2023

NATIONAL ADAPTATION PLAN COMMUNITY ENGAGEMENT SUMMARY REPORT

Enewatak Atoll

IOM UN MIGRATION

Lio tūt bok

JO-JIKUM
jodrikdrik in jibañ ene eo ekutok mararo

MICS
Marshall Islands Conservation Society

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OVERVIEW

The International Organization for Migration (IOM) was engaged by the Government of the Republic of the Marshall Islands (RMI) to lead community engagements on the National Adaptation Plan (NAP) in eight Atolls. The engagement team was comprised of IOM staff and three Non-Governmental Organization partners; Jo-Jikum focusing on youth, Women United Together Marshall Islands (WUTMI) focusing on women and inclusion, Marshall Islands Conservation Society (MICS) focusing on livelihoods. This Summary Report reflects the results of all agencies engagements that elevate and articulate the community members voices.

COMMUNITY BACKGROUND

Enewetak Atoll lies in the Ralik chain of islands and is the most northerly and western island in the Republic of the Marshall Islands (RMI). It is therefore one of the most remote islands as measured by the frequency and cost of transport, with irregular and expensive flights, and a boat from Majuro that comes every three months.

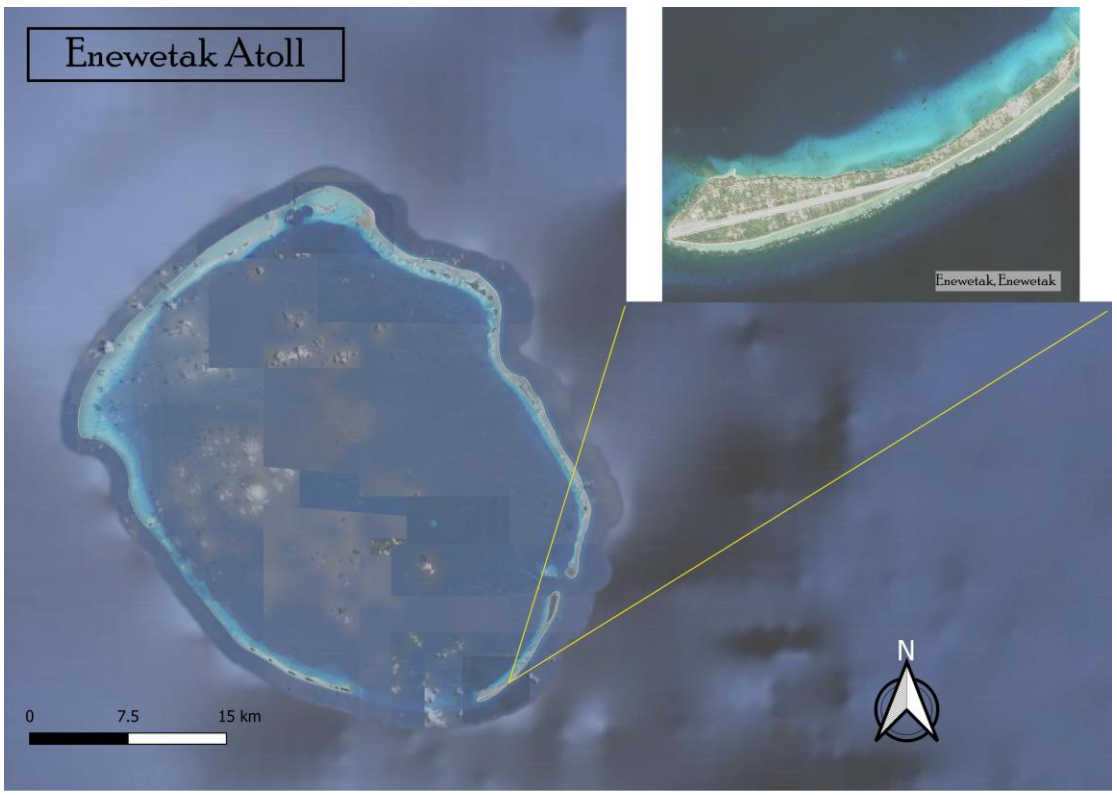

Figure 1: Map of Enewetak Atoll

Enewetak Atoll is also a former nuclear weapons testing ground, with tests conducted in 1948, 1951, 1952, 1954 and 1956. The population was relocated to Ujelang atoll in 1947 and did not return until 1980 when the island was declared decontaminated. There remains over 100,000 cubic yards (76,000 m^3) of radioactive material deposited inside an unlined nuclear test crater on Runit islet, which is one of the 40 islets in the atoll, and which is covered by a large concrete dome (called 'the Runit dome') (see Figure 2).

Figure 2: the Runit dome

The preliminary 2021 census records a population for Enewetak Atoll of 296 people, living in 64 households with a mean density of 4.6 people per household. The population lives in one community on one of the 40 islets in the atoll. The main source of income for most households (74%) is wages and salaries (preliminary n2021 census).

The population recorded in preliminary 2021 census is less than half of that recorded in the 2011 census, though it is important to note data collected for the preliminary 2021 census may have been skewed by effect of the COVID 19 pandemic. The preliminary 2021 census shows that Enewetak Atoll's population is young – with 47% of the population under the age of 20 years, and only 3.8% aged over 65. There is also a gender imbalance, with 53.7% of the population being male. The percentage of people who reported a disability in the 2021 census is 2.7%. Community profiles collected during the consultations can be found in Annex 1. Prior to travel to the community, the team collected and learned as much as possible about the community, this information can be found in Annexes 2-3. Enewatak Atoll is considered a rural community.

Previous consultations and reports from Enewetak Atoll indicate that, as with all the northern islands of the RMI, drought is a recurring problem. Inundation during king tides has also previously been reported. There is concern among locals – and which is reported in international media – about the influence of sea-level rise and higher tides on the spread of radioactive waste from the Runit dome. In previous consultations people in Enewetak Atoll indicate that typhoons are a major risk and remember the 1979 typhoon and the damage it caused.

THE CONSULTATION PROCESS

The consultation team visited Enewetak Atoll between in late January 2023.

Figure 3: Enewatak Atoll participants completing the Day in the Life Activity

The first thing to take place during the community consultations is the introduction meeting where information is provided to the community on the purpose of visit and what the NAP is and how it is going to support the community in the future. This first meeting also build off of the Hazard Vulnerability Capacity Mapping (HVCM) that took place the year before in March 2022. This is a vital step in setting the scene for the methodologies to follow. The consultation for the NAP involved six different data collection methods: a baseline survey to capture views on current and future adaptation; a Day in the Life (DIL) activity where participants were asked about their observations of environmental change, social impacts and how they anticipate daily activities to be affected in the future; focus group discussions from two targeted groups (youth and women); semi-structured interviews with community members from targeted groups (women, youth, fishermen and/or farmers and landowners and community leaders); community profiles; Hazard Vulnerability Capacity Mapping (HVCM) (community leaders and Disaster Committee); and Youth and Arts Engagement. Some individuals participated in more than one methodology.

Method	Female	Male	Youth	Middle aged	Elderly	Undisclosed
Baseline survey						
Day in Life	9	17	n/a	n/a	n/a	n/a
HVCM 2022	5	25	n/a	n/a	n/a	n/a
Focus groups	22	18	n/a	n/a	n/a	n/a
Interviews	3	6	n/a	n/a	n/a	n/a
Youth and Arts Engagement						
TOTAL	**41**	**74**				

Figure 4: Participant demographics by research method

GUIDING VALUES FOR ADAPTATION

Values can be expressed verbally, and by observing people's daily actions (called 'lived values'). People in Enewetak Atoll live very routine lives that revolve around community, home, and the environment.

Women in particular spend time inside cooking, cleaning, tidying up the house, washing clothes, and looking after children. These are time consuming tasks given 70% of households do not have refrigerators, 85% do not have stoves, and half do not have washing machines (preliminary 2021 census). Very few women report having free time in their days. No women report that they procure food either from animals, farming, or fishing. A small number of women make handicrafts, though this is not as common an activity in Enewetak as it is in other rural islands in the RMI.

In contrast, few men report that they cook food, but almost all men report that they procure food in some way. Men are responsible for maintaining the family's pigs and chickens, and fishing for food on a regular basis, and most men (even those with full time jobs) do this. Men also are responsible for cleaning up outside the house. Approximately one third of men report having some leisure time in their days.

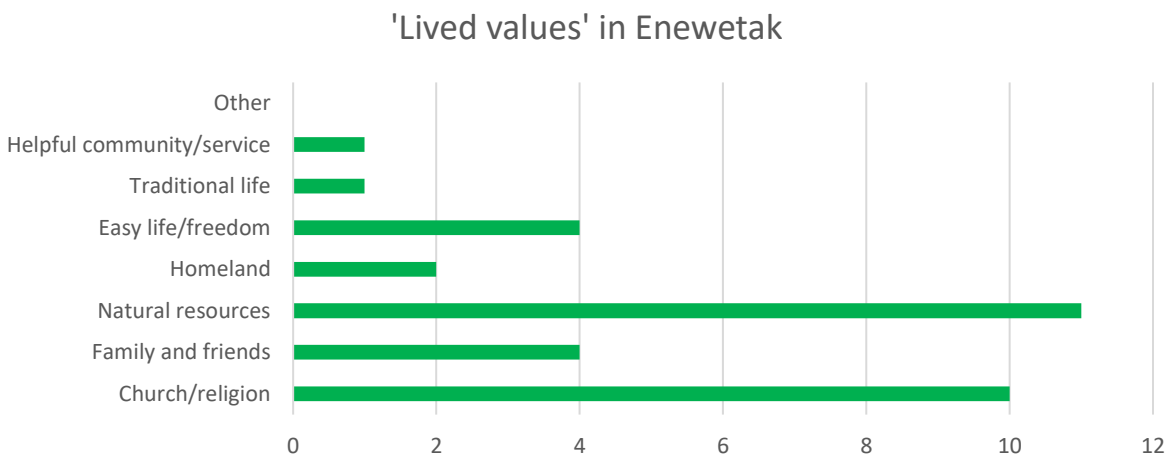

Figure 5: "Lived values" in Enewatak, as reported in 'day in the life' survey on Enewatak Atoll

People in Enewetak Atoll enjoy interacting with their islands and seas. Most people are religious, almost all report attending church on Sundays, and many say that they pray every day during the week. People in Enewetak Atoll also enjoy social interactions with family and friends, notably through the Church but also in more everyday encounters. They rely on animals, gardening and fishing for fresh food, and appreciate living in their customary lands and by their own rules. Those who remain in Enewetak Atoll express a strong commitment to remaining, and to working together and with government to adapt to climate change. These values are important in the context of climate change adaptation because they demonstrate that the community has a high reliance on having access to healthy natural resources, and a high level of place attachment. Adaptation should prioritise supporting these natural resources and recognise people's deep attachment to Enewetak Atoll.

CLIMATE CHANGE EXPERIENCES AND CONCERNS

The most common response to questions about environmental change was that air temperatures were increasing, which, together with observations of more drought itself, and more erratic rainfall accounted for more than 60% of the observations of climate change. This finding, that the main climate impact is drought, is consistent with earlier studies, and is a well-known (but not well-addressed) problem in the northern RMI.

The next more frequently cited problem was sea-level rise. Further, some people said ocean temperatures were rising, and a few people said typhoons were getting stronger (Figure 6).

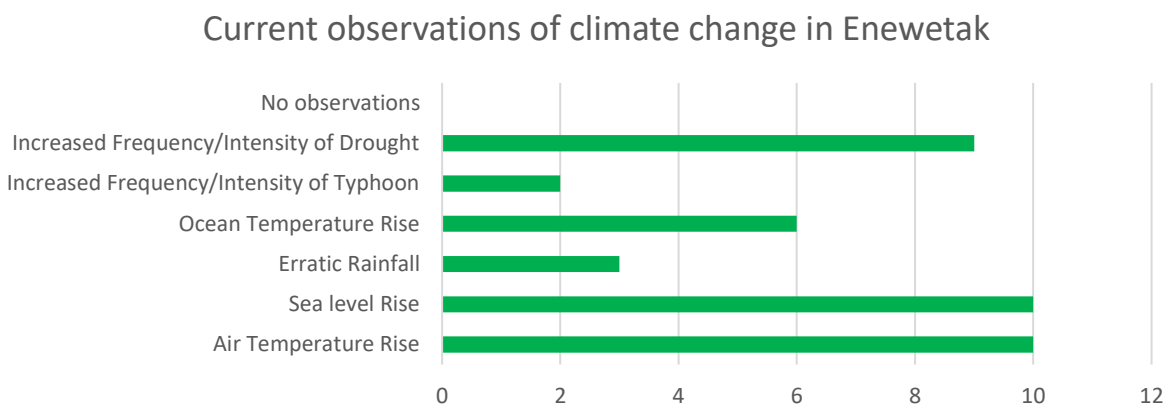

Figure 6: Main observations of climate change in Enewatak Atoll

Drought has several impacts in Enewetak Atoll. According to the preliminary 2021 census, three quarters of households rely on rainwater tanks for drinking water and cooking, with the balance largely relying on communal sources or wells. Drought affects the supply of clean water for drinking, cooking, and washing. Drought also causes health problems, including a rise in diarrhoea and conjunctivitis due to increased heat, dust, and declining availability of clean water for hand washing and bathing.

Drought also impacts on the quantity and quality of the main local crops of breadfruit, pandanus, and taro, as well as the growth of animals, and so reduces supply of fresh and nutritious foods. One farmer mentioned that whereas in the past bananas and watermelons were abundant on the island, now they are scarce.

Increasing heat is changing the timing of daily practices, for example women no longer do household chores in the middle of the day because it is too hot.

Sea-level rise was also observed. Respondents were able to identify places in the main island where shorelines were changing – which one respondent identified as being mostly on the northern side of the island. One fisherman observed that low tides were less low, while high tides were higher. Another mentioned that corals are shifting to deeper waters.

Figure 7: Community produced hazard map of Enewatak. Note the driest areas in the north west (yellow shading), areas of coastal inundation (purple lines), and coastal erosion (red line).

Women in particular were concerned about increasing flood risk during typhoons, expressing concern for the school and the safety of children given the school is close to the sea, close to sea-level, and on the northern side of the island where most erosion is occurring. Women especially remember past typhoons, including damage to houses, and the loss of many food plants and livestock.

During the Youth and Arts Engagement, it came out that younger people (elementary school age) were unaware of the topic of climate change, yet they were familiar with the effects of it in their surroundings. For example, they were aware of the fact that there have been many changes to their community, and that with extreme heat and drastic droughts, diseases like conjunctivitis and diarrhea become an issue. They just did not know the link between climate change and these observed occurrences.

Women and youth also expressed concern about the safety of eating local sea foods given the risk of contamination from the Runit dome. They continue to eat local fish despite this because there are few alternatives given imports are rare due to infrequent transport, which was even more pronounced during the COVID-19 pandemic.

Unsurprisingly, people's concerns about the future impacts of climate change included the same problems they already experience: more heat, more erratic rainfall and drought were, taken together, the most common set of future concerns. However, people are also very worried about sea-level rise, and increasing frequency and intensity of typhoons, and warmer ocean temperatures (Figure 8).

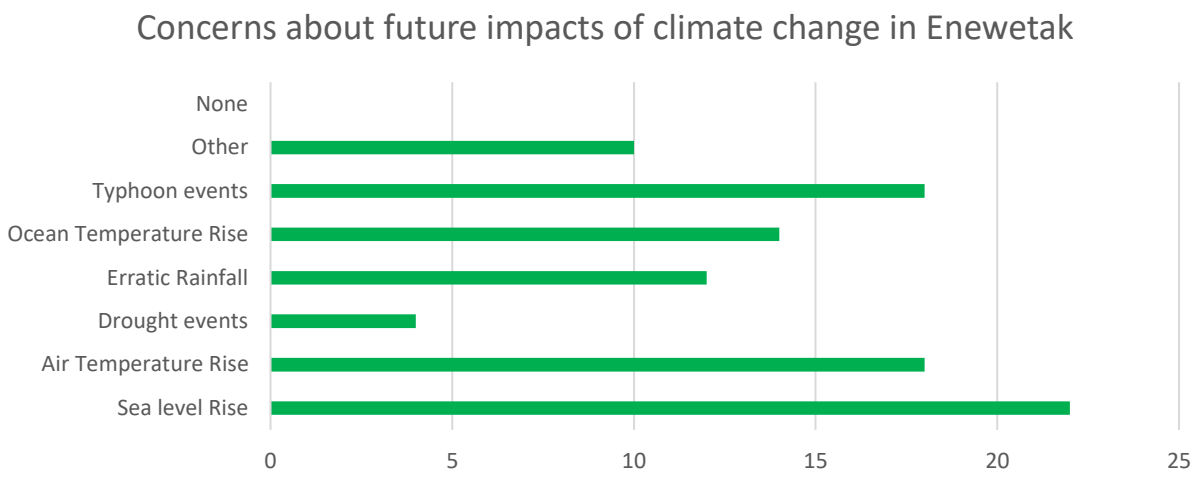

Figure 8: Concerns about future impacts of climate change in Enewatak Atoll

OTHER COMMUNITY EXPERIENCES AND CONCERNS

There are several non-climatic factors that increase vulnerability to climate change in Enewetak Atoll. Many problems stem from a lack of connectivity with Majuro and beyond.

The lack of access to transport to Majuro and beyond limits the ability of the island's producers of fish, handicrafts, and livestock to sell those items to larger markets. The island's isolation also means its people have limited access to goods and services, including spare parts to maintain critical infrastructure such the reverse osmosis unit and the water distribution truck, and to the equipment and services necessary to adapt food production to increasing dryness and drought. There is only one store, which reduces competition and leads to a perception of higher prices.

Access to basic health care and medicines is extremely limited. Medical services are limited to two medical assistants working in a clinic that is said to be not in good condition, and there is one dispensary, meaning people rely on traditional medicines, or must wait and/or pay high costs to travel to Majuro. This leads people who need more specialised health services to migrate, and this is typically older people (which helps to explains why the population of Enewetak is young). This in turn reduces the number of the people on island who can contribute to collective tasks such as gardening.

Remoteness also limits people's access to education, and technical support for agriculture and fisheries is limited and of concern to local people. This in turn drives migration as people leave to seek better access to education, healthcare, job, and social opportunities, and the rate of migration is seen by the resident community as a key social problem.

"I can see the change through the social climate amongst the community. It used to be so peaceful and the atmosphere amongst the people was calm. Now there's more hatred and social isolation in the community. They don't take care of their siblings and they're arguing over land now. You can tell everything is starting to change" (female participant)

ADAPTATION PRACTICES AND IDEAS

In general, people in Enewetak Atoll did not report many adaptation practices or ideas about future adaptations. This may be because while people observe many impacts of climate change, awareness that climate change may be a cause of these changes is low, therefore awareness of solutions is likely to be low. Presentations made to the community during the consultations helped to raise awareness, and people began to see the connections between the changes they had observed and climate change. Nevertheless, while there was not an abundance of ideas about what adaptation actions were underway or might be possible, everyone said they are ready and willing to act on their own, in their households, and with their community and leaders.

After the Youth and Arts Engagement, the youth had a better idea of the links between climate change and the changes in their environment and created art works that demonstrated what the future will look like if they (and the world) do not do something to adapt and mitigate the effects of climate change.

In terms of drought, people are coping more than they are adapting. People in Enewetak Atoll rely on water from rainwater tanks and wells, both of which become depleted during droughts. In response, rationing of water is common, and at times clean water must be imported from Majuro. In 2018 a large reverse osmosis system was installed. This unit is solar and wind powered and can produce 5600 gallons of water per day, it also provides extra power for the airport. While this reverse osmosis system can serve as a backup source of water, it has been performing below expectations due to maintenance problems, and the system of distribution of this water results in losses during transport.

When local food crops fail people travel to Ujelang to get fresh food, which is a two-day trip. Otherwise, they consume larger quantities of imported foods which are less fresh and less nutritious. This may be indirectly related to a rise on non-communicable dietary related diseases such as diabetes.

Pine trees are being replanted to help protect against salt spray and waves during storms and typhoons. The community has built a small seawall to try and prevent wave damage to the school.

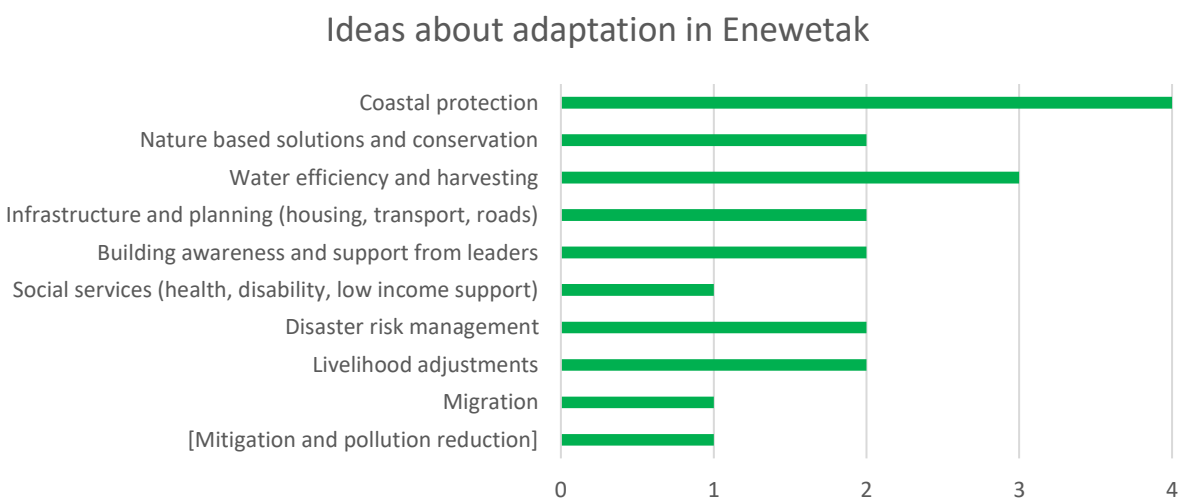

Figure 9: Ideas about adaptation in Enewatak Atoll

When asked about ideas for future adaptation the most common response was 'be prepared' and 'plan ahead'. The most frequently mentioned specific action was coastal protection (Figure 9). Many in the community expressed a desire for seawalls made from stone, though less obtrusive nature-based measures were also mentioned, including the use of rocks and corals in the reef to dissipate wave energy, and planting native vegetation along the shorelines to stabilise shorelines and dissipate wind and wave energy during storms.

Ideas for adapting to drought took two directions. One of these was improve water quality and supply to households. Ideas to do this included: more pumps water quality testing kits and purification systems for groundwater; small reverse osmosis units for households; training in using and maintaining reverse osmosis units, and a reliable supply of spare parts for them; construction of concrete water catchments; a new vehicle better suited to transporting water from the reverse osmosis unit, and improvements in the surface of roads.

Second, ideas to improve food security in the face of drought and drying focussed on improving equipment knowledge and practices for drought resilient agriculture, including: better composting, seed stores, drought tolerant varieties, small scale irrigation systems, more equipment and materials for gardening, improving food preservation, and training.

Concerns about the effects of sea-level rise and high tides on contamination from the Runit dome suggests the need for independent monitoring of radiation levels in fresh water and marine species throughout the atoll.

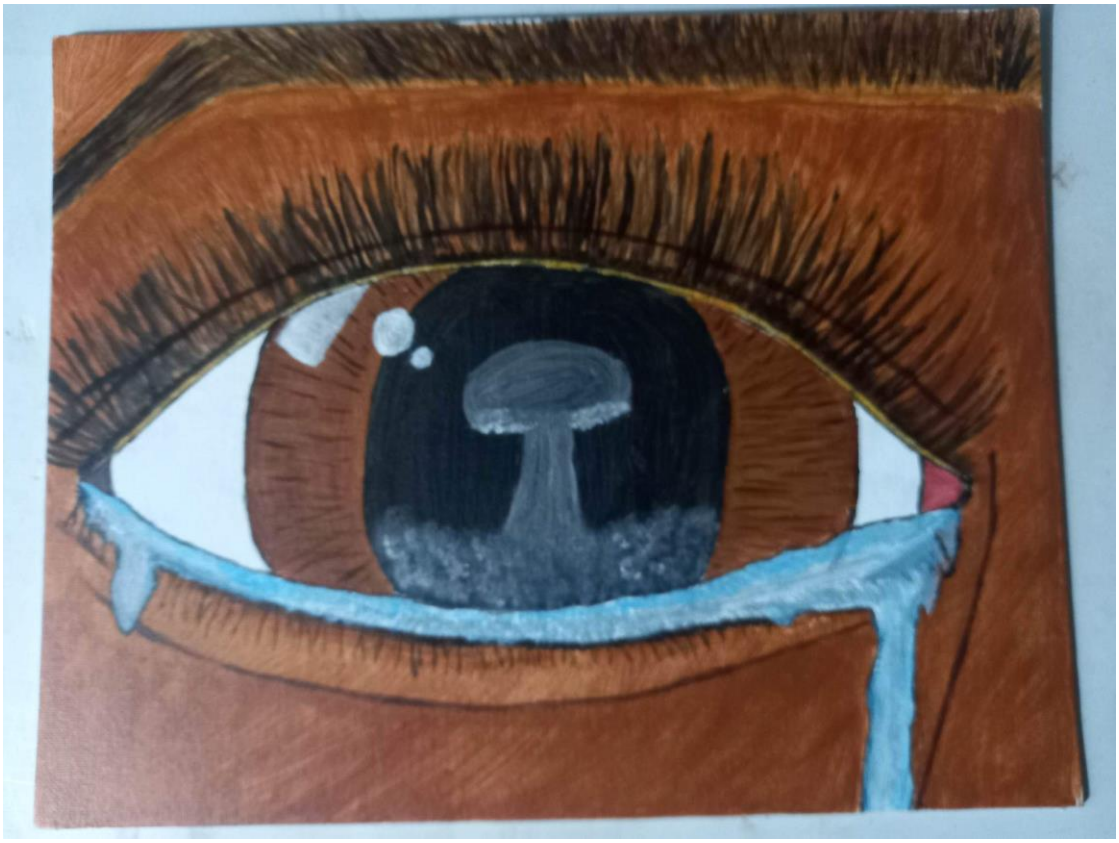

Figure 9: Youth art created during the youth and arts engagement on Enewatak Atoll

Because awareness of climate change was low, there was a suggestion for the provision of educational materials about climate change, including for use in the elementary school curriculum. Concerns about typhoons lead to a suggestion for improvements in radio communications and training in radio systems and technologies.

Migration was rejected as an adaptation option by all but one respondent (who had only been in Enewetak Atoll for a short period of time). If migration was raised, it was in terms of past and present migration. This migration was largely linked to community members seeking better health care and respondents implied that increased rates of out-migration would increase social problems in Enewetak Atoll, not decrease them. Migration was not mentioned as a future response to climate change because people value living on their own lands and living by their own rules, and do not wish to live on other people's lands and according to other people's rules. Indeed, people's main concern about climate change is that it may give them no choice but to leave.

BARRIERS, OPPORTUNIITIES, AND IMPLICATIONS FOR ADAPTATION

People in Enewetak Atoll are experiencing climate change. Drought conditions are impacting on their health and food security, which is a problem exacerbated by inadequate water supply systems that are difficult to improve and maintain due to a lack of training and materials, which is in turn a problem of poor transport services to the island. Sea-level rise is also observed, causing erosion, and concern about contamination from radioactive waste stored in the nearby Runit dome.

These changes threaten the rights and well-being of peoples that were displaced by nuclear testing for 33 years, and which, on return, have struggled to maintain their community and valued ways of life in a very remote island that receives few services or goods. Despite this, the people of Enewetak Atoll are determined to adapt to climate change to continue living in the homelands.

The list of adaptation options below reflects the ideas actions the communities have expressed, but it is limited by their awareness of options. Beyond these actions there are systemic changes that can both better support the well-being and sustainability of people of Enewetak Atoll as well as reduce their vulnerability to climate change, for example: substantial improvements in the frequency and (lower) cost of air and sea transport; access to the internet; and a long-term solution to secure the population from radioactive contamination from the Runit dome.

When discussing adaptation options, one responded stated:

> *"I would say if its relocating within just Enewetak, I think there wouldn't be any problems because the people of Enewetak are kind to each other. They should easily be managing and distributing lands equally and fairly. But if the government relocate us to outside of Enewetak it would be very hard because there are landowners everywhere and I don't know whether or not they will like the idea of this." (male participant)*

Adaptation activities that could begin immediately (identified by community and low risk of regret)
Increase the sustainability of the community's reverse osmosis unit through training and a stockpile of spare parts
Improve access to groundwater through pumps, water quality testing kits, and water purification systems
Small reverse osmosis units for households, training in their maintenance, and a supply of spare parts.
Tree planting to help protect shorelines, reduce heat, and increase food supply
Improving equipment, knowledge, and practices for drought resilient agriculture, including better composting, seed stores, drought tolerant varieties, and small-scale irrigation systems.
Provision of educational materials about climate change, including for use in the elementary school curriculum
Improve radio communications and training in radio systems and technologies
Improve medical services, including regular access to a doctor, and better supply of medicines
Establish independent monitoring of radiation levels in fresh water and marine species throughout the atoll.

Adaptation activities that could begin in the next five years (identified by community and require further consultation and planning)
Double the frequency of shipping services without increasing the cost
Site assessments to determine the most technically appropriate adaptation to sea-level rise and erosion, and engagement with the community on coastal adaptation options.
Connect the community to the internet

KEY OBSERVATIONS FROM THE FIELD ENGAGEMENT TEAM

During a final debrief and workshop session with project team members shared their naturalistic observations that were observed in the field. These are key takeways from each community and key action points for each community provided by IOM, Jo-Jikum, WUTMI, and MICS.

Key Takaways

- Droughts affect both plant and human health
- The community's awareness on how changes in climate can start an epidemic
- The community does not rely on copra like how other atolls heavily do.
- In Enewatak Atoll, women proposed changes to the law, which can promote gender equality in the climate change adaptation agenda and advocate for those less fortunate.
- Need for community cohesion through community resilience projects that aid to adjust to climate change

Key Actions

1. RO unit, one for each side of the island.
2. Installing toilets for every household for hygiene purposes.
3. More training on gardening, followed by the supplies, materials and tools to work the gardens over time.
4. More transport services to get people and supplies to and from the atoll, right now just Airport (when there are 15 or more, maybe once a month) and ships (supposed to be quarterly but not always.
5. Need climate change education materials for the school.
6. Renovation for the schools, the school is old and leaking, some of the textbooks getting wet and cannot be used.
7. Need to demolish unsafe old Japanese buildings.
8. Workshops around GBV, these should extend to all sectors of the community – men, teenagers, and more. Important for all community members to equally gain the information.
9. Coastal protection, both sea walls and nature-based solutions.

Figure 10: Field Engagement Team Enewatak Atoll

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Annex

1. Enewatak Atoll Community Profile
2. Enewatak Atoll HVCM Report 2022
3. Youth and Arts Engagement
4. IOM GBV Directory FINAL Oct 19 2021