

**COMMUNITY BASED VISITOR'S FACILITIES IN ALIKADAM, BANDARBAN**

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## Abstract

The project explores the role of architecture in educating according to the principles of eco-tourism in rural Bangladesh. The project proposes to use architecture as a way of economically supporting a struggling hilly area located in the heart of Alikadam in Bandarban. The project aims to promote conservation and eco-tourism in the region. The main purpose of this project is to revitalize an industry which has been largely ignoring the social and cultural values of the surrounding region by limiting the interaction between the tourists and the locals. I aim to successfully incorporate an eco-resort along with a working plantation, thereby introducing the guests to the traditional methods and ways of living and farming in this region.

In the past, hotel groups like the Radisson have acquired large blocks of land to create their five star resorts. These resorts are completely self-contained with minimal interaction with the local environment. This type of development detracts from providing its guests the true essence of rural Bangladesh .

Community-based development is a form of development that takes place within the community, emphasizes **maximum participation of community** members in its design and implementation, is ongoing, meets **real needs**, and is basically **self-reliant**. To achieve this, the community needs to have a structure, and persons trained in appropriate methods of implementation. Usually, community-based development will be **small-scale, low-cost, and use simple technologies**. The model must be equally available to all communities, irrespective of their location, denomination or means, and provide for all members of the community according to their needs

There are different ethnic groups reside in the Chittagong Hill Tracts(CHT) speaking different languages , practicing different religions, and following different cultural rules. Living mostly in the hills of Banderban, the “Mru”; are one of these ethnic groups, facing challenges of discrimination not only from the Bangali people, but also from other tribes. They are very isolated from other tribes, because of their topographical location and some other problems causing them utmost poverty. The “Mru” tribe is currently aspiring to become socio-economically solvent. They are greatly influenced by the development of their neighboring tribes and local Bengalis, and their desires come at the expense of their rich culture, language, traditions, customs and religion. This community is at a transitional point and there is a great chance that their aspiration might derail them. What they fail to realize is that their own culture, language and religion can fulfill their aspirations if they are nurtured properly. For this a descriptive research method and field study are done with the “Mru” people and organizations (N.G.O.), professionals dealing with them and a project based on a bottom up approach has been proposed. This project aims to give the “Mru” tribe a direction in which they might evolve without forgetting their roots. Moreover, they have already been able to move forward religiously by getting rid of certain taboos, introducing texts and preventing other religious influences. Their development is engraved within their own culture and the possibilities are immense only if they can realize it before it is too late. The juxtaposition of both knowledge and creativity of this community with the little help of training and awareness can lead them to build an ideal community where they will not have the feeling of isolation ,social negligence and influence of other society, but they will have the courage to promote themselves in tems of their unique culture, language and religion. I would like to design a visitor’s facilities which

gives the guests a real sense of what rural hilly Bangladesh is really like. The guests will have a real interaction with the day to day running of a working plantation and with the locals employed on the farm. They will have the ability to interact and even take part in the operations at the plantation. This may include activities like helping with the harvesting of vegetables or fruits plants. Their experience of this area will be different to anything the average tourist to India might encounter. And awareness can lead them to build an ideal community where they will not have the feeling of isolation ,social negligence and influence of other society, but they will have the courage to promote themselves in terms of their unique culture, language and religion.

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## List of Abbreviation

CoP	-----	Communities of Practice
FIC	-----	Fellowship for Intentional Communities
GEN	-----	Global Ecovillage Network
IEA	-----	International Energy Agency
LPP	-----	Legitimate Peripheral Participation
SBC	-----	Sustainable Building and Construction
SCOT	-----	Social Construction of Technology
SD	-----	Sustainable Development
STS	-----	Science, Technology, Society
UNEP	-----	United Nations Environment Programme
WCED	-----	World Commission on Environment and Development
WTTC	-----	World Travel & Tourism Council,
TIES	-----	The International Ecotourism Society



## CHAPTER 1

### BACKGROUND OF THIS PROJECT

#### PROJECT BRIEF:

The project explores the role of architecture in educating according to the principles of eco-tourism in rural Bangladesh. The project proposes to use architecture as a way of economically supporting a struggling hilly area located in the heart of the Alikadamcave in Bandarban. The project aims to promote conservation and eco-tourism in the region. Ecotourism is regarded as the environment based tourism and has attracted tourists a great deal all around the world. As the world's population becomes increasingly urbanized, the demand for environment-friendly, serene and unique tourist attractions continue to grow rapidly. In addition to providing guests with the leisure-resort product an eco resort should also accomplish to provide a green management programme of the resort, conservation programmes and sustainable management practices. It should have a particular focus on best practice of environmental management, educational and an interpretive component. Defining "Ecotourism" has proven to be a difficult task given all the different players attempting to define it. People tend to define things in terms that are beneficial to themselves, hence the variety of definitions. A very small minority ethnic group "Mru" , among the thirteen ethnic groups of CHT, living scattered in the hills of Bandarban. The Mrus (Murang) are a tribe which formerly dwell in the Arakan hill, they now live principally to the west of the river sangu and along the Matamuhori river within Chittagong Hill Tracts. Mru are also Known as Mro and Murong. Chakmas and Marmas call them Lengta, Kuki or Langye or wild/primitive people while some people of the plains designate them as Murongs. Despite, having such rich culture and heritage, they are facing discriminations among their tribes. Their socially isolated living pattern and superstitions are driving them into poverty. These people are lacking behind in terms of education, socio-economic condition. But now, Understandably a wind of change is blowing in the CHT for many reasons, the 1997 Peace Agreement, the development activities, the change in government, the lessening of ethnic tensions, the new roads, etc have transformed the CHT. These changes have also affected the Mru community, but it is a slow process and might not have a positive impact, as other tribes like Chakma or Marma are more forthcoming and confidently dealing with situations. This change is not intensively for each tribe, it is dedicated to all the indigenous people in CHT. Where each tribe has different lifestyle, culture, religion and language. Already, Mrus are suffering from their own problem, as the ideology that their GOD "TORAI" did not give them any instruction, any written language and they were excluded and cursed to be poor for some reason, and due to lack of communication they have remained like this. And also they have continuously been deprived through battles with other tribes and now by armies. All the other tribes consider Mrus to be of lower caste, and led them to complete isolation. Though the scenario has changed a little bit, but still they are very poor and their migratory instinct prevented them from progress in daily life, due to having larger population; now it has been difficult to move to places. And a new scenario has also been emerged. Which is the neighboring tribes of MRU are involved in economic transaction with local Bengali settlers, which is giving them easy money and for that many things are being changed, the way of their housing ( tin, brick are being introduced), causing them lose their unique culture in certain extent. The "Mru" tribe is currently aspiring to become socio-economically solvent. They are influenced by the development of their neighboring tribes and local Bengalis. This community is at a transitional point and there is a great chance that their aspiration might derail them.

## Project introduction:

My selected site is in Chittagong, bandaraban, alikadam. **Ali Kadam** (Bengali: আলিকদম) is an Upazila of Bandarban District in the Division of Chittagong, Bangladesh. Ali Kadam is located at 21.6667°N 92.3056°E . It has 4923 units of house hold and total area 885.78 km<sup>2</sup>. As of the 1991 Bangladesh census, Ali Kadam has a population of 24782. Males constitute 55.21% of the population, and females 44.79%. This Upazila's eighteen up population is 13312. Ali Kadam has an average literacy rate of 20.7% (7+ years), and the national average of 32.4% literate. The religion of Ali Kadam have Muslim 85.32%, Buddhist 13.68%, Hindu 0.77%, others 0.23%. It is the first Muslim majority population in this upazila. But Buddhist is the second religion in this upazila. Religious institutions Mosque 680, Pagoda 65, Buddhist temple 55 and Hindu temple 8. Alikadam has 2 Unions, 6 Mauzas and 148 villages. Alikadam is a popular hiking destination among tourists for the tunnels in the mountains known as "AlirGuha" or "Ali's Tunnels". Tourists are expected to face slippery and muddy terrains for the hike to the tunnels. The steep

mountains in both the sides during the hike and green vegetation with running water from the mountain streams give it a fresh look. Winter is the best season to travel because the mountain streams and rivers are dangerous during Monsoon. I want to develop a community (para) in alikadam for tourism part in ecological way.

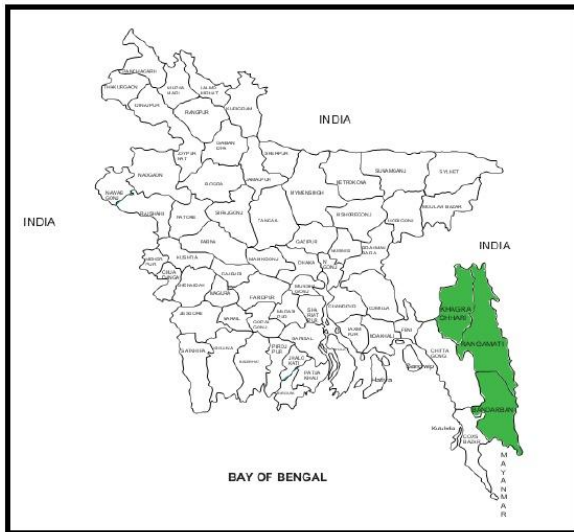


Fig 01: MAP OF BANGLADESH

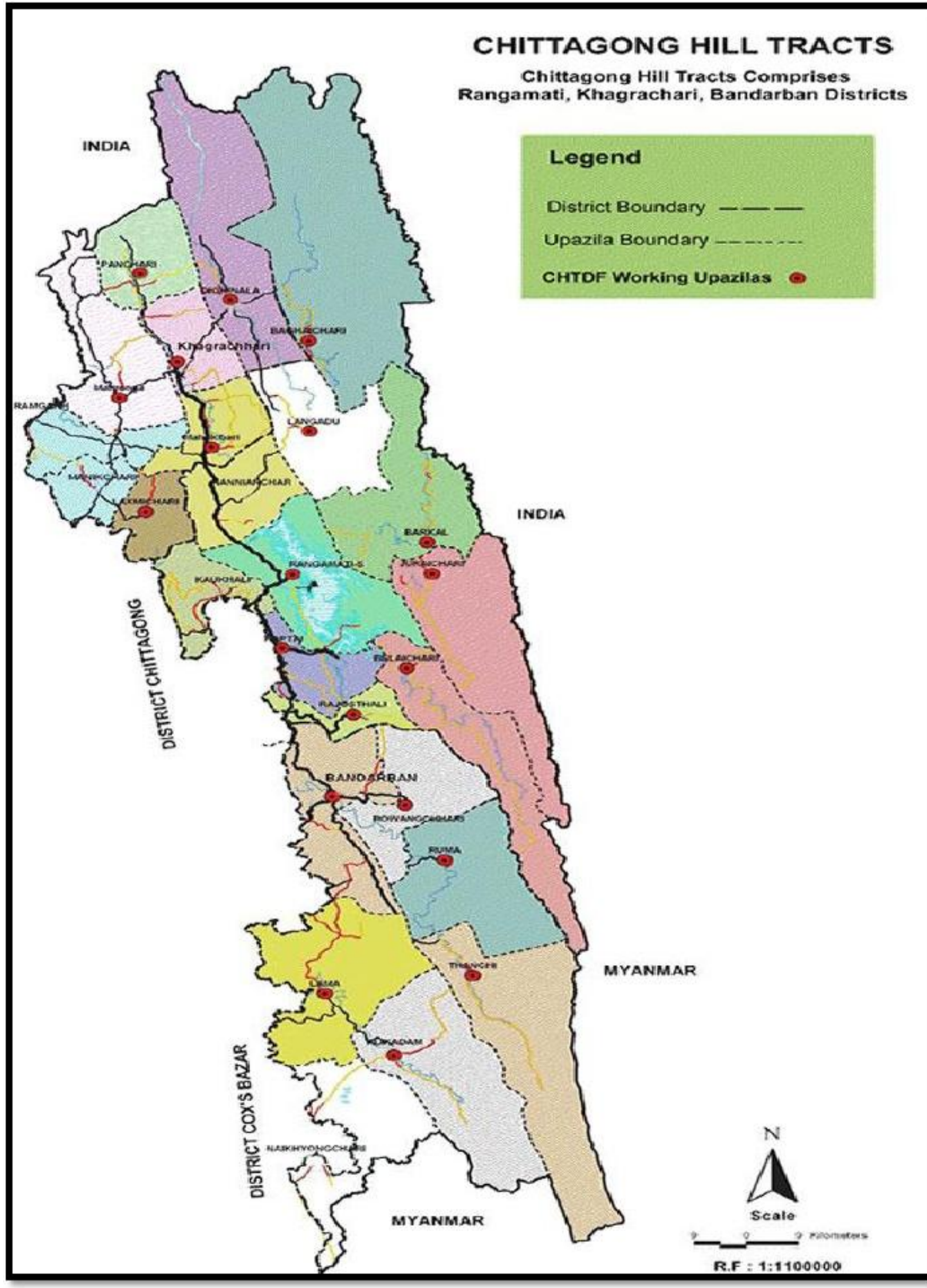


FIG 2: map of Chittagong hill track



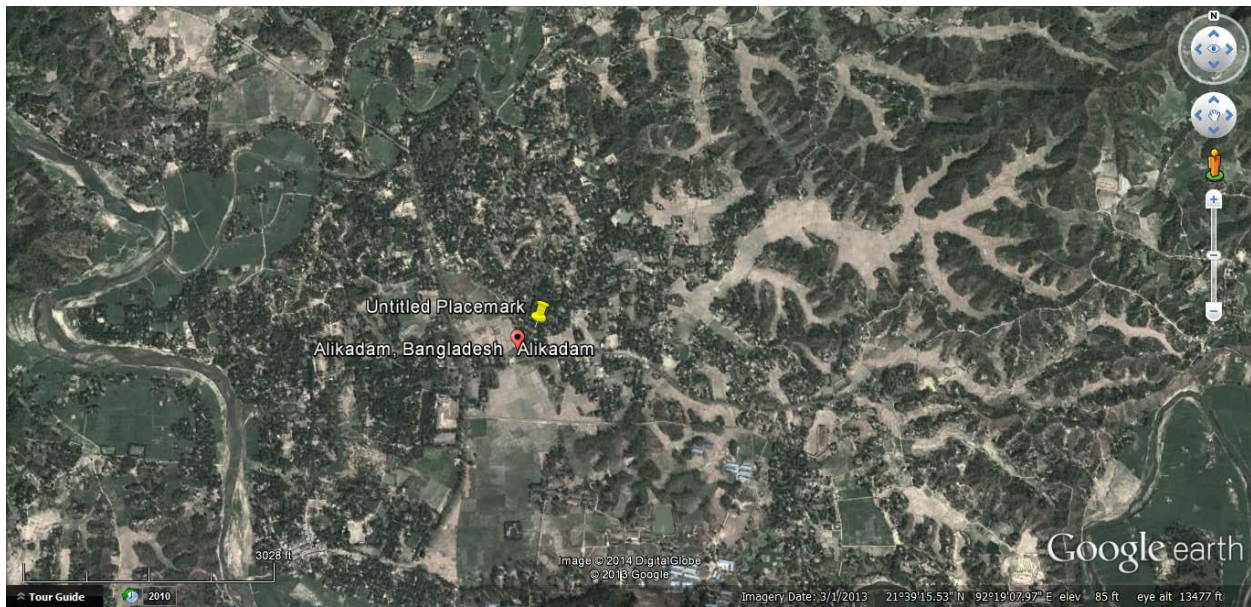


Figure 3: satellite image of BANDARBAN, ALIKADAM

### Aim and objectives of the project

The thought of facilitate these ethnic people as well, the awareness of the mainstream society evoked a recommendation or proposal in my mind. The proposal which is already mentioned above, “community based planning”. I showed in my seminar I report, a case study of khagrachari Buddhist monastery, which is helping the minority to be educated in their very own language and culture and also it is providing the primary education which mandatory for all citizens of Bangladesh. So, this place creates comfort and enhance their learning process as it is their own people, language, place, culture and their very own lifestyle. The objective of this project is to investigate best practice initiatives of sustainability involved in the successful development and management of ALIKADAM eco-Resort. eco-tourism, and sustainability . Eco-resort, the research is to be conducted in four phases: Phase one includes hands-on research through shadowing in different hotel departments, observation of management practices in Alikadam. interviews conducted with employees, and questionnaires administered to guests; Phase two begins a study of the business and organizational model of Alikadam along with an examination of the critical issues encountered during the start-up phases; Phase three is a SWOT analysis of Alikadam and a market analysis of other properties that compete with the eco-resort; Phase four investigates ecotourism promotions and policies in Alikadam, and examines the different ecocertification practices. Overall this paper strives to provide the background research gathered along with plans for the proposed research to determine the best practice policies of Alikadam There are several critical terms that require defining before proceeding. The first umbrella term is tourism. According to Mathieson and Wall, tourism is loosely defined as “travel outside one’s normal home and workplace, the activities undertaken during the stay and the facilities created to cater for tourist needs,” cited by (Dowling & Fennell, 2003). The World Travel & Tourism Council (WTTTC) works to raise awareness of travel and tourism as one of the world’s largest industries. According to the WTTTC, this industry supports more than 258 million jobs and generates 9.1 percent of the world GDP (WTTTC, World Travel & Tourism Council, 2011). Tourism is not, however a simple industry of tourists and tourism providers. It is a complex sector of the economy that needs to combine the efforts of both the public and private

sectors to develop a balanced industry, meeting the needs of the economy, local and regional authorities, local communities, and business. In the past, tourism was pursued with only shortsighted goals in mind, leading to the poorly planned and developed regions

Eco-tourism boasts hundreds of definitions without a single one which stands out as a definitive example of what the term means. The term ecotourism was first mentioned by Mexican consultant Hector Ceballos - Lascurain in the 1984 edition of *Americas Birds*. His definition first appeared in the literature in 1987 in a paper entitled "The future of ecotourism". According to Hector Ceballos – Lascurain as cited by (Weaver D. , 2006), ecotourism is "traveling to relatively undisturbed or uncontaminated natural areas with the specific object of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural aspects (both past and present) found in these areas." However this definition says nothing about "avoiding resource degradation, having positive impacts on the flora of fauna,

optimizing economic impacts or benefits, and/or enhancing the visitors' experience or levels of satisfaction" (Weaver D. , 2006). These ideological attributes only serve to obscure rather than clarify the term. A later definition by of ecotourism David A. Fennel works to incorporate these specifics and defines the term as a "sustainable form of natural resource-based tourism that

focuses primarily on experiencing and learning about nature, and which is ethically managed to be low-impact, non-consumptive and locally oriented (control, benefits and scale). It typically occurs in natural areas, and should contribute to the conservation or preservation of such areas" (Fennel, 1999).

Today eco-tourism as it applies to an eco-resort is heavily dependent upon the situational dynamics and setting upon which it is applied. Eco-tourists are often rated on a hard to soft scale

and as such an eco-resort will model itself in such a fashion to attract a specific segment.

According to Weaver, hard eco-tourists have the following characteristic (Weaver D. , 2001):

1. Biocentric
2. Have a deep commitment to environmental issues
3. Believe activities should enhance resources
4. Are desirous of a deep, meaningful interaction with nature
5. Prefer small groups and few amenities

Weaver then defines soft eco-tourists with the following characteristics:

1. Anthropocentric
2. possessing a shallow commitment to environmental issues and a steady state attitude
3. desirous of only passive engagement with nature
4. preferring large groups and numerous amenities
5. these are essentially mass tourists who enjoy tangible contact with nature

Based on the target market, the management and philosophy will change as the owners decide to

pursue hard or soft eco-tourists, thus changing the definition of eco-tourism at the specific property A simple definition of eco-tourism as provided by the International Ecotourism Society (TIES) defines the term as "Responsible travel to natural areas that conserves the environment and improves the well-being of local people" (TIES, The International Ecotourism Society, 2011). The basic principles for eco-tourism activities as outlined by TIES are similar to those outlined by authors such as (Weaver D. , 2001), (Buckley, 1994), and (Dowling & Fennel, 2003) eco-tourism principles provided by TIES (TIES, The International Ecotourism Society,

2011) are:

1. Minimize impact.
2. Build environmental and cultural awareness and respect.
3. Provide positive experiences for both visitors and hosts.
4. Provide direct financial benefits for conservation.
5. Provide financial benefits and empowerment for local people.
6. Raise sensitivity to host countries' political, environmental, and social climate.

The definition for the term sustainability traces its roots back to 1980's, when for the first time the environmental movement began to rise globally, coinciding with the increase of tourists visiting natural areas. the goals of sustainable tourism are:

1. To develop greater awareness and understanding of the significant contributions that tourism can make to the environment and the economy.
2. To promote equity in development.
3. To improve the quality of life of the host community.
4. To provide a high quality of experience for the visitor.
5. To maintain the quality of the environment on which the foregoing objectives depend

### **Aim and objectives of this project:**

The thought of facilities these ethnic people as well the awareness of the mainstream society evoked a recommendation or proposal which is already mentioned above "community based planning" which is helping the minority to be educated in their very own language and culture and also it is providing the primary education which mandatory for all citizens of Bagladesh, so this place create comfort and enhance their learning process as it is their own people,

language, place, culture and their own life style



Fig:4: picture of current scenario

Source: Zerine

Bengali settlers which is giving them easy money for that many things are being changed the way their housing causing them lose their unique culture in certain extent. Their neighborhood tribes and local Bengalis. Bengali settlers, which is giving them easy money and for that many things are being changed, the way of their housing ( tin, brick are being introduced), causing them lose their unique culture in certain extent. The “Mru” tribe is currently aspiring to become socio-economically solvent. They are influenced by the development of their neighboring tribes and local Bengalis. This community is at a transitional point and there is a great chance that their aspiration might derail them. But there are some positive things, that these people have improved their lives spiritually. They did not have text, they had many taboos but a person among them emerged as a prophet and introduced them text of their own and that is how they advanced forward with the help of their own religion . Besides this, MRU people are very hardworking and rich in lumber and hydroelectricity potential. They pride themselves in “self-sufficiency”. They have the most beautiful, creatively and naturally built community houses with no use of artificial techniques. There are opportunities and scopes for them if they get little help. They lack the technology and knowledge to improve their economic condition. So, if they get some help with education ,technical training and social awareness , they might be able to promote their own community with the use of their local wisdom and make it economically “self-sufficient” community. That may help to enrich their culture, lifestyle, language and religion and take these rich assets to furthermore, introducing to the world. Community based development can be started within a small village, which can play as a role model for all the other ethnic communities, inspiring to promote their identities with economic welfare. So if there is a eco resort So people of ALIKADAM can easily continue their very own life style with a proper benefits. The thought of facilitate these ethnic people as well, the awareness of the mainstream society evoked a recommendation or proposal in my mind. The proposal which is already mentioned above, “nature appreciative eco resrot ”. case study alikadamupozilla which is helping the minority to be educated in their very own language and culture and also it is

providing the primary education which mandatory for all citizens of Bangladesh. So, this place creates comfort and enhance their learning process as it is their own people, language, place, culture and their very own lifestyle. So, It shows

- promoting their LANGUAGE, CULTURE and RELIGION can be very effective to groom them and prepare themselves as the true part of the nation
- also it will help them to come out from the social deprivation and discrimination and create their own identity.
- It will actually make the society better if they are well prepared and contribute with their unique culture.
- Maybe this will take a long time, but the process should start for the betterment of our society where we all belong to and it will help the people to be connected with the root.
- It encourage Bangladesh tourist society
- By tourism it will get a popularity
- Backpackers get proper facilities
- And finally people of Alikdam get a chance to work for them

Architecture is a tool with which this idea can be manifested. May be, it will have only one ethnic group (MRU) as a target group. But it will show how the system works for other groups. A community based eco resort space bottom up approached design will have several programs, but the main thing is to prepare them in their own way

- promote their self-sufficiency in every sector (example- socially, economically, educationally) and making way to self realization (of their potential).
- also make the mainstream society aware of them. So it might be a combination of both.
- This project can be environmentally sustainable. Because the basic idea of their lifestyle is to keep the nature as it is.
- they have excellent sense of making their own houses. So their techniques and local material can be used for this project.



I personally think eco- resort are the comfort zones of mine. I am very passionate about my own place, my language, my culture and I feel my culture shows what I am in comfortable place . That is why I came up with this idea, and I passionately feel this is where I can utilize my senses most.

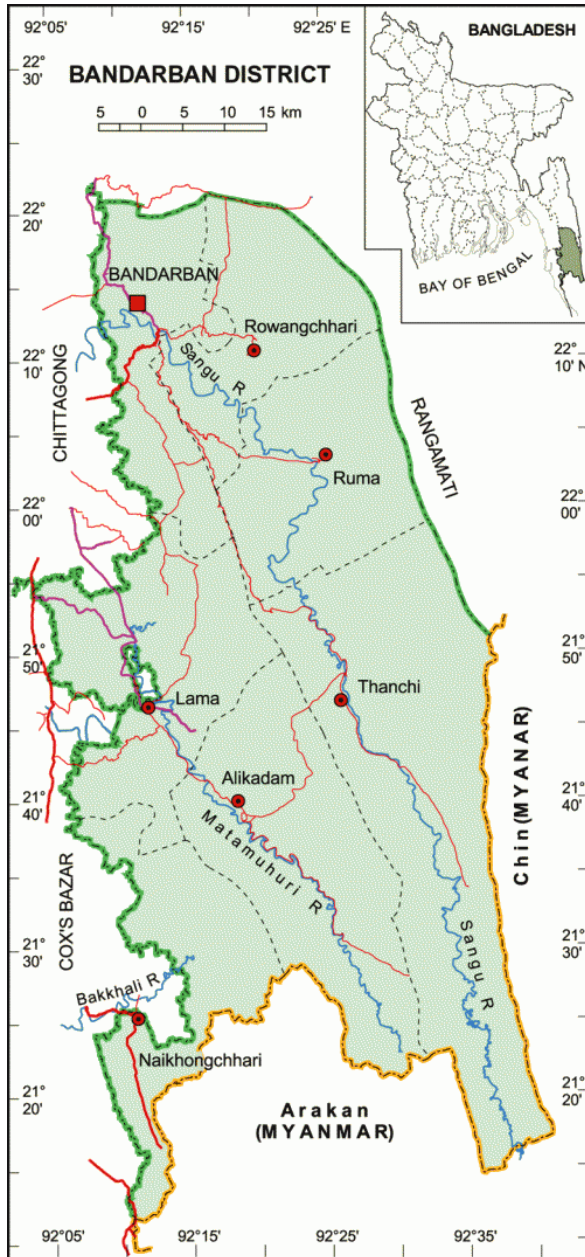


FIG 5: Map of Bandarban

## Given Programme

As the objective of the project, is the development of their community through enrichment of their own culture, religion and language based on eco-resort so it will not be confined in only one type of program, rather, it will have diversified programs. The programs will be categorized by educational aspect, economic aspect and cultural aspect. The programs might include

- A main centre which will represent their spirituality and the other programs will evolve around it
- Educational facilities up to high school with other research & complementary trainings example- agro forestry technique, seasonal fruits and vegetable harvest training, handicraft training.
- A cultural centre, representing Bangladesh's indigenous people's rich culture, history, handicraft industry
- Visitor's information center
- A meditation space
- Dining space
- A campfire space
- Training space for tourist guide
- The resort should be able to accommodate 16 guests in eight - one bedroom villas or rooms.
- The restaurant and kitchen are to be designed in an open plan arrangement to help connect resort guests with the kitchen chefs. Food is an important part of the Indian culture and the restaurant and kitchen conveying the tradition and culture of the area through the dishes that are created. Guests will be encouraged to take up classes with the resort's chefs, serving only locally sourced produce.
- The craft Centre is a building which will house local craftsmen who repair/make bamboo furnishings. Local employment will be encouraged in order to revive a dying craft. Visitors will be able to see and learn how to carve these pieces. These furnishings will be used throughout the resort.
- The cultural Centre will hold language classes and teach the guests about the site and the local culture through guided tours of the island in which guests will have the opportunity to interact with local residents.
- The medical centre is an important addition to the Island as the inhabitants of the island currently have to travel more than 40 minutes via the backwaters for medical care. This is also beneficial to the tourism industry since the waterways in front of the site are extensively used by tour operators.
- The performance hall will be used to showcase the traditional dance forms of Alikadam. These include the *paharinach*. These dances are both culturally and socially significant as the performances depict ancient tales and some of them are associated with annual festivals.

- A veterinary clinic – The plantation owners have expressed interest in bringing farm animals onto the site and also to take care of the animals already farmed on R block
- Seed production farm . All the seeds needed for this are currently being brought in from other Zilla. A new industry could be created with the allocation and proper planning of this space
- Solar and wind power units – The project should look at the possibilities of renewable energy onsite. This idea should be explored to make the project more eco-friendly and the island become self sufficient.

## Chapter –2

### SITE APPRAISAL

Environmental consideration:

Sustainable Practices for an eco resort

It is considered as any form of tourism that does not reduce the availability of resources and does not inhibit future travelers from enjoying the same experience. If the presence of large numbers of tourists disturbs an animal's mating patterns so that there are fewer of that species in the future than that visit was not sustainable. Kayaking school on a free flowing river is an example of sustainable tourism. Big game hunting in Alaska is not.

Eco Resorts are generally more accurately described as “any activity or facility operating in an environmentally friendly fashion”. A lodge with composting toilets, gray water system, and solar powered lighting is probably “green”. There are varying degrees of “greenness”; an awareness of where resources are coming from and where wastes are going is at the heart of the idea.

Best practice begins with sustainability in architecture which is a constantly evolving set of solutions. An important aspect of sustainable architecture is passive climate control, which is healthier and more sustainable than efforts to insulate the building and its occupants from the climate. Passive climate control is built into the architecture and design, and includes open floor plans, cross-ventilation, louvered ceilings, use of shade, ample windows, the use of local materials, water, energy and waste solutions, noise control, and numerous other features.

A probable organizational model for the eco-resort will include functional departments for the owners, general manager, front office, housekeeping, food and beverage, maintenance, HR, accounting, marketing, and tour operators.

- **Energy Management** Energy management solutions include the minimization of the need for energy, increase the efficiency of energy use, and control the supply and recovery of energy where possible. Some of these principles can be implemented through the installation of CFL bulbs, no AC usage, use of natural light, and use clean energy sources.
- **Water management** Simple management solutions include the capture and storage of fresh rainwater, reduced consumption, use grey water in gardens and toilets, prevention of wastage, installation of low-flow water fixtures, installation of low-flushing or composting toilets, and planting of only native and drought resistant plants.
- **Waste and pollution** Some management solutions include reduced packaging, donation of left-over food, recycling of scraps, the use of green cleaning and Maintenance chemicals, reduction use of fuel consuming vehicles, and start-up of waste management programme. These management solutions should be visible to the guests residing in the eco resorts so they have the chance to grasp an idea and at the same time create awareness on sustainable tourism.
- **Material management** The resort designer should aim at reduction of quantities of materials used. The selected materials should be durable and of low and affordable economic value so it can be changed after a course of 2 or one year if confronts adverse conditions of weather. The materials used should be abundant in the area and preferably be obtained from renewable resources and harvested in a sustainable manner. Materials should be reusable and with low carbon footprint. Materials used should be such that they reduce the carbon footprint of the building or the ecoresort. The materials should not adversely affect human health, should cooperate to operating energy efficiency, should require minimal manufacturing and processing as well as have low embodied energy,

### **Key factors and requirements of an ecological resort**

Environmental protection in Eco Resorts is at a high level of ecological efficiency and careful use of resources without compromising comfort. It includes:

- Waste and waste water management
- Water and energy saving measures as well as often the use of renewable energy
- Consistent waste separation in all areas which can be noticed and appreciated by the guests
- It should be located in a natural area, or in a rural area within a short distance to a natural area, and should not be significantly impacted by a town site, noise, traffic, smog or pollution.
- It should employ systems that protect the environment from pollution and degradation
- It often employs energy saving tactics and possibly renewable energy technology

### **Basic requirements for an ecological resort:**

- Visitor & Reception Centre
- Environmental Education & Research Centre
- Recreation & Health Facilities (Tennis Courts, Pool, Spa, Fitness Centre, Health Centre)
- Convenience & Resort Stores
- Active Recreation Playing Field
- Restaurants & Bar
- Function/Conference Centre
- Staff Accommodation Units
- Water Arrival Facility (Jetty)
- Airstrip

Infrastructure Facilities including Sewerage Treatment Works, Water Production/Recycling,

- Electricity Generator and Telecommunications

Maintenance & Store Facilities.

## **2 Characteristics of Ecotourism:**

- Involves travel to natural destinations: These destinations are often remote areas, whether inhabited or uninhabited, and are usually under some kind of environmental protection at the national, international, communal or private level.
- Minimizes Impact: Tourism causes damage. Ecotourism strives to minimize the adverse affects of hotels, trails, and other infrastructure by using either recycled materials or plentifully available local building materials, renewable sources of energy, recycling and safe disposal of waste and garbage, and environmentally and culturally sensitive architectural design. Minimization of impact also requires that the numbers and mode of behavior of tourists be regulated to ensure limited damage to the ecosystem.
- Builds environmental awareness: Ecotourism means education, for both tourists and residents of nearby communities. Well before departure tour operators should supply travelers with reading material about the country, environment and local people, as well as a code of conduct for both the traveler and the industry itself. This information helps prepare the tourist as The Ecotourism Societies guidelines state “to learn about the places and peoples visited” and “to minimize their negative impacts while visiting sensitive environments and cultures”.
- Provides direct financial benefits for conservation: Ecotourism helps raise funds for environmental protection, research and education through a variety of mechanisms, including park entrance fees, Tour Company, hotel, airline and airport taxes and voluntary contributions.
- Provides financial benefits and empowerment for local people: National Parks and other conservation areas will only survive if there are “happy people” around their perimeters. The local community must be involved with and receive income and other tangible benefits (potable water, roads, health clinics, etc.) from the conservation area and its tourist facilities. Campsites, lodges, guide services, restaurants and other

concessions should be run by or in partnership with communities surrounding a park or other tourist destination.

- Respects local culture: Ecotourism is not only “greener” but also less culturally intrusive and exploitative than conventional tourism.
- Supports human rights and democratic movements: Although tourism often is glibly hailed as a tool for building international understanding and world peace, this does not happen automatically; frequently in fact tourism bolsters the economies of repressive and undemocratic states. Mass tourism pays scant attention to the political system of the

host country or struggles within it, unless civil unrest spills over into attacks on tourists. Ecotourism demands a more holistic approach to travel, one in which participants strive to respect, learn about and benefit both the local environment and local communities.

Ideally, ecotourism should also satisfy several criteria, such as:

- Conservation of biological diversity and cultural diversity through ecosystem protection
- Promotion of sustainable use of biodiversity, by providing jobs to local populations
- Sharing of socio-economic benefits with local communities and indigenous peoples by having their informed consent and participation in the management of ecotourism enterprises
- Tourism to unspoiled natural resources, with minimal impact on the environment being a primary concern.
- Minimization of tourism’s own environmental impact
- Affordability and lack of waste in the form of luxury
- Local culture, flora and fauna being the main attractions

### **Potential positive and negative impacts**

Depending on how the eco resort is built, constructed and operated it can have a wide range of positive and negative impacts on the surrounding biodiversity and local communities. While a well designed lodge can benefit the local areas tremendously, a poorly designed resort can have serious negative effects on the biodiversity and environment around.

### **Potential positive impacts**

- **Community benefit:** Local communities can earn revenue from an ecologic business. The community may choose to run and operate the lodge itself. It can also ear revenue by charging fees to an ecotourism operator for the use of its land. Other benefits include employment of community members and reinvestment of the eco resort profits into social projects such as school, clinics in the local community and increased access to grants, donations and other types of financial assistance.
- **Environmental benefit:** Through the use of responsible materials and practices ecologies can minimize their impact on the surrounding environment. For example, the use of eco-efficiency business materials, including natural construction materials,

environmental friendly insecticides, composting toilets, renewable resources such as solar energy. They are also a good way to promote 'green' architectural design and low-impact construction. Some ecolodges have leased the surrounding area to establish private nature reserves or wildlife management areas.

- **Social benefit:** An integral part is the promotion of recycling, energy efficiency, waste management, water conservation, and creation of economic opportunities for local communities. It increases the interaction of people between different cultures and social norms. Eco tourism helps train and employ local people at fair wages. It contributes to the local economy and helps demonstrate that eco tourism is a more sustainable long term way to earn income than to destroy or alter habitats for short term gains. Above all it allows local communities to benefit financially from eco tourism.

### **Potential Negative impacts**

The presence of an ecolodge in a certain rural setting also presents a number of challenges to the conservation and community development. If they do not follow the sound practices of ecotourism they can also cause serious damage to the surrounding biodiversity and environment waste materials, taming and keeping wild animals in captivity for guest entertainment. Also if the lodge does not promote stakeholder participation, including the training and employment of local people, purchase of food and crafts from local vendors.



## Site analysis

In order to understand the baseline situation in terms of socio-economic indicators of Bandarban district population, this study was conducted in selected para or villages under unions covering Bandarban Sadar Upazila. My selected site is in Alikadam upozilla. I select this site because of the Alikadam cave, people from all over the country visit this cave.



Fig : 6 : site in google image







In this area Bengali and indigenous people live together.

### Fig 7: existing site

#### Site surrounding:

the site is surrounded by some small “para” or villages of bawm ethics groups and Bengali local people. basically the site is a wonderful piece of nature surrounded by green hills and small stream. The Chokoria highway is 18km from the site, so the communication is big problem fo this community. AlikadamUpazila with an area of 885.78 km <sup>2</sup>, is limited by Lama upazila on the north, in southernArakan, thanchiupazila on the east and Lama upazilasnaikhongchhari and in the west.Alikadam, the bordering upazila with Myanmar is the second largest upazila of Bandarbanzila in respect of area. It came into existence in 1981 as thana. Nothing is definitely known about the originof the upazila name. There is a general belief that the upazila name has been derived from the name of the mauza where the union and the upazila headquarters are located.

Area and Location: The upazila occupies an areaof 885.78 sq.km. including 564.76 sq.km. forest area. It is located between 21°21' and 21°50' north latitudes and between 92°15' and 92°34' east longitudes. The upazila is bounded on the north by Lama upazila, on the eastbyThanchiupazila, on the south by Myanmar and on the west by the Naikhongchhari andupozilla

fig 8:picture of the site

source: ZERIN



**Important unions and places:** There are 2 unions in Ali Kadamupazila. Choikhang, Matamuhurietc are the important place of Ali Kadam. Postal code nearly – 4650

**Travel from Dhaka:** There are available bus from Dhaka to Ali Kadam. You may have to go Bandarban first and then Ali Kadam.

### **Reason for choosing this site:**

Alikadam cave is a well known tourist spot for all the backpackers all over the Bangladesh, and beside the alikadam cave there is not a single resort or rest house is situated there. So aecoresortwil a be a great help for all the tourist.Alikadam is a popular hiking destination among tourists for the tunnels in the mountains known as "AlirGuha" or "Ali's Tunnels". Tourists are expected to face slippery and muddy terrains for the hike to the tunnels. The steep mountains in both the sides during the hike and green vegetation with running water from the mountain streams give it a fresh look. Winter is the best season to travel because the mountain streams and rivers are dangerous during Monsoon.





### photographs:Ali guha



fig9 : picture of the site

**Alikadam cave**  
**source: zerin**

### Climatic Situation

topographically the elevation of site varies from 330-350 ft from the sea level and it is surrounded by higher hills.there is valley between the site and the hill. Normally, floods do not take place here, but natural disasters like cyclone, tornado sometimes take place. the chosen site has a tropical climate. In most months of the year, there is significant rainfall in this area. There is only a short dry season and it is not very effective. According to Köppen and Geiger climate is classified as Am. The The average annual temperature in site is 25.5 °C. The average annual rainfall is 2560 mm.

### Climate graph

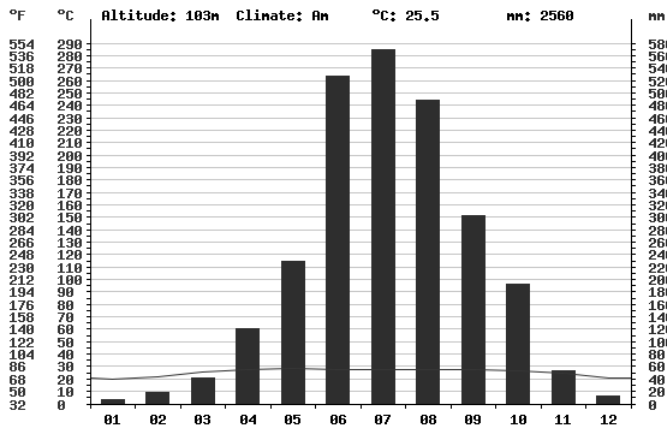
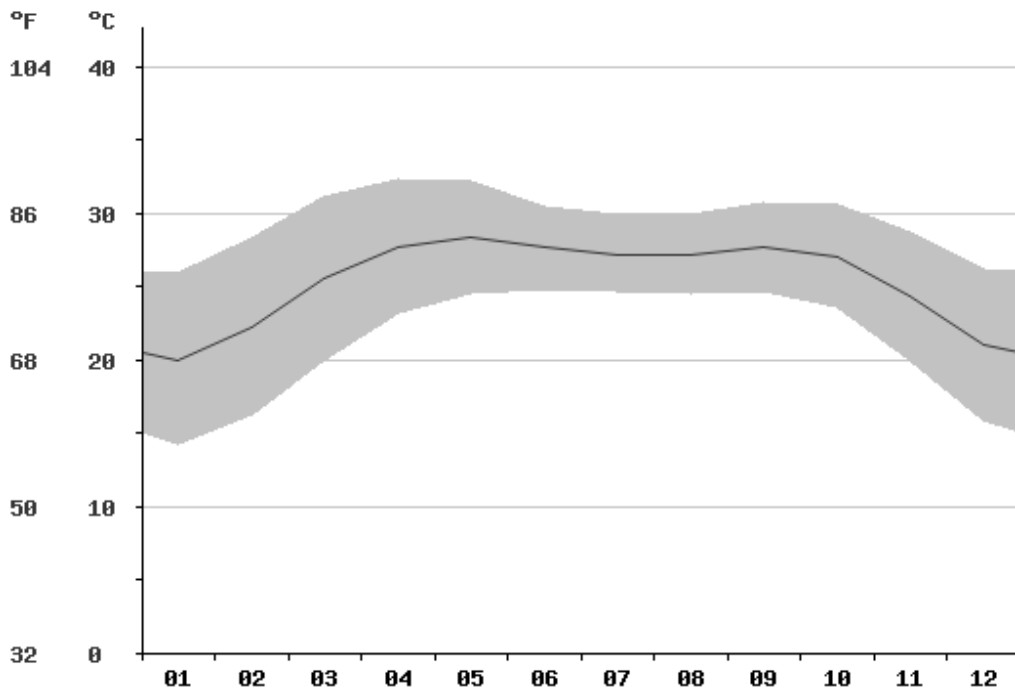


Fig 10::Climate graph

source: <http://en.climate-data.org>

The driest month is January with 6 mm. Most precipitation falls in July, with an average of 569 mm.

**Temperature graph**



The warmest month of the year is May with an average temperature of 28.3 °C. In January, the average temperature is 20 °C. It is the lowest average temperature of the whole year.

### Climate table

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	6	18	42	121	229	527	569	488	302	192	53	13
°C	20	22.2	25.5	27.7	28.3	27.6	27.2	27.2	27.7	27	24.3	21
°C (min)	14.2	16.2	19.9	23.2	24.5	24.7	24.6	24.5	24.6	23.5	19.9	15.8
°C (max)	25.9	28.3	31.2	32.3	32.2	30.5	29.9	30	30.8	30.6	28.7	26.2
°F	68	72	77.9	81.9	82.9	81.7	81	81	81.9	80.6	75.7	69.8
°F (min)	57.6	61.2	67.8	73.8	76.1	76.5	76.3	76.1	76.3	74.3	67.8	60.4
°F (max)	78.6	82.9	88.2	90.1	90	86.9	85.8	86	87.4	87.1	83.7	79.2

Fig 12: Climate table

source:

<http://en.climate-data.org>

The difference in precipitation between the driest month and the wettest month is 563 mm. The average temperatures vary during the year by 8.3 °C. ( <http://en.climate-data.org>)

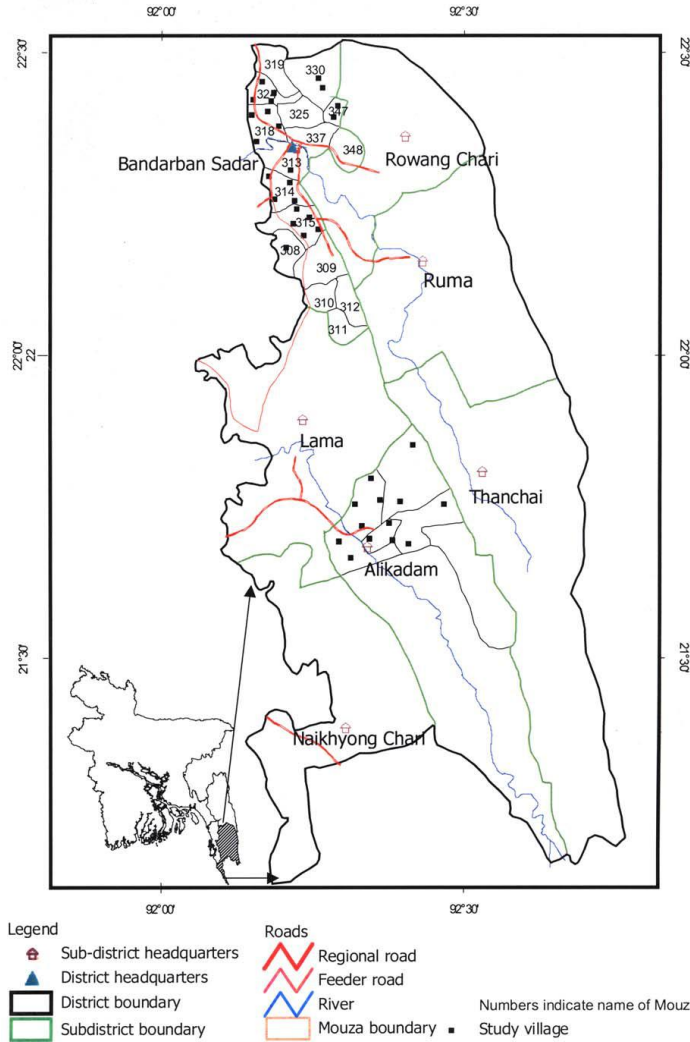
### Social background of the site:

Murong community mostly found in Bandarban district. Murong lives in Lama, Ruma, Alikadam and Thanchi Upazilas near Chimbukmountaion of Bandarban district. Mru also distributed in Toin, Mangu, Toinfa, Luloing, Uttarhangar, Dhakkinhanar, Tankabati, Harinzuri, Takerpanchari, Renikyong, Pantala Thankhyong, Swalock, Tindow, Singpa, Alikhaung and Bhariyatali Mouzas. The Mro population in Chittagong Hill Tracts in 1956 was 17000 and in 1981, it stood at 20000 and in 1991, the Murong population in Bangladesh was 22,178 and constituted the fourth largest tribe in Chittagong Hill Tracts. Bandarban is a district in South-Eastern Bangladesh, and a part of the Chittagong Division and Chittagong Hill Tracts. Bandarban is regarded as one of the most attractive travel places in Bangladesh. Bandarban (meaning the dam of monkeys), or in Marma or Arakanese language as "Rwa-daw Mro" is also known as Arvumi or the Bohmong Circle (of the rest of the three hill districts Rangamati is the Chakma Circle and Khagrachari is the Mong Circle). Bandarban town is the home town of the Bohmong Chief (currently King, or Raja, Aung Shwe Prue Chowdhury) who is the head of the Marma population. It also is the administrative headquarter of Bandarban district, which has turned into one of the most exotic tourist attractions in Bangladesh since the insurgency in Chittagong Hill Tracts has ceased more than a decade back. The people in this area are more adaptable as they live nearby the city. Some of them migrated to Christian or Buddhist religion. And they have accessibility to all the new technology, specially cell phone. But basically most of them are very poor, and they have fear of land encroachment. The positive thing is the people here did not forget their culture or lifestyle as most of them migrated to these places to get the facilities of city life and for better income, but they have actually improved themselves by leaving many superstitions and taking education.

### Mro Population Since 1872 their Distribution

Serial	Year	Population	Reference
1	1872	2,378	Sangu research paper, year six, Volume – One
2	1956	17,000	National Encydopedia of Bangladesh, Asiatic Society of BD.
3	1959	16,121	ParbottgoChattagramerupajati translated by Sufic Khan
4	1981	17,811	B. H. Swarowardi
5	1981	20,000	National Encyclopedia of Bangladesh, Asiatic society of BD.
6	1991	22,129	Govt. Census of 1991.

Fig 13: table of population



source: G. Rasul et al. / Applied Geography 24 (2004) 217–240  
 fig14: map of the village in bandarban

**Household size:**

The average dwelling household size for the upazila is 5.1 persons, for rural area the size is 5.0 and for urban area the size is 5.1.

**Ethnicity:**

In Alikadamupazila 53% are Bangali, 25% Murong, 10% Marma, 5% Tripura, 4% Tonchanga, 1.3% Chakma, and .2% are Kuki (Source: AynalHaque, History & Life Style of Tribes, June 2002).

**Housing :**

Housing structures observed for dwelling households are Jhupri, Kutcha, Semi-pucka and Pucka. Among housing structures in the upazila, predominant is kutcha structure. Dwelling households having such structure are as many as 81.6%. The kutcha housing structure is reported as large as 82.9% for urban dwelling households, compared to 80.9% rural dwelling households. In

comparison, dwelling households with pukka housing structure are fewer, only 0.9 % in the upazila. Rural and urban dwelling households with pukka housing structure are found 0.5% and 1.7% respectively. Urban dwelling households are little better off in housing standard, because as many as 7.4% of them are found having semi-pukka and pukka structures, in contrast to merely 3.5% rural dwelling households.

### **Source of Drinking Water**

: Among sources of drinking water, tube well and the (indigenous) sources are largely used by households. Dwelling households reported using tube well and other source (river, chharra etc.) are 33.9% and 39.6% respectively. On the other hand, dwelling households found drinking deep tube well water are 10.4% tap water 1.6% and pond water 14.6%.

### **Sanitation:**

In Aikadamupazila 8.3% of dwelling households have sanitary latrines with 4.4% in rural area and 14.9% in urban area. A total of 61.7% of the households have non-sanitary latrines with (59.4% in rural vs 65.7% in urban area) with 30.0% of the households having no toilet facility.

### **Access to Electricity**

: Both the two unions of the upazila have been brought under Rural Electrification Programme. However, a total of 13.2% of the dwelling households reported to have electricity connection in the entire upazila.

### **Ownership of Agriculture Land:**

In Alikadamupazila 29.0% of the dwelling households own and 80.0% do not own agricultural land. Percentage of households owning agricultural land is 26.3% in urban area as against 30.6% in rural area.

### **Population Characteristics:**

According to Population Census - 2001 the total population of the upazila is 35264 of which 19290 are males and 15974 are females. The sex ratio of the upazila is 121 males per 100 females as against 123 males per 100 females in 1991.

### **Growth Rate:**

The decadal population growth rate is 42.3% and annual compound growth rate is 3.6%. In the upazila population below 10 years of age is 29.9%. Among the population of age 10 years and above those recorded idle are 27.0%, looking for work 1.6%, doing household work 32.7% and employed the remaining 38.8%. The employed people identified working are in agriculture 20.8%, industry 0.2%, business 4.5%, services 0.4%, construction 0.7%, transport and communication 0.2% and others 11.5%.

### **SOWT analysis:**

Strength:



- Alikadam cave is the center
- Good water facilities
- Use of solar power
- People have a very good skill of building structure with local materials
- Beside joom harvesting, tobacco harvesting, seasonal fruit and vegetable harvesting is done too
- Many tourist visit this place
- People are hardworking here
- People understand Bengali language

#### Weakness

- Because of recent flood there is a scarcity of bamboo can be seen
- Material which are not local and which are costly are being used
- The unique building style of huts are being changed due to natural disaster
- Sites are far from the highway
- No hospital or health facilities near the site

#### Opportunity

- Scope of development as there is school and saving concept are being involved
- The green scenario will attract tourists to visit the place
- There are scopes of training centers as the local people are interested and the site is itself very suitable for the type of programme
- As there is a water stream fishing related center might be helpful here
- Natural beauty is a plus point of the site which creates a peaceful environment

#### Threats

- Land encroachment
- Other powerful ethnic groups can pressurize them and demand the land
- Introduction of building materials which are not natural might cause losing their unique identity

## Chapter 3

### LITERATURE REVIEW

The research showed the project would need to have a direct focus on the eco-resort and its programme. The master planning of the island would not be beneficial to the overall scheme.

The project would concentrate on the key programmes associated with an eco-resort to achieve the project's aim. The medical centre, veterinary clinic, and the seed production farm would need to be set aside from the design scheme. These programmes do not have a direct relation to the eco-resort's viability. The study was conducted in Bandarban district of CHT, located in the southeastern

part of Bangladesh. The topography of the region is mountainous. Two-thirds of the area is characterized by steep slopes; the remaining area comprises of undulating topography. Steep slopes combined with heavy seasonal rainfall pose serious limits to arable agriculture. A soil and land use survey conducted in 1966 found that 73% of the land of CHT is suitable only for forest, 15% for horticulture, and only 3% for intensive terraced agriculture (Brammer, 1986; Forestal, 1966). The agricultural land in the study area is broadly divided into two categories: sloping lands and valley lands. Valley lands, classified as Class-I land, are suitable for all forms of cultivation. Gentle sloping lands, classified as Class-II land, are suitable for terrace cultivation. Steep sloping lands, Class-III land, are considered to be only suitable for non-arable land use, like forestry and horticulture (Roy, 1995). Valley lands cover only 6% of the region. The soils on the hill slopes are dominantly brown loamy sands and silty clays; they are well-drained and strongly acidic (Gafur, 2001). While the soils on the river terraces are loams, soils in the valley floors are silty clay in texture. They are poorly drained in nature and subjected to seasonal flooding (ADB, 2001; Khan & Khisa, 2000). The climate is sub-tropical, with a mean monthly maximum temperature ranging from 25 to 34 °C; the annual average rainfall ranges between 2032 and 3910 mm, 80% of which occurs during the period May–September (ADB, 2001; Gafur, 2001). There are 11 hill tribes (Mongoloids) in Bandarban district, comprising more than half of the total population. The other people are Bengalese, who had migrated into the area from the neighboring plain region. Marma and Mro are the main tribal communities. The Marma normally live near streams and rivers; they are relatively better-off in their socio-economic condition than the Mro. The Mro usually live in higher elevations; they are the most disadvantaged of the tribal groups in the area. The Bawm, another tribal community, live on the hill slopes. These three groups account for about 80% of the total tribal population of the district.

Agriculture is the main source of livelihood of these people, who mainly practice shifting cultivation. The crops traditionally used to grow under shifting cultivation are upland rice, maize, sweet potato, yam, vegetables, and spices such as chilly, turmeric, and ginger. The main cash crop is cotton, but the area is declining gradually. Non-farm income opportunities are very limited and in some areas

non-existent. Primary and secondary information were collected from two representative subdistricts

of Bandarban district, namely Bandarban Sadar and Alikadam

### **Appearance of athenic group of people in alikadam**

they have mongoloid features but are tall and strong and have dark complexion. They are peaceful and timid. Moustache and beard are hardly seen on their face. Physically they have a close resemblance with Semang of Malaysia. ( www.ebbd.info)

### **Food Habit**

They take boiled rice twice a day and consume all types of meat but hardly use spicy items in cooking curry. Dry fish is their favorite food. Drinking is popular and they have no taboo as

regards any food. Rice and home made beer are their main food and drink. Their delicacy is “nappi” made of fermented fat of fish, frog, deer or boar mixed fermented rice. ( [www.ebbd.info](http://www.ebbd.info))

### ***Habitat and Occupation***

They build their houses on hilltops. The houses are big and seem to be built for community dwelling. Mros build houses on Machangs (platt forms) on the top of the hills. Their houses are bigger than the houses of other tribes. This main profession of the Mros is jhum cultivation and lumbering wood from jungle. Women work harder than the men. Mros depend mainly on hunting but many of them are now engaged in jhumcultivation, jauthaKhamar (colletive farming) and gardening. Mro women are very active in economic pursuits, weave their own clothes and manage all affairs of the house. ( [www.ebbd.info](http://www.ebbd.info))

### ***Dresses***

Mro men wear round the waist a strip of cloth called lengti, which is passed between the two legs. The female use a small piece of dark blue cloth (wanglai) to cover the private part of the body. The wanglai is 6 inches in width from top to bottom. The women hardly cover their breasts. They bind their hairs on the left side of the back of the head. Male wears a lungi and a shirt and female uses a piece of cloth on the upper part of her body when they go to the market. ( [www.ebbd.info](http://www.ebbd.info))

### ***Cultural Background***

#### ***Language***

Mros do not have any written language. But recently they have been introduced with text which will be discussed in "Krama" religion part. The language they speak has some similarity with the Burmese and it seems to belong to the Tibeto-Burman family. In all probability, the Mro language was separated from Tibeto-Burma group at an early period, The Mro vocabulary, syntax, and grammar, to some extent, resemble the Kuki-Chin languages of northeastern India and northwestern Myanmar. Nowadays, some Mros receive modern education at Shialoa school (near Bandarban town) established by the government. Mros talk to their neighbors in the local tongue and know Bangla. In this sense, they are bilingual.

#### ***Housing***

Like other aboriginals, the Mros also live a life characterized by clans. Since the dawn of civilization, the human beings began to live in modest thatch houses built on the plains, on river banks or on the hills. In modern times people have started building concrete houses but the Mros have till now clung to living in their traditional 'machangghar'. It is said the ancestors of the Mros settled on hill tops at the dawn of civilization. In this belief the Mros established their settlements in the deep forests high on the hills.

It is said once upon a time the Mros lived in mud houses. As part of their tradition they used put their new-born on the ground but when they observed that ants and insects from the jungles came to bite the babies they decided to build machangs or huts 9 to 12 feet above the ground with the help of wooden poles. Unlike the other aborigines living in such machangs, the Mro huts are bigger in size and uniform in pattern. (Baten,2008)

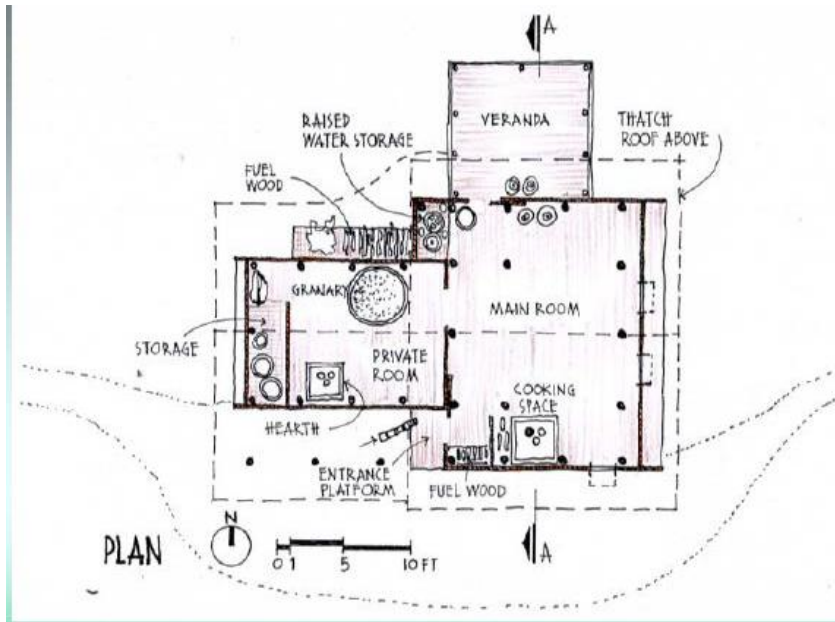


Fig 15: plan of a tribal house

)



fig 08: (up) plan of a typical tribal house

(bottom) section of a typical tribal house  
source: (ahmed&Kabir, 2005)

## CHAPTER 4

### Contextual analysis

#### WHAT IS ECO-TOURISM ??

Eco-tourism is an environmentally responsible way of travelling to a natural location. Eco-tourism promotes conservation of the environment and helps improve the lives of the local people.<sup>1</sup> This type of tourism is valuable in the conservation and protection of local sites. It helps struggling communities, create a source of income through tourism while maintaining their way of life.

What is an Eco-resort?

An eco-resort is the destination where the traveler experiences the local culture and landscape. Hitesh Mehta is regarded as an expert in the field of eco-lodges. In his book, *Authentic Ecolodges*<sup>3</sup>, the three main principles of eco-tourism that an eco-resort should embody are:

1. The conservation and protection of the site
2. Local community must benefit through educational programmes.
3. Educating the guests and locals on the surrounding environment and its cultural heritage.

The project aims to follow these three principles of eco-tourism and look into other related issues such as using sustainable materials, using local vernacular architecture and minimizing impact to the site.

SOURCE Hitesh Mehta, *Authentic Ecolodges*.

(New York, NY: Harper Collins, 2010). 10.

**Backpackers** generally travel for a longer period of time than most other tourists, and they tend to travel in several different countries during their time away. The number of countries differs and a backpacker can be on the road all from a few weeks to several years. However, that is again the short way of describing it. Backpacking is a very loose definition – there are backpackers who go tramping in the forests sleeping in tents and on the beach, and hitch-hike their way around the world, and there are those who backpack with roller-bag suitcases, sleep in hotels and buy their own car to get around a country. These are two completely different types of traveling, but they both like to call themselves backpackers. Backpacking can be described as an independent, often international, low- budget way of travelling. Someone who backpacks is called a **'Backpacker'**

I strongly believe that if a eco resort situated in the middle of Alikadam near the “ALI CAVE” then we can easily attract the tourist specially the backpackers, an it will enhance the lice of the tribal people of alikadam.they can improve their life in many ways.

## CHAPTER 5

### CASE STUDY:

#### **Posada de la Laguna Lodge**

Posada de la Laguna Lodge is a nature resort located inside the nature reserve of Ibera, in the province of Corrientes, Argentina. The resort has two main buildings, the accommodation block and the main building, that houses the restaurant, bar and lounge space.

#### **Access**

The resort is accessible via the nature reserve trail and only with a 4x4 vehicle.

#### **Site Planning & Architecture**

The resort is located on a four acre site on the edge of a lagoon. The two buildings on the site around overlook the lagoon. There is no boundary or fence around the resort. It is kept entirely open to the site and its surroundings.

The buildings are two pitched roof structures made of timber and stone. The internal space is lime rendered and showcases the exposed ceiling structure.

#### **Resort Programme**

The resort’s scheme is based around a nature reserve and the attractions associated with it.

The resort offers its guests, bird watching tours, canoeing trips, horseback riding and nature trails. All of these activities highlight the importance of conservation of the natural habitat to the guests.

#### **Outcome**

This resort has a simple plan and programmes to satisfy its guests. The resort is oriented toward the activities rather than the type of accommodation or facilities the resort offers.

Eco-resorts are always designed with a focus on teaching its guests on the importance of conservation and connection to the local community. Posada de la Laguna Lodge is not a good example of a resort that promotes community interaction. The proposed eco-resort should look at this example on how to align itself to its surrounding environment and local attractions.



Figure 18: Rainwater Collection and Filter

Figure 17: Site Map of Posada de la Laguna (red-main building, blue – accommodation)

### Eco Features

Each villa is fitted with a rain water collection system and filtration system for its water supply. It has the capacity to store up to 15,000 litres of water underneath the floor in large cisterns.<sup>34</sup> The villa is also attached to photovoltaic panels for electricity. The bathrooms have self composting toilets.

A centralized water collection system was not installed for the resort due to the amount of excavation required. An individual system ensured minimal impact to the fragile ecology of the island.

### Overall

This project embodies many aspects which would be beneficial for a rural eco-resort. The site is planned effectively. The architecture is simple but elegantly placed within the landscape. The eco features have a huge impact on the overall scheme of a resort. The main point this project displays is, how a resort can be designed to work as individual entities and still function as one cohesive unit.

## Chapter 6

### Programme and development

Research into the precedents, tour operators and critical comments from critiques have helped me fine tune the programme to the list below.

**Programme: Eco-resort in alikadam**





## Main Buildings

### Administration and Staff Block

- Manager's Office -----64 sft
- Staff Room -----10sft per staff member total (150.69 sft)
- Resort manager, two resort staff, three maids, maintenance man, two chefs, three waiters and two local guides (all locally employed workers)
- Staff and tour guides sleeping quarters -----226sft
- Some staff are required to stay overnight on the property and the resort is obliged to provide accommodation for the guides travelling with the group.
- Housekeeping and general storage 15sft per number of rooms
- Restaurant Seating for 40 people----- (775sft)  
Space was calculated using a table's chart.
- 5 x four person tables (24.75 sft x 24.75sft) these tables can be separated to make two person tables.
- 2 x ten person tables (25sft x 39.288ft)17
- Lounge area 15.069sftper seat - 30 seats (15.069sft)
- 
- The resort guests will use this space to mingle with the other guests and relax after their busy day.
- Kitchen - Main Kitchen, Prep Area and Store room - 9.6875sft per
- meditation center-----300 sft
- open platform-----600sft
- Interpretation centre -----538.20sft  
This space will be used to teach the guests about the site, the culture and elements of local language before the guests are lead on their tours of the area.
- Small library and gallery----- 258.33sft
- The Performance Hall----- 1291.7 sft
- Local children will be taught classical Indian dances and traditional performances can be conducted in this space.
- Boat Building/Craft Centre-----1291.7sft
- The space is used by local craftsmen repairing and making bamboo furnishings and architectural elements. Local employment is key in developing this industry.
- 
- **Accommodation – 11 Villas for 40 guests**
- 3 x 3 bedroom = 18 people ( 3 bedrooms, three ensuite and a lounge)
- Research has shown that tour operators have around 5 to 10 people per their travel group. These villas are aimed at the tour groups.
- 2 x 2 bedroom = 8 people (2bedroom, 2 ensuite and a lounge)
- 3 x 1 bedroom = 6 people (1 bedroom, ensuite and a lounge)

Total = 8971 sft



## **CHAPTER 7: CONCEPTUAL STAGE AND DESIGN DEVELOPMENT**

**7.1 Introduction**

**7.2 Self realization**

**7.3 conceptualization**

**7.4 programs conceptualization**

### **7.5 Design Development: Phase 01 (idea of spaces)**

### **7.6 Design Development: Phase 02 (Zoning)**

### **7.7 Plans, Sections, Renders and Model images**

## **7.1 Introduction**

The "Mru" tribe are currently on the verge of changing, it is a transitional point for them where their desire of becoming socio-economically solvent and equivalent to the so called superior Bengali settlers can take shape in reality and they might lose their own culture, lifestyle. Or they realize their specialty, their unique potential of culture, religion and language and follow the path of self realization. The second option is a very challenging way for them. Because they see now, what they are doing for hundreds of years for living is not fruitful, they have these feelings that this culture and religion are becoming useless and they should move forward and live life like the mainstream Bengali settlers are living. But the question is being influenced by the neighboring tribes and Bengali settlers and choosing the path of theirs , can it be called moving forward? Or this is actually taking them backward? This thing is currently not visible to them, because any person who is living in a poorer condition will aspire to live like a person who is more solvent, whether this desire floods away their hundred years old culture, it will not matter to them. But after 20-30 years when this person will look back and see that he/she along with his/her family have no connection to root and they do not know where they have come from, it will be then question of self existence. And this things have taken place in many places of our society, many of us have blindly followed the wealthy culture of western society and our desire and aspirations won over our rich culture and heritage. But this question can arise, why it is so important to hold on to roots and culture. This may lead to debate but a very simple example can be given. The current scenario of Chittagong- the megacity. We are blindly following the

western civilization not knowing what is actually good for the city. There are big highways, buildings, but what we actually fail to see how it was built before, how the environment of the city was taken care of, how the hills were respected, but now the aspiration and population increase is such, we build high-rises not thinking that this might affect the nature of the city. Making the hills flat, disrespecting the nature, building so called modern structures not knowing if it is suitable or not, have become a regular thing for us. Resulting landslide, decrease of green, natural disaster, water blockage. So it is not only the question of preserving culture, but also a question of protecting our own environment. In this case we are talking about ethnic and indigenous people of our country who are the assets of Bangladesh. We realize the fact that they are very special, the way they have merged themselves with nature and lived there for hundreds of years are the examples of sustainability in their very own way. And they should improvise this way of living, and not just follow neighboring solvent tribes and Bengali settlers who are disrespecting everything only for economic solvency.

## 7.2 Self Realization

Mru ethnic group has not been yet completely influenced, or derailed, but there are possibilities that they realize their self importance. If this very group can set an example of improvement through originality, then it will be easier for other groups to follow. The main reason for choosing this tribe were their positive attitudes towards their culture and religion. "**KRAMA**" - a religious solution which came from their very own people, which has been discussed before, but in brief, through this new religion the Mrus were being introduced with their new text, which is a step forward, and this religion stopped many of their taboos which were holding them back. And most of them accepted the religion, but it would not have been possible if this sort of solution was proposed to them. The positive thing is, this change merged with their way of lifestyle, did promote their identity and it enriched them. So we can see, spiritually this tribe has move forward which can set as an example on their way of self realization, that any positive solution can come from their society and it can be utilized for their own prosperity. Like the way they move forward through spirituality, they can move forward through culture and lifestyle, it just needs a starting point. **So this project aims to give them a starting point where this journey will start. The sense of originality** might come in 20-30 years, but they need to see some **immediate benefits**, which will drive them to that path .

## 7.3 Conceptualization

# Program formulation ideology

Using their potential for strengthening them

## Culture, religion and language

Religion as key point



05: program formulation, functions revolve around spirituality

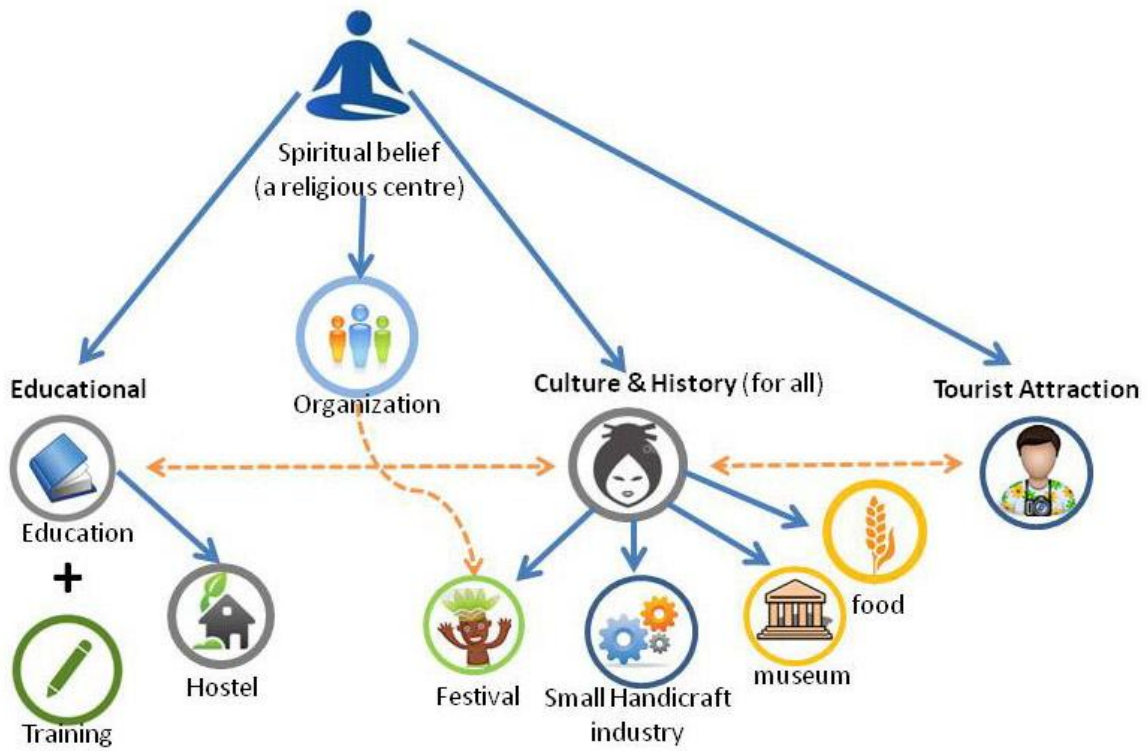


Diagram 06: Interconnection of programs

Source : ZERIN



Diagram 07: income source of MRU people

Source : ZERIN

## 7.4 Programs Conceptualization

Cultural part of Mru community will not only represent Mru, but also it will represent all the indigenous people of CHT. As we the mainstream society of Bangladesh know very little about all these tribes, this can be a tourist attraction for us. We will go there and know, learn and understand their rich culture of these people. On the other hand, indigenous people will feel the importance of their culture. And it will be a interaction and meeting point for all the tribes. From the training centre Mrus will be able to sell their products in here without any middleman, and interact with Bengalis as they will be getting education. in this way, they will interact, emphasizing on their lifestyle and have economic benefits.

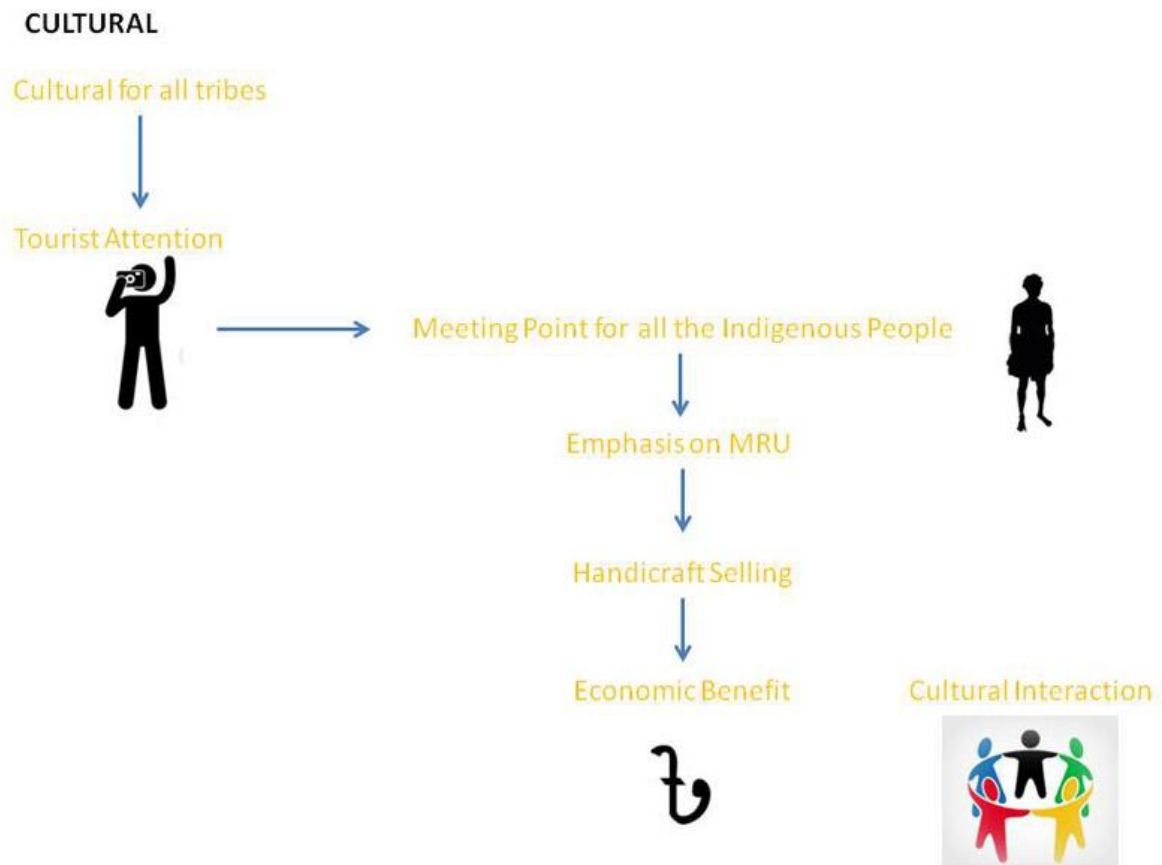


Diagram 07: Conceptual diagram for cultural part  
Source: Zerin

Agroforestry: The traditional jhoom cultivation is becoming a threat now a days, where Agro forestry can be considered as a very good solution for the soil of hills and also for the economic benefits.

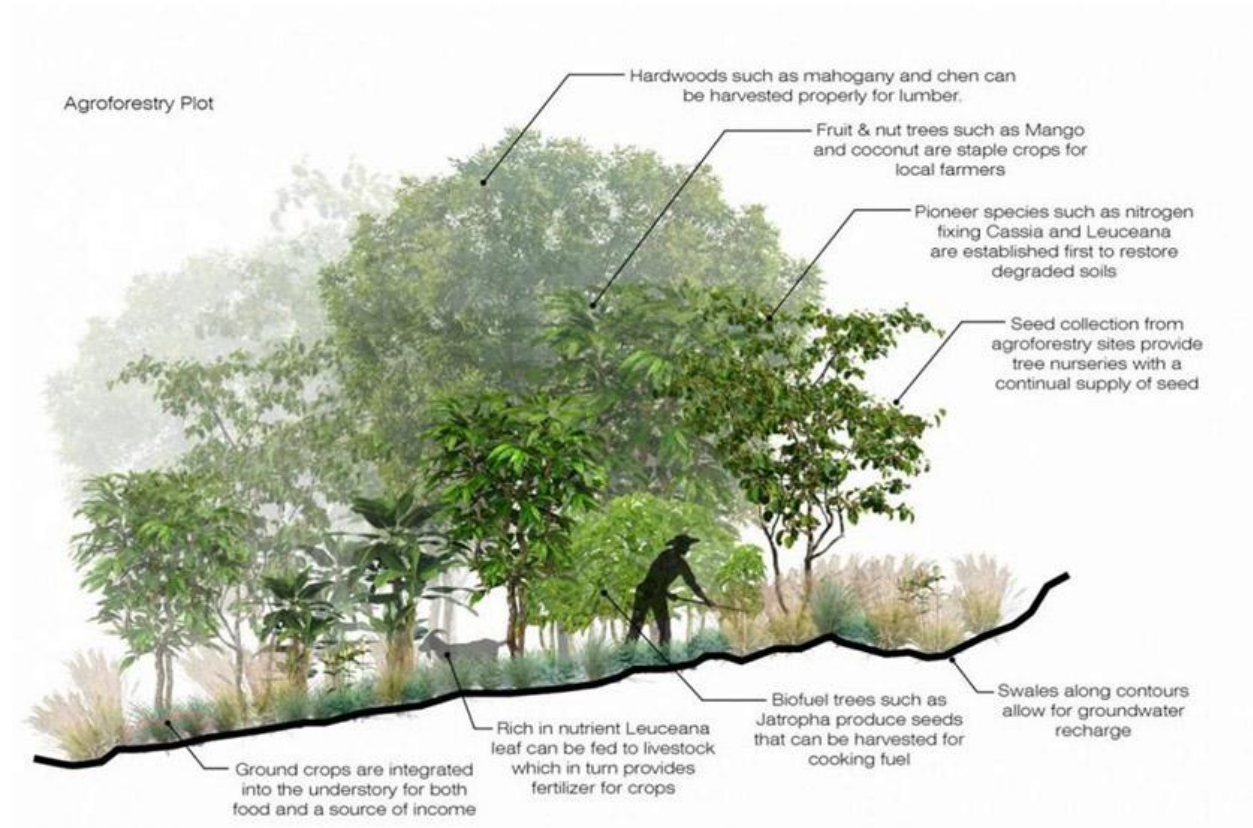


Diagram14: Agroforestry system  
Source: ZERIN

### 7.5 Design Development: Phase 01 (idea of spaces)

As we know the standards of everything varies in Mru tribe. They have a different lifestyle, different topography, different spaces, different sense of privacy. All of these things were main concerns, because the idea was to design in their own way, a bottom up approach. And it has to come from them.





Diagram15: Site surrounding  
Source: ZERIN



Diagram16: Site surrounding  
Source: ZERIN





Diagram17: existing site  
Source: ZERIN



Diagram18: designed site

Source: ZERIN





Diagram18: experience for the visitor's

Source: ZERIN



Diagram19: detail layout

Source: ZERIN



Diagram20: more detail layout

Source: ZerIn



Diagram21 :section



Diagram22 :section2

Source: zerin





Diagram23: cottage plan for visitor's

Source: Zerlin



Diagram24: cottage section

Source: Zerlin





Diagram25: render of the cottage

Source: Zerin



Diagram26: render of the shuparibagan

Source: Zerin

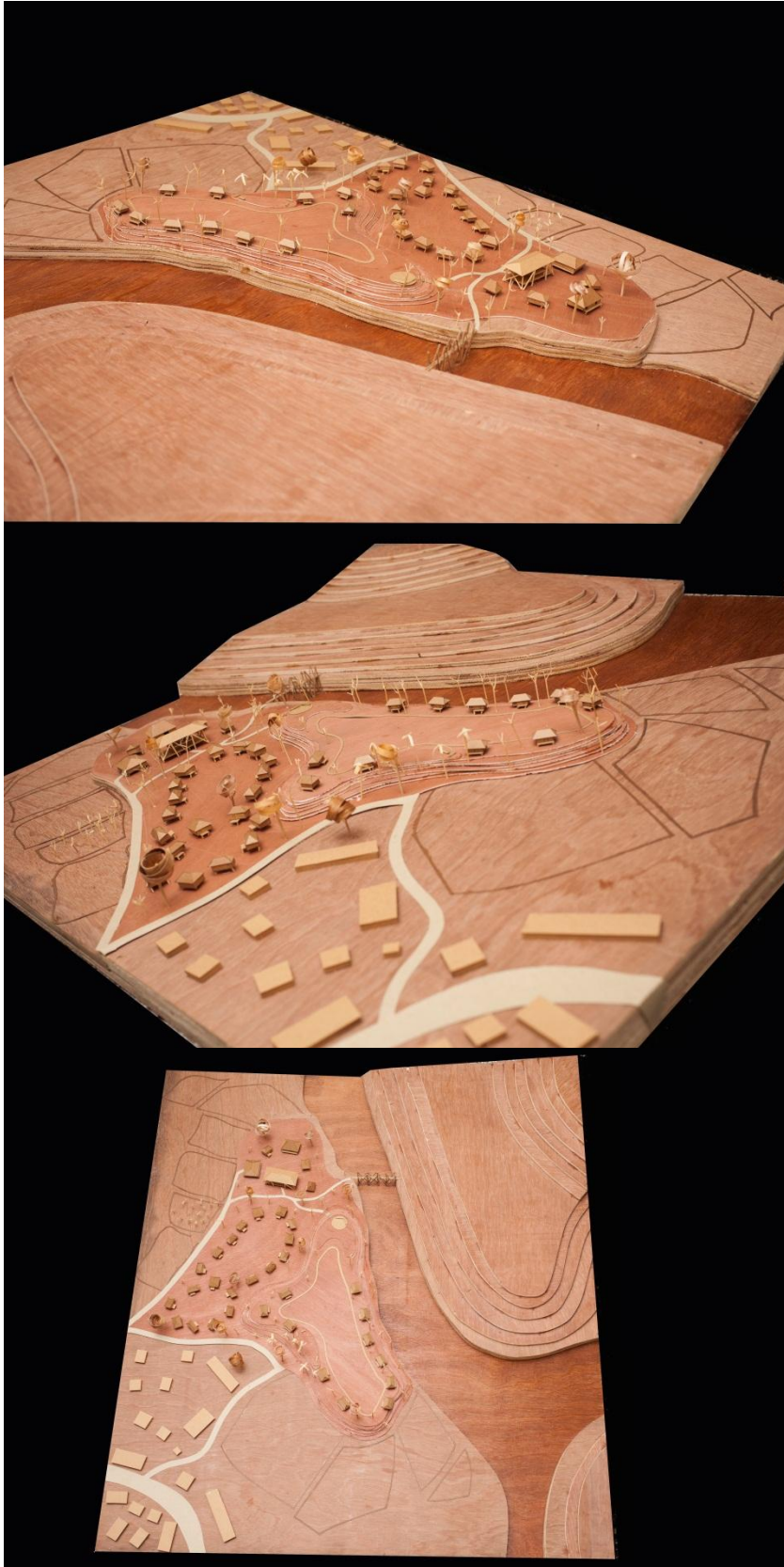


Diagram27: site model

Source: Zerín





Diagram28: detail model

Source: Zerin

## CONCLUSION

The aim of the project is to start a journey towards the **self realization**. This is just not for the MRU 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 Who are of concern. But an architect's role 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 hub will be an inspiration for them and help them to retain their identity and move forward. In the end I would like to quote ,*“Let people, be the solution.”* SomsookBoonyabanha secretary-general of Asian Coalition for Housing Rights (ACHR)

## BIBLIOGRAPHY

- 1)Ahmed. K.Iftekhar&KAbir, kh.Hasibul, *A Study Of Traditional Housing Of “Pahari” Communities In The Chittagong Hill Tracts (Cht)*, Centre for Advanced Studies & Research (CASR), Bangladesh University of Engineering & Technology (BUET),Dhaka-1000,Banglades, 2005
- 2) Arman, Sadia and Kamal, Mesbah, *Constitutional recognition of Indigenous peoples-national and international perspectives*.RDC:Dhaka,19<sup>th</sup>august 2007
- 3)Baten, Md. Abdul, *Adibashi Jonogoshthi*,2008
- 4)Gorring,Ari , *People,place,country*, world indigenous network,2013
- 5)kabir ,Tamanna, *Factors affecting slum resettlement projects in Bangladesh: A case study of ‘Bhasantek Rehabilitation Project’, Dhaka*,Thesis,the Netherlands, September 2011
- 6)Kennedy, Gillian, *Paruku Indigenous Protected Area, Kimberley Region, Western Australia*,Report by Special Projects Officer, Paruku IPA, August 2008
- 7) Mahmud, *Angingmru rung: Life and the struggle of the Mru people in Bangladesh*,Dhaka, *Matri production*, June, 2007
- 8)Ministry of Chittagong Hill Tracts Affairs,2007
- 9)Rahman, Mahfuj, *The daily ProthomAlo*, 2<sup>nd</sup> February 2013
- 10)Tahmina, Kurratul –Ain, *The Daily ProthomAlo*, 13 July 2007
- 11)Uddin, Jamal, *ParbatyaChottogrameritihash*, *Chittagong*:Balaka,2011
- 12)Uddin, Mohd. Kamal, *Rights of indigenous people and minority issues in Bangladesh*, Dhaka,2008
- 13)*UNLOCKING THE POTENTIAL: Poverty Reduction Strategy Paper (PRSP)*, *People’s Republic of Government of Bangladesh*, 2005, p-152
- 14)United Nations Development Programme, *Talamanca Initiative, Costa Rica*. Equator Initiative Case Study Series. New York, NY,2012
- 15) Vail , John , *Community-Based Development in Tari — Present and Prospects*,2009

- 16) <http://en.climate-data.org>
- 17) [www.ebbd.info](http://www.ebbd.info)
- 18) <http://www.ateccr.org>
- 19) <http://www.auroville.org>
- 20) <http://www.achr.net/>
- 21) [en.wikipedia.org/](http://en.wikipedia.org/)