

# Mental Health Effects of Rising Sea Level in East Malaita, Solomon Islands

**James Asugeni**  
Mental Health Instructor  
Malaita Province  
Solomon Islands

[jaxs2008xerxes@gmail.com](mailto:jaxs2008xerxes@gmail.com)

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# Outline

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- Map of Solomon Islands
- Location of Study
- Introduction
- Problem statement
- Aims/Objective
- Methodology
- Results
- Summary
- References



Asia

Japan

USA

Hawaii

Guam

South America

PNG

Other South Pacific Islands

equator

Solomon

Australia

Samoa

Fiji

Tahiti

Aitutaki

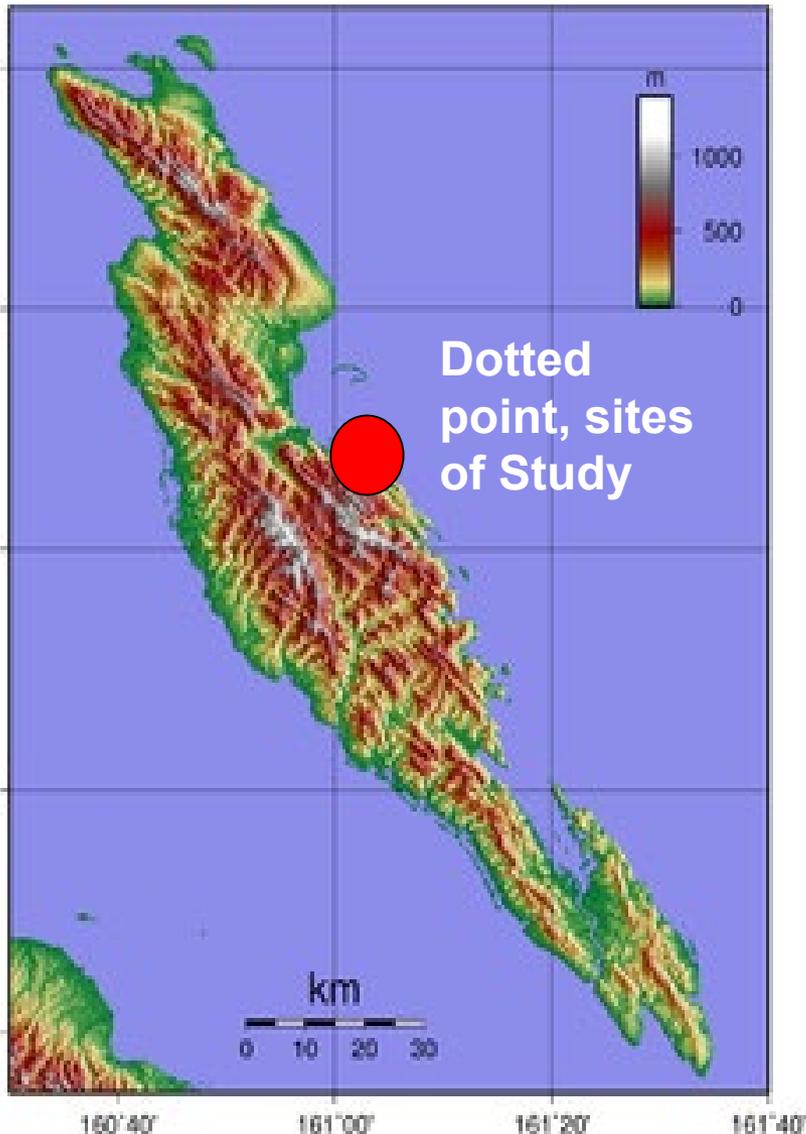
Tonga

Cook Is

Easter Is

New Zealand

# Location of Study



**Population of Solomon Islands**

**Approx. 623,281**

**Population of Eastern Region of  
Malaita Province**

**Approx. 25,000**

**Most people live on the coastal areas  
and some on Man-made Islands**



# Introduction

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- As a Mental Health Nurse, I see climate change is causing mental health effects on people living in low lying villages and man-made islands in East Malaita.
- Also, official reports state that sea-level rise is causing community disharmony in Solomon Islands (Beck 2011)



- Recently five reef islands in Isabel Province have been lost completely to sea-level rise and a further six islands have been severely eroded (Edison-Hayden 2016)

# Introduction

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- "Taro, the capital Town of Choiseul Province is set to become the first provincial capital globally to relocate residents and services due to the threat of sea-level rise," (Edison-Hayden 2016)
- In Kiribati sea-level is rising by 1.8 mm each year since 1993 causing people to relocate (Decloitre 2010)
- Mental health impacts reported in young people in Australia as a result of climate change (extended drought) (Dean 2010)

# Problem Statement

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- Sea-level rise is impacting the lives of people in coastal areas and man-made islands in East Malaita
- Sea-level rise is causing the sea to inundate villages during high tide season
- Inundation of villages is changing people's lives because houses are destroyed
- Inundation of villages is changing people's lives because areas where families gather are being washed away
- Many people have nowhere to go



# Study Aim

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The aim of this study is to investigate mental health effects of sea level rise on people living on man-made islands, low lying islands and low lying villages in East Malaita.



# Study Objectives

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- To document the experience of people living in low-lying coastal villages and islands that are experiencing rising sea levels
- To document the mental health impacts of these experiences of rising sea level in people living in these villages and islands.
- To provide evidence based recommendations for people and communities affected by rising sea levels in East Malaita.



# Methodology

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The study was conducted in six remote villages in east coast of Malaita.

- 2 low-lying villages people could move up a hill close to the village
- 4 villages people had no option to move.

10 people from each village (male and female 15 - 60 yrs) were asked to participate.

Both quantitative and qualitative methods used (mixed methods).

- Quantitative surveys completed for quantitative results.
- Qualitative open ended questions were asked to participants and responses written by hand.

# Details of Participants

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Village	Village status	Males	Females	Total
Kwai Island	Low lying island	3	7	10
Ngongosilia	Low lying island	4	6	10
Fouoge	Man-made island	4	5	9
Ou	Man-made island	3	7	10
Abitona	Low lying mainland village	3	6	9
Canaan	Low lying mainland village	3	6	9
Total		20	37	57

## Participants Roles in Village

Chief	4
Pastor/ church leaders	6
Mother	10
Father	10
Students	8
Teachers	5
Others	14
Total	57

# Results - Quantitative

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Question	Yes (%)	No (%)	Not sure (%)
In your lifetime, have you seen the patterns of the weather change?	89%	11%	-
Can a sea level rise experience leads to Mental health effects?	94%	2%	4%
Does this worry about sea level rise affect the way you think, your family think, and your community think?	98%	2%	0
Does this worry effect the way you <b><u>think</u></b> towards your family and your community?	100%	0	0
Does this worry effect the way you <b><u>act</u></b> towards your family and community?	100%	0	0
Does this worry change the way you think in your everyday life?	98%	2%	0

# Results - Quantitative

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<b>QUESTION</b>	<b>Yes (%)</b>	<b>No (%)</b>	<b>Not Sure (%)</b>
Are you doing anything to help decrease your worry about sea level rise?	58%	33%	9%
Are other people in your community worry about sea level rise?	91%	7%	2%
Does this worry in other people have negative effects for themselves?	58%	14%	28%
Does this worry in other people have negative effects on their families or communities?	53%	16%	32%
Are other people doing anything to help decrease the worry?	39%	47%	14%
Can someone develop physical impacts as a result of sea level rise?	36%	39%	25%

# Results – Qualitative

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## Four Main Themes Identified

### 1). Experience of physical impacts of climate change

#### (a) How sea level rises impacted their daily lives by inundation of gardens and villages

*Mi fala faraeti and wari wari olowe nomoa taem mi fala lukim olsem solo wata em Kam apu bigi ani hemu kamu insaed lo haosi belong mifala. (participant from low lying island)*

#### (b) Meeting areas were damaged leaving no proper place for community members, chiefs and leaders to meet

*“Pelesi mi fala safe sidaoni na toko toko aboutim olketa gud fala toko toko lo komiuniti blo mifala emu no guti nao” (participant from low lying island. (participant from low lying mainland villages)*

# Results - Qualitative

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## 2). Worry about the future

Fear because not enough space to build houses and to live due to sea level increases and continuously creeping into the village.

*“Mi faraeti bikosi nomoa pelesi fo wakemu haos bilongo mi bikosi. Solowata emu kamu olowe nomoa inisaeti lo pelesi bilongo mi”.*  
*(participant from man-made island)*

Worry because there's no other option of where to go or where to settle due to customary land, not Government land.

*“Wari nomoa bigi lo mi bikosi no moa pelesi fo mi go lo hemu nao. Lani ino blo Gafumanu so hemu hati for go sitafu lo hemu”.*

# Results - Qualitative

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## **(3) Adaptation to climate change.**

How sea level rises impacted their daily lives by inundation of gardens and villages.

*“ Mi fala faraeti and wariwari olowe nomoa taem mi fala lukim olsem solowata em kam apu bigi ani hemu kamu insaedi lo haosi belong mifala.*



# Results - Qualitative

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## 4) Government reponse / Provincial Assistance.

All levels need to be involved in providing solutions or assistance to the areas affected.

*“ Oloketa biki mani bilongo Gafumani masi gifimu kamu helopu blilongo oloketa tu fo helopemu mifala pipolo solowata sipoelemu pelesi bilongo mifala”* (Participant from low coastal island dweller)



# Community level adaptation to sea level rise

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## Problem:

- Women unable to go to garden, clinic or market because of inundation during high tide season
- Children unable to go to school because of inundation

## Solution:

- Community leaders coordinate project to build bridge above high tide level



# Summary

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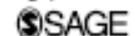
- Rising sea level is being experienced by people living on man-made and low-lying islands of East Malaita. It is a contributing factor to the mental health of people in this region.
- Some communities have active projects to adapt to sea level rise. Some communities do not.



- Further research needs to investigate personal and community level mental health impacts of climate change and how locally appropriate actions can assist in adaptation.

# Mental health issues from rising sea level in a remote coastal region of the Solomon Islands: current and future

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**James Asugeni** Mental Health Instructor, Atofi Adventist Hospital, Malaita, Solomon Islands

**David MacLaren** Senior Research Fellow, James Cook University, Cairns, QLD, Australia

**Peter D Massey** Program Manager Health Protection, Hunter New England Population Health, Newcastle, NSW, Australia

**Rick Speare** Director, Tropical Health Solutions, Townsville, QLD, Australia

## Abstract

**Objective:** There is little published research about mental health and climate change in the Pacific, including Solomon Islands. Solomon Islands has one of the highest rates of sea-level rise globally. The aim of this research was to document mental health issues related to sea-level rise for people in East Malaita, Solomon Islands.

**Method:** A cross-sectional study was carried out in six low-lying villages in East Malaita, Solomon Islands. The researcher travelled to villages by dugout canoe. In addition to quantitative, closed-ended questions, open-ended questions with villagers explored individual and community responses to rising sea level.

**Results:** Of 60 people asked, 57 completed the questionnaire. Of these, 90% reported having seen a change in the weather patterns. Nearly all participants reported that sea-level rise is affecting them and their family and is causing fear and worry on a personal and community level. Four themes emerged from the qualitative analysis: experience of physical impacts of climate change; worry about the future; adaptation to climate change; government response needed.

**Conclusion:** Given predictions of ongoing sea-level rise in the Pacific it is essential that more research is conducted to further understand the human impact of climate change for small island states which will inform local, provincial and national-level mental health responses.

**Keywords:** mental health, sea-level rise, Solomon Islands, coastal communities, climate change

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Baole'a ba'ita  
Thank you so much.

