



SOCIAL SURVEY REPORT

SUSTAINABLE MANAGEMENT OF HDH, NEYKURENDHOO MANGROVE/WETLAND AREA

31 July 2018

Report Number:



Environmental Protection Agency

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1. Introduction

Neykurendhoo is located in the center of Haa Dhaal atoll. The island has a land area of 169 hectares of which 2.7 hectares are mangrove/wetland areas. The mangrove/wetland area is significantly small in ratio when compared to the total land area of the island.

According to the Census report of 2014, Neykurendhoo has a population of 743, which includes 328 males and 415 females. The majority of the islanders depend on tourism and fishery as their main source of income, however the islanders living within the island depend on agriculture for their daily needs as well as generate income through the sale of their produce to central Male' as well as nearby islands. The main crops yielded by farmers in Neykurendhoo include bananas, coconuts, chilies and breadfruits. Groundwater is being used for agriculture as well as household purposes. The island's freshwater lens is well maintained, probably due to the mangrove/wetland.



2. Purpose

The main purpose of this survey is to find out the perspectives of the island community towards sustainable management of the mangrove/wetland area. The survey also focuses on finding the social and economic changes the community will face due to the sustainable management of the mangrove/wetland area and to be well informed about the expectations and opinion of the island community towards sustainable management of mangrove/wetland areas.



3. Methodology

The survey was done using informed participants who willingly filled out questionnaires that required for them to answer questions about their opinion about mangrove/wetland areas, importance of sustainable management of mangrove/wetland areas as well as the current uses of the mangrove/wetland areas. The questions were answered by 102 participants.

3.1 Survey Team

Surveyors team includes staffs from Environmental Protection Agency (EPA). Below are the surveyors who did the social survey for Neykurendhoo.

Hassan Abdul Kareem: Deputy Director

Hussain Shufran: Assistant Director

Mariyam Shidha Afzal: Senior Research Officer

Ali Ahmed Didi: Senior Computer Programmer

Enas Mohamed: Environment Analyst

4. Results

4.1. Survey Participants

The survey participants were selected on voluntary basis and 25% of the total population of the island was surveyed, which includes 55 females and 47 males. The majority of participants were between the age of 21-30.

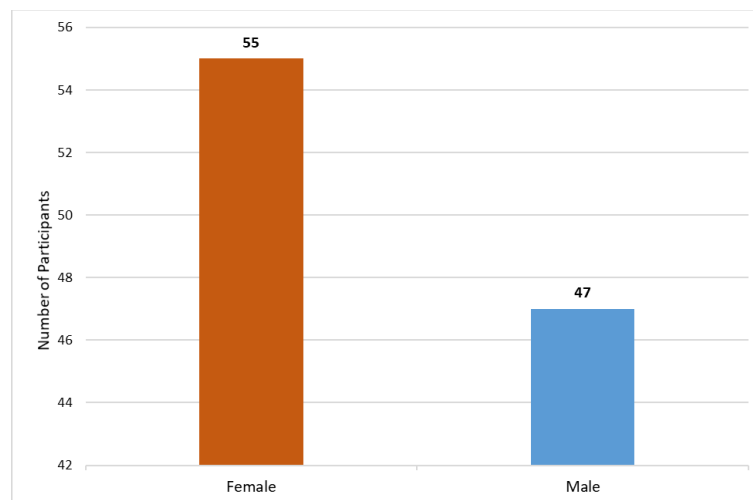


Figure 1: Gender of survey participants

The survey team attempted to include all gender and age groups equally in the survey. The graph above shows the participant's gender and it shows that there were 55 females and 46 males in the surveyors.

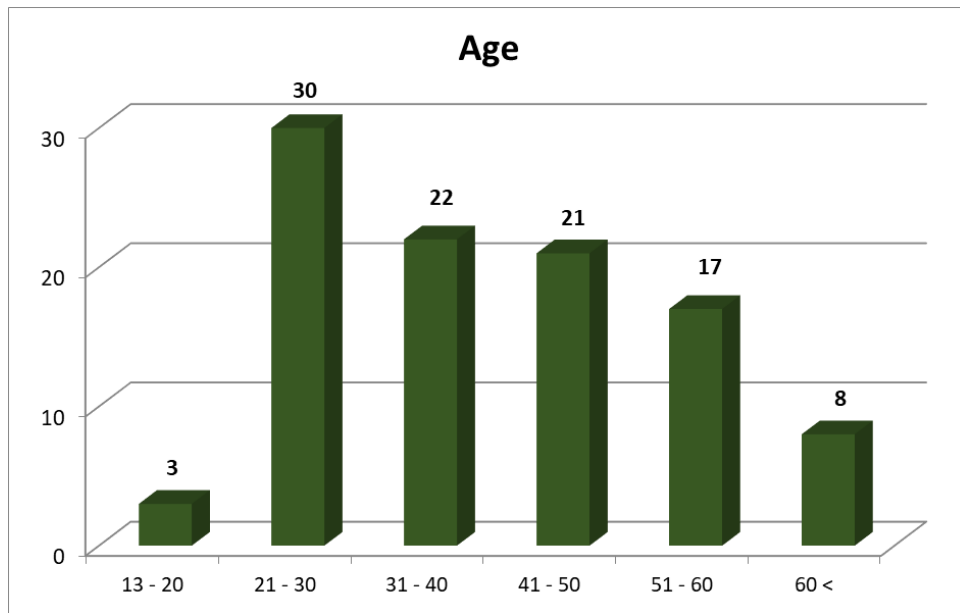


Figure 2: Age groups of survey participants

The majority of survey participants are between the age of 21-30, which is 30 participants. And 22 participants were between the age of 31-40 years of age and 21 participants are between the age of 41-50 years. There were 3 participants between the age of 13-20 years and 8 participants were above 60 years.

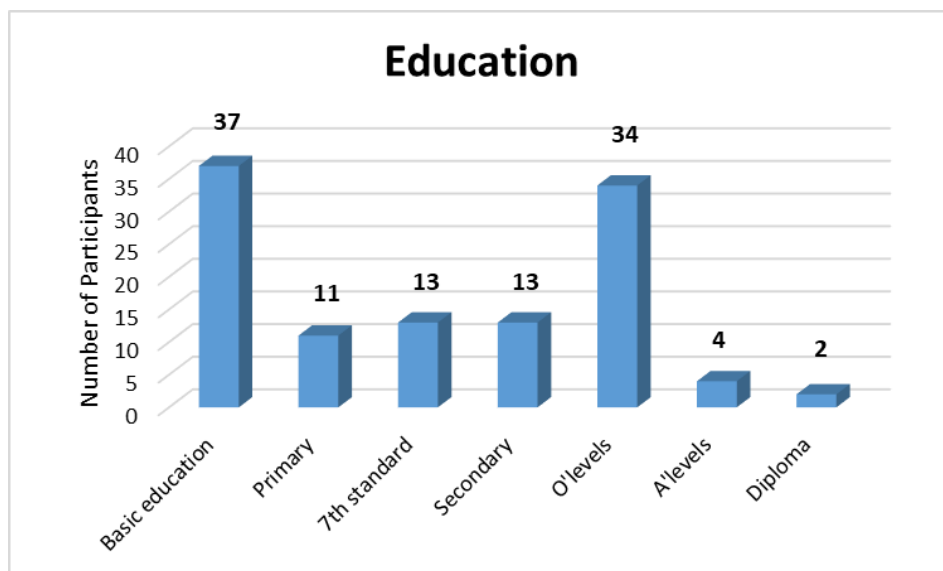


Figure 3: Education levels of the survey participants

There were 37 participants who had completed basic education and 34 participants who have completed O'levels. 2 participants have completed diploma and 4 participants have completed A'levels. 13 participants have completed 7th grade and secondary education, and 11 participants have completed primary.



4.2. Mangrove/Wetland

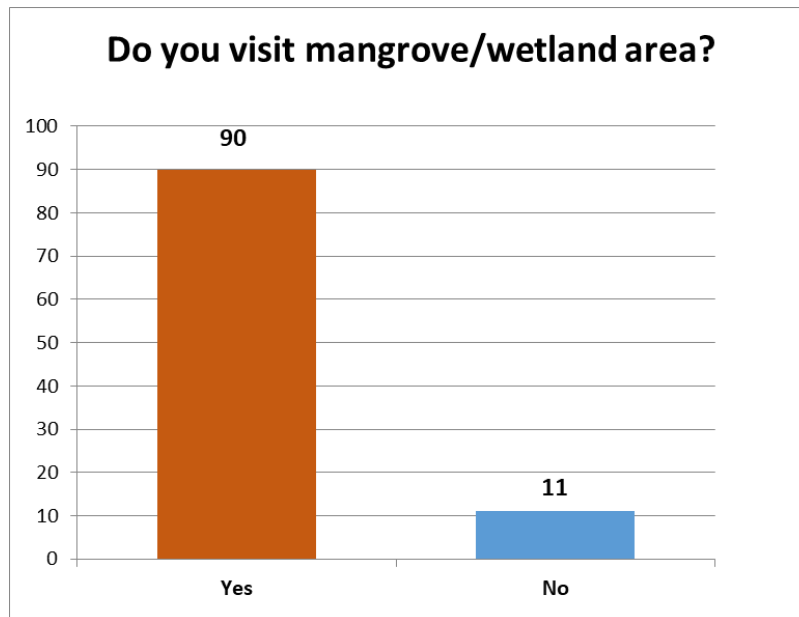


Figure 4: Do you visit mangrove/wetland area?

From the 102 participants of this survey 90 participants said that they visit the mangrove/ wetland area of Neykurendhoo and 11 participants answered that they do not visit the mangrove/wetland areas for any purpose.

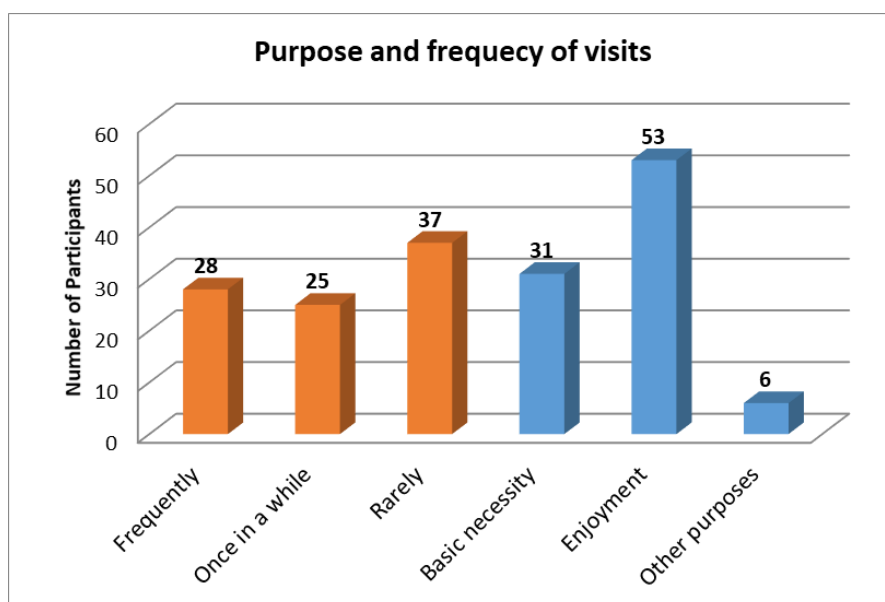


Figure 5: Frequency and purpose of visits to the mangrove/wetland area

The figure above shows the frequency and purpose of visits by the participants who agreed to visiting the mangrove wetland area in the above question. It shows that 28 participants frequently visited the mangrove wetland area while 25 and 37 participants once visited the mangrove wetland area once in a while and rarely,



respectively. Majority of the participants, which is 53 participants from Neykurendhoo visited the mangrove/wetland area for enjoyment and 31 visited for basic necessity, which included collecting firewood, collecting *Bruguiera cylindrica* for personal consumption and 6 participants visited for purposes such as showing the area to tourists or helping out with school field trips.

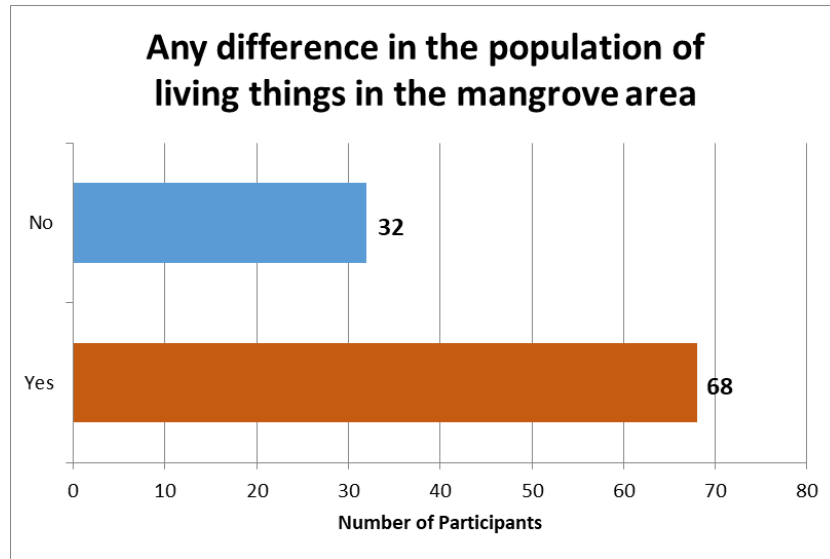


Figure 6: Are there any difference observed in the population of living things in the mangrove/wetland area?

There is a significant change in the population of the living things in the mangrove/wetland area of Neykurendhoo according to the 68 participants and the remaining 32 participants said that they do not observe any significant changes in the population of living things in the mangrove/wetland area.

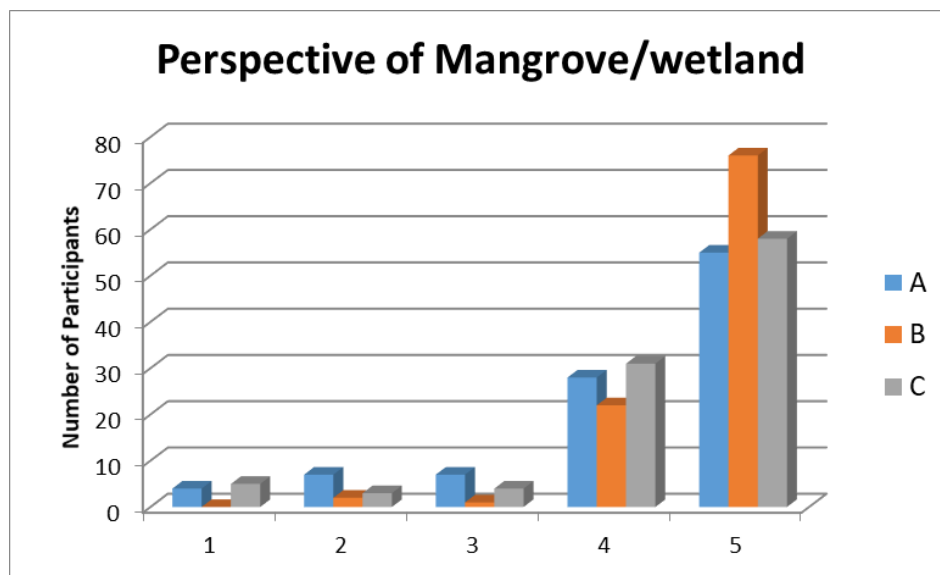


Figure 7: Perspective of the participants towards mangrove/wetland area



- (5: Strongly Agree, 4: Agree, 3: Neutral, 2: Disagree, 1: strongly disagree)

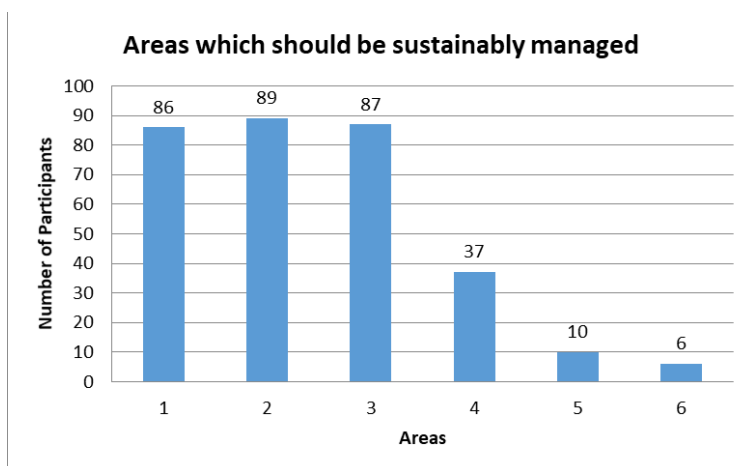
A	Mangrove/ wetlands are breeding and nursery grounds for marine animals
B	I believe the future generations should get the opportunity to use the mangrove/wetland resources
C	It is our responsibility to stop development projects within the shore area and preserve mangrove/wetland resources for the future generations

Figure 7 shows that 55 participants strongly agree and 28 participants agrees that mangrove/wetlands are breeding and nursery grounds for marine animals. While 7 participants are neutral regarding the statement, 7 and 4 participants disagree and strongly disagrees respectively, to the statement that mangrove/ wetlands are breeding and nursery grounds for marine animals.

76 participants strongly agree and 22 participants agrees that future generations should get the opportunity to use the mangrove/wetland resources. 2 participants disagree with the statement. And 1 participant wanted to stay neutral regarding the statement that future generations should get the opportunity to use the mangrove/wetland resources.

The last statement states that it is our responsibility to stop development projects near the shore and preserve the mangrove/wetlands resources for the future generations. While 58 participants strongly agree with the statement, 31 agrees and 4 said that they wanted to be neutral regarding the statement. 3 participants disagree with the statement and 5 participants strongly disagrees with the statement that it is their responsibility to stop development projects near the shore and preserve mangrove/wetland resources for the future generations.

Areas:



1	Areas where maximum benefit can be obtained from the natural resources
2	Areas which has rich natural resources
3	Areas with unique features and historical values
4	Areas which are open only for permit holders
5	Strictly closed areas
6	All of the Above areas

Figure 8: Areas which should be sustainably managed



The above graph shows areas according to the participants which should be sustainably managed and participants allowed to select all the options that found to be correct. The main purpose of this question is to find out the awareness level of the participants regarding sustainably managed areas and to know the participant's perspective regarding the selected areas. 86 participants agreed that the areas which are sustainably managed should be areas where the maximum benefit of natural resources can be extracted. 89 participants believe that areas with rich natural resources should be sustainably managed, and 87 participants believe that such areas should have unique features or historical significance. As seen from the graph above 37 participants agree that sustainably managed areas should be given access to only the permit holders, and 10 participants said that such areas should be strictly closed. 6 participants said that sustainably managed areas should have all the 5 features above mentioned.

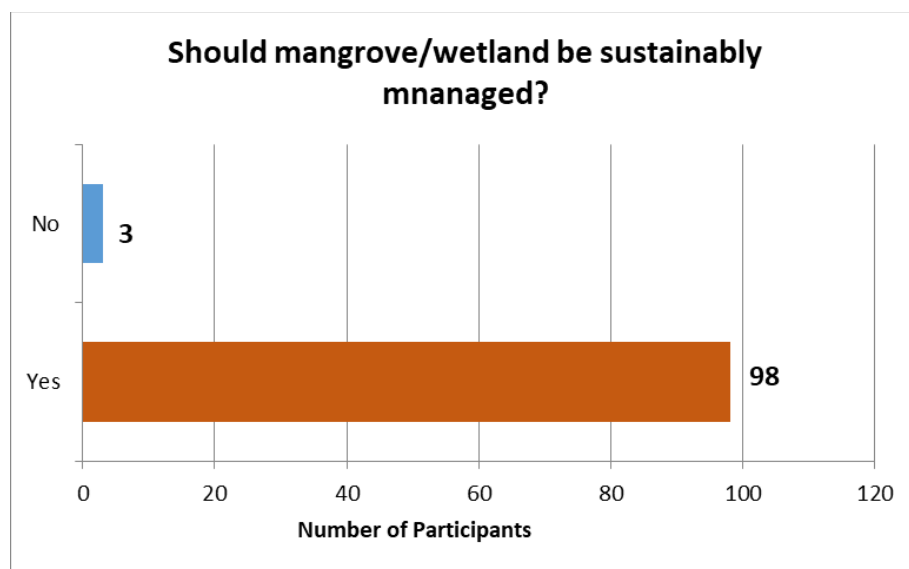


Figure 9: Should mangrove/wetlands be sustainably managed?

From the total number of 102 participants 98 participants agreed that mangrove/wetlands should be sustainably managed and 3 participants disagreed that mangrove/wetlands should be sustainably managed.

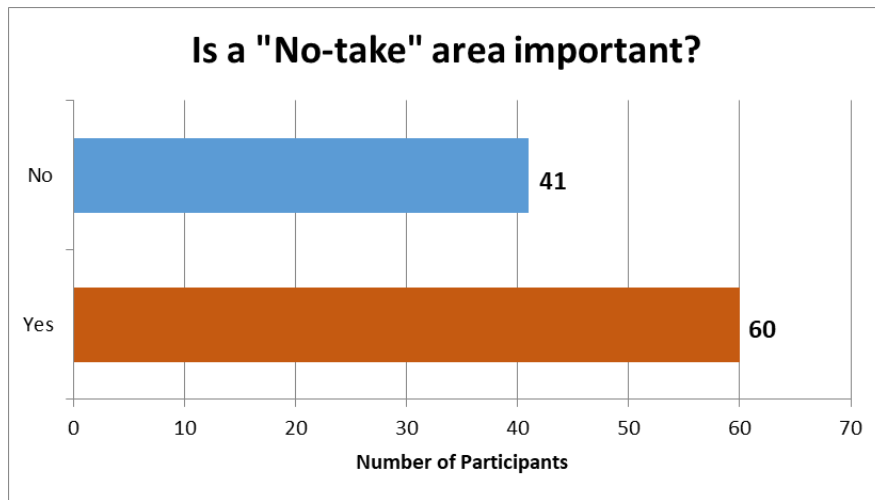


Figure 10: Is a "No-take" area important for management of mangrove/wetland areas?

“No-take” areas are important for the sustainable management of mangrove/wetland areas according to 60 participants and 41 participants were against having a “No-take” within the sustainably managed areas.

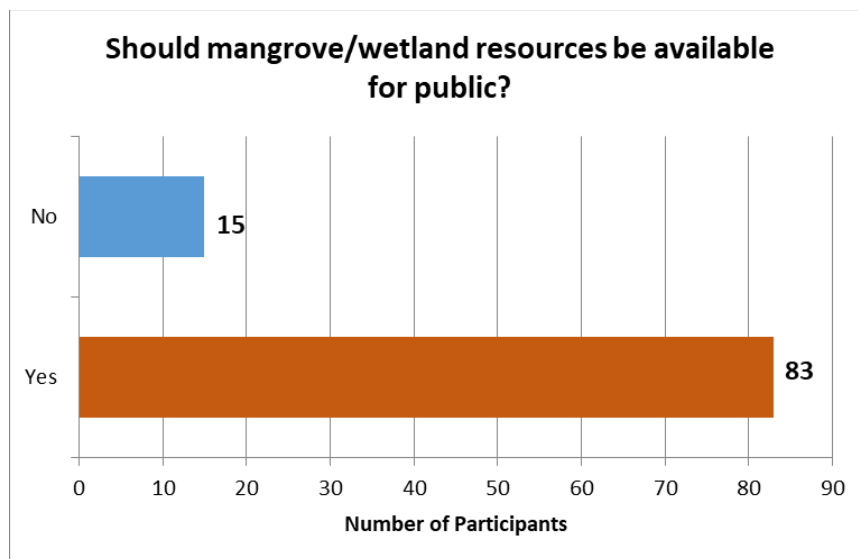


Figure 11: Should mangrove/wetland resources be available for public?

Mangrove/wetland resources should be available for the public according to 83 participants and 15 participants said that it should not be available for the public.

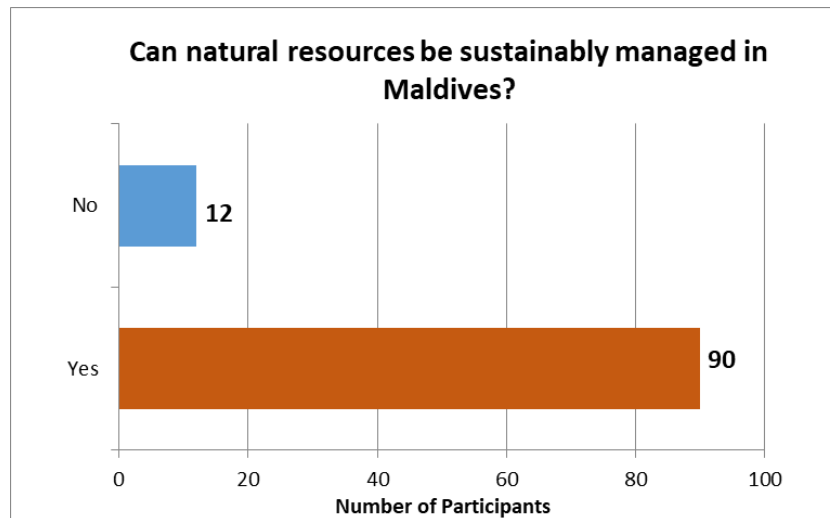


Figure 12: Can natural resources be sustainably managed in the Maldives?

90 participants agreed that natural resources can be sustainably managed in the Maldives while 12 participants disagreed that natural resources can be sustainably managed in the Maldives.

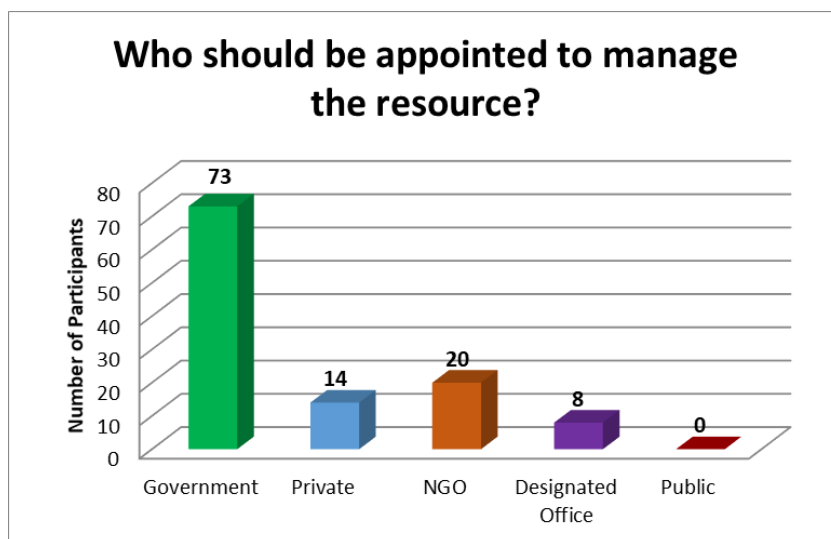


Figure 13: who should be appointed to manage the resources?

The Majority of 73 participants said government should be appointed to manage the resources and 14 participants said the private sector should be appointed to manage the resources. While 20 participants said it should be the NGOs within the island who should be appointed to manage the resources, 8 participants said that it should be a separate designated office formulated for the given purpose, who should be given the responsibility of managing the resource. None of the participants believes that the island community should be given the responsibility of managing the resources.

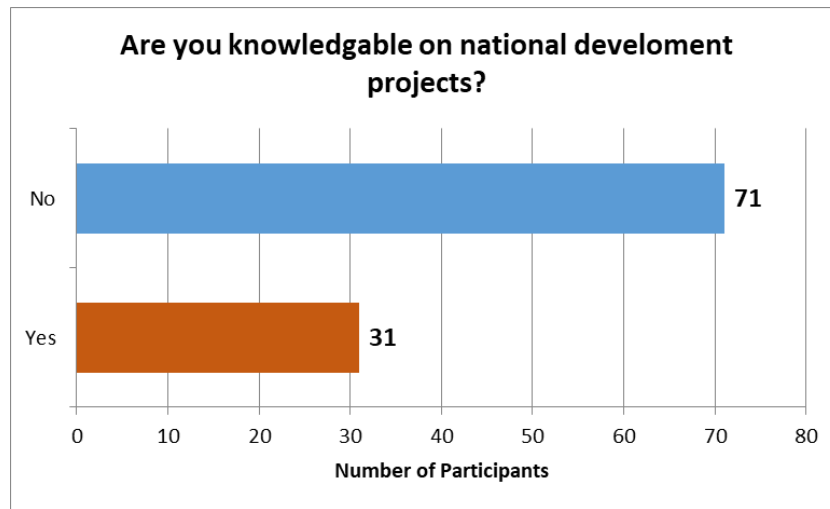


Figure 14: Are you knowledgeable about national development projects?

Majority of participants are not knowledgeable about the development projects within the country as only 31 participants said that they have knowledge of such development projects and 71 participants said they do not have knowledge about national development projects.

5. Conclusion

This survey was aimed to find the awareness levels and perspectives of the island community of Neykurendhoo regarding the mangrove/wetland area of the island and its sustainable management. Apart from the 11 participants, all the survey participants visit the mangrove/wetland areas of the island for different purposes. Figure 5 indicates the frequency of visits and the purpose of the visits. As it is seen from the figure 31 participants visit the mangrove/wetland area for their daily necessities, which includes; firewood collection, farming and collecting *Bruguiera cylindrica* for personal consumption. The survey brought to light the importance of sustainable management of the mangrove/wetland area of Neykurendhoo as the island community uses the resources and the area for their daily needs as well as for their enjoyment and fun. Majority of the survey participants also wish to manage the area in a sustainable long term manner, which would also help the island community benefit economically.

It was agreed by 98 participants that mangrove/wetland resources should be conserved for the future generations and 89 participants also agree that development projects within mangrove/wetland areas should be stopped to conserve those areas for the future generations.

Majority of the participants agreed that areas being managed sustainably should be areas with rich natural resources and areas from where maximum benefits of the resources can be extracted. Few participants said that areas with unique natural features and areas with historical importance should also be sustainably managed. It was agreed by all the participants that, sustainably managed areas should have open-access for the island community. It is also agreed by majority of participants that having “No Take” area within the



sustainably managed area is very important as it helps in sustainable management of resources with least human disturbance.

As it is evident from figure 12, 90 participants believe that natural resources can be sustainably managed in Maldives, but only if the responsibility is given to an eligible party with strict regulations and thorough monitoring. 73 participants said the responsibility should be given to government while 20 and 14 participants said that it would be best to give the responsibility to an NGO/s within the island and private sector respectively.

6. Recommendation

The results of the survey indicate that the community is aware about the benefits of the mangrove/wetland areas, however it shows that more awareness sessions should be conducted for the island community regarding the benefits of mangrove/wetland areas for the island physically and how to use a sustainable approach for the natural resource extraction, either for economic gain or daily needs.

Majority of the island community agrees to sustainable long term management of the mangrove/ wetlands, and they also believe that the island community should have open access to the resources of the mangrove/wetlands of the island. Hence it is very important to incorporate the ideas and opinion of the island community when formulating the regulations and guidelines for the Neykurendhoo mangrove/wetland management. Sustainable management can only be achieved when the island community can benefit from the resource economically, and so it is very important to consider the island community when developing the management plan for the mangrove/wetland areas of any given island.