



# THE STUDY OF MANGROVE AND CLIMATE CHANGE IN ZANZIBAR



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## Introduction

Mangrove refers to a diverse group of salt (halophytes), thrive in areas of high salinity, margins of low energy coastline, mudflats and river banks in tropicals or subtropical areas. Worldwide there are about 70 species of mangrove but Zanzibar island comprises of all mangrove species found in Indian ocean countries with ten species that are reported along the bays and coastline of Unguja and Pemba. The volume and distribution of mangroves were later measured using aerial photograph of 2012 that show 5,274 ha were estimated in Unguja and 11,214 ha were estimated in Pemba. Mangroves are found in different places like Jozani Chwaka bay, Uzi island, Ngezi forest, Michweni, Chumbe islands and many areas.

In generally, mangrove forest is vital for various marine resources. Reflecting to importance of mangrove forest in Zanzibar Ocean, it provides for the breeding and nursery grounds for a number of marine organisms including the commercially important shrimp, crab and fish species. The existence of mangrove trees creates basis of a complex marine food chain, creation of critical habitat for fisheries and coastal bird populations, establishment of restrictive impounds that offer protection for maturing offspring, filtering and assimilating pollutants from upland run-off, stabilization of sediments and protection of shorelines from erosion as well as water and atmospheric quality improvements where all these have economical and biological importance to human being include production of fishes as sources of nutritious food and income, in the communities of Zanzibar.

In this researcher interested to find the data through the following questions:?

1. How people benefited through the presence of mangrove?
2. How the communities participate in mangrove activities?
3. What to do in order to protect mangroves in Zanzibar?
4. How the presence of Mangrove alleviate the climate change?



## Method

This is a survey research that was conducted using two research tools which are Questionnaires and interview. The questionnaires were distributed for thirty students while the interview were conducted for ten people. The papers with question were distribute by the researcher under the guideline so as to ensure that all questions are returned to to researcher for further consideration In this project the researchers applied observation, questionnaires and interview to collect the data regarding the opportunities due to the products of mangrove.

The questionnaires were distributed to 30 people in the community of Unguja Ukuu, and the results were recorded as follow.

What are most economical activities where the people benefited from Mangrove?

### PROCEDURES

Step 1 We did a field trip to visit mangrove sites including Unguja Ukuu, Kinazini and Jonzani Mangrove

Step 3.

The Researchers designed tools for interview and questionnaires

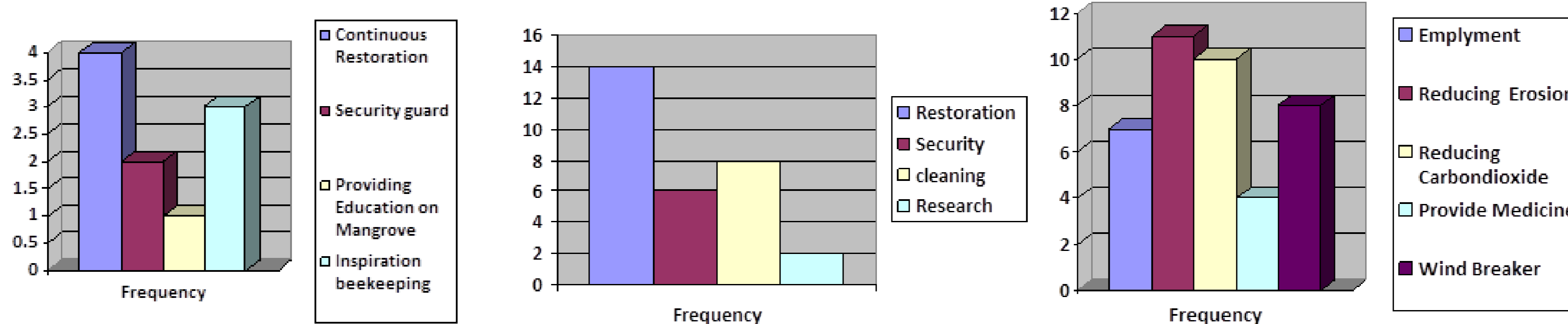
The Interview was prepared for communities in the mangrove areas while interview was directed to special people.

Step 4. We distributed 30 questionnaires for the community people and we asked 10 questions during the interview

Step 5: We collected the data and we continued to access results using statistical methods

	MANGROVE SPECIES	ENGLISH NAME	LOCAL NAME
1	Avicenia marina	White or Grey mangrove	Mchu
2	Cerriops tegal	Oriental mangrove	Msinzi
3	Bruguera gymmorrhiza	Yellow mangrove	Mkoko mwekundu
4	Rhizophora mucronata	Booking grass mangrove	Mshundazi
5	Suneratia alba	Black mangrove	Kikandaa
6	Lumnitzera racemosa	Orange mangrove	Mkoko magondi
7	Heritiera littoralis	Mangrove apple	Mpia
8	Xylocarpus granatum	Cannon ball mangrove	Mkuo
9	Xylocarpus mulicicins	Cerdar mangrove	Mkomafi dume
10	P. acidula	Iron wood mangrove	Kilalamba dume

## Results



## Conclusion

Mangroves are more importance to us, they bring many benefits to us. Also Avicenia marina, lumnitzera racemosa, Rhizophora mucronata, suneratia alba, Xylocarpus granatum and the best mangrove species with a broad advantages in our country as seen on our project report.

The mangrove are very important in for our economy particularly the spirit of blue economy where the Government of Zanzibar has invested. There is a need of increasing awareness in the community on protecting the mangrove so as to make our oceans safe.

More over the data above shows that the batter use of mangrove can lead to improve economic status for the communities and controls the climate changes' impacts in our country so we need to educate people on those opportunities and benefits available on the batter use of mangrove.

## References

Biological system of Mangroves, 1986, Ehima University.  
Growth and establishment of Mangrove 2001

## Acknowledgement

We would like to give much thanks to all invaluable suggestions and contributions helped us so much when we were preparing this project.

For sure it is not possible to mention all, but there are some who are powerful contributors and played a great role to the completion of this project without and with respect to their contributions; we must mention few of them



S/N	TIME	DATES	DESCRIPTION
1	11.00 – 13.00AM	12 <sup>th</sup> February 2023	We did a Meeting with our teacher and told us about Young Scientists Project 2023
2	10.00 – 12.00 AM	21 February 2023	We came up with three project ideas and we discussed with our mentor Teacher
3	9.00 – 11.00AM	12 <sup>th</sup> March 2023	We met our Mentor to get the feet back from the Project Manager Mr Joseph Clowry who advise us to opt such project and he added to advise us on the way of getting the data. He said that this is very good project.
4	1.00 – 3.00 PM	27 <sup>th</sup> March 2023	We sent our project Proposal with all necessary information
5	10.00 – 12.00 AM	15 <sup>th</sup> May 2023	We got the message that our project has been selected.
6	10.00 – 12.00 AM	20 <sup>th</sup> May 2023	We started to develop our project by mentioning those who are going to be involved in the project
7	9.00 – 12.00 AM	25 <sup>th</sup> May 2023	We went to Mangrove sites and identifying those mangrove species available in Zanzibar. The same day we talk to Community leader at Unguja Ukuu
8	12.00 – 10.00 PM	2 <sup>nd</sup> June 2023	We prepared Questionnaires and also we design motive for the interview
9	10.00 – 12.00 AM	10 <sup>th</sup> June 2023	We distributed 30 Questionnaires to the communities
10	12.00 – 10.00 PM	15 <sup>th</sup> June 2023	We did interview for 10 people in the communities
11	14.00 – 16.00 PM	20 <sup>th</sup> June 2023	We started to analyze the correspondence from the interview and questionnaires
12	12.00 – 10.00 PM	1 <sup>st</sup> July 2023	We started to write the project report
13	10.00 – 12.00 AM	10 <sup>th</sup> July 2023	We continued to write the project reports
14	13.00 – 16.00 PM	27 <sup>th</sup> July 2023	We sent our Project report
15	2.00 – 6.00 PM	20 <sup>th</sup> October 2023	We reviewed our project report