

FIELD REPORT
FIELD WORK AND TRAINING ON
BIOLOGICAL SAMPLING TECHNIQUES
FOR MALDIVES NATIONAL UNIVERSITY STUDENTS
14 October 2017



REPORT

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About this report:

On 14th October, 2017 a fieldtrip was organized for the students of Maldives National University. The report describes the sessions and outcomes of this field activity.

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November 2017

Introduction

Maldives is blessed with several ecologically significant ecosystems. They provide important ecosystem services to the communities living across the Maldives. Being a low-lying, small islands state, the Maldives is one of the most vulnerable countries to climate change, sea level rise, changes in temperature and rainfall patterns. Climate change can have a catastrophic impact on the islands resulting in erosion, destruction of infrastructure and coral reef damage, affecting human health, food security and water resources. Hence strategies need to be formulated and implemented to reduce impacts of climate change on the communities. This training exposed the Maldives National University students to ecologically significant ecosystems – coral reefs, seagrass beds and shoreline vegetation. The content covered created awareness among the students of the vulnerability of the island communities and ways to build resilience of the communities through proper management of ecosystems. The fieldwork sessions were designed to expose the students to the ecosystems and helped them learn ways to monitor changes to these ecosystems through biological sampling methods and beach profiling.

Objectives

By the end of the field work participants will be able to:

1. Identify the ecologically significant ecosystems
2. Explain the services provided by the ecosystems for the wellbeing of communities
3. Conduct a beach profile to study erosion
4. Use transects and quadrats for data collection from coral reefs, seagrass and shoreline.

Field work site

The field work was conducted on HulhuMale'. This island was particularly selected as there were plenty of students taking part in the field work and most of them did not want to spend too much time travelling between Male' and the field work site. Being an inhabited island it was easy to obtain the necessary facilities for students including meals from HulhuMale'. There was a hospital on the island too – it was very useful as any injuries to students could be quickly treated.

Access to the different ecosystems were easy and students did not have to take many risks even when observing corals in the marine environment. Several students did not know to swim and hence shallow waters were selected for the activities.

Participants

52 students (Bachelor of Education Primary – 37 students and Bachelor of Teaching Secondary – 15 students) of Faculty of Education of Maldives National University, were invited to take part in the field work. 45 students took the field work.



Participants being briefed on the use of equipment (*List of participants are provided in Appendix*)

Program and activities

Time	Activity
0830	Departure from Male' ferry terminal
0900 to 0930	Breakfast
0930 to 1030	Talk on use of snorkeling gear and the use of equipment for activities
1030 to 1100	Measuring the height of shoreline vegetation using a clinometer
1100 to 1130	Collecting data on beach slope to make a beach profile
1130 to 1200	Study the distribution of sediments across the beach slope using strainers
1200 to 1230	Estimating the distribution and abundance of coral and seagrass along a transect line
1230 to 1330	Break for Lunch
1330 to 1430	Snorkeling in the lagoon – observing corals and other organisms on the coral reef
1430 to 1500	Concluding the activities
1500	Departure to Male' from HulhuMale'



Students assembling for the activities

Activity 1: Briefing on proper use of snorkeling equipment and the other equipment used for data collection

This activity began with an introduction to the snorkeling equipment. Students were briefed on the proper use and care for snorkeling equipment and how to select the equipment when purchasing and burrowing it. Students were also briefed about the threats they could face while swimming on the reef and exploring it. In addition students were provided information on the use of quadrat, laying a line transect and using a clinometer to take measurement on heights of trees. They were also taught how to use the different scales on a measuring tape.



Students learning about proper use of snorkeling equipment and other tools used for data collection

Activity 2: Sampling along a transect line using a quadrat

For this activity transect lines and quadrats were prepared and the sampling was carried out in the lagoon. Students were provided waterproof paper for writing their data. They recorded the abundance of live coral, seagrass, sediments and any other organisms that were under the quadrat.



Activity 3: Beach profile

This activity was designed to provide experience in collecting data on beach erosion. Beach erosion is very common throughout the Maldives and this experience would help them teach their students to collect data on beach erosion in their own islands once they have completed their course.



Activity 4: Studying sediment distribution across the beach slope

Students used strainers to compare the distribution and abundance of different sizes of sand particles across the beach slope. Volume of three different size particles were measured at 4 different points along a transect line laid across the beach.



Activity 5: Estimating the height of shoreline vegetation using a simple clinometer

With the help of the clinometer students were able to find the angle of inclination from the position where they were standing from the tree. Students used this angle to estimate the height of the trees. This activity was designed to help students identify approximate heights of trees that grow along the shoreline.



Activity 6: Snorkeling and observing organisms in the marine environment

This activity helped student to learn how to use snorkeling equipment and in addition it provide students information on the coral reef and seagrass beds. Students snorkeled along the shallow lagoon identifying various types of corals and other marine organisms found on the reef.



Field trip expenses

Since the activity was conducted on a separate island arrangements had to be made for the students to travel to the site by ferry. The expenses for the field trip were fully covered by Rufford Foundation Small Grants.

Description	Rate (USD \$)	Total (USD \$)
Transport by ferry from Male' to HulhuMale and back to Male'. Transport of students from ferry terminal to the field work site and back to ferry terminal.		50.00
1 Room (For facilitators to take shower and change cloths after the field work).	50.00	50.00
One meal for the students, and facilitators (total 50 persons).	8.00	400.00
5 Facilitators (charges for conducting the sessions).	100.00	500.00
TOTAL		1000.00

Appendix 1: List of Participants and trainees

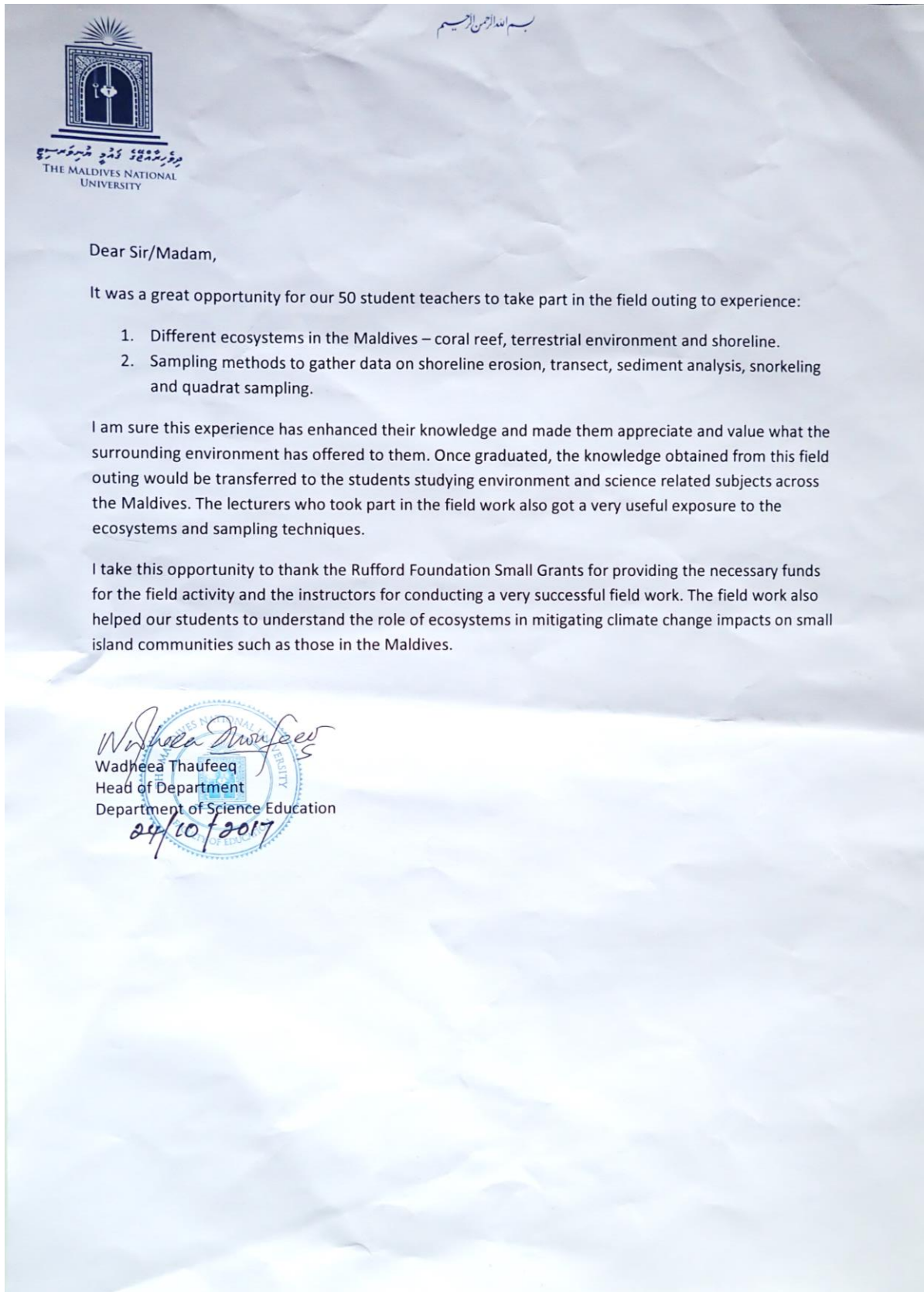
	Std. ID No.	Name
1	47056	Aishath Thooba
2	43628	Aminath Juman
3	38313	Aminath Nuzuhath
4	45848	Aminath Shazna
5	46955	Aminath Zoonaa
6	46984	Amna Ali Shareef
7	47077	Fathimath Hussain
8	46979	Fathimath Naazleen
9	26120	Fathimath Nasha
10	16580	Fathimath Shabana
11	18838	Fathuhiyya Ali
12	47018	Haifa Hussain
13	33021	Haleemath Sifaza
14	8596	Khadheeja Nafha
15	47043	Mariyam Abdul Wahhab
16	48845	Mariyam Wasma
17	41884	Muzuna Mohamed
18	47073	Najdha Mohamed
19	47877	Safiyya Abdulla
20	47066	Sama Niyaz
21	37105	Aishath Shama Aslam
22	42021	Aishath Sunitha
23	34521	Fathimath Thohira
24	37332	Fathimath Ushama
25	36761	Fathimath Wafa
26	31036	Fathimath Yumna Hussain
27	33587	Husna Mohamed
28	42882	Mariyam Hamdha
29	35127	Nuzuha Ali

30	35207	Rifa Rafeeu
31	7023	Ruhuma Rasheed
32	42299	Saaidha Ibrahim
33	39891	Sithura Mohamed
34	28832	Ummu Salma Ali
35	000-048-152	Abdul Rahman, Shamra
36	000-047-069	Ashfa Abdulla, Mariyam
37	000-042-557	Maashaa Shiyam, Aishath
38	000-042-913	Mohamed, Lubna
39	000-046-999	Mohamed, Yasmin
40	000-044-725	Nahudha Mauroof, Aminath
41	000-046-998	Rafa, Fathimath
42	000-039-011	Rasheed, Khuzaima
43	000-047-006	Samaha Ali, Aishath
44	000-034-483	Shuhaimath, Mariyam
45	000-037-506	Najmee, Mohamed

Those who contributed to the sessions

	Name	E-mail Address
1	Mariyam Nashath	mariyam.nashath@mnu.edu.mv
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4	A Riyaz Jauharee	arjauhary@yahoo.com
5	Mohamed Amir	

Appendix 2: Letter of acknowledgement from Maldives National University



Appendix 3: Comments by students that took part in the field work

field trip feedback.

The experience was very useful. I got to engage in ecological activities which will help me in future teaching career when ~~conducted~~ with students. The trip was also fun and enjoyable which enable to enjoy with friends and lecturers. Good instructions were given to students. New techniques known.

- Demonstrated very well what we have to do
- Learned to do the activities independently
- Learned new thing like beach profiling, Sedimentation

Field trip experience was good.

Activities went smoothly.

there was proper guidance.

All the groups completed their tasks on time.

Overall it was a very good experience. the sampling of sea bed was a new experience and it was explained well. All the activities were ~~gix~~ given very good explanation and very nice.

It was a very good experience. I have learnt beach profiling and sedimentation through the field trip. The instructions were very clear so we were able very clear about what we were supposed to do. It was a fun experience.

- Learned new techniques of sampling.
- Line transect was very interesting.
- ~~Learn~~ Sedimentation and beach profile was a new experience.

17) It was a fun trip and a great experience. We learned a lot of useful things that we can do in the schools as teachers. We also learned how to organize field trips in the future.

18) Trip was really fun and I had a great new experience. Got chance to do new things and learn lot.

19) Trip was really fun and enjoyable. I have learned many things from this trip. Really happy that we got this chance 😊

The field trip was exciting as I got to practice all the different activities again. And the ~~extra~~ briefing given at the beginning really helped in catching up of the steps & cleared some of misconceptions.

More practice was received in the trip.

Would like to involve in more trips. like this.

Field Trip

1. Very important experience for a student teacher.
 2. A fun trip. Learned a lot of new things.
 3. It was fun and learned a lot ; & Thankyou miss
 4. It was a fun and adventurous trip. Cooperation from all the students and the activities were fun and enjoyable.
 5. A fun and enjoyed trip. Learned many things.
 6. It was a good experience. Learned a lot of new things ~~with~~ in an enjoyable environment.
- This trip was really fun and new experience with enjoyable activity. And I learned new thing through the activities.
- 8) Fun and enjoyable trip with lots of new learning. Had a great time with friends and lecturers. Insha Allah we will use the information you had provided us in our future.
- 9) The trip was very fun. Got chance to do things i fear the most. Learned new things which was very helpful. I had a really great time with my friends. And so happy Nashath miss baby was there.
 - 10) It was a fun trip. learned a lot of new things -
 - 11) A fun trip. learned a lot of new things.
 - 12) It was a fun and enjoyable trip. learned a lot of new things
 - 13) Fun and very enjoyable trip. Learned many new things which I can use in future. Thank you miss.
 - (14) Very useful trip. Glad to do such important ~~exper~~ practicals practically. It will really be usef effective when we work in teaching field.
 - 15) It was a fun trip as well as we got lots of new information which we can use in future.
 - 16) It was a wonderful trip and learned lots of new things which I can use in future.

It was very enjoyable and learned lots of new things. Got a chance to see beautiful corals. It was so much fun. learned how to buy a mask. V.v fun. Thanks for the great opportunity. =Yumna=

It was a wonderful trip 😊

Thank you so much = Tholira =

It was Fun, Interesting and awesome. Thank you for the amazing trip - Rifa -

Most of all, I enjoyed the trip. Tasks were interesting. I am glad I participated it. One of the best experience. Thank you all! Fathun.

It was an awesome trip and a great opportunity to learn new things. We enjoyed it a lot.

Thank you for giving us the wonderful opportunity. -Sal-

It was awesome experience. Got a chance to ~~experin~~ Learn new things. It was really fun and enjoyable.

Thank so much for the giving such a ~~such a~~ enjoyable^{the} opportunity to learn new things and experience. Such a ~~th~~ = Hamdha =

It was great and fun trip. Thank you for the opportunity. We enjoyed a lot. - Sithu -

→ It was a good experience
→ learned a lot about sampling techniques .

It was very interesting. Learned many new things. Loved reef sampling.

It was a good experience. From the field trip I have learnt some sedimentation pa how to see the particle size and beach profiling. It was a fun experience with lots of new things learnt.