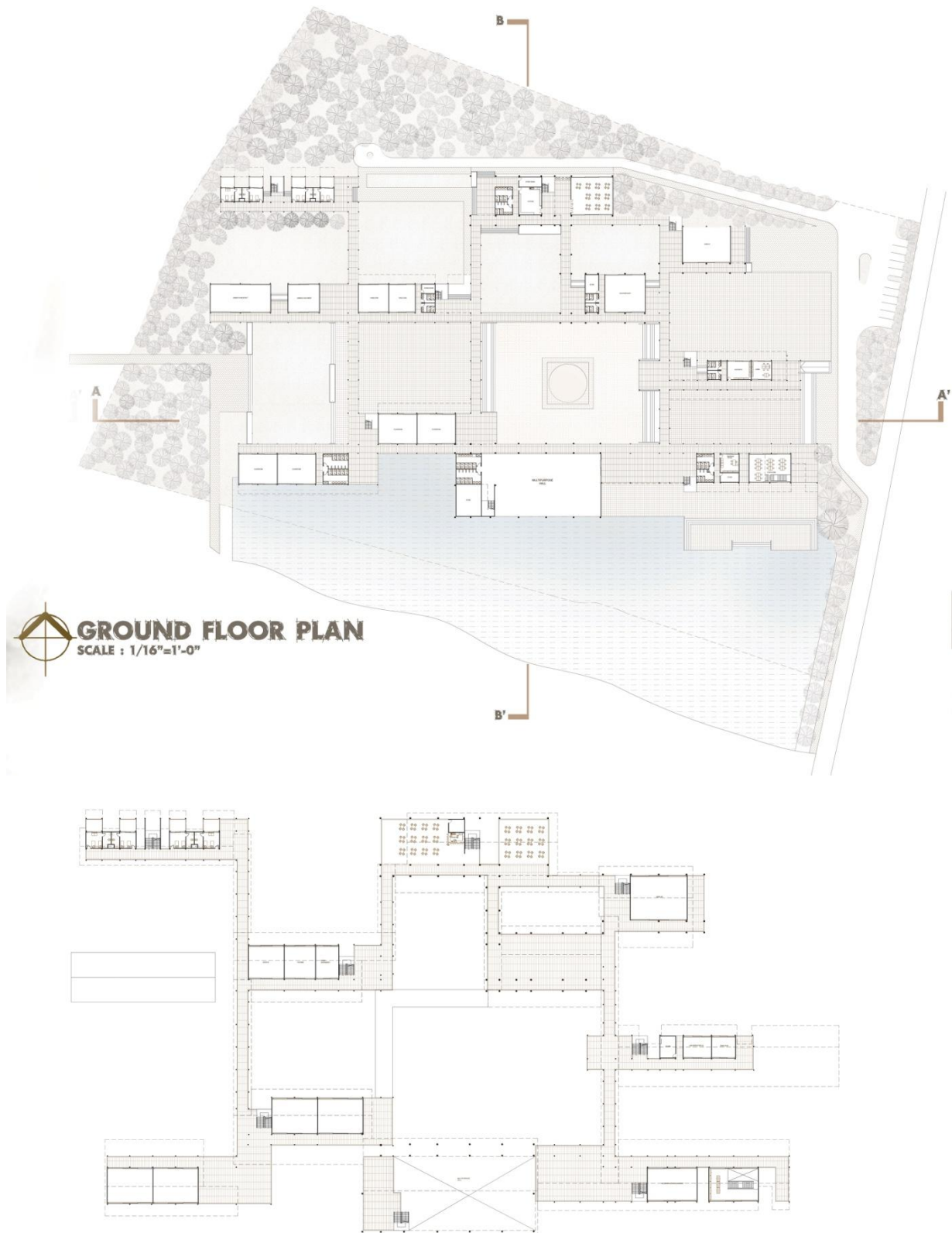
Dia 7 : Design consideration (source: Mostofa,2016)



Dia 8 : form derivation (source: Mostofa,2016)

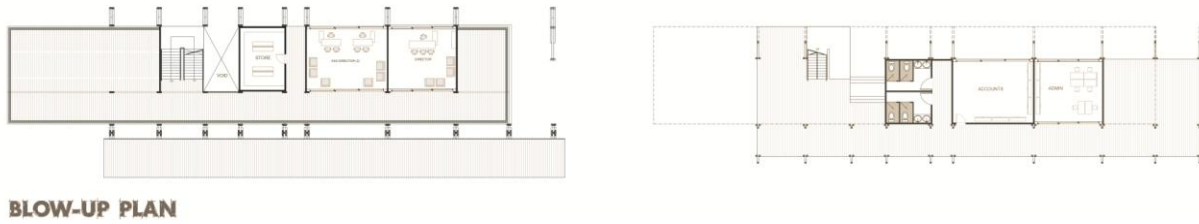


Dia 9 : Masterplan (source: Mostofa,2016)

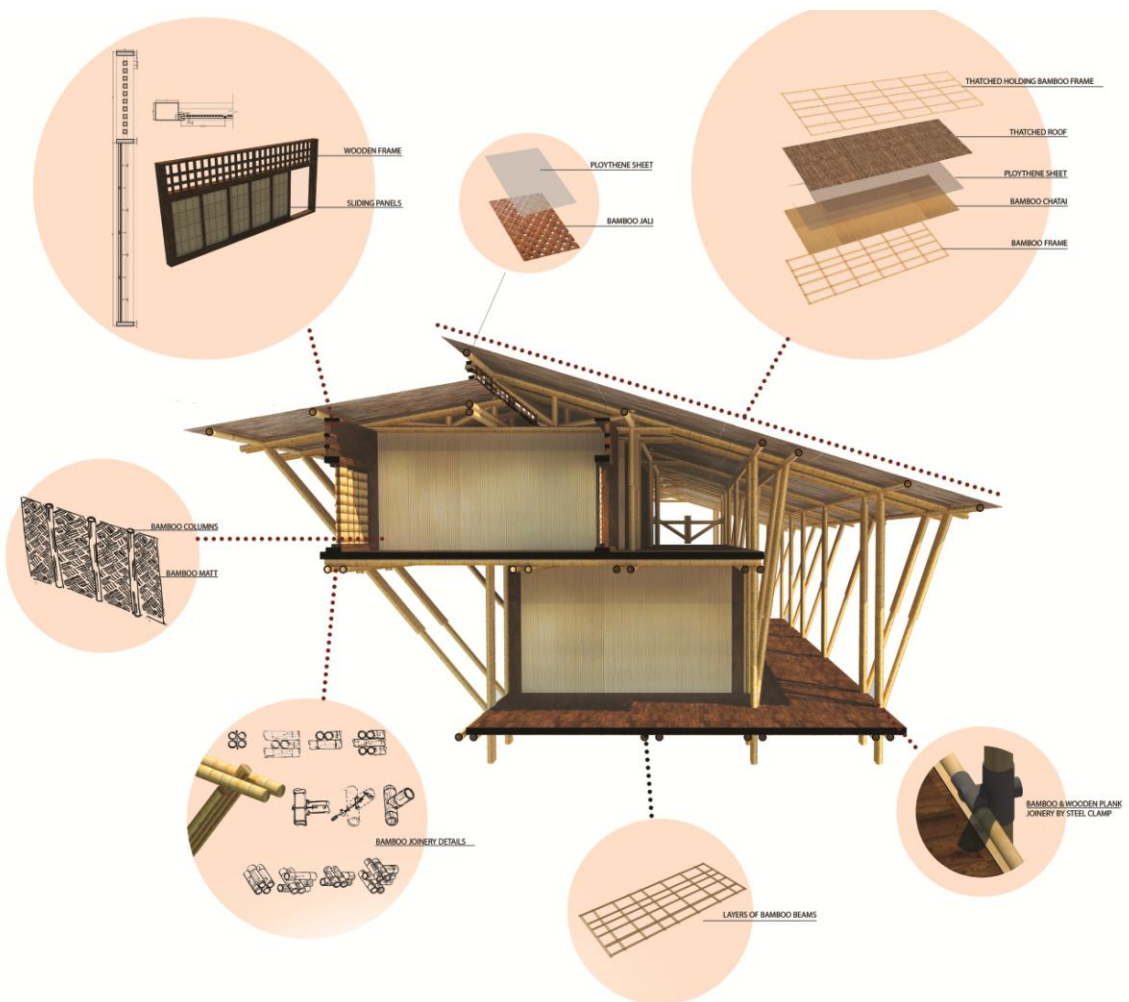


Dia 10: Ground floor plan and First floor plan (source: Mostofa,2016)

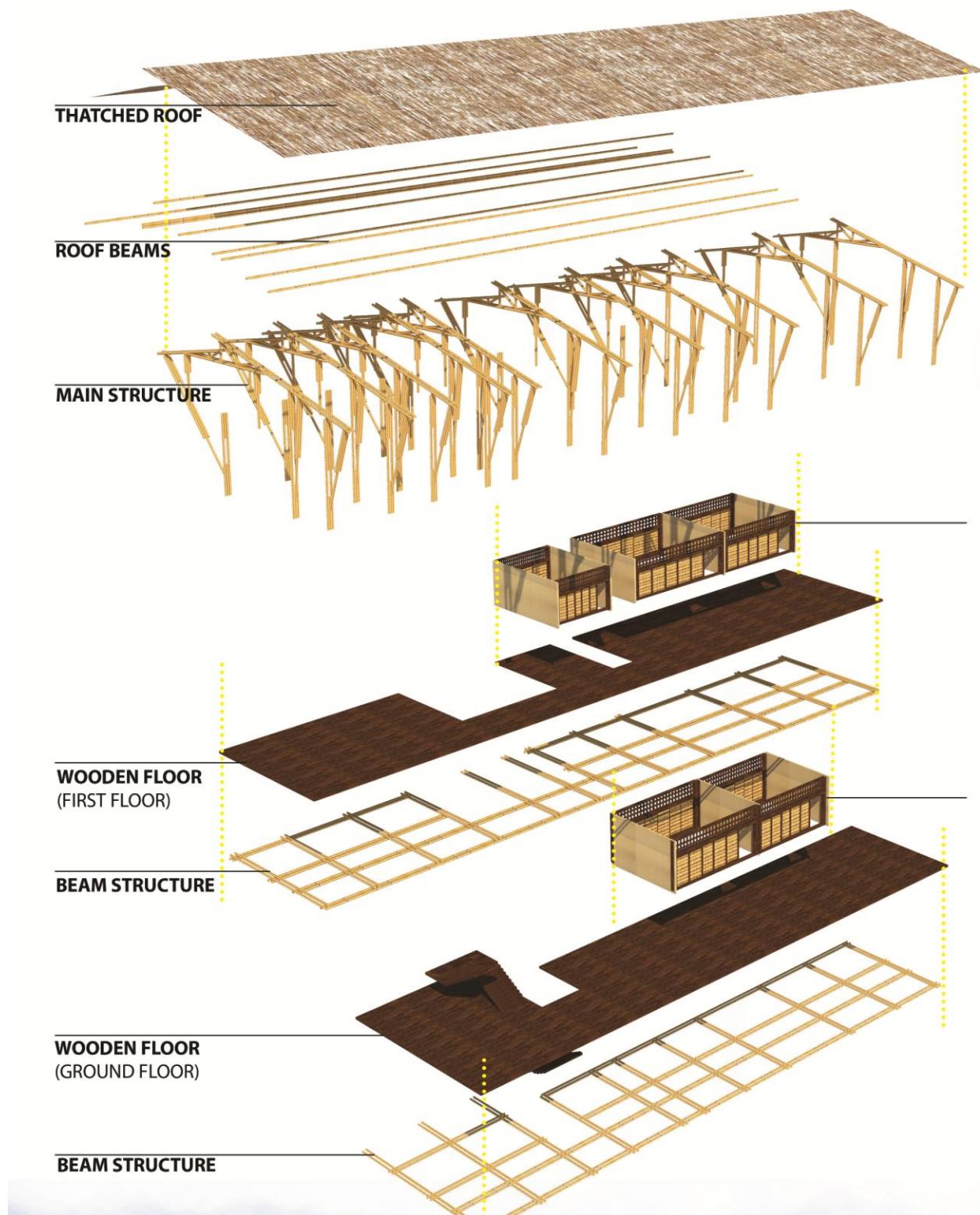




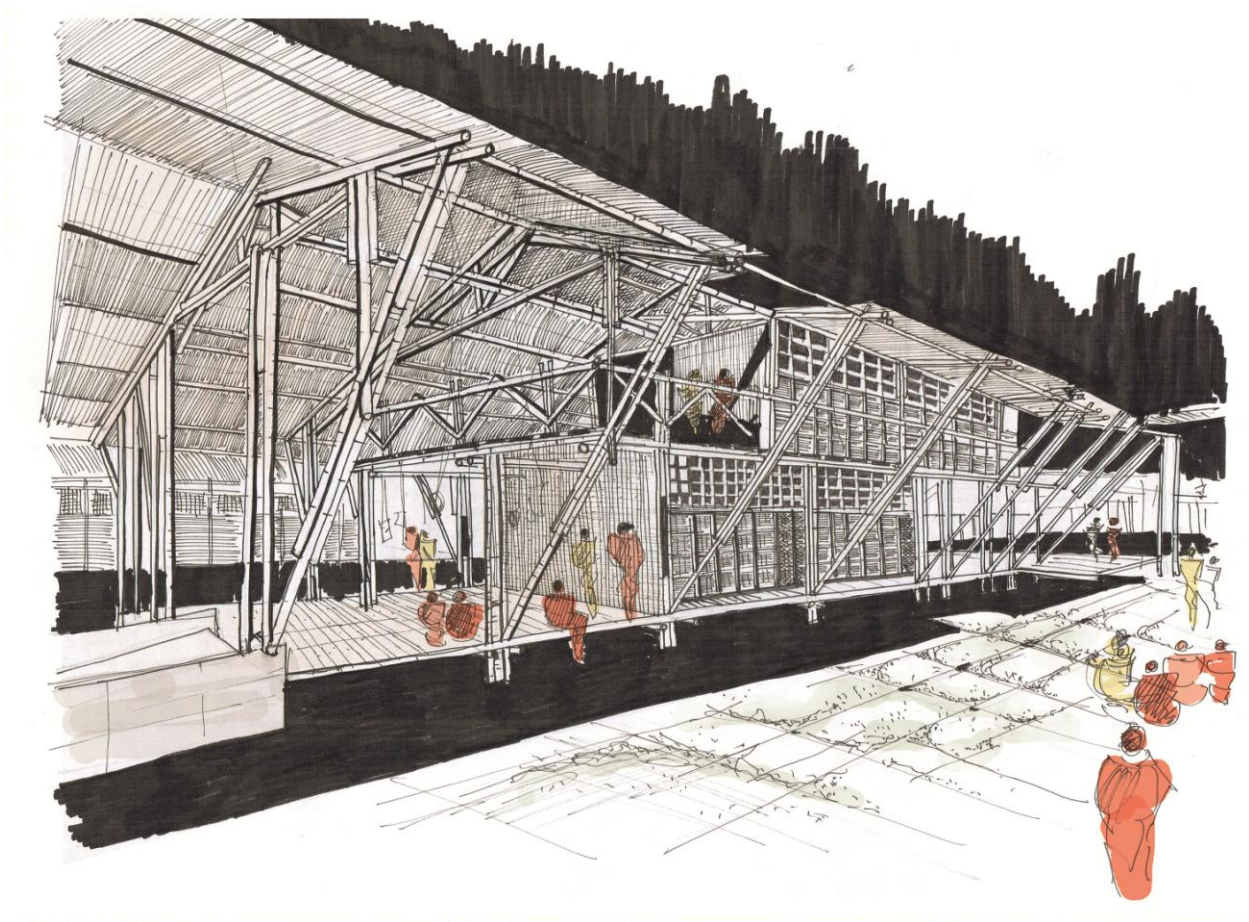
Dia 11: Blowup plans (source: Mostofa,2016)



Dia 12: One point perspective and details (source: Mostofa,2016)



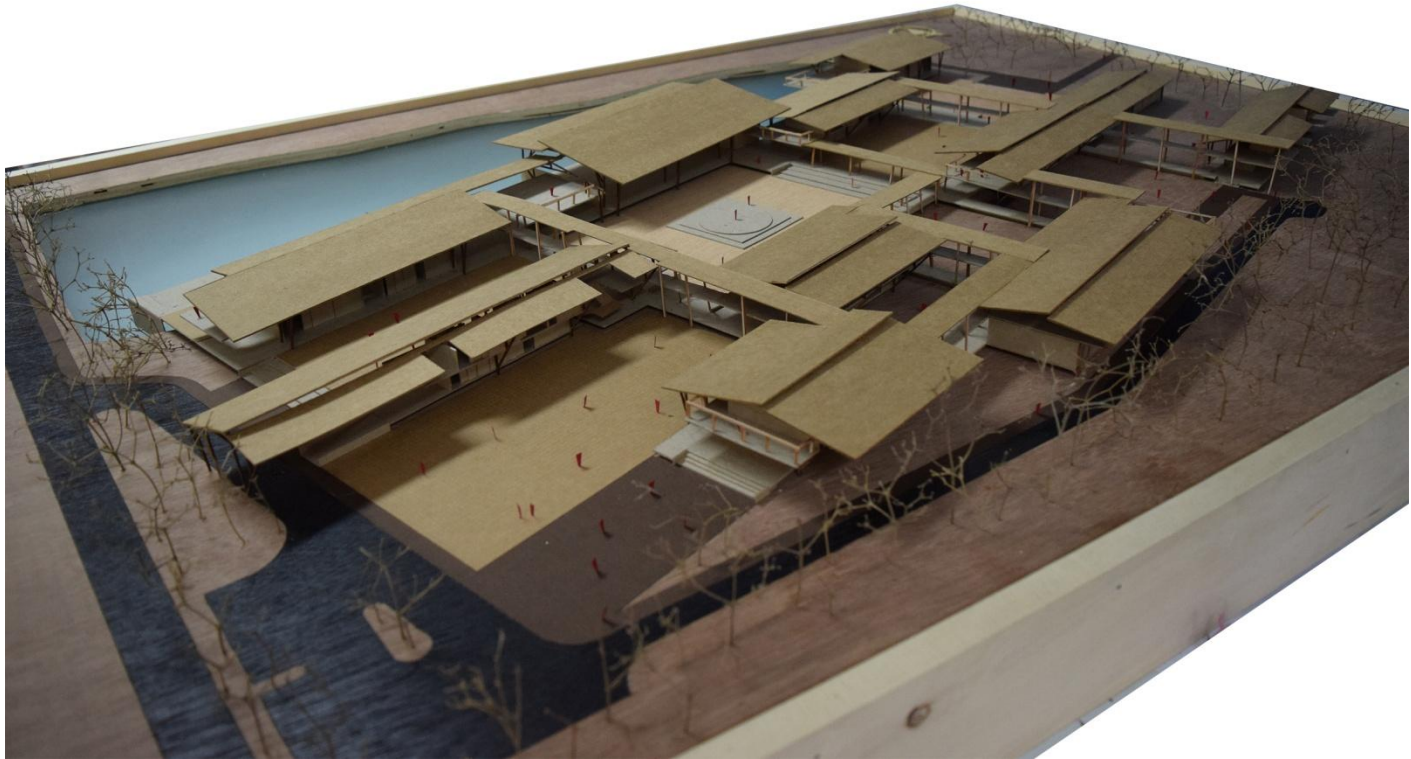
Dia 13: Structural axono (source: Mostofa,2016)

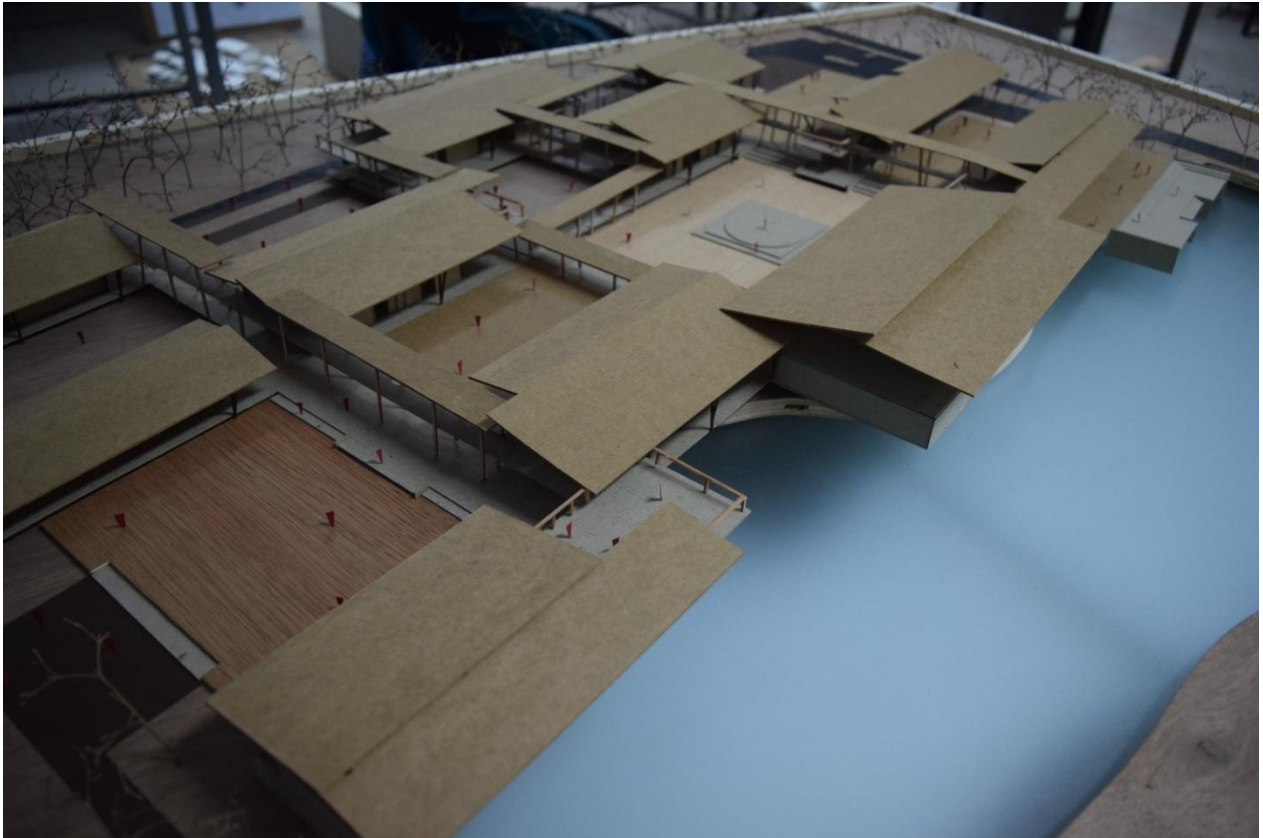






Dia 14: Perspective views of the project(source: Mostofa,2016)





Dia 15: Model images (source: Mostofa,2016)

CONCLUSION

The aim of the project is to start a journey by making it a meeting point so that the whole community can be united altogether. This is just not for the Garo people, but an example for all of us. It is an effort to make them realize their potential and make us realize that how these people have survived and merged with the nature and respected surrounding.

With the help of local technique and knowledge how a tribe can promote their culture, religion and lifestyle. This is a struggle towards attaining self esteem and improvising life using very unique natural way. As an architect, the design intervention is very little, it will all come spontaneously from the people

But an architect's roles from a neutral point of view I feel, to give something to the society which they can be proud of, and work with the people, understand their demand and need, and then taking a decision for the grater welfare. The process of this project was more important than the end result, because the study focused intensely on the positive achievements and their lifestyle. And then the design came as the outcome of this process. But the design focused on their cultural system which will promote local tourism, and training and educational part will enhance their wisdom and knowledge, removing many superstitions they have and also it will bring economic benefits. The institute will be an inspiration for them and help them to retain their identity and move forward.

In the end I would like to quote one of them told me ,

“wheather I follow sangasarek or Christianity, at the end of the day I am a Bangladesh”

So let them be the unique part of our nation but most importantly a part of our nation.

BIBLOGRPAHY

1. <http://www.willylogan.com/?p=507>
2. <http://www.encyclopedia.com/doc/1G2-3458000484.html>
3. <http://inhabitat.com/jean-marie-tjibaou-cultural-center-inspired-by-native-architecture/tjibaou-cultural-center-8/>
4. <http://en.climate-data.org/location/969985/>
5. <http://www.willylogan.com/?p=507>
6. <http://www.importantindia.com/10092/garo-tribes/>
7. <http://inhabitat.com/jean-marie-tjibaou-cultural-center-inspired-by-native-architecture/tjibaou-cultural-center-4/>

8. <http://www.architravel.com/architravel/building/jean-marie-tjibaou-cultural-center/>
9. https://joshuaproject.net/people_groups/11826/BG
10. <http://www.encyclopedia.com/doc/1G2-3458000484.html>
11. <http://westgarohills.gov.in/history.html>
12. <http://www.mapsofindia.com/meghalaya/history.html>
13. The family structure and cultural practices of Garo community in Bangladesh: An overview
(Md. Abdul Jalil, Mohammad Ali Oakkas)
14. https://www.google.com.bd/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj-7SGrZXOAhUMLY8KHUvLCRkQFggcMAA&url=http%3A%2F%2Fdspace.bracu.ac.bd%2Fhandle%2F10361%2F3036&usq=AFOjCNEOMG6M2Q0_WpCC5MeR41BprLZrVQ&sig2=0LOAumw_n_a9mqShWi6_jrQ (saifee,2013)
15. https://www.google.com.bd/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwj-7SGrZXOAhWHMY8KHY7PBI4QFggcMAA&url=http%3A%2F%2Fdspace.bracu.ac.bd%2Fjsui%2Fbitstream%2F10361%2F2987%2F1%2F08108002.pdf&usq=AFOjCNF-UN0SU8gbjMfxYzNVgPKYnbVI6uw&sig2=s9K6pw08iXRbH_Z11Qk1g&bvm=bv.128153897,d.c2l (fahmee,2013)
16. <http://southwestgarohills.gov.in/peopleculture.html>
17. <http://www.newindianexpress.com/nation/article1404565.ece>
18. A Case Study On The Garo Ethnic People Of The Sal (Shorea Robusta) Forests In Bangladesh (M.Masum)
http://www.academia.edu/3615158/A_Case_Study_On_The_Garo_Ethnic_People_Of_The_Sal_Shorea_Robusta_Forests_In_Bangladesh
19. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2173614
20. <http://southgarohills.gov.in/home/Profile/Culture.html>
21. Abirbhab (Shilpa-shangskriti and adhibashi bishayak kagoj) (Jornesh Chiran,2013) 1st edition.
22. Abirbhab (Shilpa-shangskriti and adhibashi bishayak kagoj) (Jornesh Chiran,2013) 2nd edition.
23. Abirbhab (Shilpa-shangskriti and adhibashi bishayak kagoj) (Jornesh Chiran,2013) 3rd edition.

