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RECENT ADVANCES IN SOCIAL SCIENCES AND ACADEMIC DEVELOPMENT

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ENVIRONMENTAL SUSTAINABILITY AND MANGROVES

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ABSTRACT

Humans are a part of nature. It is constant observation and experiment with nature , and with suitable use of nature's product be it minerals , alloys ,wood or earth that man began to understand nature and create new conditions of comfort for himself and live in some degree of harmony with nature.

There are unpredictable forces of nature, such as violent earthquakes, killer cyclones or destructive volcanoes, which causes not only unfold human misery but gave ecological damage as well, and over which humans have no control. Today the major contradiction between man's developmental activity and environment however rises from continued misapplication of science and technology to over-exploit nature be it forest, minerals or rivers. The alarming built up of carbon dioxide in the atmosphere , global warming , rise in ocean levels , drastic changes in the weather pattern , depletion of ozone layer , the threat posed to aquatic life and coastal areas by oil spills from tankers , destruction of wild life and herbs now recognised as potential sources of alternate medicine, and looming threat of nuclear and industrial like Bhopal Gas Tragedy . Sustainable development has rapidly become the dominant idea or discourse, shaping, international policy towards the environment. We are looking forward to clean water , clean air , productive soil and agriculture abundant forest and wild life . In fact we want our relationship with the environment to be sustainable.

One of the major areas of concern is saving mangroves. Mangroves are not merely a few plant species but a complete eco – system found in the inter – tidal regions of the estuaries , bays and creeks . Environmental factors which controls the mangroves eco- system are : temperature , salinity , tides , substratum , wave action , dissolved oxygen and detritus. The absence of any of these factors has a serious effect on the growth of the mangroves. Mangroves are groups of woody trees that grow where rainforests meet oceans. They are found in the tropics , on sheltered coastlines and river deltas, in brackish wetlands between land and sea, where other plants cannot survive. . Mangroves are buffers between the land and the sea. Coastlines throughout the world are facing serious problems of coastal erosion and threat of rising sea levels. Due to global warming , the threats have increased by several folds. To control such assault of the sea on land , the nature has provided what is called as mangroves. a tropical littoral ecosystem which is more dynamic than the sea itself.

The study is based on through primary data collection and looking into importance of Mangroves in Vikhroli , Mumbai area . How Mangrove protects the land from erosion and plays an invaluable role as natures shield against cyclones, ecological disasters and add protector of shorelines.

KEY WORDS: *Mangrove, Ecological ,Atmosphere , Sustainable Development , Land , Sea , Coastal , Erosion*

INTRODUCTION

Mangroves typically grow in wet grounds and are tropical trees with their roots above the ground. They are found in bays and creeks. Mangroves are more likely to grow in marshy lands rather than sandy rocky lands.Waves, temperature, tides, salinity are factors which control growth of mangroves. Disturbances in these factors can led to deterioration of mangroves.In 75% of tropical coast forest they flourish in between land and sea .It adjusts itself to changing environment and tides in the sea.

According to the Oxford dictionary the word mangrove is associated with the Portuguese word "mangal" and the English word "grove" . The term "mangrove" often refers to both the plants and forest community. Later it was declared that "mangal' should refer to the individual plants species. Mangrove is known by different names all around the world. For instance, in some places the mangroves are called mangal, in some they are known as

tidal forests or coastal woodlands. Ecologically mangroves are very important habitat as they play a very significant role in filtering their surroundings when soil and water enters .

MANGROVES AND IT'S DEVELOPMENT

Mangroves are found in tropical regions, mostly near the sea or large water bodies. Mangroves are found in abundant quantities mostly in Asia, especially in countries India and Bangladesh. They do occupy a large portion of the land and are also found in other continents. One can not find mangroves in the continent of Europe and Antarctica. Interestingly, the largest mangrove found in the world is Sunderbans which also has a very rich diversity.

Mangroves are grown in a place where rainfall is plenty.Sandy soil,muddy habitat and coral islands are most suitable place for mangroves to develop. Mangroves can also manage to grow and survive in situations like unstable wind storm, high salinity place, low oxygen level and wave area.Mangroves has a very effective method to get itself away from the excess salt which is found in adjacent land .

HISTORICAL BACKGROUNDS OF MANGROVES

Mangrove share a long historical relationship with human culture and civilization. Mangroves also grow in fresh water as they have capacity to withstand itself to the ecological conditions of plants and animals that live at the interface between land and sea. Mangroves are ecofriendly and are also considered as land builders .Mangroves leaves are used by many aquatic species ,animals , birds as food for survival . In a temple of Tamilnadu , it was portrayed that Excoecario agallocha as a tree of the land or Sthala Vriksha . In Kenya shrines built in the mangrove forest and are worshipped by the local people who believe spirits of the shrine will bring death to those who cut the surroundings trees. Very interesting, the bodies of the dead are released in the mangroves and are accompanied by rituals in the Soloman Islands,

MANGROVES IN INDIA

An interesting fact is that India is home to a large amount of mangroves and shares almost 7% of the worlds mangroves .These mangroves provide shelter to a diverse species of plants , migratory birds ,animals .They stabilise the shoreline,inhibit rich biodiversity and provide source of livelihood for people of local area. Local people generally involve in doing fishing .

The east coast of India includes 80% of the Indian mangroves - Sunderban, Bhitarkanika , and the Andaman and Nicobar mangroves.India has some of the best mangroves in the world located in the deltas of river Ganga, Godaveri,Krishna and Cauvery and on Andman and Nicobar Islands. The species composition of mangroves varies significantly from place to place and accordingly its associated fauna. Mangroves in the Kutch for example are dominated by species of the genera Avicenna, bruguiera, excoecaria and rhizophoro.

Mangroves provides habitat to marine life.Terrestrial and marine animals are sheltered by Mangroves either for a temporary period or permanently.Aquatic animal community which have become adapted to salinities feed themselves from the mangroves for their survival .Mangroves also provides short period habitat and food to terrestrial animals who visits the sea area for short period of time. Mangroves are very useful in providing food supply to marine animals.For breeding of fish ,crab and prawn nursery is provided by mangroves.

MANGROVES OF MUMBAI AND THEIR IMPORTANCE

The mangroves play a vital role in the wellbeing of Mumbai City.A subsequent increase in infrastructural development interms of railway projects, road widening, construction of buildings , development process and continuous growth of population in city were few of the major factor in destruction of major mangroves in Mumbai. Due to lack of ecological awareness and environmental consciousness among the local people mangroves are neglected and ignored and proper care is not taken for their protection.

Most Mumabikars think of mangroves as shabby, muddy plats which grow in swampy lands, not realising the importance of mangroves inkeeping the citizens well . Some communities of Mumbai, .e.g., the Koli community who are living near the seashore ,understand the value of Mangroves and take concrete steps to protect it. They understand, that mangroves protect the city from soil erosion

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MANGROVES IN VIKHROLI AREA

While travelling from the south of Mumbai towards the north, a traveller would be lucky to spot the lar mangroves between the tall towers and bustling city life. The mangroves by Godrej are the best taken care of Mumbai and are home to diverse flora and fauna. There are numerous species of birds and animals that se shelter during the winters and a large number of unique plants can be spotted in the marshy lands. T mangroves truly are the lungs of Mumbai City. It's not common to find such a diverse and unique habitat i metropolitan city such as Mumbai. What enhances the unique quality of this place is the fact that it has be possible to conserve in an almost virgin state. While there have been several opportunities to industrialise a build factories in the mangroves area, the land has been kept safe by Godrej and away from modernisation any kind near Vikhroli, are Kanjurmarg and Bhandup. Both Kanjurmarg and Bhandup have a large numbe fishermen communities that benefit from the large reservoir of fish that are available in the mangroves. addition to being a source of daily bread-butter for the fisher community, the mangroves are also beneficia them in other ways. For e.g., Weeds and grass found in the mangroves can be used to feed goats and cows k by the fisher community, Many species of mangroves have health benefits-they are rich sources of protein a vitamins and can be added in the food. Timber is found in abundance in mangroves and that can be sed building houses, boats and poles. Soil erosion can also be avoided as mangroves act as a protective agent aga them.

Mangroves are of utmost importance to humans and they should be preserved at all costs. While the Vikh mangroves are taken care of and protected, it is not the case everywhere. Mangroves are perceived as swar lands and neglected badly , in reality they are home to the most beautiful habitat, they provide hum basic necessities and above all, they are a huge source of pure oxygen. It is high time we take concrete strong measures to protect and preserve our mangroves because they too will protect us.

INSTITUTIONAL SET-UP

A scheme was initiated by the Indian government on conservation and Management of Mangroves and C Reefs in 1986-87. Legal protection to mangroves in India in 2011 by passing the Coastal Zone Regula under the environment protection act 1986, mangroves eco- system are legally protected .

For the conservation and management of forest in India the country has a strong institutional setup to protec environment. The Ministry of environment and Forest (MEF)is te nodal agency for planni promotion,coordination and overseeing the implementation of various environment and forestry program The Ministry's mandate includes conservation and survey of flora and fauna , forests and wildlife, preve and control of pollution , afforestation and regeneration of degraded area sand protection of environment.I Stringent regulation is necessary for the protection of mangroves in cities.

CONCLUSION

Mangroves protect the land from soil erosion. They are home to a variety of marine life, other animal birds. They are good source of timbers, fuel and fodders. Mangroves act as a great means of tourisn attraction. They are also an important reservoir of income generation for the fisher community.

There are several ways in which the mangroves can be preserved. We need to first educate ourselv mangroves exactly are and why they need to be protected. It is essential to develop a culture protection of mangroves. There are laws that work in favour of mangrove protection. Incase anyone is destroying or harming the mangroves in any way, they can be charged by law and police under the Mahar tree felling act and The environment protection act.Mangroves are potential source for recreation and touri

Through education/awareness programmes, one has to realise that there is long way to go to co Mangroves.

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