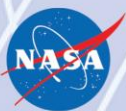


ANNUAL REPORT

GLOBE – MARSHALL ISLANDS

2023-2024

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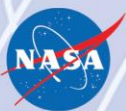
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INTRODUCTION

We tried to implement the recommendations of last year's activity report. The Marshall Islands was in an international and domestic transport lockdown for 3.5 years over the pandemic period. Last year 2023 was the first year of complete normalcy. This report outlines the activities undertaken.

Inferences from the activities and the sense of students' interest and behavior as it relates to Globe are that:

1. The app is not practical in the marshalls because smartphone and internet is limited.
2. Interest in the microscope and field work is easy to stimulate among the younger students
3. It is necessary to sustain their interest through a reward system.
4. College level students who have internet access and smart phones can be trained. This requires an integration of the Globe app in the environmental science program at the College of the Marshall islands on Majuro and Ebeye

Next steps.

1. Encourage the use of microscope and field work
2. Engage the environmental science class /department of College of Marshall islands in Globe

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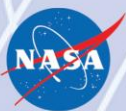


EDUCATION

Activity: Mosquito and Microplastics (Follow-up from recommendation of report last year)

- 1) I made a presentation to the marine science club members of the college of the Marshall Islands, a community college on Majuro. This is the entry point to citizen science in the Marshall Islands. Approximately 20 students were shown the scope of Globe activities, the Globe website, the different countries that were involved were showcased. Palau and FSM the neighbouring island states' last year's reports were shared. Also shared the Maldives' report. The purpose was to get students to relate to similar geographies and the importance or relevance of students in citizen science. Most students have cellphones and access to internet is available on the campus. We decided to try out the app. I also introduced the cloud observation and mosquito modules on the app. I asked a simple interest gauging question. About 20% of the students seemed really interested 50% were vaguely interested 20% were disinterested and 10% said they did not think this would help.
- 2) I approached the Calvary school on Ebeye and the Queen of Peace high school principals to allow a presentation to students. On Ebeye there are sanitation issues with the street gutters overflowing during rains. Overcrowding of housing and lack of play areas is the general status. In this environment Ebeye students related to the importance of mosquito larvae awareness identification and the public health nexus.
- 3) Laura district Majuro atoll is a rural district. There are two schools on Laura and an agricultural extension station. I did a presentation at the elementary school with the use of the active eye phone microscope to look at insect larvae eggs on leaves. This caught the attention of the students. Following this we collected discarded soda cans. The soda cans were Split open and liquid samples were examined.

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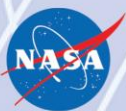
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SCIENCE

- 1) On Ebeye, Marshall Islands, a densely populated islet on Kwajalein atoll I met a group of CDC scientists who were implementing a project aimed at introducing genetically modified mosquitos. These were supposedly infertile females. I informed them of GLOBE activities and suggested they look into any collaboration that may be possible.
- 2) Water storage tanks made of Polyethelyne based plastics are widely used and manufactured in the Marshall islands. We examined these for microplastics using samples drawn from the faucet. The magnification was insufficient to see clear microplastics but it surprisingly showed particles of plastic that were evidently remnants of the manufacturing process or degradation of the plastic in high temperaturass.

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COMMUNITY

- 1) We held a neighborhood meeting last year during early summer holidays with middle school age children. We demonstrated the USE OF HANDHELD small MICROSCOPES provided by the Globe Zika project. We looked at water samples from water collected in discarded tires strewn in the neighborhood. About 50 children were divided in groups of 5. They used the microscopes to to differentiate the different types of larvae. We did not identify the species. We did not use the cellphones/app etc. Generally the children were enthusiastic. I think in the Marshalls it may be excessive to use the app and cellphones because the majority of teens and children do not have access to smartphones and 4G internet is expensive. It is sufficient to create awareness through the use of mosquito larvae differentiation to show that a certain type of larvae leads to zika transmission.
- 2) On Ebeye it is common to see hundreds of elementary school children play on the streets in the evening. I held a neighborhood field class-near the basketball court using the projector and globe website using 4G. The children were most interested in seeing other countries' involvement in Globe activities especially in Nepal and Thailand. Some incentive is required to keep their interest sustained.

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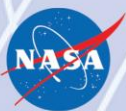
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TECHNOLOGY

The availability of Smartphones and internet Access remain issues that are an obstacle to the use of the app.

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Communication



STAFF

Collaboration with Karness Kusto a former science teacher and guide at National Training Council and, Asako a science teacher at Laura High School. Country Coordinator Riyadh Mucadam at Delap, Majuro. Collaboration with Ebeye Principal Sathya of SDA school to introduce GLOBE activities.

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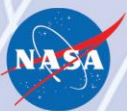


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THE GLOBE PROGRAM

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