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# **Consultancy to prepare a National Climate Change and Health Policy (NCCHP) and Revised Action Plan for the Republic of Marshall Islands**

## **D5. Consultations and Mapping Workshop with List of Stakeholders**

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Authors: Sotiris Vardoulakis, Christine McMurray

National Centre for Epidemiology and Population Health

Research School of Population Health

College of Health and Medicine

+61 2 6125 0657

[sotiris.vardoulakis@anu.edu.au](mailto:sotiris.vardoulakis@anu.edu.au)

The Australian National University

Canberra ACT 2601 Australia

[www.anu.edu.au](http://www.anu.edu.au)

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# Table of Contents

Glossary .....	4
Summary .....	7
1. Introduction .....	8
2. Methods .....	8
3. Findings .....	11
3.1. Rapid Survey and Focus Group Discussions .....	11
3.2. Mapping Workshops with Key Stakeholders .....	24
4. Conclusions .....	31
5. Acknowledgments .....	31
References .....	33
Appendix 1: Focus Group Discussion Topics .....	34
Appendix 2: List of Stakeholders .....	35
Appendix 3: Workshops Programme & Presentations .....	39
Appendix 4: Group Pictures from Workshops .....	54

## Glossary

AG	Attorney General
ALRO	Alab Lebje Relatives Organization
AMI	Air Marshall Islands ANZ Australian and New Zealand
BOMI	Bank of the Marshall Islands
CAP	Comprehensive Adjustment Program
CCA	Climate Change Adaptation
CMAC	Coastal Management Advisory Council
CMI	College of the Marshall Islands
DAC	Development Assistance Committee
DRM	Disaster Risk Management
EIA	Environmental Impact Assessment
ELEFA	Enemanit-Latuma Extended Family Association
EPA	Environmental Protection Authority
EPPSO	Economic Policy, Planning and Statistics Office
FDGs	Focus Group Discussions
IWRM	Integrated Water Resource Management
JNAP	Joint National Action Plan
KAJUR	Kwajalein Atoll Joint Utility Resources
KIJLE	Kora in Jiban Lolorjake Ejmour (promoting weight loss and improved health)
MALGov	Majuro Atoll Local Government
MAWC	Majuro Atoll Waste Company
MBC	Marshalls Broadcasting Company
MCG	Forum Ministerial Contact Group on Fiji (MCG)
MEC CRP	Marshalls Energy Company Comprehensive Recovery Plan
MEC	Marshalls Energy Company
MICNGOs	Marshall Islands Council of Non-Governmental Organizations
MICS	Marshall Islands Conservation Society
MIDB	Marshall Islands Development Bank

MIEPI	Marshall Islands Epidemiology & Prevention Initiatives
MIJ	Marshall Islands Journal
MIMA	Marshall Islands Mayors' Association
MIMRA	Marshall Islands Marine Resources Authority
MIOFA	Marshall Islands Organic Farmers Association
MIR	Marshall Islands Resort
MISAT	Marshall Islands Standard Achievement Test
MISC	Marshall Islands Shipping Corporation
MISGLB	Marshall Islands Scholarship, Grant and Loan Board
MISSA	Marshall Islands Social Security Administration
MIVA	Marshall Islands Visitors Authority
MOE	Ministry of Education
MOF	Ministry of Finance
MOFA	Ministry of Foreign Affairs
MOHHS	Ministry of Health and Human Services
MOIA	Ministry of Internal Affairs
MOJ	Ministry of Justice
MPW	Ministry of Public Works
MWSC	Majuro Water and Sewer Company
NCCHAP	National Climate Change and Health Action Plan
NCCHP	National Climate Change and Health Policy
NCCPF	National Climate Change Policy Framework
NCDs	Non Communicable Diseases
NDMO	National Disaster Management Office
NRC	Ministry of Natural Resources and Commerce
NSDS	National Sustainable Development strategy
NSP	National Strategic Plan
NTA	National Telecommunication Authority
NTC	National Training Council
NTFC	National Trade Facilitation Committee

OCIT	Office of Commerce, Investment & Tourism
OCS	Office of the Chief Secretary
OEPPC	Office of Environmental Planning, Policy and Coordination
OLPC	One Laptop Per Child
PDMC	Pacific Developing Member Countries
PFRM	Public Financial Roadmap
PIDP	Pacific Islands Development Program
PIFFA	Pacific Islands Forum Fisheries Agency
PSC	Public Service Commission
PWD	People With Disabilities
R&D	Ministry of Resources and Development
RECO	Research and Education Community Organization
RMI	Republic of Marshall Islands
RWH	Rainwater Harvesting
SBA	Small Business Administration
SBDA	Small Business Development Agency
SBDC	Small Business Development Center
SE4All	Sustainable Energy for All
SPTO	South Pacific Tourism Organization
T&C	Ministry of Transportation and Communication
USP	University of South Pacific
WAM	Waan Aelon in Majel - Canoes of the Marshall Islands Program
WHO	World Health Organization
WIB	Women In Business
WUTMI	Women United Together Marshall Islands
YTYIH	Youth to Youth in Health

## Summary

Given the vulnerability of the Republic of the Marshall Islands (RMI) to the impacts of climate change, the Government of RMI is aiming to develop a concise and comprehensive National Climate Change Health Policy (NCCHP), and a 5-Year Action Plan to support the effective delivery of the NCCHP. The goal of the NCCHP and revised action plan is to improve the coordination and effectiveness of the RMI Environmental Health Unit and lead the country into a climate resilient future.

This report includes a summary of the engagement and consultation methods used as part of the development of the NCCHP and 5-Year Action Plan, and their main findings. These include the findings from: (i) the Rapid Survey and Focus Group Discussions carried out in RMI between January and March 2020, and (ii) the stakeholder mapping workshops conducted in Majuro in July 2020, to inform the development of the NCCHP and 5-Year Action Plan.

These consultations directly involved over 160 local stakeholders, including Government officials, Local Authority representatives, Traditional Leaders and landowners, business, NGOs, community and faith groups, and residents, representing a significant cross-section of the RMI population.

Overall, the findings were very consistent, focusing attention on a number of key health issues (including food and water security, vector borne diseases, and mental health), and barriers for implementation (insufficient funding and human resources, apathy and stigma). Responsible agencies and strategies to manage these risks were suggested, including increased resource allocation, education, communication and engagement, particularly with Traditional Leaders, landowners, and community and faith groups.

## 1. Introduction

The 2050 RMI Climate Change Strategy “Lighting the Way” (2018) outlined a pathway for the Republic of the Marshall Islands (RMI) to facilitate adaptation and climate resilience in a way that ensures the future protection and prosperity of the country and its people. The Strategy noted that ‘whilst the RMI Ministry of Health and Human Services (MOHHS) have a National Climate Change and Health Action Plan (NCCHAP, 2012) and have been actively engaged in addressing environmental health for many years, it does not have a fully established Environmental Health Unit or a clear climate change and health policy to guide the implementation of the NCCHAP 2012’.

The 2050 RMI Climate Change Strategy requires the development of National Climate Change and Health Policy (NCCHP), with a revised 5-Year Action Plan which is realistic and achievable, and well-targeted to local needs. To achieve this, we carried out consultations with key stakeholders in RMI, as well as with a cross-section of the local population.

This report summarises the consultations carried out as part of the development of the NCCHP and 5-Year Action Plan, including: (i) a summary of the Rapid Survey and Focus Group Discussions carried out in RMI from January to March 2020), and (ii) the stakeholder mapping workshops conducted in July 2020.

## 2. Methods

We mapped key stakeholders in RMI and carried consultations to inform the development of the NCCHP and 5-Year Action Plan with support from two local organisations, the Marshall Islands Epidemiology & Prevention Initiatives (MIEPI) and the Marshall Islands Conservation Society (MICS), and in consultation with the RMI Ministry of Health and Human Services (MOHHS). A range of participatory research methods were used in the consultations, including a rapid survey, in-depth interviews, focus group discussions, and stakeholder workshops.

### 2.1. Rapid Survey, Interviews and Focus Group Discussions

The Rapid Survey (RS) comprised the responses of 31 participants to an 8-question survey distributed at the Climate Change and Health Dialog meeting held in Majuro on 30-31 January 2020.

Three in-depth interviews with key informants from the MOHHS (face-to-face and online) were carried out in February 2020.

Focus Group Discussions (FGDs) comprised 16 discussions of 12 similar topics with 64 randomly selected people in Majuro. Equal numbers of men and women, and ages over 25 and 18- 25 years participated in the FGDs. Sixteen participants normally lived in outer atolls and 48 in Majuro.

The FGDs were conducted by three Marshallese facilitators recruited by MIEPI, a local non-governmental organisation. The three facilitators were fluent in both English and Marshallese and had previous experience in collecting health data from the Marshallese community. They were given one day of basic training in FGD techniques by Dr Christine McMurray on 3rd January 2020.

Facilitators conducted 16 FGDs in and around communities on Majuro atoll, four with each of four age/gender groups: mature men and women aged over 25 years, and young men and women aged 18-25. Each FGD comprised four participants. Seventy-five percent of participants were Majuro residents, while one FGD with each of the four age/gender groups comprised participants whose usual place of residence was on an outer atoll.

FGD discussions were conducted mainly in Marshallese by a facilitator, with a note-taker to record the main points. Digital recordings were also made of each discussion, and the facilitator and note-taker used both the notes and recordings to transcribe the discussion and translate it into English.

The 10 main topics on the FGD guidelines (see Appendix 1) were similar to the questions in the Rapid Survey conducted during the RMI National Climate Change and Health Dialogue event in Majuro on 30-31 January 2020. At the end of each FGD, participants were invited to provide additional comments.

## **2.2. Mapping workshops with key stakeholders**

MIEPI and MICS, with input from the MOHHS, identified key stakeholders from a number of sectors, including Government, Local Authorities, Traditional Leaders and landowners, businesses and professional associations, community and faith, women, youth groups, and other non-profit organisations.

Two half-day workshops with key stakeholders were organised by ANU, MIEPI, MICS and MOHHS and delivered in Majuro on 27<sup>th</sup> and 29<sup>th</sup> July 2020. Both workshops had the same programme (Appendix 3), but involved different groups of stakeholders:

- Day 1 Stakeholders: Local NGOs, Chamber of Commerce, State-owned Enterprises (24 participants)
- Day 2 Stakeholders: Traditional Leaders, Local Authorities, and landowners Chamber of Commerce, State-owned Enterprises (29 participants)

In addition, 8/2 MOHHS officials (including Minister Bruce Bilimon and Secretary Jack Niedenthal on Day 1, and Deputy Secretary Francyne Wase-Jacklick on Days 1/2), 5/4 MIEPI and 3/2 MICS staff, were present on Days 1/2. All participants received a brief

summary report on the health effects of climate change in Pacific Island Developing Countries (based on the desktop review carried out by Vardoulakis et al. 2020a) prior to the workshop.

Marshall Islands Conservation Society's (MICS) Director Doloris Kattil and Sai Turanga from Marshall Islands Council of Non-Governmental Organization (MICNGOs) officially opened the workshop on Day 1.

Welcoming remarks came from Secretary Jack Niedenthal, MOHHS. Secretary Jack welcomed and thanked participants for attending. He talked about environmental impact of climate change, particularly with the increasing incidences of vector borne diseases, such as dengue fever, zika, and chikungunya, high non-communicable diseases rates, and the more frequent king tides evident in the Marshall Islands. He also credited climate change as a contributing factor the steady and increasing flow of outmigration of Marshallese.

After presentation on the effects of climate change on human health by Prof Sotiris Vardoulakis (ANU), and on the findings from the rapid survey and FGDs by Dr Christine McMurray (ANU) (both presentation delivered live via Zoom), participants were allocated to three groups (green, blue, and red) for the breakout sessions (see Appendix 3). Each breakout group had 7-10 participants on both days, including a facilitator and a note-taker.

All groups presented their priorities and action plan (summarised in Table 2) to plenary sessions. At the end of both workshops, Deputy Secretary Francyne Wase-Jacklick, MOHHS, thanked all participants for their input and advised everyone to fill out an additional Feedback form.



Day 1 – Stakeholder workshop breakout session (Majuro, RMI)

## 3. Findings

### 3.1. Rapid Survey and Focus Group Discussions

The results from the Rapid Survey (RS) and in-depth interviews are presented in two separate deliverables of this project (McMurray and Vardoulakis, 2020; Vardoulakis et al. 2020b).

The findings from the Focus Group Discussions (FGDs) are summarised in this report. Table 1 is a tabulation of the main points made in the 16 FGDs. There is one column for each FGD, with the age/gender group and main place of residence of participants indicated at the top of the column. The last of the four columns for each age/gender group is shaded, to indicate a FGD with participants usually residing on islands outside Majuro Atoll. The outer islands/atolls represented included Ailinglaplap, Arno, Ebeye, Jaluit, Maloelap, Utirik and Wotje.

The fluency of the discussions and the number of points made varied considerably between FGDs. In some instances, especially in discussions with younger men and women, participants did not have any comments to make on a particular topic.

The main point raised in both the RS and FGDs in relation to each question are summarised below:

1. *What changes in RMI's climate and/or environment have you noticed in the past 20-30 years?*

Almost every participant in both the RS and the FGDs said they had observed changes in in the past few decades. The most common responses were “it is becoming hotter”, ‘there are more droughts and dust’ and ‘there is more erosion and more high tides’.

2. *Have any of these changes affected your family's or community's health? If so, how?*

Most participants thought that climate change is impacting health. The most common responses related to loss of access to healthy home-grown food crops and seafood, unsafe water from contaminated wells, and increases in various infectious diseases. The sources of contamination of water and environments mentioned included pollution from trash, trash dumps and burning plastics; salination from rising sea levels; and septic tanks damaged by rough seas and high tides. Social impacts and mental stress were also mentioned by a few participants.

3. *Have you or others in your family or your own community made any changes to the way you live, or done other things to protect family health and safety? If so, what?*

Around 80% of participants mentioned actions, with the most common being building sea walls and implementing household and community clean-ups. Various strategies to improve nutrition and personal hygiene were also mentioned by most participants.

4. *RS and FGD participants were asked if they had received health information from*
- *Health promotion poster or information in the media*
  - *Advice from nurse or doctor*
  - *Community or church meeting*
  - *Family, friends and/or neighbours*
  - *Any other sources*

*and if any of the information received caused them to take action to protect their own or their community's health.*

The majority of participants residing in Majuro had been reached by and responded to health information in posters, the media and/or advice from medical professionals, but this was much less likely for participants residing in outer islands. Some participants from both outer islands and Majuro had received and responded to health information delivered by their community, church or friends and neighbours. Generally, only participants aged under 26 years reported receiving and/or responding to information gathered from social media or at schools and colleges.

5. *Have any of the changes or actions taken by you and/or your community resulted in improvement? If so which ones?*

About half of participants in both the RS and the FGDs mentioned taking actions resulting in improvement, most commonly community-level and household-level clean-ups. Construction of seawalls was mentioned less frequently. There were also a few mentions each of numerous other strategies, including improved hygiene.

6. *If any changes and/or actions taken have not resulted in improvement, which ones and why not?*

About half of participants in both the RS and the FGDs mentioned ineffective actions. Most often these were problems relating to seawalls, including badly built seawalls and the unintended consequence of accelerated erosion where sea walls had been constructed. A range of other points were also mentioned, including problems with disposal of trash and other household-level issues.

7. *Are you concerned about any health consequences of climate change that could possibly occur in the future and harm you, your family and/or your community? If so, which possible consequences?*

Participants in both the RS and the FGDs indicated high levels of awareness and concern about the possible future impacts on health of continuing climate change. Most concerns related to specific infectious diseases or to infectious diseases in general, and there were also mentions of possible loss of food crops and loss of land area. Respondents from outer islands tended to express fewer concerns about health impacts.

The last two questions were not asked in the RS, only in the FGDs:

*8. Please list the issues you believe should be addressed as part of the National Climate Change and Health Action Plan (NCCHAP) to improve community health.*

FGD participants mentioned a wide range of specific and practical suggestions, although most were made by only a few participants. The most common suggestions related to ensuring food and water security, and to improving the environment by taking action to reduce pollution and limit erosion.

*9. Do you think there would be any obstacles to implementing a National Climate Change and Health Action Plan? (NCCHAP (e.g. cultural, community, bureaucratic, environmental, etc.))*

Most participants thought there would be some obstacles, mostly those relating to financial constraints, bureaucratic constraints, and the possible unwillingness of some landowners to take action.

The majority of participants in both the RS and FGDs offered additional comments when asked if they had anything more to add. Most comments were a restatement of participants' own concerns and their belief that individuals and communities need to take action to mitigate the impact of climate change on health.

**Table 1:** Summary of the FGDs findings ('x' indicates a point was made in that FGD)

<b>TYPE OF RESPONDENT:</b> (M=Men 26yrs +) (W=Women 26yrs +) (YM = Men 18-25 yrs) (YW= Women 18-25 yrs)	M1	M2	M3	M4	W1	W2	W3	W4	YM1	YM2	YM3	YM4	YW1	YW2	YW3	YW4
<b>USUAL HOME:</b> Majuro Atoll (M) Outer Islands (O) (dark shading)	M	M	M3	O	M	M	M	O	M	M	M	O	M	M	M	O
<b>NUMBER IN GROUP:</b>	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
<b>1. What changes in the climate and/or environment have you noticed in RMI in the past 20-30 years?</b>																
It is hotter now	x	x	x		x	x	x	x	x	x		x	x	x		x
Weather is more variable now	x						x							x		
Droughts and dust		x	x		x				x		x	x			x	
Less rain than in the past			x		x		x								x	
Windier weather				x												
Sea level rise				x					x				x			
Salination of wells						x										
Inundation	x				x	x			x			x				
More high tides/king tides	x	x	x				x				x					x
Erosion	x		x		x	x	x	x	x	x			x	x		
Concrete water catchments are cracking						x										
More piling up of sand													x			
Crops washed away	x			x												
More seawalls		x			x						x	x		x		
Too many cars																x
Plants and trees dying from salination						x		x							x	
Plants and trees dying from drought	x				x	x		x								
Fruits are smaller e.g. breadfruit						x										
Some traditional trees and plants no longer grow						x										
New plant pests						x										
Some graves /embalmed bodies have been sucked into the ocean			x			x		x								
Our surroundings are dirtier				x												
More trash in the ocean											x					

Dump sites over loaded					x													
Fish have moved away from shore to deeper water		x																
Fish are smaller																		
Fewer shells on the beaches																		
Weed growing on the coral (algae)		x																
Reefs dying/coral bleaching																		
<b>2. Have any of these changes affected your family's or community's health? If so, how?</b>																		
Less access to healthy food because fewer/diseased/ dying home grown food crops	x	x	x	x	x	x	x	x										
Plants for traditional medicine dying/not available		x																
Less access to nutritious foods from the ocean																		
Reefs and/or fish are dying so fewer fish to catch																		
More fish poisoning		x																
We have to rely more on unhealthy imported food				x														
No safe household water supply/ sickness from unsafe water/ salination of wells																		
Not enough water to bathe in																		
King tides destroy homes and/or gardens																		
Hotter weather leads to more sickness	x																	
Dry weather leads to more sickness																		
Inundations lead to more sickness																		
Septic tanks broken by king tides spread sickness																		
Dirtier surroundings/trash lead to more sickness		x																
Pinkeye (from dust)																		
Impetigo																		
Our skin is drying out																		
Diarrohea	x																	
Dengue fever																		
Climate Change is increasing diabetes and heart disease in RMI																		
Social impacts																		
Mental stress																		



a) Information received	0	4	0	0	3	4	3	4	4	1	2	0	0	0	2	4
b) Took action or made changes	0	4	0	0	3	4	3	4	0	1	2	0	0	0	2	4
• Family, friends and/or neighbours																
a) Information received	0	4	0	4	4	4	4	4	4	4	4	0	4	0	0	4
b) Took action or made changes	0	4	0	4	4	4	4	4	0	4	4	0	0	0	0	4
• Social Media																
a) Information received	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0
b) Took action or made changes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
• Schools and colleges																
a) Information received	0	0	0	0	0	0	0	0	4	1	2	0	0	0	0	4
b) Took action or made changes	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	4
<b>5. Have any of the changes or actions taken by you and/or your community resulted in improvement? If so which ones?</b>																
Growing more trees and plants	x								x							
Growing more food crops						x										
Protecting mangroves									x							
Water conservation									x							
Keeping our water supply clean			x	x												
Keeping ourselves clean			x	x												
Using hand sanitizers			x													
Not swimming where the ocean is polluted								x								
Recognising Climate Change and taking action to mitigate its effects	x															
Moving homes to cooler locations												x				
Building seawalls		x					x					x		x		
Clean-ups		x		x	x	x			x	x	x		x	x	x	x
Sorting and separating trash											x					
Burning biodegradable trash												x				x
Better disposal of trash		x				x										
Using less electricity									x							
Community meetings to educate people													x			



Loss of food crops			x			x	x		x		x				
When our crops die we could run out of food because the ships don't come often								x							
Less land area for crops						x									
Loss of /contaminated seafood because of marine pollution			x			x					x				
We are eating too much imported food		x													
Dengue fever			x		x						x				
Respiratory diseases			x									x			
Corona virus (Covid 19)					x						x		x	x	
Ringworm												x			
Skin cancer						x									
Sickness from contaminated water					x						x	x	x		
Sickness from more droughts							x		x			x	x		
Heatstroke												x			
People getting sick because they are less active now														x	
The pollution from burning trash affects our health		x											x	x	
I'm worried about many different health problems			x	x			x		x		x				x
When disease outbreaks occur we have very limited medical facilities on our island								x							
People on flights bring diseases from foreign countries									x						
Loss of clean air			x				x						x		
Loss of land from erosion /over crowding			x				x				x	x			x
Less sharing, helping and taking care of each other						x									
We may be forced to leave our islands	x	x					x			x					
Mental stress							x								
<b>8. Please list in order of importance the issues you believe should be addressed as part of the NCCHAP to improve community health.</b>															
<i>(Numbers indicate the order in which each point was mentioned by someone in group)</i>															
Food security	1		3	1					1						
Promote healthy nutrition, more local foods				1						3				6	
Teach people how to cook healthy food										3					
Promote planting of food crops									1			5			

Consultancy to prepare a NCCHP and revised Action Plan for RMI

Promote planting of trees													1	1	
Water security	1		2												1
Cancel the fishing tournaments to stop overfishing (esp. of parrotfish)						1									
Stop the big fishing vessels coming in to Majuro and polluting our ocean						2									
Enforce the environmental laws						3	1								
Build more seawalls			1				2			1			2		2
Make engineered plans available so that all seawalls are properly constructed												6	2	6	
Promote traditional transport and traditional fuels	4							3				1			
Promote solar power/renewable energy	4							3				3			
Promote bicycles										2			6	4	5
Promote healthy exercise													6		
Promote hats to protect from sun													4		
Promote cleanups /proper management of trash			5		1				2				2		2
Provide more trash cans										3					
Reduce air pollution from burning trash	3								1						
Promote recycling													4		
Have more recycling plants so people have less distance to travel to them													5		
Use more biodegradable materials														3	
Use less fossil fuel								3		2			3	2	
Tell other countries to burn less fossil fuel	3							3							
Import fewer cars /reduce dependence on cars										2			3		4
Provide public toilet facilities for people without sanitation			4												
Bring in more doctors, medical equipment and medicine													1		
MOHHE should provide more mosquito repellents and nets														5	
Rebuild our hospital															3
Provide shelters for times of crisis	2														
Work together							1	2							
Work with traditional leaders								2							

Be better prepared to deal with Climate Change		2												
<b>9. Can you suggest how each of these issues should be addressed?</b>														
More clean ups			x											x
Build more sea walls			x										x	
Plant trees to prevent coastal erosion			x											
Provide more mobile water purification plants /Reverse Osmosis plants			x							x				
Provide more trash bins										x				
Dig holes to bury trash (landfill)										x				
Collect batteries for safe disposal						x								
Bury plant waste to enrich the soil						x								
Education in how to clean properly						x								
Management needs to schedule time for cleaning workplaces						x								
Provide more funding for thorough cleaning						x								
Promote the concept of conservation to landowners									x					
Enforce environmental laws to protect land and ocean									x					
Provide education in how to avoid health problems													x	
We need to raise awareness of Climate Change and health in the community									x					
We need to raise awareness of climate change and health among traditional leaders									x					
Work through the landowners, then the people will respond										x				
Hear more from the people on outer islands, not only mayors and politicians								x						
Make other countries aware of the impact of Climate Change and health in RMI									x					
We need to get help from the United States /other countries						x							x	x
More outreach programs on how to mitigate the impact of Climate Change														x
We'll have to ask God to help us	x					x								
Reduce number of taxis and increase number of buses												x		

We must work together	x										x			x	
<b>10. Do you think there would be any obstacles to implementing a National Climate Change and Health Action Plan?</b>															
Shortage of land to plant crops											x				
Shortage of tools to make new gardens				x											
We can't prevent salt water from destroying our food crops				x											
Shortage of finance			x						x	x			x		x
Government won't allow some projects		x							x		x				
Government /official apathy													x		
Our leaders don't always honour their promises								x							
Lack of follow through at international level							x								
Disagreements with or between traditional landowners /land disputes			x						x						
Landowners oppose some projects		x		x	x	x				x	x				
Landowners won't clear dump sites					x										
Landowners keeping rents for themselves													x		
Landownership disputes													x		
Difficult to enforce laws when some people benefit financially from some activities		x													
Lack of awareness										x					
We must educate leaders and landowners so they are more aware						x									
Our culture stops women doing some kinds of work that we need to do now								x							
Not enough transport to outer islands															x
Lack of supplies /services													x		x
We need more cooperation and working together						x									
Our island is too crowded													x		
<b>11. Additional comments at end of discussion</b>															
I can't afford to maintain my home when it's damaged by the sea	x														
Traditional leaders are promoting the building of sea walls											x				
We should use non-polluting bicycles / electric bicycles								x			x				

There should be more units to purify water							x					x			
RMI should import cars that use renewable energy								x							
Our islands are our inheritance. If we lose them, we have nothing.								x	x						
Stop destroying corals to build seawalls and parks, coral is the foundation of our islands									x						
When we swim we collect the bones of our forefathers that have washed into the sea							x								
When people migrate to other islands and countries it is very difficult because they don't know the culture and customs							x								
If our children migrate they won't know our culture and customs							x								
Our fishermen have had to change the way they fish because a huge shark has come to our island, maybe because of climate change						x									
We need to have emergency kits							x								
We need more education on what to do in an emergency, for adults and children							x								
The nuclear testing also had a huge impact on our health and made some foods toxic				x											
We never heard that our ancestors' food crops were destroyed by rising sea water				x											
Climate Change is causing stress		x													
Even if our islands sink, I won't leave							x								
Gone are the days when people showed kindness					x										
Life is much more difficult now					x										
The National Strategic Plan needs to incorporate Climate Change			x												
We need to include Climate Change and its impacts in the school curriculum				x											
We need to improve the translation of expert reports so they reach the whole population				x											

### **3.2. Mapping Workshops with Key Stakeholders**

Tables 2a-f include the logical frameworks ('log-frames') developed by the six different groups of stakeholders during breakout group discussions at the two workshops on 27<sup>th</sup> and 29<sup>th</sup> July 2020. The key topics selected as priorities for the NCCHAP are listed below:

#### **Day 1 (representatives of NGOs and business)**

- Food and Water Security
- Mental Health
- Epidemics/pandemics
- Vector borne diseases

#### **Day 2 (Traditional leaders, landowners and representatives of local government)**

- Vector borne diseases
- Infectious disease/pollution
- Waterborne disease and food and water security
- Ciguatera
- Mental Health
- Access to Traditional Medicine

#### **General comments:**

- There was general agreement in the workshops about which health issues need to be prioritised in the NCCHAP, and this is generally consistent with the two surveys.
- Food and water security, and vector borne diseases, were major concerns in both workshops, as well as in both surveys (RS and FGDs). Mental health was also an issue raised in the surveys as well as in both workshops.
- The landowners and Traditional Leaders were very sensitive about perceived criticism and/or lack of consultation. Therefore, they need to be fully engaged and refer to very carefully in follow-up consultations.
- The landowners included Ciguatera and Access to Traditional Medicine as high priority issues for the NCCHAP. The desktop review, key stakeholder interviews, and expert input indicated that there are a lot of other issues that should be addressed first, especially as Ciguatera is hard to address other than with education and awareness raising (Friedman et al., 2008). However, Ciguatera is very prevalent in RMI and should be considered as part of the NCCHAP. Access to Traditional Medicine was not highlighted as a priority in the earlier consultations or the desktop review, and it unlikely to have any significant impact. The NCCHAP could include a brief note in the text (rather than an action) that MOHHS should make information on Traditional Medicine available, e.g. in posters.

**Table 2a:** Day 1 – Green Team log-frame

Health Issue	Priority (number in order of importance 1-highest, 2, 3, etc.)	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	Strategies to manage risk
Food & Water Security	1	<ol style="list-style-type: none"> <li>1. Better advance weather</li> <li>2. Drought resistance crops introduced</li> <li>3. More outreach awareness</li> <li>4. Revive/Revise/Endorse</li> <li>5. Improve water testing in the outer islands</li> <li>6. Food Preservation</li> </ol>	<ol style="list-style-type: none"> <li>7. MOHHS</li> <li>8. NRS</li> <li>9. CSO/NDMO</li> <li>10. MOCIA</li> <li>11. CCD</li> <li>12. MICNGOS</li> </ol>	<ol style="list-style-type: none"> <li>13. Funds</li> <li>14. Transportation logistics (getting to outer islands)</li> <li>15. Politics-change in administration</li> <li>16. Competing priorities</li> </ol>	<ul style="list-style-type: none"> <li>• Revive/Revise/Endorse food and water security policies</li> <li>• Endorsement of the CCH governing body</li> <li>• Attractive management package for CCH coordinator</li> <li>•</li> </ul>
Mental Health and Well-Being	2	<ul style="list-style-type: none"> <li>• Establish programs/policies to address mental health issues</li> <li>• Implement Rapid Assessment Survey</li> </ul>	<ul style="list-style-type: none"> <li>• MOHHS</li> <li>• RMI MH Advisory Council</li> <li>• PSS/CMI/USP</li> <li>• MICNGOS</li> </ul>	<ul style="list-style-type: none"> <li>• Funds</li> <li>• De-stigmatize MH issues</li> <li>• Lack of MH professionalism</li> <li>• Cultural taboos</li> </ul>	<ul style="list-style-type: none"> <li>• Outreach and education/training</li> <li>• Allocate funds for the MH programs</li> </ul>

**Table 2b:** Day 1 – Blue Team log-frame

Health Issue	Priority (number in order of importance, 1-highest)	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	Strategies to manage risk
WATER & FOOD SECURITY	1.	ECOSYSTEM MONITORING PROGRAM INCLUDES WORKFORCE AND FINANCING	LOCAL GOVERNMENT / NRC	OWNERSHIP	POLICIES SHOULD BE ENFORCED
		EVERYONE THROUGHOUT THE RMI SHOULD MANAGE THEIR OWN WATER	MOHHS / ENVIRONMENT PROTECTION AUTHORITY	MARSHALLESE CITIZENS MIGRATING OUT OF THE RMI DUE TO CLIMATE CHANGE	UPDATING AND MONITORING POLICIES
		SUPPORT THE AGRICULTURE PLAN	WELLNESS CENTER/ WHOLE COMMUNITY/LRC	BUDGET (EXAMPLE; NCD NOT BEING PAID )	
MENTAL HEALTH	2	COMMUNITY MEMBER SHOULD GET TOGETHER TO HAVE COMMON UNDERSTANDING ABOUT CLIMATE CHANGE	LOCAL COMMUNITY PUBLIC SCHOOL SERVICES / MENTAL HEALTH ADVISORY COUNCIL	GETTING PEOPLE TO CARE	EVERYONE WHO IS RESPONSIBLE SHOULD TAKE ACTIONS
		INTERGENERATIONAL KNOWLEDGE SHARING/ PLACE BASED LEARNING	COLLEGE OF THE MARSHALL ISLAND MARSHALLESE LANGUAGE	STIGMA	
		SPORT AND RECREATION, RURAL VS URBAN RESOURCES NEEDS, MORE TRAINED PROFESSIONALS WITHIN EACH COMMUNITY	MOHHS, MENTAL HEALTH ADVISORY COUNCIL NGOs	CROSS-CUTTING ACCESS TO APPROPRIATE TRAINING	CONDUCT MORE TRAININGS WITHIN THE COMMUNITY

**Table 2c:** Day 1 – Red Team log-frame

Health Issue	Priority	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	Strategies to manage risk
Epidemic/Pandemic	1	<ol style="list-style-type: none"> <li>1. Close borders and back up plans in OI</li> <li>2. Building capacities (more trainings, professionals)</li> </ol>	<ol style="list-style-type: none"> <li>1. Cabinet</li> <li>2. NDC, Nitijela, Cabinet, Scholarship Board</li> </ol>	1. Funding	<ol style="list-style-type: none"> <li>1. Develop national sources</li> <li>2. Direct access to trust fund</li> <li>3. Develop parameters to ND</li> <li>4. Detail plan where funding should go</li> </ol>
		<ol style="list-style-type: none"> <li>3. Screening &amp; mass vaccinations</li> <li>4. Awareness &amp; campaigns</li> <li>5. Update NCD laws</li> </ol>	<ol style="list-style-type: none"> <li>3. MOHHS</li> <li>4. NGOs</li> <li>5. Nititjela, Cabinet, NCD</li> </ol>	2. Lack of Human Resources	<ul style="list-style-type: none"> <li>- Prioritize scholarship for critical fields</li> <li>- Longer service periods</li> <li>- Better elem./sec. education</li> <li>- Salaries reflecting special skills</li> </ul>
		<ol style="list-style-type: none"> <li>6. Better coordination &amp; communications</li> <li>7. Specify rules &amp; responsibilities from different entities (Nat'l Approach)</li> </ol>	<ol style="list-style-type: none"> <li>6. Chief Sec, NTA, NDC</li> <li>7. Cabinet</li> </ol>	3. Religious & Cultural Leaders	<ul style="list-style-type: none"> <li>- Coordinate/use these powerful leaders to spread awareness</li> <li>- MUST BE INCLUDED</li> </ul>
Vector Borne Illnesses	2	<ol style="list-style-type: none"> <li>1. Start education/awareness</li> <li>2. Littering Law enforcement</li> </ol>	<ol style="list-style-type: none"> <li>1. MOE, MOHHS, NGOs</li> <li>2. EPA, MALGOV</li> </ol>	1. Political Nill	- Grassroots initiative puts pressure on
		<ol style="list-style-type: none"> <li>3. Traditional Leaders</li> </ol>	<ol style="list-style-type: none"> <li>3. Nat'l/Local Gov't</li> </ol>	2. Lack of information	<ul style="list-style-type: none"> <li>- Youth driven engaging creative materials</li> <li>- Integrate into school curriculum</li> </ul>
		<ol style="list-style-type: none"> <li>4. Utilizing Technology &amp; Mapping</li> </ol>	<ol style="list-style-type: none"> <li>4. MOH, EPA, Weather Bureau</li> </ol>	Loss teaching/Risks to tech (internet access? Capacity)	<ul style="list-style-type: none"> <li>- Promote family time-days</li> <li>- 1 hr timeout period—utilize churches &amp; family holidays</li> </ul>

**Table 2d:** Day 2 – Blue Team log-frame

Health Issue	Priority (number in order of importance 1-highest, 2, 3, etc.)	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	<ul style="list-style-type: none"> <li>Strategies to manage risk</li> </ul>
Vector-Borne Illnesses	1	17. Identify/Engage landowners & church leaders for community clean up. 18. Consistent community awareness & education 19. Provide cleaning equipment	20. Local government 21. Church leaders 22. Landowners 23. MOHHS	24. Incentives to motivate for clean up 25. Lack of cleaning equipment	<ul style="list-style-type: none"> <li>Funds for Incentives &amp; Cleaning equipment</li> <li>Effective planning</li> <li>Awareness</li> </ul>
Pollution/Infectious Diseases	2	<ul style="list-style-type: none"> <li>Decrease waste that goes into dump (limit imports)</li> <li>Make a mandatory to import eco-friendly products</li> <li>Less burning of trash</li> <li>Significantly reduce import of vehicles</li> </ul>	<ul style="list-style-type: none"> <li>National Government</li> <li>Local Governments</li> <li>MOHHS</li> <li>EPA/CCD/AG</li> <li>Private Sector</li> <li>Individuals</li> <li>Awareness</li> </ul>	<ul style="list-style-type: none"> <li>Culture/habit</li> <li>Private Sector (might)</li> <li>Enforcement</li> <li>Developing and passing the appropriate policies/regulation to address the actions such as limit imports and import eco-friendly products.</li> </ul>	<ul style="list-style-type: none"> <li>Implement existing policies</li> <li>Enforce existing policies</li> <li>Consistent mass media campaign of new and existing laws to decrease the impact of pollution</li> <li>Funds for awareness and consultation with relevant stakeholders regarding new and existing policies/regulations</li> </ul>

**Table 2e:** Day 2 – Red Team log-frame

Health Issue	Priority	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	Strategies to manage risk
Water Security and Water-borne diseases	1	Increase Community water catchments and improve water harvesting systems	Local Governments	Dispute of location of catchment, ownership, maintenance, Funding	National water office
		Community Engagement and awareness	Traditional Leaders, MOHHS, Environmental Protection Agency, Local Gov't, NGOs, Faith-based Organizations	Need water champion	National water office coordinating with Local govt and traditional leaders.
		Enforce water regulations	Environmental Protection Agency, Mater Water and Sewer Co.	Political Support, No National Water Office	National water office, Water regulation review board, SWOT analysis, SOP for enforcement.
		Use or implement water efficient tech for growing crops	Ministry of Natural Resources, Commerce; Agriculture sector	No SOP for water lens	Additional research and studies. Develop SOP for efficient water tech.
Ciguatera / Fish Poisoning	2	Fishing regulations – increase conservation areas for fishing	Marshall Is Marine Resources Authority (MIMRA), NGOs, Local Gov't, Traditional Leadership	Behaviour Change/compliance to regulations is difficult	More emphasis on health impacts. Increase patrolling and monitoring of fish conservation areas/ no fishing allowed areas.
		More studies on Fish Poisoning in the RMI	MIMRA, NGOs, Local Gov't, Traditional Leadership	Lack of human resources	Studies on traditional medicine for fish poisoning. Studies on algae growth and hotspot areas for fish poisoning in the RMI. Studies on algae growth prevention/ herbivorous fish.

**Table 2f:** Day 2 – Green Team log-frame

Health Issue	Priority	Action(s) needed (please separate actions and be specific)	Responsible agency(ies) and/or community(ies) and/or individual(s)	Obstacles and/or risks to implementation	Strategies to manage risk
MENTAL HEALTH	1.	CONDUCT COMMUNITY OUTREACH ABOUT CLIMATE CHANGE	MINISTRY OF HEALTH AND EDUCATION/ CHURCHES	STIGMA/ FINANCIAL ISSUES/ FACILITY	SEEK DONATIONS / ENCOURAGE COMMUNITY TO PARTICIPATE
		CONDUCT SURVEY BASED ON MENTAL HEALTH ISSUE WITHIN THE COMMUNITY	LOCAL GOVERNMENTS/GOVERNMENT/ MINISTRY OF HEALTH	COMMUNICATION WITHIN THE COMMUNITY	TEACH YOUNGER GENERATION ABOUT THE IMPORTANCE OF MENTAL HEALTH
		BUILD SHELTERS FOR KING TIDES REFUGEES	GOVERNMENT	WORK AND SPACE AVAILABILITY/ FUNDING	SEEK FINANCIAL SUPPORTS
ACCESS TO TRADITIONAL MEDICINE	2	ZONING( ex: make sure there's space for planting traditional medicines) GROW MORE TRADITIONAL MEDICINE PLANTS	MINISTRY OF NATURAL RESOURCES AND COMMERCE/ LOCAL COMMUNITY/ TRADITIONAL LEADERS	LAND AVAILABILITY/ FUNDING	BETTER AWARENESS/ GET TRADITIONAL AND LANDOWNER SUPPORTS
		INCLUDE HERBAL MEDICINE STUDY IN THE SCHOOL SYSTEM	MINISTRY OF PUBLIC SCHOOL SERVICES/ COMMUNITY AND GOVERNMENT	ACCESS TO INSTRUCTION	RECORD HERBAL MEDICINE FOR THE FUTURE
		CONDUCT COMMUNITY OUTREACH ABOUT THE IMPORTANCE OF TRADITIONAL MEDICINES	CHURCHES/ LOCAL GOVERNMENT/ LAND OWNERS	FUNDING AND COMMUNICATION	ASK FOR DONATION AND GET THE WHOLE COMMUNITY'S SUPPORT.

## 4. Conclusions

There was strong engagement and participation in the consultation activities carried out as part of the development of the NCCHP and 5-Year Action Plan for the RMI. A range of engagement methods were used, including a rapid survey, 16 focus group discussions, 3 interviews with key informants, and two stakeholder workshops. Overall, the consultations directly involved over 160 local stakeholders, including Government officials, Local Authority representatives, Traditional Leaders and landowners, business, NGOs, community and faith groups, and residents, representing a significant cross-section of the RMI population. The consultations were gender and age group balanced as far as possible, and involved Majuro residents as well as (fewer) residents from other atolls.

Overall, the findings were very consistent across the methods used in this study (and broadly consistent with similar studies, e.g. van der Geest et al. 2020), focusing attention on a number of key health issues (including food and water security, vector borne diseases, and mental health), and barriers for implementation (insufficient funding and human resources, apathy and stigma). Responsible agencies and strategies to manage these risks were suggested, including increased resource allocation, education, communication and engagement with Traditional Leaders, landowners, and community and faith groups.

To conclude, one very powerful comment made in the Rapid Survey could become a key point in future community education strategies: *'We are the first generation to fully understand Climate Change and the last that is able to do something about it'*.

## 5. Acknowledgments

The authors of this report would like to thank all RMI participants in the survey, focus group discussions, interviews, and workshops. We are particularly grateful to the DS Francyne Wase-Jacklick and the other MOHHS officials involved in the consultations, and to Maybelline Ipil, Molly Murphy and Joie Heine (MIEPI), and Dolores Kattil and Madeline Cochran (MICS) for their valuable contributions to the focus group discussions and workshops, including recruitment of participants, moderation of sessions, note taking, and logistics.



## References

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## Appendix 1: Focus Group Discussion Topics

1. *What changes in the climate and/or environment have you noticed in RMI in the past 20-30 years?*
  2. *Have any of these changes affected your family's or community's health? If so, how?*
  3. *Have you or others in your family or your own community made any changes to the way you live, or done other things to protect family health and safety? If so, what?*
  4. *Did you receive information on Climate Change and Health from any of the following sources? Did any of them cause you to take action or make changes?*
    - *Health promotion poster or information in the media*
    - *Advice from nurse or doctor*
    - *Community or church meeting*
    - *Family, friends and/or neighbours*
    - *Other sources*
  5. *Have any of the changes or actions taken by you and/or your community resulted in improvement? If so which ones?*
  6. *If any changes and/or actions taken have not resulted in improvement, which ones and why not?*
  7. *Are you concerned about any health consequences of Climate Change that could possibly occur in the future and harm you, your family and/or your community? If so, which possible consequences?*
  8. *Please list in order of importance the issues you believe should be addressed as part of the National Climate Change and Health Action Plan (NCCHAP) to improve community health.*
  9. *Can you suggest how each of these issues should be addressed?*
  10. *Do you think there would be any obstacles to implementing a National Climate Change and Health Action Plan? (NCCHAP (e.g. cultural, community, bureaucratic, environmental, etc)*
  11. *Do you have any other information or any comments you would like to make on Climate Change and/or Adaptation to Climate Change?*
- NOTE: Topics 8-11 were not included in the Rapid Survey.

## Appendix 2: List of Stakeholders

### Day 1 – Participants

	Name	Organization/Affiliation	Gender	Email address	Present
1	Laitia Tamata	MICNGOs	M	directormicngo@gmail.com	Sent Proxy
2	Angela Saunders	International office of Migration	F	aksaunders@iom.int	Present
3	Brooke Takala	Red Cross	F	btakala@gmail.com	Present
4	Ellen Milne	Chamber of Commerce	F	kujmilne@gmail.com	Mark
5	Alson Kelen	WAM	M	alsonjkelen@gmail.com	Proxy
6	Yolanie Johnson	YTYIH	F	yolaniejohnson@yahoo.com	Wednesday
7	Daisy Momotaro	WUTMI	F	alik_momotaro@yahoo.com	Proxy
8	Kathy Kijiner/Jina David	Jo-Jikum		jkijiner@gmail.com	
9	Tanner Smith	Wellness Center	M	director@canvasback.org	Present
10	Ted Michael	CMI Landgrant	M	jrintj@yahoo.com	Present
11	Karness Kusto	MI Organic Farmers Association	M	kustokarness@gmail.com	Present
12	Risa Kabua Myazoe	NRC - Agriculture	F	rkmyazoe@gmail.com	Wednesday
13	Thomas Kijiner, Jr.	NTA	M	tkijiner@gmail.com	Present
14	Angeline Heine	Kio Club/National Energy Office	F	gelheine@gmail.com	Present
15	Peter R. Anjain	Reach-MI	M	peteranjain@gmail.com	
16	Lydia Tibon	KIJLE	F	lrbibon@gmail.com	Present
17	Rosita Capelle	Jined Club	F	taklib@yahoo.com	
18	Halston deBrum	MAWC	M	wanidebrum@gmail.com	Wednesday
19	Patrick Langrine, Jr.	Tobolar	M	pklangrine@hotmail.com	Proxy
20	Lucia Guavis	MI Handicraft Group	F	elefahandicrafts@gmail.com	
21	Yolanda McKay	USP	F	yolanda.mckay@usp.ac.fj	Present
22	Meyar Mamis + Alma Capelle	CMI	F	mmamis@cmi.edu	Present
23	Miram deBrum	Womens Athletic Co.	F	mwdebrum@gmail.com	Present
24	Candice Guavis	ELEFA – Bikini Conservation	F	cmguavis@gmail.com	
25	David Lin	Taiwan Farm	M	y.j.lin@icdf.org.tw	Present
26	Nora Wei	Taiwan Health Center	F	marshallthc@gmail.com	
27		Chinese Association			
28	Ellen Milne	Billfish/Urok Club			
29	Leilani Lani Peren	Kumit	F	leilaniperen@gmail.com	
30	Jasmine Henry	Law Association	F		Present
31	Riyad Mucadam	RECO RMI	M	reco.rmi@gmail.com	
32	Mark Stege	Chamber	M	markhstege@gmail.com	Present
33	Carlos Domnick	OCIT	M	cdomnick@gmail.com	
34	Reginald White	Weather Service Office	M	reginald.white@noaa.gov	Proxy
	<b>Other Attendees</b>	<b>Organization/Affiliation</b>	<b>Gender</b>	<b>Present</b>	
	Tony Alik	WAM	M	Proxy for Alson	

Consultancy to prepare a NCCHP and revised Action Plan for RMI

	Aliti Koroï	University of South Pacific	F	Joined Yolanda	
	Davenest Edison	MICNGOs	M	Proxy for Laitia	
	Senimili Turaga	Faith Based Org/MICNGOs	F	Joined Dave	
	Jabujka Aikin	MIOFA	M	Joined Karness	
	Loredel Areieta	Land Grant	F	Joined Ted	
	Lee Jacklick	Weather Service Office	M	Proxy for Reginald	
	Jim Philippo	Tobolar Copra Processing Plant	M	Proxy for Patrick Langrine	

MoHHS, MIEPI, MICS					
1	Shra Kedi	MoHHS	F	All day	
2	Sec. Jack Niedenthal	MoHHS	M	Opening	
3	Min. Bruce Bilimon	MoHHS	M	Opening - Lunch	
4	Francyne Wase-Jacklick	MoHHS	F	All day	
5	Edlen Anzures	MoHHS	F	All day	
6	Nealson Keju	MoHHS	M	All day	
7	Sharlynn Lang	MoHHS	F	Half day	
8	Williamina Bing	MoHHS	F	Half day	
9	Dolores Kattil	MICS	F	All day	
10	Madeline Cochran	MICS	F	All day	
11	Joseann Lear	MICS	F	All day	
12	Maybelline Ipil	MIEPI	F	All day	
13	Molly Murphy	MIEPI	F	All day	
14	Joie Heine	MIEPI	F	All day	
15	Tamar Capelle	MIEPI	F	All day	
16	Alma Capelle	MIEPI/CMI	F	All day	

**Day 2 – Participants**

	Name	Affiliation/District/Island	Gender	Email Address	Present
1	Mayor Ladie Jack	MALGov	M	<a href="mailto:ladiejack@gmail.com">ladiejack@gmail.com</a>	
2	Russell Langrine	MALGov	M	<a href="mailto:russelangrine@gmail.com">russelangrine@gmail.com</a>	Present
3	Jina David	MALGov	M	<a href="mailto:jinanana76@gmail.com">jinanana76@gmail.com</a>	
4	Betty Imaikita	MALGov	F	<a href="mailto:btimaikita@gmail.com">btimaikita@gmail.com</a>	Present
5	Neilani Ackley	MALGov	F	<a href="mailto:bittia.ackley@gmail.com">bittia.ackley@gmail.com</a>	Present
6	Boaz Lamdrik	MALGov	M	<a href="mailto:bzlamdrik@gmail.com">bzlamdrik@gmail.com</a>	
7	Barry H. Jekkar	Delap Councilman	M	<a href="mailto:anoknaak@gmail.com">anoknaak@gmail.com</a>	Present
8	Darrel Malachi	Laura lolap Councilman	M		Present
9	Kanjen Basin	Laura Lomar Councilman	M		
10	Jimmy Ceasar	Lobat councilman	M	<a href="mailto:JimmyCeasar@gmail.com">JimmyCeasar@gmail.com</a>	Present
	Ronnie Lakabung	Rita Councilman	M		
12	Arlington Tibon	Rita Councilman	M	<a href="mailto:jabettibon@gmail.com">jabettibon@gmail.com</a>	Present
13	Stacy Samuel	Delap Councilwoman	F	<a href="mailto:stacy.samuel79@gmail.co">stacy.samuel79@gmail.co</a>	

Consultancy to prepare a NCCHP and revised Action Plan for RMI

14	Margerate L. Alee	Rairok Councilman	F		Present
15	Randy H. Jack	Woja Councilman	M	rhjack0686@gmail.com	
16	Junior Kabua	MIMA / Namo Mayor	M	Jrmkabua@gmail.com	present
17	Anderson Jibas	KBE Mayor	M		
18	Victoria Capelle	Likiep	F	victoria.capelle85@gmail.c	
19	Kudo Kabua	Wotho Mayor	M	kudokabua@gmail.com	
20	Marie Milne	Ebon Mayor	F	mmilne45@yahoo.com	present
21	Melvin Majmeto	Council of Iroj	M	melvinmajmeto@gmail.co	present
22	Kino Kabua	Chief Secretary's Office	F	dcskabua.rmi@gmail.com	Sent
23	Climate Change Div.	Clarence Samuel	M	clarencesam@gmail.com	
24	UCC	Church Leader			present
25	Catholic	Church Leader	M	Stephenlepton5519@gmail.	present
26	Yetta Aliven deBrum	NDMO	F	yetta.aliven@gmail.com	Sent Proxy
27	RMI EPA	Moriana Philip	F	Morianaphilip.rmiepa@gmail	
28	MAWC	Halston deBrum	M	wanidebrum@gmail.com	present
29	MWSC	Joseph Batol	M	jibatol@gmail.com	present
30	Min. of Works, Infrastructure, Utilities	Sec. Catalino Kijiner	M	secwui.rmi@gmail.com	
31	MOCIA	Sec. Wallace Peter	M	seccia.rmi@gmail.com	
32	EPPSO	Fred deBrum	M	fjdebrum@gmail.com	Sent proxy
33	AOG	Church Leader	M	rammyi@yahoo.com	Rammy

Other Attendees	Organization/Affiliation	Gender	Present
Rammy I	Assembly of God Church	M	-present-
Randon Jack	NRC	M	-present-
Scott Keju	EPPSO	M	-present-proxy for Fred Debrum EPPSO
Alington Robert	Jaluit Mayor	M	-present-
Derick Kurn	NDMO	M	-present- proxy for Yetta Aliven
John Norton	Office of Chief Secretary	M	-present-proxy Kino
Howrick Reiher	Salvation Army	M	-present-
Nixon Jibil	Salvation Army	M	-present-
Abacca Maddison	OCS Ebeye	F	-present-proxy Kino
John Henry	EPPSO	M	Present-proxy for Fred Debrum EPPSO
Iseia Aisaih	MWSC	M	Present-proxy for Joseph Batol, MWSC
Risa Kabua Myazoe	NRC - Agriculture	F	From Monday group
Halston deBrum	MAWC	M	<u>From</u> Monday Group
Yolanie Johnson	YTYIH	F	<u>From</u> Monday Group

MoHHS, MIEPI, MICS				
	Francyne Wase-	MoHHS	F	All day
	Edlen Anzures	MoHHS	F	All day

Consultancy to prepare a NCCHP and revised Action Plan for RMI

	Dolores Kattil	MICS	F	All day
	Madeline Cochran	MICS	F	All day
	Maybelline Ipil	MIEPI	F	All day
	Molly Murphy	MIEPI	F	All day
	Joie Heine	MIEPI	F	All day
	Tamar Capelle	MIEPI	F	All day

## **Appendix 3: Workshops Programme & Presentations**

### **National Climate Change and Health Policy and Action Plan 2020**

#### **Stakeholder Mapping Workshop**

##### **Date**

27<sup>th</sup> / 29<sup>th</sup> July 2020, 11.00 – 17.00

##### **Venue**

Lomalo Room, MIR, Majuro

#### **Background**

Given the vulnerability of Republic of Marshall Island (RMI) to the impacts of climate change, the Government of RMI is aiming to develop a concise and comprehensive National Climate Change Health Policy (NCCHP) and a 5-year Action Plan to support the effective delivery of the NCCHP. The goal of the NCCHP and revised action plan is to improve the coordination and effectiveness of the RMI Environmental Health Unit and lead the country into a climate resilient and healthier future.

The RMI Ministry of Health and Human Services (MOHHS) is inviting key stakeholders to attend a half-day workshop that will help shape the National Climate Change Health Policy and Action Plan, organised by the Australian National University (ANU), the Marshall Islands Epidemiology & Prevention Initiatives (MIEPI), and the Marshall Islands Conservation Society (MICS).

#### **Aim**

The aim of the workshop is to bring together a core group of key stakeholders in RMI to raise awareness on climate change and health issues, and identify priorities, solutions, challenges, and opportunities for the proposed focus areas of the policy and action plan.

#### **Objectives**

- Discuss the impacts of climate change on population health in RMI, and raise awareness of related public health policies.
- Explore and prioritise the main issues that need to be addressed in the new RMI Climate Change and Health Policy and 5-year Action Plan.
- Identify which of these actions should be the responsibility of the community or another agency, and what resources are needed for their effective implementation.
- Identify any potential obstacles for the implementation of the NCCHAP and how these should be addressed.

#### **Expected outcomes**

- Identification of the key direct and indirect impacts of climate change on human health in RMI and development of a list of actions to address them.

- A stakeholder community that is better informed about climate change and its impacts on health in RMI, and as a result are able to make better decisions as they set priorities for action and allocate resources.
- A community of local leaders that is engaged with the development of the NCCHAP and has ownership of the new policy and responsibility for its implementation.
- Mapping of key stakeholders and identification of best communication practices for responding to climate related health impacts in the RMI.

## AGENDA

Time	Activity	Lead/Presenters
11:00 – 12:30	Registration and Lunch	
12:30 – 12:40	Welcome	Secretary Jack Niedenthal (Ministry of Health & Human Services)
12:40 – 12:50	Introduction and objectives of workshop, and current policy landscape	Deputy Secretary Francyne Wase-Jacklick (Ministry of Health & Human Services)
12:50 – 13:10	Presentation on the effects of climate change on human health	Professor Sotiris Vardoulakis (ANU)
13:10 – 13:20	Presentation of rapid survey and focus group discussion findings	Dr Christine McMurray (ANU)
13:20 – 14:00	Breakout group discussion 1: to address the following question  <b>(Q.1) What climate change related health issues should be addressed in the NCCHAP?</b>	Marshall Islands Conservation Society (MICS)  Marshall Islands Epidemiology & Prevention Initiatives (MIEPI)
14:00 – 14:30	Plenary session 1: Feedback and discussion	Breakout group representatives
14:30 – 14:45	Brief break and Group Photograph	
14:45 – 16:00	Breakout group discussion 2: to address the following questions and fill out log frame  <b>For <u>each</u> health issue: (Q.2) What is the priority level?</b>	Marshall Islands Conservation Society (MICS)  Marshall Islands Epidemiology & Prevention Initiatives (MIEPI)

	<p><b>(Q.3) What specific actions should be included in the NCCHAP to address this health issue?</b></p> <p><b>(Q.4) Who should be responsible for implementing these actions?</b></p> <p><b>(Q.5) What risks or obstacles could make these actions difficult to implement?</b></p> <p><b>(Q.6) What can be done to reduce or manage these risks or obstacles</b></p>	
16:00 – 16:30	<p>Plenary session 2: Final comments, conclusions and wrap-up</p> <p><b>(Q.7) Any other comments about what the NCCHAP can do improve health and facilitate adaptation to climate change?</b></p> <p><b>(Q.8) Ways for RMI to actively implement this plan such that it does not become a “paper plan on a shelf”</b></p>	<p>Francyne Wase-Jacklick and Linda Chutaro (Ministry of Health &amp; Human Services)</p>
16:30 – 17:00	<p>Afternoon tea, networking and end of workshop</p>	

**RSVP: [miepi.projects@gmail.com](mailto:miepi.projects@gmail.com) (please register to attend either on 27<sup>th</sup> or 29<sup>th</sup> July)**



**REPUBLIC OF THE MARSHALL ISLANDS**  
*Office of the Secretary of Health and Human Services*  
**MINISTRY OF HEALTH & HUMAN SERVICES**



P.O. Box 16 ~ Majuro ~ Marshall Islands ~ 96960  
Telephone No. (692) 625-5327/7710 (ext. 2392) • Email: [sechhs.rmi@gmail.com](mailto:sechhs.rmi@gmail.com)

20 July 2020

**Invitation to the National Climate Change and Health Policy and Action Plan 2020  
Stakeholder Mapping Workshop**

**Date: Monday 27<sup>th</sup> July 2020 11am – 4:30pm LOMALO Room MIR.**

Dear \_\_\_\_\_,

Iokwe!

You are cordially invited to a half-day stakeholder workshop that will help develop the National Climate Change and Health Policy and Action Plan 2020. The workshop will take place on the 27<sup>th</sup> of July 2020, at Lomalo Room, MIR Majuro.

The Republic of the Marshall Islands (RMI) is among the most vulnerable countries in the world to the effects of climate change, including sea level rise, rising temperatures, and changing patterns of infectious diseases such as dengue among others, and must act effectively to minimise the impacts to the health of its people. With its high population density (especially in Majuro and Ebeye atoll), accelerated development, increasing environmental degradation and limited freshwater resources, RMI is especially at risk from the added effects of climate change on the environment and health. An overview of the effects of climate change on health in RMI is enclosed.

RMI has developed its climate change strategy called *Til Eo 2050 CLIMATE CHANGE STRATEGY "Lighting the Way"*. This strategy outlines a long-term pathway for RMI to achieve its objectives for net zero emissions and 100% renewable energy, as well as to facilitate adaptation and climate resilience in a way that ensures the future protection and prosperity of the country and its people.

As part of this strategy, the Ministry of Health and Human Services is currently developing a National Climate Change and Health Policy that will be supported by a 5-Year Action Plan. This workshop will bring together stakeholders from communities, businesses, Government and other organisations from across the RMI to discuss health issues related to climate change and propose solutions.

We hope that you will be able to attend this workshop and help us shape the forthcoming National Climate Change and Health Policy and 5-Year Action Plan. A programme of the workshop, including its aim and objectives, is enclosed.

Please confirm your participation by email: [miepi.projects@gmail.com](mailto:miepi.projects@gmail.com) or by phone: 625-6477/455-3027.

Thank you in advance for your support.

Komol Tata,

Jack Niedenthal  
Secretary of Health and Human Services



# Effects of climate change on human health

Prof Sotiris Vardoulakis (ANU)

**GCCA+**  
THE GLOBAL CLIMATE CHANGE ALLIANCE PLUS INITIATIVE



Funded by the European Union

Stakeholder Workshops, Majuro, RMI  
27 & 29 July 2020



## National Climate Change & Health Action Plan 2020

- **Review of the literature** and relevant documents
- **Interviews** with key personnel in MOHHS
- **Rapid Survey** of participants in the 1st National Climate Change and Health Dialogue, January 30th -31st 2020, held in Majuro
- **Focus Group Discussions (FGDs)** with Marshallese residents in and around Majuro
- **Stakeholder workshops** in Majuro on 27/29 July with representatives from Government, Local Authorities, Traditional Chiefs, NGOs, etc.
- NCCHAP 2020 **drafting** and **consultation**, August 2020.

2

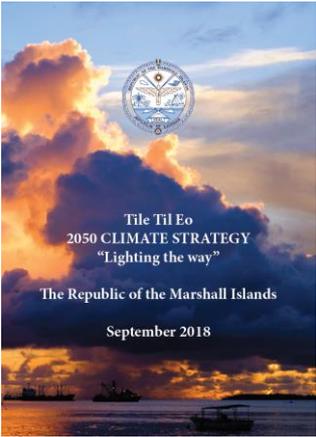


3

Australian National University



Republic of the Marshall Islands  
Joint National Action Plan for  
Climate Change Adaptation &  
Disaster Risk Management  
2014 - 2018



Tile Til Eo  
2050 CLIMATE STRATEGY  
"Lighting the way"  
The Republic of the Marshall Islands  
September 2018

REPUBLIC OF THE MARSHALL ISLANDS  
MINISTRY OF HEALTH

NATIONAL CLIMATE CHANGE  
AND  
HEALTH ACTION PLAN

August 2012



4

Australian National University

## Evaluation of previous plan and current needs

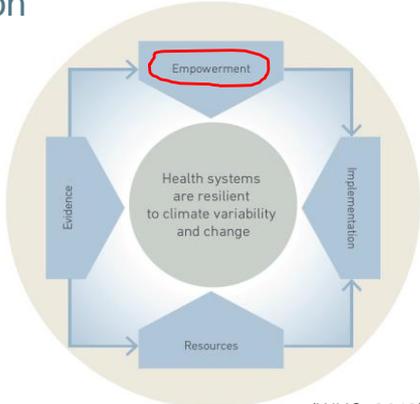
- Action plan needs to be concise, **realistic** and achievable (not a “**wish list**”)
- More community **consultation** is needed with traditional leaders, landowners, local authorities, faith groups, businesses, Government, NGOs
- Need to **prioritise** strategies; do not duplicate other initiatives but cooperate
- Critical strategies, such as vector control, need to be expanded
- Appointing a local climate change and health ‘**champion**’
- Receive **endorsement** by Government and specific funding for implementation
- Monitor and evaluate implementation of action plan

5

Australian National University

## NCCHAP strategic lines of action

- **Empowerment:** Supporting health leadership to engage locally, nationally and internationally.
- **Evidence:** Identify priorities and gaps, and build the business case for investment.
- **Implementation:** Preparedness for climate risks, and health-promoting mitigation policies.
- **Resources:** Facilitating access to climate and health finance.

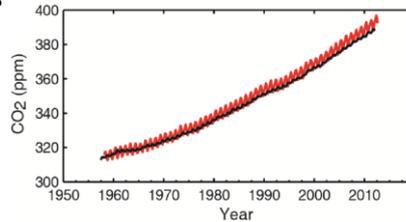


(WHO, 2018)

6

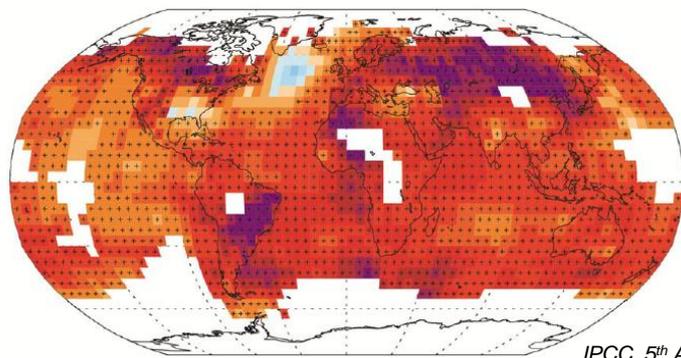
## Climate Change - Evidence

- Atmospheric concentration of CO<sub>2</sub> is increasing
- Other greenhouse gases (e.g. methane) have also increased
- Observed changes to the Earth's climate system include:
  - increase in global surface temperatures
  - sea level rise
  - ocean acidification
  - shrinking ice sheets
  - more extreme weather events

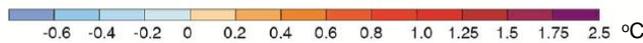


IPCC 2013, 5<sup>th</sup> AR

## Observed change in average surface temperature (1900-2012)



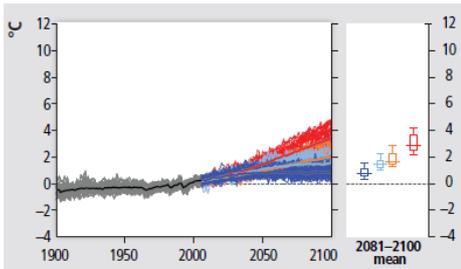
IPCC, 5<sup>th</sup> AR



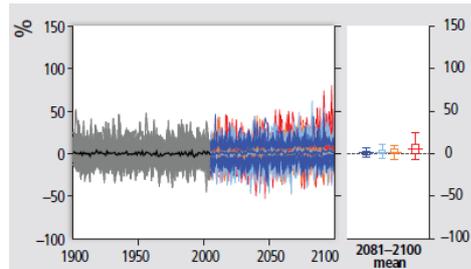
Climate Change and Health

## Northern Tropical Pacific (IPCC, 5<sup>th</sup> AR)

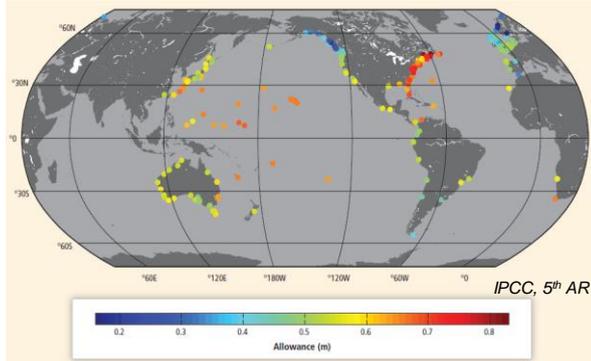
Near-surface air temperature



Precipitation



## Sea level rise



The estimated increase in height (m) that flood protection structures would need to be raised

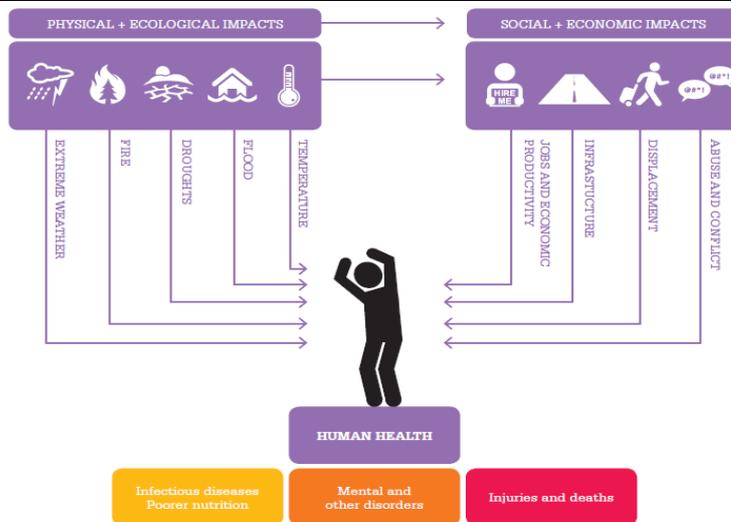


10

## Majuro (RMI)



11



Hughes *et al* (2011), modified from Capon and Hanna (2009) and Berry *et al* (2011)

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## Health Issues

- Vector-borne diseases (dengue, zika, chikungunya)
- Zoonotic diseases (leptospirosis)
- Diarrhoeal diseases
- Food security, malnutrition and stunting
- Obesity and diabetes
- Respiratory diseases (TB, Covid19, asthma)
- Measles outbreaks
- Ciguatera poisoning
- Extreme weather events
- Mental health
- Heat effects and sun exposure
- Pollution (water, waste, air)

13

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## Key action areas

1. Develop personal skills
2. Create supportive environments
3. Strengthen community action
4. Reorient health services
5. Build healthy public policy

(Ottawa Charter for Health Promotion)

14

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## Dengue outbreaks

### Mosquito-Borne Disease: Reporting

Understanding and sharing mosquito-borne disease activity data with public health professionals and local stakeholders can help reduce the incidence of disease within a community significantly.

HEALTH  
The Pacific Is Dealing With a Dengue Fever Outbreak Amid COVID-19 and Tropical Cyclone Harold

15





### Have any of these changes affected your family's or community's health? If so, how?

Most participants thought climate change is impacting health.

The most common responses related to:

- loss of access to healthy home-grown food crops and seafood
- unsafe water from contaminated wells and increases in infectious diseases
- The sources of contamination of water and environments mentioned included pollution from trash, trash dumps and burning plastics; salination from rising sea levels; and septic tanks damaged by rough seas and high tides
- Social impacts and mental stress were also mentioned by a few participants.

4

### Have you or others in your family or your own community made any changes to the way you live, or done other things to protect family health and safety? If so, what?

- Around 80% of participants mentioned actions, with the most common being building sea walls and implementing household and community clean-ups
- Various strategies to improve nutrition and personal hygiene were also mentioned by most participants.

5

Participants were asked if they had received health information from: Health promotion poster or information in the media; Advice from nurse or doctor; Community or church meeting; Family, friends and/or neighbours; Any other sources;

- Most Majuro participants had seen and responded to health information in posters, the media and/or advice from medical professionals
- This was much less likely for participants residing in outer islands
- Some participants from both outer islands and Majuro had received and responded to health information delivered by their community, church or friends and neighbours
- Generally only participants aged under 26 years had received and/or responded to information gathered from social media or at schools and colleges.

6

Have any of the changes or actions taken by you and/or your community resulted in improvement? If so which ones?

- About half of participants in both the Rapid Survey and the Focus Group Discussions mentioned taking actions resulting in improvement, most commonly community-level and household-level clean-ups
- Construction of seawalls was mentioned less frequently
- There were also a few mentions each of numerous other strategies, including improved hygiene.

7

If any changes and/or actions taken have not resulted in improvement, which ones and why not?

- About half the participants mentioned ineffective actions
- Most problems related to seawalls, including badly built seawalls and accelerated erosion where sea walls had been constructed
- A range of other points were also mentioned, including problems with disposal of trash and other household-level issues.

8

Are you concerned about possible health consequences of climate change the future that might harm you, your family and/or your community? If so, which possible consequences?

- Participants indicated high levels of awareness and concern about the possible future health impacts of climate change
- Most concerns related to specific infectious diseases or to infectious diseases in general
- There were also mentions of possible loss of food crops and loss of land area
- Respondents from outer islands tended to express fewer concerns about health impacts.

9

Please list the issues you believe should be addressed as part of the National Climate Change and Health Action Plan (NCCHAP) to improve community health.

- FGD participants mentioned a wide range of specific and practical suggestions, although most were made by only a few participants
- The most common suggestions related to ensuring food and water security and to improving the environment by taking action to reduce pollution and limit erosion.

10

Do you think there would be any obstacles to implementing a National Climate Change and Health Action Plan?

- Most participants thought there would be some obstacles, mostly those relating to financial constraints, bureaucratic constraints and the possible unwillingness of some landowners to take action.

11

- Participants in both the Rapid Survey and Focus Group Discussions usually had additional comments
- Most restated their own concerns and their belief that both individuals and communities need to take action to mitigate the impact of climate change on health.

12

## Conclusion

- Both datasets indicate high levels of respondent awareness of climate change and its impacts on health
- Even without preparation and consultation, Focus Group Discussion participants were able to suggest a range of possible strategies for intervention
- This suggests the RMI community is ready to accept and support NCCHAP strategies to address climate change and health

Komol tata.

## Appendix 4: Group Pictures from Workshops

### DAY 1



### DAY 2

