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The background of the cover is a photograph of a tropical island. In the foreground, there is a calm body of water reflecting the sky and the island. The island itself is covered in lush green vegetation, with several tall palm trees standing out against a blue sky filled with white clouds. A sandy beach is visible at the base of the island.

# KIRIBATI: CLIMATE CHANGE AND MIGRATION

## RELATIONSHIPS BETWEEN HOUSEHOLD VULNERABILITY, HUMAN MOBILITY AND CLIMATE CHANGE

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# Acronyms

<b>ABM</b>	Agent Based Model	<b>PAC</b>	Pacific Access Category
<b>COP</b>	Conference of the Parties	<b>PRA</b>	Participatory Research Approach
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation	<b>RCP</b>	Representative Concentration Pathways
<b>CSVI</b>	Correlation Sensitive Vulnerability Index	<b>RSE</b>	Recognized Seasonal Employers
<b>ESCAP</b>	Economic and Social Commission for Asia and the Pacific	<b>SDGs</b>	Sustainable Development Goals
<b>GCF</b>	Green Climate Fund	<b>SPC</b>	Secretariat of the Pacific Community
<b>GEF</b>	Global Environmental Facility	<b>SWP</b>	Seasonal Worker Program
<b>ILO</b>	International Labour Organization	<b>UNDP</b>	United Nations Development Programme
<b>IOM</b>	International Organization for Migration	<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>IPCC</b>	Intergovernmental Panel on Climate Change	<b>UNU-EHS</b>	United Nations University Institute for Environment and Human Security
<b>KCCMM</b>	Kiribati Climate Change Migration Model	<b>USP</b>	University of the South Pacific
<b>KIFMP</b>	Kiritimati Integrated Fisheries Master Plan	<b>WIM</b>	Warsaw International Mechanism for Loss and Damage
<b>MP</b>	Member of Parliament		
<b>MTC</b>	Marine Training Centre		
<b>NGO</b>	Non-governmental Organization		



# Glossary

**Agent Based Model** A research tool from computer science used to simulate social interaction

**Climate Change Adaptation** The process whereby people, communities and institutions respond to the impacts of climate change

**Disaster Risk Reduction** The process through which exposure and vulnerability to disasters is diminished

**Displacement** The process in which people are forced to move from their normal place of residence due to a change in the political, social, economic or environmental situation

**Environmental Migration** Movement which is directly caused by environmental change

**Exposure** The condition of being physically present in an area which could be impacted by hazards

**Q methodology** A research method which seeks to gain an understanding of shared attitudes or perspectives on a particular issue

**Participatory Research Approach** A group of qualitative research tools which place people at the centre of the investigation

**Relocation** A policy of planned resettlement of a community to a less risky place

**Remittances** Flows of money sent from migrants to their families, one of the main reasons to move

**Resilience** The ability of a community or system to absorb shocks

**Theory of Planned** A theory which posits that decisions are taken as a result of attitudes, peer pressure and the ability to manifest the decision

**Trapped Populations** Groups of people who are affected by a changing environment, but are unable to leave

**Voluntary Migration** Movements in which people were not forced to move, but chose to do so

**Vulnerability** The propensity to be affected by climate change, related to underlying socio-economic, demographic, political and cultural processes and conditions



# Executive summary

The Pacific Climate Change and Migration (PCCM) project has two main goals:

- Increase the protection of individuals and communities which are vulnerable to climate change displacement and migration through targeted national and regional policies;
- Increase labour mobility opportunities for Pacific Islanders, through well-managed labour migration schemes.

With this in mind the main objective of the study is to build institutional capacity and knowledge which will enable Kiribati to better plan and manage the impacts of climate change on migration. By developing migration indicators, providing new knowledge on labour migration and assessing community attitudes to climate change-related migration, the report will help develop effective climate change responses and national strategies to mitigate the risk of displacement and enhance national capacity to participate in regional, bilateral and global schemes on labour migration.

This report presents the results of the first nationally representative empirical study of relationships between household vulnerability, human mobility and climate change in the Pacific. Findings are based upon quantitative and qualitative fieldwork carried out in Kiribati during the early part of 2015 by researchers from the United Nations University Institute for Environment and Human Security (UNU-EHS), the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) and the University of the South Pacific (USP). Project fieldwork involved implementation of a total of 377 household surveys in South Tarawa (72), North Tarawa

(103), Marakei (75), Kiritimati (Christmas Island) (75) and Butaritari (52). Participatory Research Approach (PRA) tools and a Q study were used to complement the overall analysis. An Agent Based Model (ABM) was developed using the data generated from the fieldwork to simulate the future flows of migrants from Kiribati and migration patterns within Kiribati.







# Key Findings

## **Climate change related impacts are already affecting the vast majority of households in Kiribati**

Almost every household (94%) surveyed in Kiribati reported that they had been impacted by environmental hazards over the preceding 10 years and 81 per cent of households were affected by sea level rise over the same period. In Kiritimati, only half of households surveyed have been affected by sea level rise.

## **Migration is not reported as a common experience in Kiribati and international migration is rare.**

Migration is currently a relatively rare occurrence for households in Kiribati. Less than one tenth of I-Kiribati experienced a movement in the previous decade. There are large differences in migration patterns between the islands of Kiribati, with migrants from Kiritimati much more likely to move overseas (31%), than migrants from South Tarawa (19%) and the outer islands (11%). Two thirds of migrants from the outer islands departed to South Tarawa. This is despite the marginal environment and overcrowding of the capital, which these flows of people are worsening. One in seven of all movements are attributed to environmental change (14%), meaning that it is the third most important motivation for migration after employment (42%) and work (26%). There is comparatively little international migration, and there is very little stepwise migration from the outer islands and then overseas.

## **Migration has a positive relationship with both income and household resilience**

Although a causal relationship is difficult to ascertain, migrant households are associated with higher median per capita incomes. The picture is even clearer when looking at those households with two movements as they have much higher mean incomes than households with only one movement. In addition, there is a correlation between household vulnerability and migration, with international movements associated with lower vulnerability than internal movements.

## **There are large differences in the migration experiences and desires of men and women**

Although similar volumes of men and women have migrated over the past decade, women have less access to international migration and have less ability to make independent migration decisions. Men are much more likely to move overseas, as international movements account for 17 per cent of their movements, as compared to 9 per cent of women's movements. Additionally, survey respondents reported that decisions concerning women are often made by male family members, which may restrict women's ability to pursue migration opportunities.

## **A large section of the population of Kiribati has been unable to migrate. Migration is most often constrained by a lack of money**

In the decade preceding the survey, almost 10,000 people wanted to migrate but could not. The most common reasons for not migrating was a lack of money, accounting for 75 per cent of unrealized migration ambitions. This financial issue

was more pronounced in the outer islands, where it explains almost 90 per cent of unrealized movements.

**Future migration flows are likely to be increasingly motivated by climate change, but large numbers may be unable to benefit from migration.**

Households surveyed believe that they are more likely to send out migrants if the environmental situation deteriorates. Over 70 per cent of households believe this course of action will be necessary if sea level rise, saltwater intrusion, agricultural yields and floods worsen. However, despite this desire for migration, only 24 per cent of households believe they possess the means to finance migration, and only 26 per cent thought they could acquire the documents necessary to migrate. As a result, it is possible that a large number of I-Kiribati will be unable to migrate despite the perception of an increased necessity to move.

**Modelling of future migration shows similar patterns to the present, but with increased flows of movements. By the middle of the century, this could mean the population of South Tarawa reaches 86,510, representing an increase of 72 per cent from the 2010 census.**

According to the Agent Based Model (ABM) simulation<sup>1</sup>, there is likely to be a significant increase in human mobility in the future as a result of a combination of population growth and the increasing impact of climate change. The number of internal movements (mainly to South Tarawa) is simulated to increase threefold, while the number of international movements would increase by only 35 per cent. Moreover, the

population of South Tarawa is simulated to increase at a slightly faster rate than the rest of the country, intensifying the existing social and environmental issues in the capital. Environmental pressures already account for 31 per cent of movements from South Tarawa, making it unlikely to be a sustainable destination.

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<sup>1</sup> An Agent Based Model is a type of simulation which attempts to model social interactions. The ABM made for this study used data gathered in the household survey and assumptions about future climate change scenarios to project migration in the period 2015-2055. The ABM is briefly explained in Section 4 and more details are given in the PCCM methods available at <https://collections.unu.edu/view/UNU:5856>

# Policy Implications and Recommendations

- 1. Environmental change is already impacting the vast majority of Kiribati households. Migration is an option, but in tandem with disaster risk reduction and climate change adaptation.**

The I-Kiribati have a strong sense of attachment to place, but environmental pressures are already leading to migration and under climate change it is likely that differing forms of human mobility will become increasingly necessary. Sustainable development is vital for Kiribati, including the implementation of the Sustainable Development Goals (SDGs) through the Small Island Developing States Accelerated Modalities of Action (Samoa Pathway), which provides a framework for turning the SDGs into action, facilitating increased resilience and reducing the need to migrate.

- 2. Forms of human mobility which reduce household vulnerability should be facilitated.**

There are clear links between migration and reduced household vulnerability. Migration could bring diversification of income and livelihoods and reduce the strain on households. Through remittances, households might be able to improve physical infrastructure, thereby increasing their resilience. However, there are a variety of views on migration and climate change within Kiribati. It is doubtful that any policy designed to facilitate migration will maximize its utility unless this range of views is recognized and validated.

- 3. Migration to South Tarawa combined with population growth is unsustainable. Action is necessary.**

The vast majority of movements are to the capital South Tarawa, which places additional strains on a delicate ecosystem and overcrowded environment. As the impacts of climate change become more severe, the ability of South Tarawa to absorb migrants will decline as fresh water becomes less available and floods more frequent. Measures need to be taken to mitigate against this intensification of existing environmental issues. Increased resilience, and temporary migration from the outer islands could reduce the necessity of leaving outer islands for the capital. At the same time further investment is necessary in the capital to include disaster risk reduction (DRR) and climate change adaptation (CCA).

- 4. Kiritimati is a viable internal destination but such movements present risks to existing communities which must be mitigated. Likewise, international relocation will have to be approached thoughtfully.**

The findings on Kiritimati support government policy to encourage migration to less exposed islands. It is a viable, if not long-term destination for migrants, as the environment is comparatively more secure than other islands and it has relatively abundant land and fish. While integration with the existing community could prove difficult, it can be achieved when there is buy-in from all parties. The purchase of Vanua Levu from Fiji raises further questions about whether relocating households will be able to adapt to a different island, with a distinct form of agriculture and culture.

**5. Policy support will be needed to facilitate international migration with dignity.**

The success of I-Kiribati migrants in the international labour market is partially determined by their level of education. The Pacific Qualification Framework and Regional Education Framework are attempts to standardise education and improve graduates' prospects internationally, but lack of teacher recruitment may prevent this. Through the further development of the Marine Training Centre the number of seafaring opportunities can be maximized.

**6. I-Kiribati who are unable to migrate would benefit from assistance or they may become "trapped".**

Some of this population could be termed "trapped"; unable to move from a degrading environment which erodes their coping capacity. The survey found that individuals' lack of financial means is a primary barrier to their ability to migrate and therefore further research is needed in this area. Any policies to promote additional movements would have to be carefully managed, as existing migration patterns suggest that the overcrowding of South Tarawa would continue.

**7. Further regional integration could help Kiribati both to adapt and facilitate mobility.**

Existing bonds between Pacific Island states are strong and have the potential to act as a support mechanism for Kiribati. Further bilateral agreements would be of great use for planned migration, including an extension to existing labour migration schemes.

**8. The Paris Agreement was not totally satisfactory for Kiribati. Nonetheless it presents opportunities for the country.**

The agreement reached at the 2015 Paris Climate Conference (COP 21) is to limit global warming to 2°C above pre-industrial levels, and to strive for 1.5°C. This means that Pacific Island States such as Kiribati will likely be unable to avoid severe impacts of climate change in the 21<sup>st</sup> century.

However, other elements of the agreement are more positive for Kiribati. For the first time, adaptation has been put on equal footing to mitigation. It is essential Kiribati acts quickly to be able to access the resources that have been made available for adaptation. Moreover, the issue of mobility was addressed as the agreement requested that the Executive Committee of the Warsaw International Mechanism (WIM) creates a task force to avert, minimize and address displacement.











# 1. Background

## 1.1 Climate change and migration: global context

Whether negative climate change impacts on livelihoods will trigger migration is a subject of debate. Since 1990 it has been theorized that climate change will result in flows of millions of climate migrants both internally and internationally, moving from marginal environmental areas to places where they can find a more secure livelihood (Lonergan, 1998). Such flows have implications for planning, social policy and security and as a result there is a strong desire within affected countries and the international community to better understand climate-induced migration. This is echoed by the International Organisation for Migration (IOM) which has identified capacity building requirements as a response to challenges from the effects of environmental change. It should be noted that while the IOM does not specifically refer to climate change and migration, it acknowledges that climate change will aggravate the situation of the movement of people due to gradual changes in the environment (IOM, 2010).

The Foresight Report (2011) consolidated the literature on migration and global environmental change and it found that climate change could result in more migration, but at the same time the impact of climate change on livelihoods could erode the capital necessary for migration and so reduce migration. In the face of slow environmental change, those who are able to move—those with money, social networks and alternative livelihoods—may migrate independently. The vulnerable poor, those with no capacity to move when environments deterio-

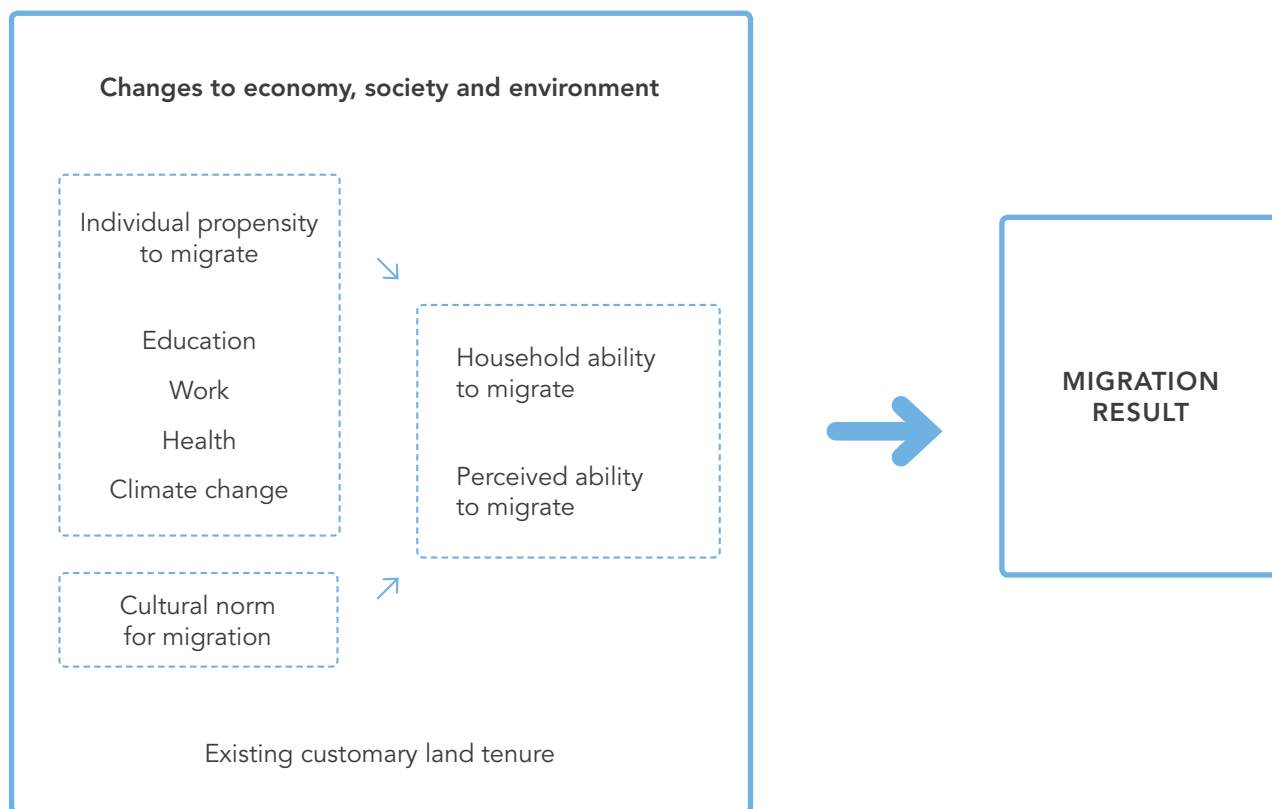


Figure 1: Conceptualization of migration decision making

Source: Adapted from Ajzen (1991)

### Defining environmental migration

The International Organization for Migration (IOM, 2007) defines environmentally related migration as "...persons or groups of persons who, predominantly for reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad".

There are three main types of environmentally related mobility; migration, displacement and planned relocation (Warner et al., 2013). Migration infers a degree of choice in how and when to move. Displacement is forced as it means that persons have been pushed out of their homes either by isolated or repeated environmental events. Planned relocation is resettlement in a new area as staying in place is no longer viable.

rate, the young and elderly may be left behind or forced to resettle later (Warner and Laczko, 2008, p. 60). This has led to subsequent research into the idea of "trapped" populations, who are unable to migrate (Black and Collyer, 2014; Warner and Afifi, 2014) and the need for national and international communities to consider policy options for both migrants and trapped populations.

## 1.2 Framework of study

In the light of the New Economics of Labour Migration (NELM), migration decisions are understood in this study as a strategy adopted mostly at the household level but influenced by individual preferences and attitudes (Stark and Bloom, 1985). This decision-making process is regarded as a planned behaviour, as theorized by Ajzen and Fishbein (1980). This theory views decisions as a combination of individual and community attitudes and the ability to manifest a decision. It theorizes that there are two interrelated ways on which an individual bases his decision to migrate. The first is through a propensity to migrate for education, work, health or climate related purposes. The other reason which intervenes in the migration decision is if a person is influenced by his or her social network. Ultimately, whether this desire to migrate actually results in migration depends on household vulnerability; the latter is calculated using a vulnerability index which assesses if a household has the material ability to enable migration; the availability of necessary funds, contacts and other requirements, in addition to the ability to access land at the destination (fig.1, p.18).







## 2. Country context

### 2.1 Physical geography and environment

The Republic of Kiribati is located in the Central Pacific Ocean and is made up of the Gilbert, Phoenix and Line Island groups covering an ocean area of 3.5 million km<sup>2</sup>. It consists of one raised limestone island (Banaba Island in the Gilbert Island group) and 32 low-lying atolls with a total land area of 811 km<sup>2</sup>. The highest elevation above sea level is 81m with a land area of 5.7 km<sup>2</sup> (Banaba Island), however the atolls generally have a maximum height of 2 to 4m (Government of Kiribati, 2007, 2014; Campbell and Warrick, 2014). There are no streams or rivers on the atolls and only the larger atolls have a fresh groundwater lens as the source of water (Government of Kiribati, 2007, 2014). Kiribati experiences a hot humid tropical climate. In the capital Tarawa the annual average temperature is 28.3 °C and the annual average rainfall is 2,100mm. There are two seasons, dry and wet, the duration of each season differs according to location. For Tarawa the wet season lasts from November to April, while in Kiritimati, it lasts from January to June (Government of Kiribati, 2007, 2014). The El Niño-Southern Oscillation and the corresponding El Niño and La Niña phases have extreme effects on Kiribati's climate with as much as 4,000mm of rain being received in Tarawa during an El Niño event and as little as 150mm during a La Niña event. (Australian Bureau of Meteorology and CSIRO, 2011).

## 2.2 Kiribati and climate change

Extreme events such as droughts and floods threaten most islands of Kiribati, with severe droughts in 1988-1989 and 2007-2009. These events reduced the water supplies in the Gilbert Islands, turned groundwater brackish and dried out plants causing, in particular, declines in copra production in the outer islands as coconut trees dried up (Australian Bureau of Meteorology, 2011). Ocean acidification is another impact of climate change. Aragonite saturation values in the waters around Kiribati have decreased from 4.5 in the 18<sup>th</sup> century to approximately 3.9 in 2000, thereby negatively impacting coral calcification (Australian Bureau of Meteorology and CSIRO, 2014).

There are significant differences in associated climate change impacts between the islands which comprise Kiribati. Approximately half of the population of Kiribati lives in South Tarawa, an urban area with a very high population density. The environmental issues highlighted in the mass media about Kiribati tend to relate to South Tarawa (IPCC, 2014). Storey and Hunter (2010) highlight the existing vulnerability “severe overcrowding, proliferation of informal housing and unplanned settlement, inadequate water supply, poor sanitation and solid waste disposal, pollution and conflict over land ownership”. There is also a large problem with food packaging. As subsistence agriculture has decreased and food imports increased, the amount of packaging exceeds the capacity for local collection and therefore leads to pollution and contamination of water supplies (Teburea et al., 2013). Climate change is therefore often understood as acting as an intensifier of existing vulnerabilities and environmental stresses. The island is low-lying and it is possible that up to half of the island will be inundated under projected sea level rise unless adaptation measures are implemented. In addition to reducing the quality and quantity of land available for homes, this will also impact groundwater, arable land and the spread of disease.

The outer islands are also generally low-lying and some are already affected by environmental change. For example, the village of Tebunginako, a settlement on reclaimed land on Abaiang has had to move inwards away from the advancing sea (Kiribati Government, n.d.). On other islands coconut trees are decaying. One of the outer islands, Kiritimati is treated by the government as distinct from the other islands. The government actually promotes Kiritimati as a destination for migrants, particularly from South Tarawa, because it is spacious and has relatively plentiful natural resources such as fisheries.

The Intergovernmental Panel on Climate Change Fifth Assessment Report (IPCC AR5) states that there is a deficit of climate change knowledge in Kiribati, especially in the outer islands, encouraged by spiritualism, governance and short termism (IPCC, 2014).

## 2.3 Demographics

In 2013, the population of Kiribati was 108,800, of which 54 per cent lived in urban areas. The population increased by 11,000 people from 2005 to 2010, especially in South Tarawa. In 2013, life expectancy at birth was 69 for women and 62.7 for men (World Bank, 2016), which were significantly shorter life expectancies than for the region as a whole (World Bank, 2016). Livelihood is mainly at the subsistence level, especially outside of the urban centre of South Tarawa. Coconut, pandanus, giant taro (bwabwai), breadfruit, banana and fish are the main components of the diet. The productivity of the mentioned plants, trees and crops is directly affected by the health of the environment (Kiribati National Statistics Office and SPC, 2009). Limited access to land and its limited suitability for agriculture lead to food insecurity and malnutrition (McIver, 2014); therefore, imported foodstuffs are the main source of food. It is likely that climate change will exacerbate



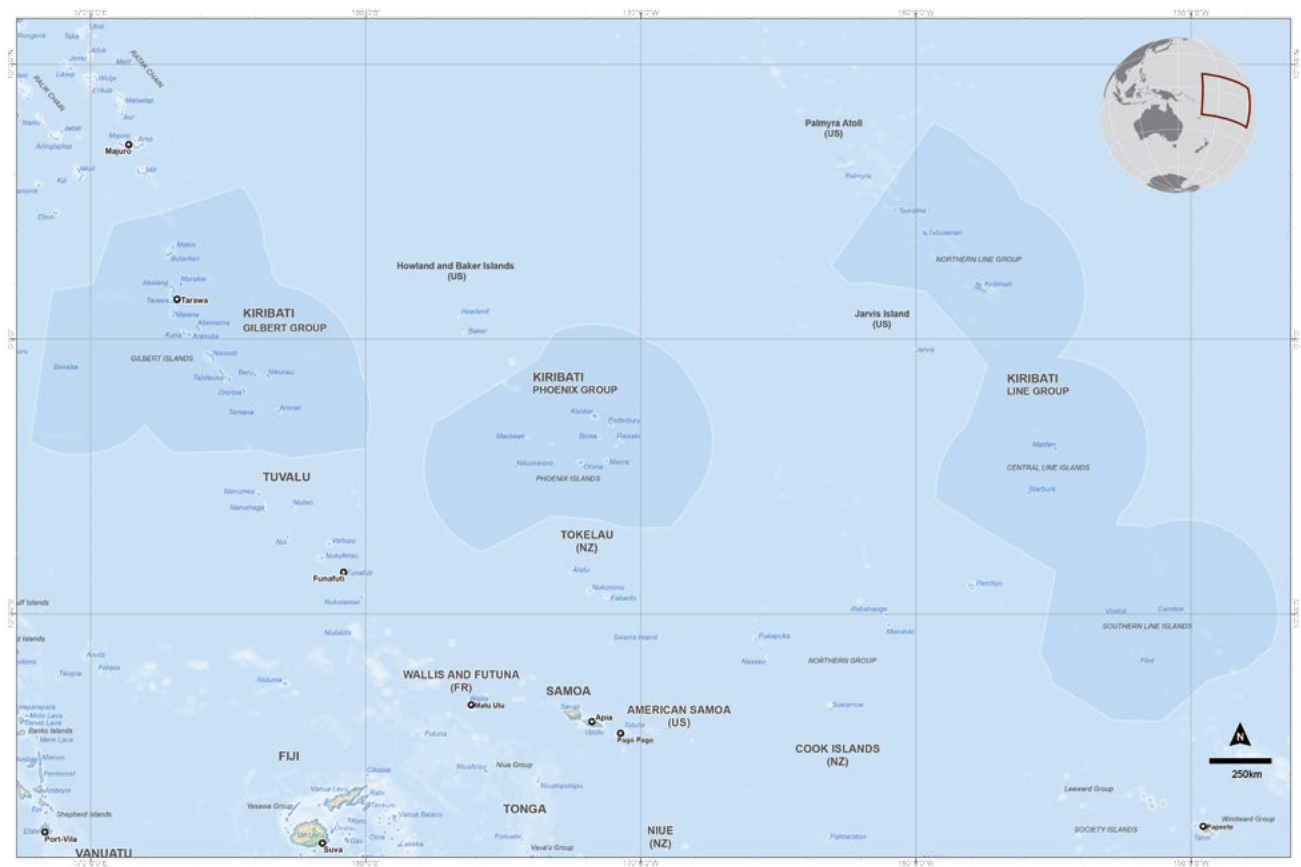


Figure 2: Map of Kiribati

Source: UNOCHA Fiji (2016). The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

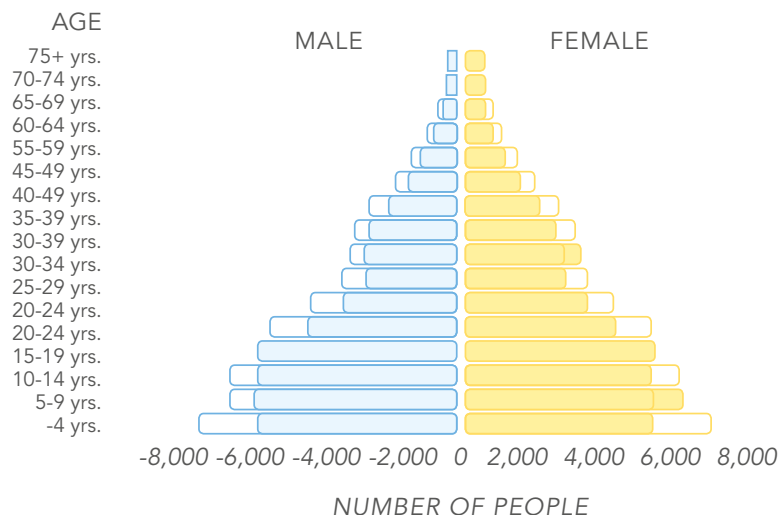


Figure 3: Kiribati Population Pyramid (2005: shaded and 2010: outlined)

Source: Kiribati National Statistics Office (2012)

this already critical situation (ibid.). One option to improve food security of I-Kiribati is breeding salt- and drought-resistant crops such as cassava and taro (ibid.).

Kiribati has a historical precedent of environment related migration. In the middle of the 20<sup>th</sup> century, approximately 2,000 I-Kiribati were relocated by the British colonialists to the Solomon Islands due to perceived overcrowding and resource scarcity. Adapting to new unfamiliar risks such as tsunami and land rights have made the resettlement a challenge (Donner, 2015).

The population pyramid above illustrates the high fertility rate and comparably high mortality rate in Kiribati. The Total Fertility rate (TFR) was estimated at 3.9 children per women in 2010, which is an increase of half a child compared to 2005

(Kiribati Census, 2010). The young populations is illustrated by the fact that 36 per cent of the population is below the age of 15 and only 5 per cent are 60 years or older (ibid.). The working age population represents 58 per cent of the total population and the median age was 21.6 in 2010 (Kiribati Census, 2010). The age-dependency ratio marginally declined from 74/100 in 2005 to 71/100 in 2010 (ibid.). It is higher in outer islands than in South Tarawa and shows many children and elderly rely on the income of a working age person. Non-communicable diseases are important health issues in the country (Kiribati Government and WHO, 2009). Related chronic diseases are also widespread, for example diabetes was reported by 28 per cent of the population (ibid.).

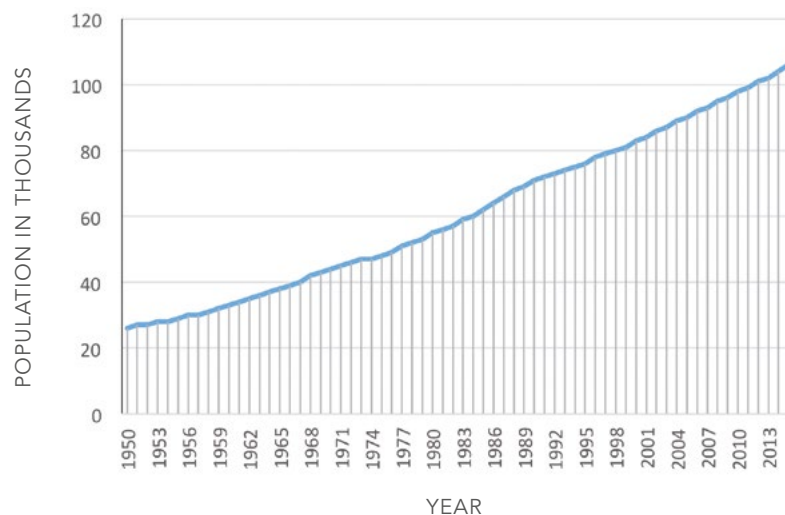


Figure 4: Population of Kiribati from 1950-2015

Source: UN Population Division (2015)

Primary education is compulsory and provided free of charge from the age of 6 to 14 (UNESCO, 2008). School attendance is high until the age of 14, after which fees apply and 56 per cent of the population has finished secondary school (Kiribati Census, 2010). The main post-secondary training institutes in Kiribati are the Marine Training Centre (MTC), the Fisheries Training Centre (FTC) and the Kiribati Institute for Technology (KIT) (ILO, 2010). Other institutes are the Kiribati Teachers College and the School of Nursing as well as a campus of the University of the South Pacific, which opened in 1976 (ILO, 2010; USP, 2015) and the Kiribati Uniting Church Theological College, and the Catholic Kiribati Pastoral Institute.

## 2.4 Economy

The main challenges to the country's economy are the scarcity of natural resources, infertile and porous soil, remoteness from international markets and the threats posed by climate change and environmental impacts (ILO, 2012). The overall labour force participation rate in Kiribati was 60 per cent, while youth unemployment amounts to 54 per cent. In 2006 (the latest available data) the percentage of the population living below the poverty line was 21.8 per cent (ILO, 2012). Traditionally, the economy was dominated by subsistence farming and fishing, which are still important but declining sectors. One reason is that urbanization and movements towards South Tarawa and Kiritimati lead many people to give up fishing and agriculture

in the outer islands (ILO, 2012). In urban areas, those who do work are employed in the service industry and in small scale commerce (Kiribati Census, 2010).

The importance of fisheries relates to Kiribati's geographical position in one of the most important tuna fishing grounds in the world. However, most of the income that fishing generates for Kiribati is indirect, through fishing licenses for its vast Exclusive Economic Zone (EEZ). Kiribati sells these licenses to foreign fleets (government revenues) because it lacks the infrastructure to participate in large-scale fishing activities itself. In many cases, the fish caught are directly processed on the vessels or prepared for processing and taken to foreign canning facilities immediately (FAO, 2014)<sup>2</sup>. This activity does not generate income for Kiribati, except for the sale of fishing licenses. Fishing itself ranges from large-scale foreign and industrialized operations (offshore) to small-scale domestic fishing (onshore), but there is aquaculture and aquarium fish trade as well. Given the lack of freshwater sources, fishing is limited to the ocean (Campbell and Hanich, 2014).

Kiribati has been described as a MIRAB (MIgration, Remittances, Aid and Bureaucracy) country which has a significant discrepancy between export production and import consumption, and migration generates remittances primarily from seafarers. Kiribati also has a large national bureaucracy with public wages amounting to 40 per cent of its GDP (ILO, 2010). Kiribati's imports exceed its exports but remittances, aid and other income allow it to maintain a balance of payments. Other income includes fees from fishing licences and interest from the Reserve Equalization Fund (REF), which was created with income from past phosphate mining (ibid.). At present, tourism is one of the few promising industries in Kiribati with cruise

ships regularly calling at Tarawa, Kiritimati and Fanning Islands (ILO, 2010).

## 2.5 Gender

In 2004, Kiribati acceded to the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) (University of Geneva, 2010). In regard to education, in 2013, gender parity in primary education has been reached and now, more girls than boys attend secondary education (MFED, 2015). The proportion of women in non-agricultural employment reached 51 per cent in 2010 (ibid.). In politics, four women are among Kiribati's 45 parliamentarians and many of the Senior Executive public servants are female (ibid.). However, with regard to violence against women, 68 per cent of women aged 15-49 who have had, or have a partner reported experiences of physical or sexual violence (ibid.). Kiribati has taken action to combat gender-based violence with the 2014 Family Peace Act for Domestic Violence, which has improved the prosecution of offenders (SPC, 2015). Additional initiatives addressing gender issues in Kiribati include the Kiribati Development Plan 2012- 2015, the 2013 Draft National Gender Equality Policy, as well as the National Approach to Eliminating Sexual and gender-based Violence in Kiribati. This is further supported by the aim to ensure gender mainstreaming in the country's environmental policy.

## 2.6 Migration patterns

Internal migration takes place primarily to South Tarawa, which recorded a net gain of 14,739 people in the 2010 census (Kiribati Census, 2010). The Line and Phoenix island group

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<sup>2</sup> Until 2010 when the first offshore fishing company joint-ventured with the Government of Kiribati – forming the Kiribati Fish Company Ltd, which set up its onshore facility that now processes locally caught tuna into fresh tuna products (loins) and markets them overseas. Data on the economic benefits to locals and the Government of Kiribati is yet to be gathered.

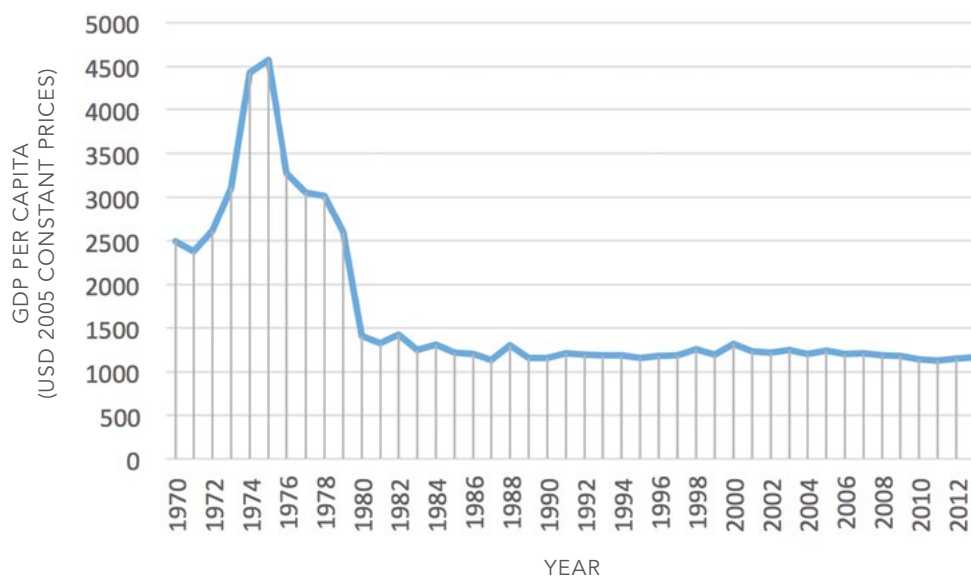


Figure 5. GDP per capita of Kiribati from 1970-2015

Source: ESCAP (2015)

recorded a net gain of 3,438 people, while the Gilbert group excluding Tarawa experienced a net loss of 15,309 people (ibid.). Since 2005, the government of Kiribati has been promoting migration to Kiritimati, especially from South Tarawa as it is considered less at risk of the impacts of climate change and offers more space than other islands, as it is the largest coral atoll in the world and has a larger land mass than all of the other islands of Kiribati combined.

Kiribati experiences net emigration and main international destinations are Fiji, New Zealand and Australia. I-Kiribati have a history of labour migration across the Pacific including to the phosphate mines in Banaba and Nauru, as well as seafaring (UN ESCAP et al., 2014). With the 2008 financial crisis, the

share of I-Kiribati seafarers dropped and competition remains fierce. However, the Kiribati government actively supports labour migration of its citizens, especially to New Zealand and Australia. Seafaring and temporary as well as permanent migration schemes are briefly explained below.

### Seafaring

A Marine Training Centre (MTC) which recruits I-Kiribati for the seafaring industry is based on South Tarawa. New Zealand and Australia are investing in the MTC in order to safeguard international standards of education. The key employers for graduates from the MTC in 2011 were Japanese. Bedford et al. (2014: 12) state "of all the Pacific countries that have set up marine training establishments with a view to providing

overseas employers with well-qualified seafarers and fishermen, Kiribati has been the most successful.”

### Working Schemes

Seasonal labour migration to New Zealand is organized under New Zealand’s Recognized Seasonal Employer (RSE) scheme, which Kiribati joined in 2011. This program offers the opportunity to go to New Zealand for up to nine months in order to work in the agricultural sector, and in horticulture and viticulture companies (Immigration New Zealand, n.d.). In 2013/14, 127 I-Kiribati migrated under New Zealand’s RSE scheme (Government of Australia, 2014). The Australia’s Seasonal Worker Program (SWP) offers nine month of work on the invitation of an Australian employer in the agricultural and accommodation sector (Australian Government, 2015). In 2013/2014 34 I-Kiribati workers used Australia’s SWP (Government of Australia, 2014). Although there is a long history of I-Kiribati contract labour migration overseas in the region, there are currently difficulties finding New Zealand or Australian employers for seasonal I-Kiribati workers.

Under the Kiribati Australia Nursing Initiative (KANI), I-Kiribati are offered scholarships to study a Bachelor’s degree in nursing in Australia (UN ESCAP et al., 2014). The aim of KANI was to provide a high quality education and employment opportunities overseas to I-Kiribati and also address the global skill shortage in nursing. The pilot program was concluded in 2014 with an investment of AUD20.8 million, it achieved a completion rate of 81 per cent over a total of 84 students (Shaw et al., 2014).

In 2002, the Pacific Access Category (PAC) Scheme was designed to offer annually up to 75 citizens from Kiribati a work permit and permanent residence in New Zealand. The applications sets demanding criteria regarding a job offer with a minimum salary and applicants are selected via a ballot (New Zealand Immigration, n.d.). Another labour migration pro-

gramme is related to the Kiribati Institute of Technology (KIT), which is the main centre for vocational education and training. Australia is providing funding to improve the level of technical education and produce graduates with internationally recognized qualifications, so that they are more competitive in international labour markets (Bedford et al., 2014). In 2013, A Memorandum of Understanding between the Fiji National University and KIT also provides further training opportunities for I-Kiribati.

### The National Policy Framework

#### *Migration with Dignity*

Kiribati recognizes the need for migration as a well-managed pro-active adaptation policy to manage gradual onset climate change processes, as opposed to a last resort response to disasters (Smith and McNamara, 2014). This is the basis for the “Migration with Dignity” vision of President Tong. One way of enabling this vision is to provide I-Kiribati students with internationally accredited education, especially in the form of tertiary degrees, which will enable young I-Kiribati to seek employment abroad. Migration can generate remittances that support families and households in Kiribati. These remittances can increase resilience to the impacts of climate change and enable I-Kiribati to stay longer on their land.

#### *Purchase of land in Fiji (2014)*

In 2014, Kiribati purchased 5,460 acres of land on the island of Vanua Levu, Fiji’s second largest island. It will be used to ensure food security of I-Kiribati and to offer a destination in the event of relocation from Kiribati.

#### *National Adaptation Program for Action (NAPA) 2007*

The NAPA outlines a three year urgent and immediate action plan for climate change adaptation. The plan is meant to compliment long-term national development strategies, such as the Kiribati Action Plan and climate change adaptation policies.

#### *Kiribati Development Plan (KDP) 2012-2015 (2012)*

The KDP outlines seven specific Key Policy Areas (KPA) for economic growth and sustainable development. These are human resources development, economic growth, poverty reduction, health, environment, governance and infrastructure.

#### *National Disaster Risk Management Plan (2012)*

This is a three-part comprehensive management plan that identifies potential natural and anthropogenic disasters, outlines the roles and responsibilities of all relevant national agencies and provides a detailed procedure for disaster preparedness, response and post occurrence.

#### *National Framework for Climate Change and Climate Change Adaptation (2013)*

The Framework outlines key areas to strengthen national capacity in terms of national development and climate change adaptation. These key areas are mitigation; integration of climate change and climate change adaptation into national planning and institutional capacity; external financial and technical assistance; population and resettlement; governance and services; and survivability and self-reliance.

## 2.7 Remittances

The World Bank estimates that Kiribati received USD9 million in remittances in 2010 (Ratha et al., 2011). Remittances from seafarers declined in the past years and were USD5.6 million in 2014 from 676 seafarers (IMF, 2014; Kiribati MFED, 2015). The ratio of remittances to GDP has been between 7-12 per cent over the past 20 years (IMF, 2009). As mentioned above, Kiribati's economy is very dependent on remittances and a reduction in remittance flows can be expected to have a negative impact on the income of many households. Given the absence of an institutionalized social welfare system, remittances provide a "private safety net" for the supported families (Borovnik, 2006).









## 3. Methodology

This section presents a brief overview of the research aims and methodology underlying this community survey study. Migration is a normal event which should not be labelled as beneficial or detrimental without considering the wider perspective of the individuals and households central to the action (Farbotko and Lazrus, 2012). For this reason, the current project investigated migration from a broad outlook, considering the values of the individual and community in addition to the household situation. Further details on the methods are included in the annex which has been published as a separate document and is available online at: <https://collections.unu.edu/view/UNU:5856>

### 3.1 Household survey and multidimensional index

A representative sample of the population was interviewed through a household survey, which was devised in English and then translated into Kiribati. The survey was designed to produce household-level data related to vulnerability and migration patterns. UNU-EHS and ESCAP trained and guided local enumerators from the University of the South Pacific (USP) who undertook the survey. A combination of stratified and opportunistic sampling was used. Five islands were sampled: South Tarawa, North Tarawa, Butaritari, Kiritimati and Marakei. Within each island several communities were sampled to provide data. Within the communities, due to time and budgetary constraints, households rather than individuals were approached. The enumerators knocked on the doors of homesteads and asked to

speak to the head of the household. If the head was not available an adult was asked to partake in the survey. A total of 377 households were surveyed, covering 2,799 individuals. This means that 2.35 per cent of all households and 2.72 per cent of all individuals in Kiribati were covered in the survey. As South Tarawa is the capital and urban centre, results for many of the questions are presented separately. North Tarawa, Butaritari, Kiritimati and Marakei are assumed to represent the outer islands of Kiribati. Migration histories were sought for each of the households, but it is important to note that only movements by individuals who remain part of a household on Kiribati are included.

In order to assess vulnerability, a Correlation, Sensitive Vulnerability Index (CSVI) was created as a development of the Correlation Sensitive Poverty Index (Rippin, 2011; Rippin, 2012). The goal of the index is to identify which households are vulnerable based on their economic situation, education, health, housing, connectivity, and community and social networks. Each household receives a value that ranges between 0 and 1, with 0 being no vulnerability and 1 being complete vulnerability. For instance, a household whose members have no primary education would have a high education vulnerability score. The nominal values of vulnerability only make sense when put in comparison with other vulnerability values. Thus, a single vulnerability value does not reflect the severity of the vulnerability ("high" or "low"). Therefore, for better readability, the numerical vulnerability values have been omitted from the illustrations of this report. Further details on the index are included in the annex.

### 3.2 Qualitative analysis

A Participatory Research Approach (PRA) was undertaken as part of the fieldwork to ensure the representation of local

ISLAND	TOTAL HOUSEHOLDS ACCORDING TO 2012 CENSUS	TOTAL HOUSEHOLDS SURVEYED
South Tarawa	6,705	72 (1.07%)
Butaritari	630	52 (8.25%)
Kiritimati	857	75 (8.75%)
Marakei	492	75 (15.24%)
North Tarawa	1,002	103 (10.28%)
Outer Islands Total	9,338	305 (3.27%)
Total	16,043	377 (2.35%)

Table 1: Distribution of the sample by island

Source: PCCM Kiribati Fieldwork

perspectives. The processes by which the data is collected means that the communities are themselves involved in the data analysis. As opposed to other research methods, PRA is conducted in groups. This ensures that the views of certain sections of society are included, which meant that for this study it was possible to ascertain other perspectives on livelihood risks and migration decision-making. A “Q” study (Brown, 1980), was also conducted on twenty-four of the surveyed household representatives in order to obtain a better understanding of the range of shared attitudes on climate change and migration. Eight of the participants were from South Tarawa and 16 from the outer islands (9 from North Tarawa, 4 from Marakei and 3 from Kiritimati). No Q study was conducted on Butaritari.

### 3.3 Modelling migration

The Kiribati Climate Change Migration Model (KCCMM) was elaborated to simulate future migration flows. It projects migration flows in Kiribati from 2015 to 2055. The model envisages two ways in which an agent may decide to migrate. The first is through a propensity to migrate. In accordance with the survey results, agents migrate for education, work, health or climate change reasons. The other reason people may decide to migrate is if an agent is influenced by his social network; he is influenced by peer pressure. Whether these desires to migrate actually result in migration depends on the agent's capability to migrate which is determined by his or her vulnerability index (CSVI). This determines whether the agent has the necessary funds, employment or study opportunities, contacts and other requirements to manifest the migration decision.







## 4. Findings

### 4.1 Climate change related impacts are affecting the vast majority of households in Kiribati

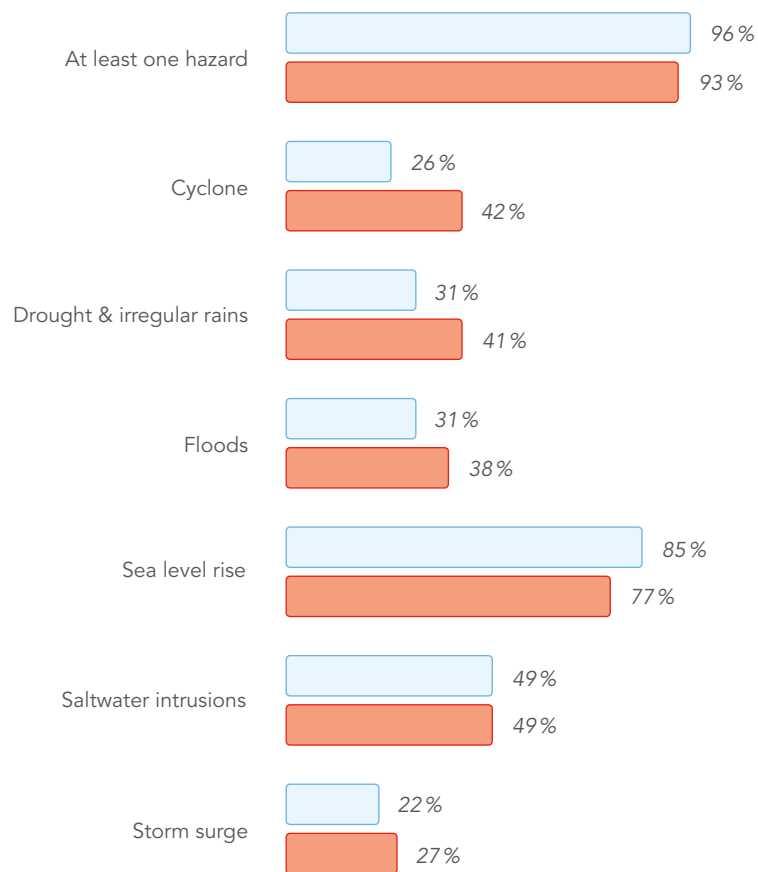
The vast majority (95%) of households were affected by one or more natural hazards in the period 2005-2015. Sea level rise is the hazard which has impacted the most households, affecting approximately 80 per cent. Saltwater intrusion impacted just under half of all households. All of the other hazards were reported more frequently in the outer islands than in South Tarawa (fig. 6, p. 36).

A PRA exercise was carried out in South Tarawa in order to understand the main livelihood risks which households face. The results reflect a range of social, economic and environmental issues (fig. 7, p. 37). Within the latter category, drainage, land conflict, high tides, overcrowding, lack of toilets, water shortages and rubbish were highlighted, again demonstrating the strong influence of the environment on people's lives.

In the impacts assessment a mixed group spontaneously ranked the main livelihood risks and problems already highlighted from the most severe to the least severe. Subsequently, the direct and indirect impacts were collected and some connections between different risks and impacts were established (table 2, p. 37).

The PRA sessions on livelihood risks that were conducted in Betio and Kiritimati (with men in London and with women in Tabwakea), included persons of all ages. For each of the identified key risks and problems for their livelihoods the group voted to rank them as worst, medium and least severe problems (only the most severe ones are shown here). For each of the most severe problems potential solutions by households and the government were collected (table 3, p. 38).

# NATURAL HAZARDS 2005-2015



PROPORTION OF HOUSEHOLDS IMPACTED

- SOUTH TARAWA
- OUTER ISLANDS

Figure 6: Households affected by natural hazards 2005-2015

Source: PCCM Kiribati Fieldwork





Figure 7: Livelihood Risk Ranking in South Tarawa

Source: PCCM Kiribati Fieldwork

MAIN LIVELIHOOD RISKS AND PROBLEMS	DIRECT IMPACT	INDIRECT IMPACT
King tides	Floods	Crops, erosion, wells, no shelter
No governmental help	Unavailability of funding	Construction of seawalls, tanks for rainwater
Unemployment	Starvation, high crime rate	Sickness spreads, insecurity and corruption
Lack of toilets	Pollution of air and sea	Unsafe drinking water, contaminated seafood and wells and sickness spreads
Overcrowded homes	Limited space	Land conflict
Rubbish	Destroyed food crops, dust, pollution	No domestic or commercial food
Domestic fights	Abuse of women	Family disputes, insecurity for children, discrimination of women and children

Table 2: Livelihood risks in South Tarawa

Source: PCCM Kiribati Fieldwork

ISSUE	HOUSEHOLD MEASURES (BLUE)	EXTERNAL MEASURES (YELLOW)
Unemployment, especially among young people	Self-employment (fishing/agriculture), education	Providing more job opportunities foreign investment)
Overcrowded homes, due to arriving immigrants	Family planning, migration	Offer unoccupied land to people who need it, evacuation to more spacious place
Health problems such as diabetes	Better hygiene practices	More medicine in the hospital
Domestic fights	Better communication, controlling temper, sharing and counselling	More police available, especially in the women's section, the police need cars (now they have to rent them to go and stop violence), ensure enforcement, provide social services to help
Security problems with migrants in Kiritimati	Control alcohol consumption, protect girls and children	Police with special investigators, proper court cases
No governmental help for example with funding	Appeal to government	The council and community lawyers can assist
Lack of water because of salt intrusion	Move to another piece of land that has good water inside the island (e.g. Banana), build ground well	Rainwater harvesting, community assistance to build a safe well
Alcohol causing violence	Stop the selling and making of home brews	No licenses and jail for home brewers
Bad roads	Use the side of the road and leave it to the government	Apply new tar to make the road smooth
Rubbish	Cleaning and recycling	Council truck shall pick up the rubbish
Lack of toilets	Start with compost/pit toilet that is cheaper	Bring sanitation projects with affordable toilets, financial support from government and aid
Floods and high tide	Build seawalls and move inland	Migrate to higher countries, provide advice and assistance

Table 3: Severe problems and proposed solutions

Source: PCCM Kiribati fieldwork



NUMBER OF MOVEMENTS	OVERALL	SOUTH TARAWA	OUTER ISLANDS
<b>Total movements</b>	10,480	3,388	7,092
<b>Zero movements</b>	90%	93%	87%
<b>One movement</b>	10%	7%	13%
<b>Total</b>	100%	100%	100%

Table 4: Number of movements by individual

Source: PCCM Kiribati fieldwork

## 4.2 Migration is not a common experience in Kiribati and international migration is rare

After weighting, the household survey found that 10,480 movements took place from the sampled islands in the period 2005-2015 (table 4, above). As the overwhelming majority of migrants made only one movement, this means approximately ten per cent of the population migrated in this timeframe. Seventy-nine per cent of the movements were internal, 13 per cent were external and 8 per cent were seafaring (fig. 8, p. 41). People on the outer islands are more likely to migrate than people on South Tarawa, reflecting that the capital is primarily a destination for migrants.

Although the data does not contain the precise age of the migrants at the time of migration, generalizations can be made based on the survey results. At the time of the survey, the majority (69.5%) of migrants were aged between 15 and 50

NUMBER OF MOVEMENTS	OVERALL	SOUTH TARAWA	OUTER ISLANDS
<b>0</b>	63%	69%	58%
<b>1</b>	21%	17%	25%
<b>2</b>	9%	10%	9%
<b>3</b>	3%	3%	3%
<b>4</b>	2%	1%	2%
<b>5 or more</b>	2%	0%	3%
<b>Total</b>	100%	100%	100%

Table 5: Number of movements by households

Source: PCCM Kiribati fieldwork

years. In comparison, 58.3 per cent of the overall sample was situated in the same age group. Approximately 40.9 per cent of the migrants were between 25 and 50 years old and 28.6 per cent were between 15 and 24 years of age. The overall sample counts 29.1 per cent of children below 15 years and around 87.4 per cent of the sample was 50 years of age or below. Furthermore, 33.1 per cent of migrants above 15 years of age completed some secondary education (overall sample: 28.7%) and 19.76 per cent completed secondary education (overall sample: 14.7%). The majority (63.2%) of the migrants above 15 years old have some secondary education or attained higher levels of education. In comparison, only 50.3 per cent of the overall sample of that age category has reached similar levels of educational attainment. Hence, the data suggests that on average the migrant group reached higher levels of education than the overall sample.

DESTINATION:	OVERALL	FROM SOUTH TARAWA	FROM OUTER ISLANDS
<b>Abaiang</b>	9%	9%	10%
<b>Kiritimati</b>	7%	22%	3%
<b>South Tarawa</b>	52%	N/A	69%
<b>Other internal</b>	32%	69%	18%
<b>Total</b>	100%	100%	100%

Table 6: Internal migration destinations

Source: PCCM Kiribati fieldwork

At the household-level, in South Tarawa, approximately three-fifths of households did not report migratory movements. Out of those households which experienced migration, the majority only experienced one or two movements. Households on the Outer islands reported more movements than households on South Tarawa (table 5, p. 39).

The types of movement are similar for both South Tarawa and the Outer Islands. Internal migration is much more common than international migration, with seafaring the least common form of movement. Seafaring is much more common from South Tarawa than from the Outer Islands; this is to be expected as the Marine Training Centre is based in Betio on South Tarawa.

Table 6 and 7 (above) display the most common destinations for migrants divided into internal and international move-

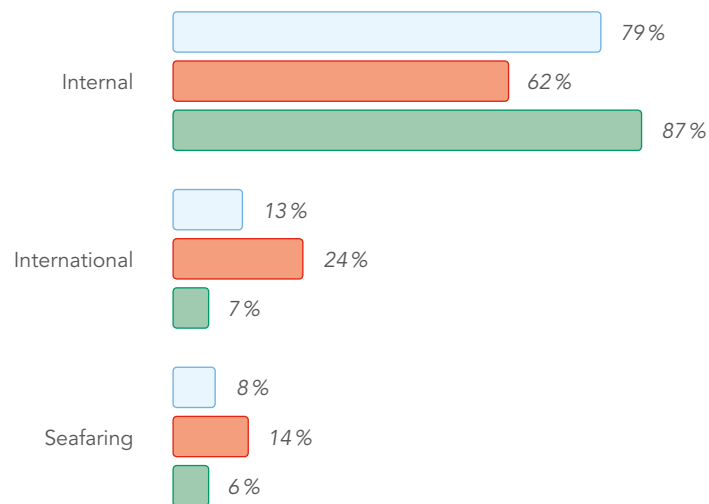
DESTINATION:	OVERALL	FROM: SOUTH TARAWA	FROM: OUTER ISLANDS
<b>Fiji</b>	21%	22%	18%
<b>New Zealand</b>	24%	11%	43%
<b>Australia</b>	7%	11%	0%
<b>Marshall Islands</b>	16%	22%	5%
<b>Other international</b>	32%	34%	34%
<b>Total</b>	100%	100%	100%

Table 7: International migration destinations

Source: PCCM Kiribati fieldwork

ments. Most internal migration is to South Tarawa, due to the fact that almost three quarters of internal migrants from the Outer Islands move to the capital. From South Tarawa, there is a significant flow of migrants to Kiritimati. For international migration, the most popular specific destination is New Zealand followed by Fiji. The most frequent destinations for migrants from South Tarawa are Fiji, then New Zealand and Australia. Migrants from the Outer Islands are more likely to move to New Zealand and then Fiji. The sample does not include any migrants from the Outer Islands to Australia. Seafaring, is much more common from South Tarawa, reflecting the fact that the marine training centre and main port are located in South Tarawa. South Tarawa is used as a stepping stone for migrants from the Outer Islands who then go onto work in the international shipping industry.

# TYPE OF MIGRATION



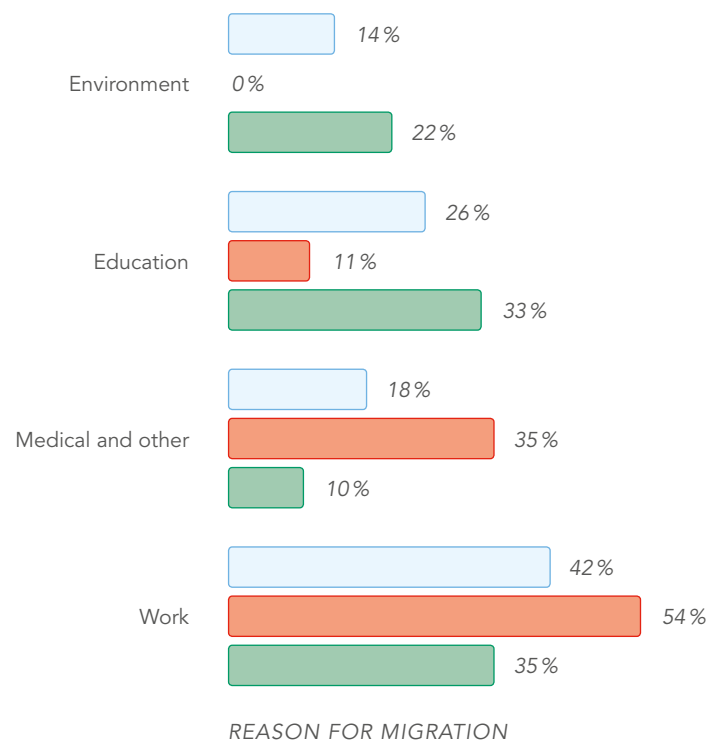
PERCENTAGE OF MIGRANTS

- OVERALL
- SOUTH TARAWA
- OUTER ISLANDS

Figure 8: Internal and international migration and seafaring

Source: PCCM Kiribati fieldwork

## PROPORTION OF MIGRATION



- OVERALL
- SOUTH TARAWA
- OUTER ISLANDS

Figure 9: Reason for migration

Source: PCCM Kiribati fieldwork



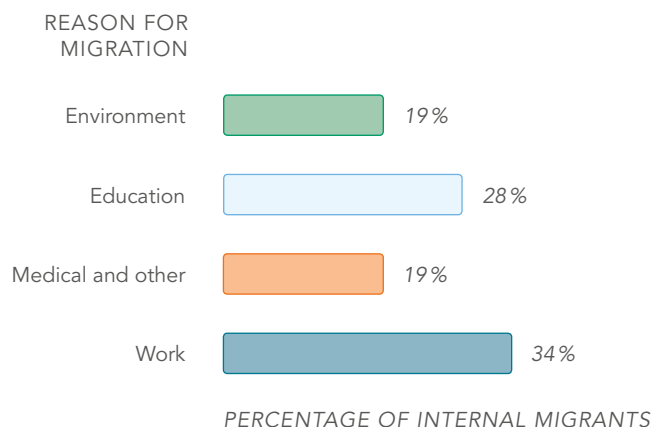


Figure 10: Internal migration by reason

Source: PCCM Kiribati fieldwork

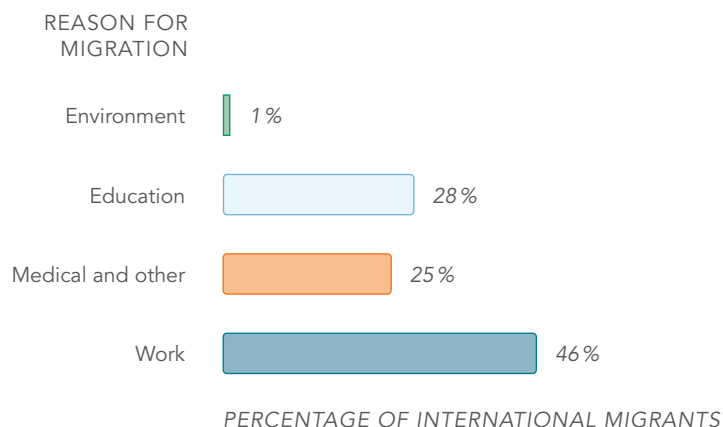


Figure 11: International migration by reason

Source: PCCM Kiribati fieldwork

According to the survey, work is the most common reason for migration, followed by education and climate change (fig. 9, p. 42). However, the reasons for migration differ depending on the place of origin. Climate change is not a factor for movements from South Tarawa, while education is a much more common driving factor for movements from the Outer Islands.

When the reason for migration is subdivided into internal and international, some differences emerge. For internal migration (fig. 10, above), motivations are split relatively equally between the four reasons, with work being the most important followed by education. For international movements (fig. 11, above), work is the dominant reason.

People migrate to South Tarawa for work, education and climate change in approximately equal proportions. Migration

to Kiritimati occurs overwhelmingly for work and in some cases due to environmental factors. Migrants move to other internal destinations mainly for education and work (table 8, p. 44). For international movements (table 9, p. 44), those to Fiji is primarily driven by work, with the remaining share of migrants moving for education. This pattern is repeated for New Zealand, but Australia is only a destination for education. Migrants travel to other destinations almost exclusively for work.

Decision-making is generally a social phenomenon. About half of all household representatives consult four or more people outside of the household when they need to make an important decision, so it can be assumed that migration decisions are also taken communally (fig. 12, p. 45).

DESTINATION	TOTAL	EDUCATION	WORK	MEDICAL	ENVIRONMENT
<b>Abaiang</b>	9%	5%	2%	1%	1%
<b>Kiritimati</b>	7%	0%	4%	3%	<1%
<b>South Tarawa</b>	52%	16%	16%	5%	14%
<b>Other internal</b>	32%	7%	12%	11%	3%

Table 8: Reason and destination for internal movements

Source: PCCM Kiribati fieldwork

DESTINATION	TOTAL	EDUCATION	WORK	MEDICAL	ENVIRONMENT
<b>Fiji</b>	21%	6%	14%	1%	0%
<b>New Zealand</b>	24%	5%	18%	0%	1%
<b>Australia</b>	7%	7%	0%	0%	0%
<b>Marshall Islands</b>	16%	0%	2%	14%	0%
<b>Other international</b>	32%	10%	12%	10%	0%

Table 9: Reason and destination for international movements

Source: PCCM Kiribati fieldwork

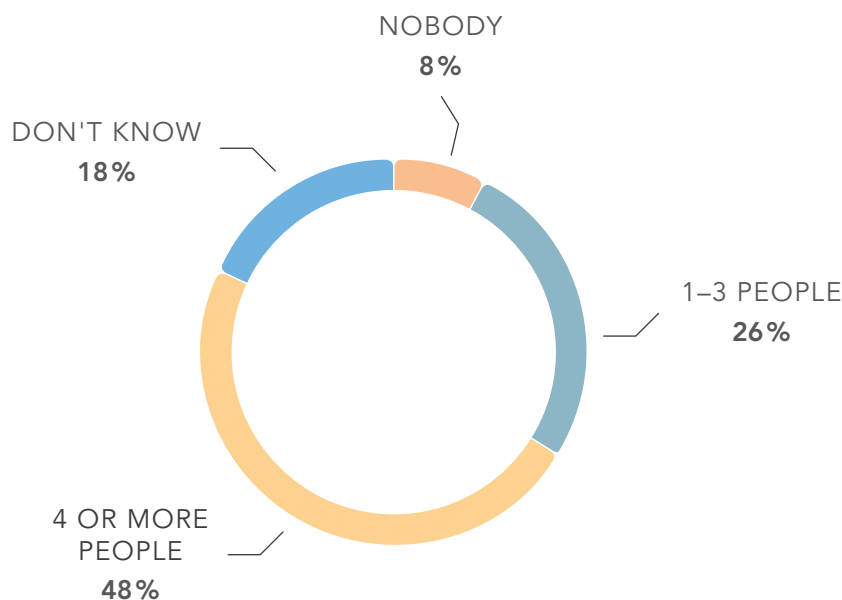


Figure 12: The number of people outside of the household consulted for decisions

Source: PCCM Kiribati fieldwork

The PRA activity on reasons for migration gave another perspective to the household survey.

#### PRA on reasons for migration in Kiritimati

A focus group discussion among men of all ages in Kiritimati, looked at the reasons for migration. It was reported that many people want to go to Kiritimati but that it is very expensive. If more people had the financial means, participants think that more people would go to Kiritimati.

Currently, migrants are perceived as arriving from all 16 Kiribati islands except Banaba, and only few internationals arrive. The focus group participants did not identify any beneficial impacts of migration for the receiving community and highlighted instead the negative impacts of migration, such as bringing kava and drugs, coming without money and relying on their families for help in paying for their boat tickets and in hosting immigrants. Migration is not seen as an individual action: assistance is provided by families and members of the church, and immigrants maintain close links with their home islands, for example via phone calls and remittances. The participants in the focus group believe that there should be controls to avoid Kiritimati becoming overcrowded like South Tarawa. According to this group, migration from Kiritimati to South Tarawa occurs mostly for education and what was described as “entertainment”; this is presumably a term to describe the various attractions of the capital compared to the rest of the country. Finally, some older people return to their home islands but leave their children in Kiritimati.

### PRA on reasons for migration in South Tarawa

The reasons for immigration to South Tarawa include a better and more accessible education than in the outer islands, an easier life for adults and more work opportunities. Additionally, South Tarawa offers higher income generating opportunities. Moreover, a better availability and variety of food and more possibilities for youth entertainment contribute to its attractiveness.

In regard to reasons why people leave South Tarawa to go back to the Outer Islands or to go overseas, participants named primarily overcrowding and climate change, which makes many places unsustainable for living. Only educated people with sufficient financial resources can migrate outside of Kiribati, for example to Australia or New Zealand.

People are likely to go to South Tarawa as it is cheaper than going abroad and it offers advantages relative to other places; however, overcrowding and climate change are the two central factors that determine and will determine how many people will be able to stay in South Tarawa in the near future.



Figure 13: Reasons for migration in South Tarawa

Source: PCCM Kiribati fieldwork







### PRA session on institutional help

A mixed group discussed institutions that help in times of crisis and assigned a medium impact to Members of Parliament (MPs) and a small impact to the other actors. The church and family members, who help especially by giving money when they come for holidays/funerals/weddings, were found to be easily accessible and also moneylenders were ranked as relatively easily accessible. MPs, Betio Council and Minister were classified as being a bit harder to access. There are monthly meetings with the council and quarterly meetings with MPs but nobody attends them, they just contact them in times of need. All in all, households have very few institutions to rely upon. It is interesting to note that they do not receive help from international NGOs, and can only sometimes rely on neighbours for help in times of crises. Finally, political participation seems to be low, for example only 50 per cent of potential voters vote, and institutionalized opportunities to interact with policymakers are often not used.

The session with a mixed group in Banana in Kiritimati, yielded broadly similar results. One addition was that in case of financial problems, people would go to cut and sell copra, which instantly increases their cash income. The church was not included as a supporting institution but small business and the development bank, which only gives loans to permanent employees, were named. The impact of family support and the support of small business was seen to be significant. The family was the easiest actor to access, followed by small businesses and moneylenders, MPs, the village bank and the development bank.

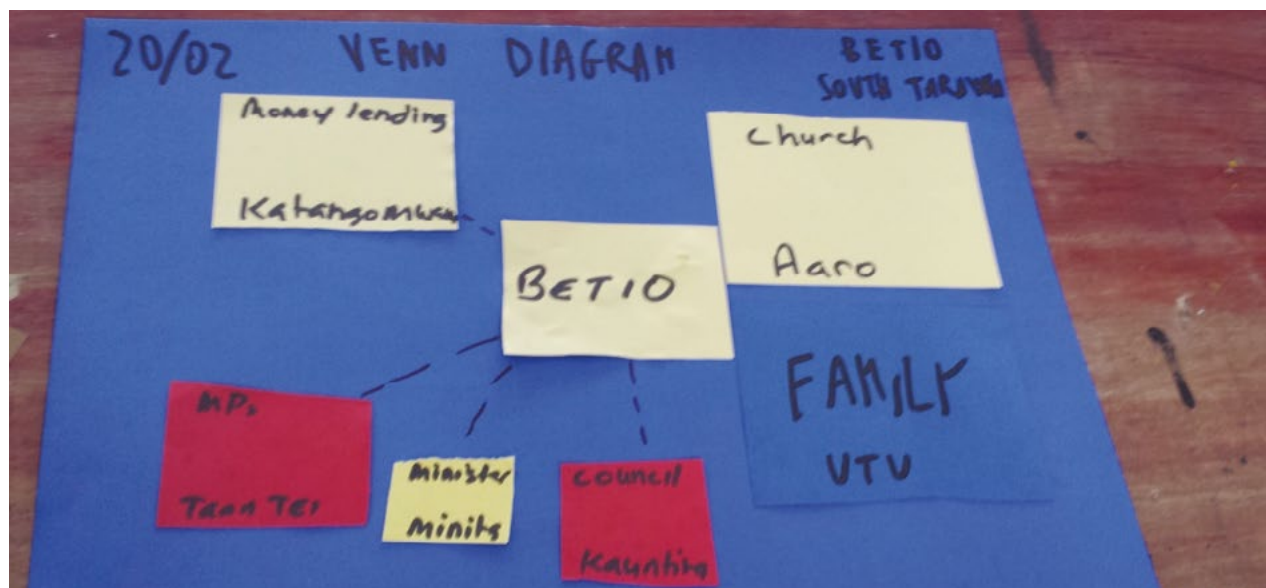


Figure 14: Institutional help in South Tarawa

Source: PCCM Kiribati fieldwork

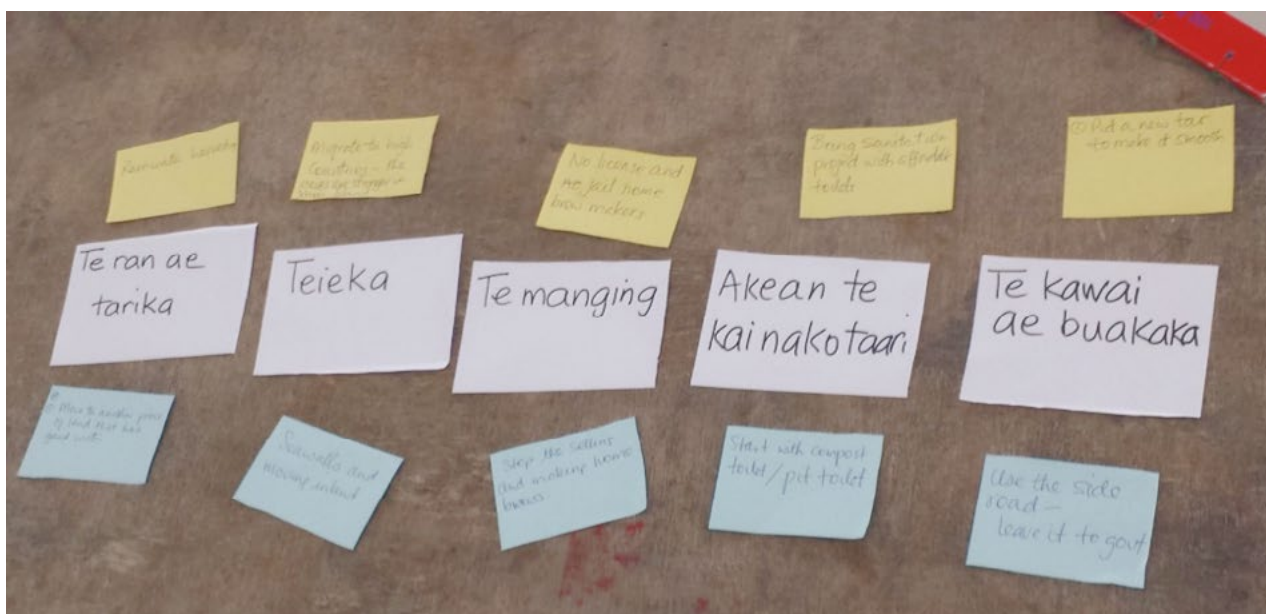


Figure 15: Institutional help in Kiribati

Source: PCCM Kiribati fieldwork

### 4.3 Migration has a positive relationship with both income and household resilience

Although it is problematic to speculate about causality, the Correlation Sensitive Vulnerability Index (CSVI) for households with no movement is greater than the mean, suggesting that these households are more vulnerable than the average. In contrast, households with any type of movement recorded CSVI values below the mean, indicating lower vulnerability, or higher resilience. With reference to Figure 16 (p. 50), among types of movement, households with predominantly international movers had the lowest vulnerability, considerably lower than the CSVI for internal movements. This suggests that the

more resilient households are more able to engage in international migration, or that international migration reduces vulnerability.

With reference to Figure 17 (p. 50), when looking at the length of migration, households with primarily long-term movers have the lowest vulnerability, while households engaged in short-term migration have a similar vulnerability to the mean. This suggests that either the least vulnerable households are the ones that can support long-term migration, or that longer term movements can contribute to reducing vulnerability. This supports the previous finding as movements to another country or seafaring tend to be for longer periods.

Table 10 (p. 51) divides migrating individuals into four groups depending on their household incomes. People in the two

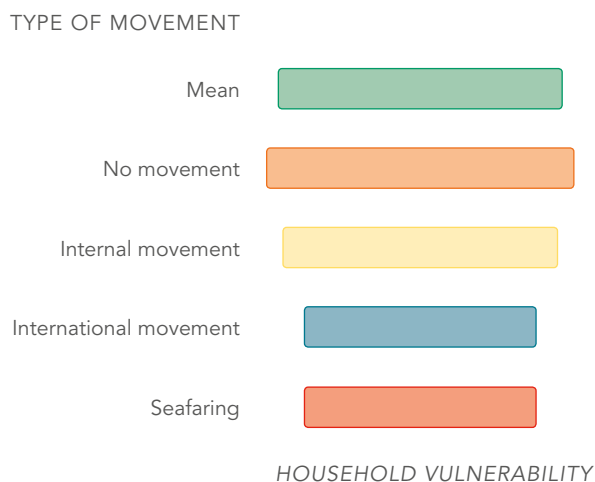


Figure 16: Type of movement and vulnerability

Source: PCCM Kiribati fieldwork

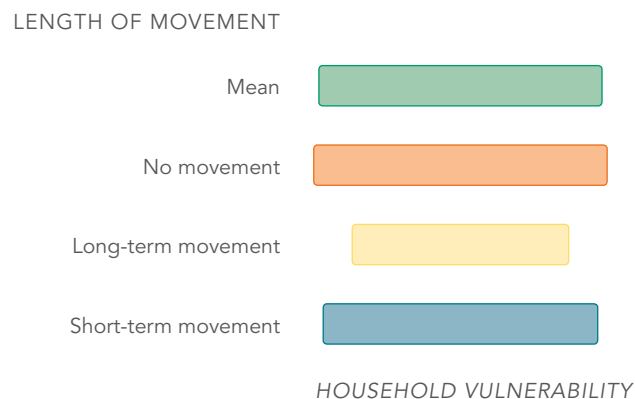


Figure 17: Length of movement and vulnerability

Source: PCCM Kiribati fieldwork

upper quartiles are more likely to migrate than the people in the lower two quartiles. There are also some differences in the reasons for migration. Households in the upper income<sup>3</sup> quartile primarily move for work, which is also the most common reason for migration for households from the lower income quartile. The second most important reason to move is climate change for both quartiles, which suggests there may be a two-tier system of migrants, those who can move under their own terms (or “with dignity”) and those likely to have less control over their migration.

Most households surveyed had taken measures to adapt to climate change in the year before the survey was undertaken (fig. 18, p. 51). The main forms of adaptation undertaken were using resilient building materials, constructing barriers and moving to a safer place on the same island. There was a clear difference in uptake between South Tarawa and the Outer Islands. The Outer Islands are approximately 50 per cent more likely to have taken action. For the Outer Islands, those households which have engaged in migration are slightly more likely to take such measures. It must be pointed out that causality is impossible to ascertain, but it is possible that households in the Outer Islands are more able to adapt if and when they send out migrants; this could be because they are receiving remittances. In South Tarawa, half of the households take measures to adapt to climate change both in households with experience of migration and in households with no experience of migration.

<sup>3</sup> The observations have been divided into four defined income intervals based upon the values of the data and how they compare to the entire set of observations. The first quartile (the lower quartile) is the income value below which lies 25 per cent of the data. The second quartile is the value at which 50 per cent of the income data lies below and above it. The third quartile (the upper quartile) is the income value below which lies 75 per cent of the income data and the top 25 per cent of the data above it.



REASON FOR MIGRATION	LOWER QUARTILE	LOWER MIDDLE QUARTILE	UPPER MIDDLE QUARTILE	UPPER QUARTILE
Education	26%	44%	25%	11%
Work	36%	35%	48%	58%
Medical	12%	5%	11%	8%
Environment	26%	16%	16%	23%
Total	100%	100%	100%	100%
Share of migrants	20%	25%	27%	28%

Table 10: Reason for migration by income quartile

Source: PCCM Kiribati fieldwork

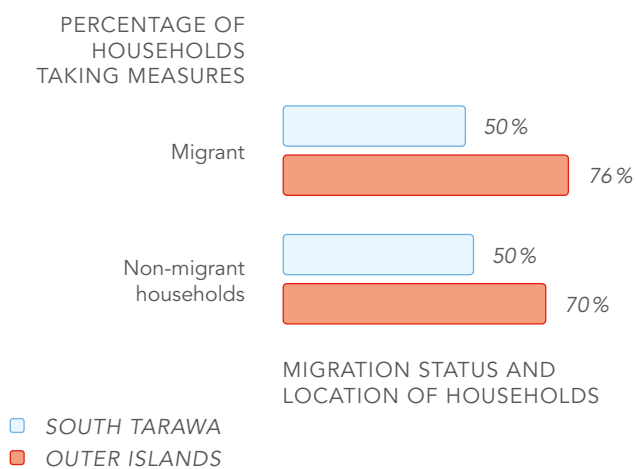


Figure 18: Percentage of households taking measures to adapt to climate change

Source: PCCM Kiribati fieldwork

4.4 There are large differences in the migration experiences of men and women

More men than women engage in migration of every kind. While the proportions of movements within Kiribati are quite similar, considerably fewer women engage in international migration. And more men than women go abroad as seafarers, although women also engage in seafaring (fig. 19, below).

South Tarawa is the main internal destination for both genders, accounting for over half of women’s internal movements and exactly half those of men. Men are much more likely to move to Kiritimati than women (table 11).

DESTINATION	FEMALE	MALE
Abaiang	9%	10%
Kiritimati	3%	11%
South Tarawa	50%	54%
Other internal	38%	25%

Table 11: Internal destinations by gender

Source: PCCM Kiribati fieldwork

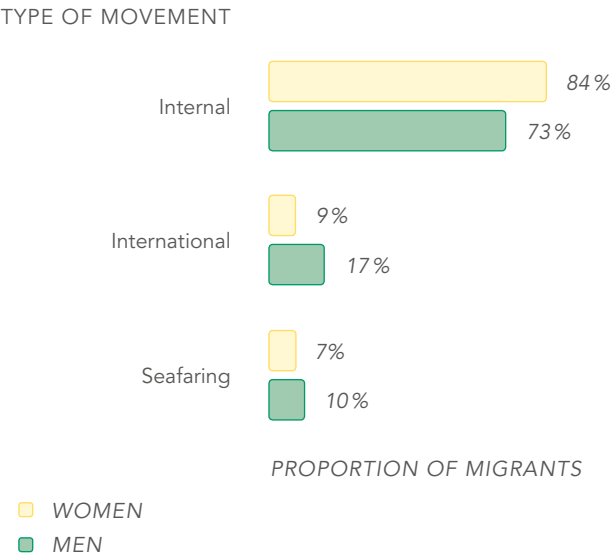


Figure 19: Type of movement by gender

Source: PCCM Kiribati fieldwork

DESTINATION	FEMALE	MALE
Fiji	13%	24%
New Zealand	11%	29%
Australia	21%	0%
Marshall Islands	28%	10%
Other International	27%	37%

Table 12: International destinations by gender

Source: PCCM Kiribati fieldwork

According to the data the main destination for women migrants is Marshall Islands, then Australia and Fiji (table 12, p. 52). Men move primarily to New Zealand and Fiji and there was no recorded case of a man moving to Australia. Men seemingly are more likely to move to other places beyond the main destinations.

The main reason for migration for both sexes is work, although this reason is clearly more important for men than for women. Education appears to be equally important for both sexes. Women move more often for climate change and for medical reasons than men (fig. 20).

The reasons for not being able to migrate differ negligibly by sex. A lack of money is the predominant reason for all (fig. 21, p. 54).

In more than half of all households, men make decisions which affect women. In one-third of households, women make these decisions and in approximately one-tenth of households both sexes make the decisions affecting women (fig. 22, p. 55).

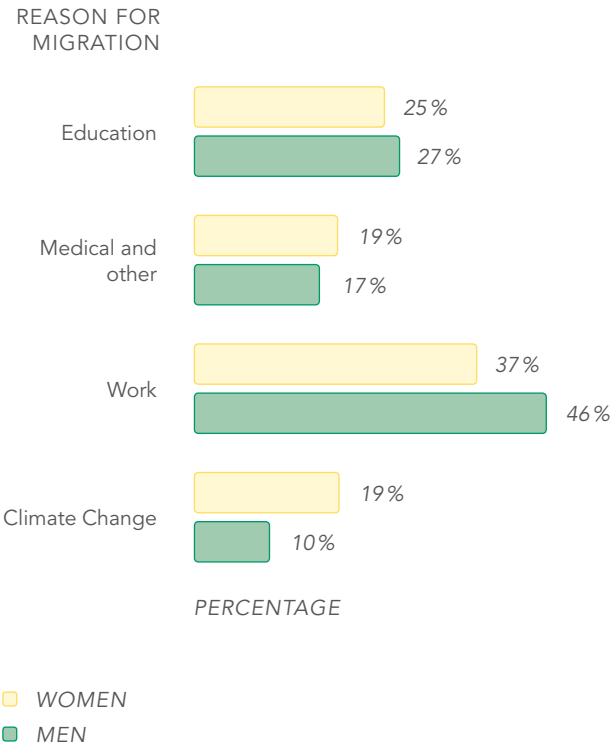
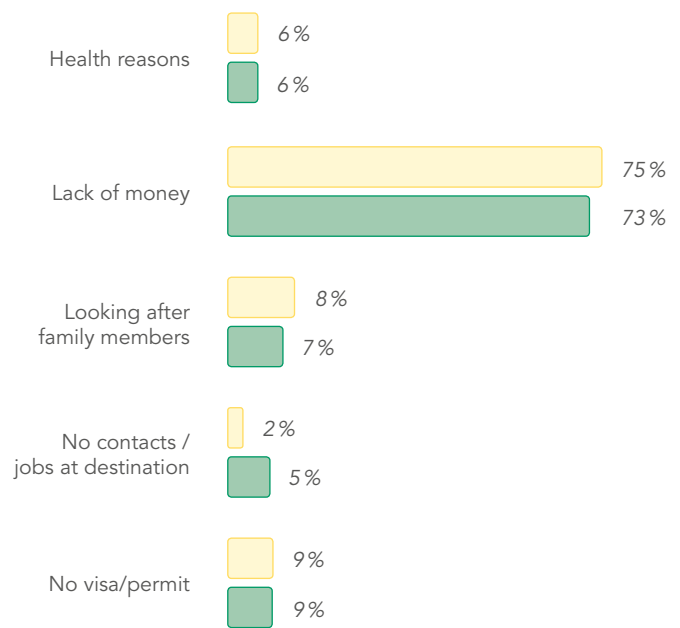


Figure 20: Main reason for migration by gender

Source: PCCM Kiribati fieldwork

## TYPES OF CONSTRAINTS



PERCENTAGE OF POTENTIAL MIGRANTS

WOMEN

MEN

Figure 21: Reason for non-migration by gender

Source: PCCM Kiribati fieldwork



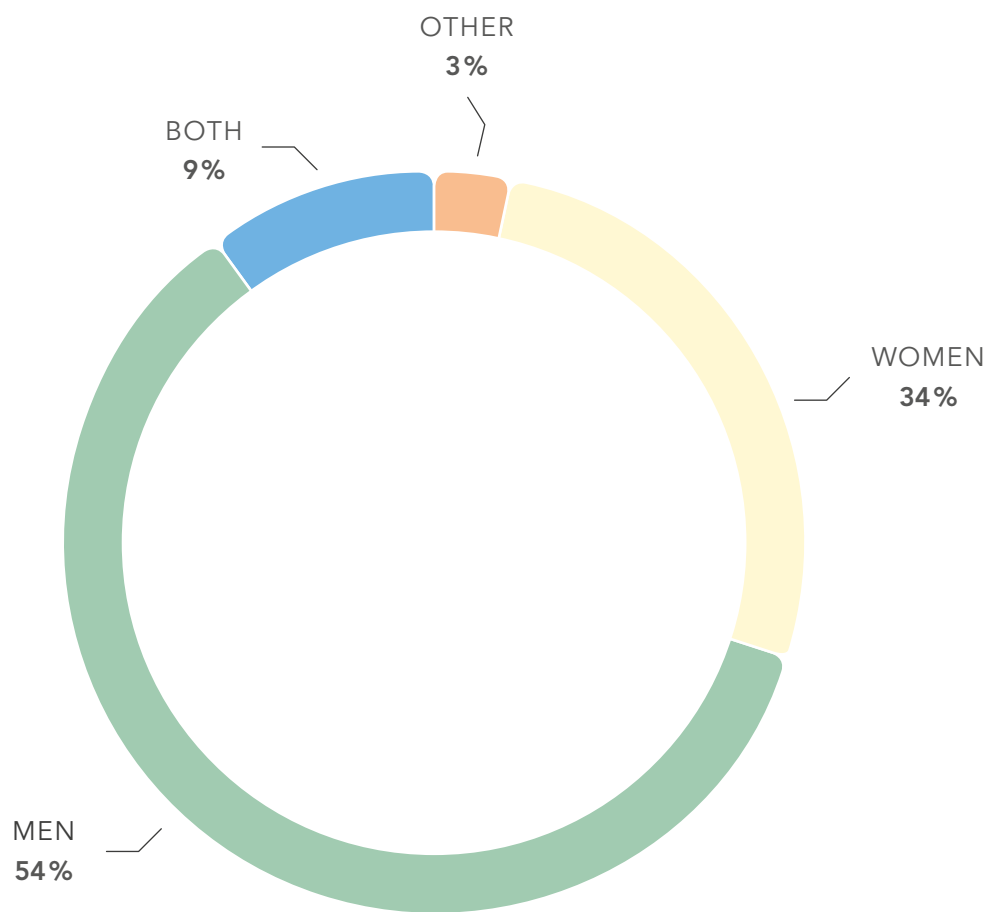
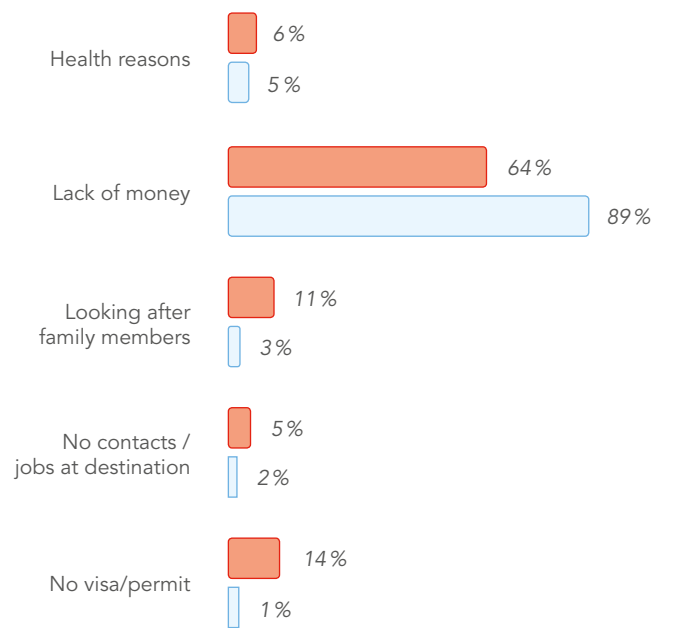


Figure 22: Who makes decisions which affect women in your household

Source: PCCM Kiribati fieldwork

## TYPES OF CONSTRAINTS



PERCENTAGE OF POTENTIAL MIGRANTS

- SOUTH TARAWA
- OUTER ISLANDS

Figure 23: The constraints on migration

Source: PCCM Kiribati fieldwork

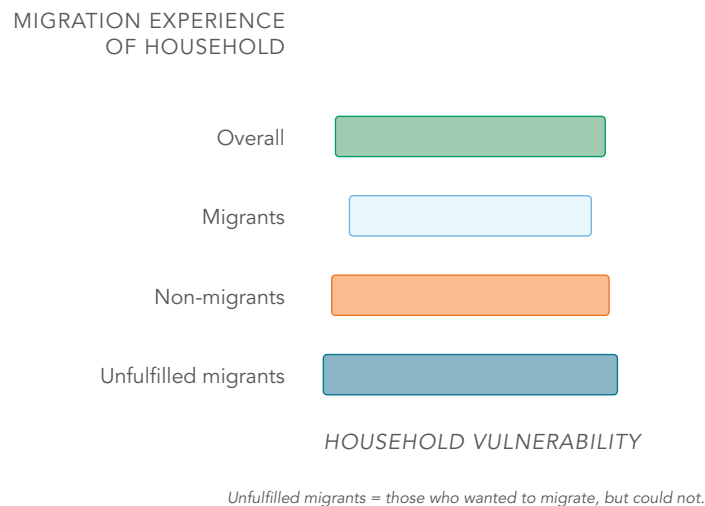


Figure 24: Migration experience and vulnerability

Source: PCCM Kiribati fieldwork

#### 4.5 A large section of the population of Kiribati has been unable to migrate. Migration is most often constrained by a lack of money

Although only 9 per cent of the population of Kiribati migrated in the period 2005-2015, a similar proportion of the population wanted to, but were unable to move. A lack of money is by far the main reason that people who want to move do not (fig. 23, p. 56). On the Outer Islands a shortage of cash represents almost 90 per cent of the reasons for not moving. In South Tarawa, in addition to a lack of money, migration is also constrained by a lack of visas as well as looking after family members.

When comparing household migration experience with household vulnerability, it was found that those households with people who wanted to migrate but could not, have a higher vulnerability than those households which did not migrate, or did not wish to migrate. This indicates that a section of Kiribati society could be considered “trapped” as those most in need of moving were the least able. As shown (fig. 24) migrant households are the least vulnerable of the three types of households.

4.6 Future migration flows are likely to be increasingly motivated by climate change, but large numbers may be unable to benefit from migration

There are a range of future socio-economic conditions which could encourage future migration (fig. 25, below). Achieving tertiary education is the most important factor in determining households’ decision to migrate, followed by overcrowding of their island and others favouring migration.

There are also a range of environmental conditions which would encourage migration for Kiribati households (fig. 26,

p.59). Sea level rise, saltwater intrusion, more difficulties growing crops and more serious floods would each trigger over 70 per cent of households to send out a member of the household.

Despite this apparent desire to migrate in the future, three-quarters of households do not believe that they possess the financial requirements or the permits needed to undertake migration (fig. 27, p. 60). On the other hand, almost 70 per cent of households believe that a member of the household possesses a sufficient level of income to enable migration.

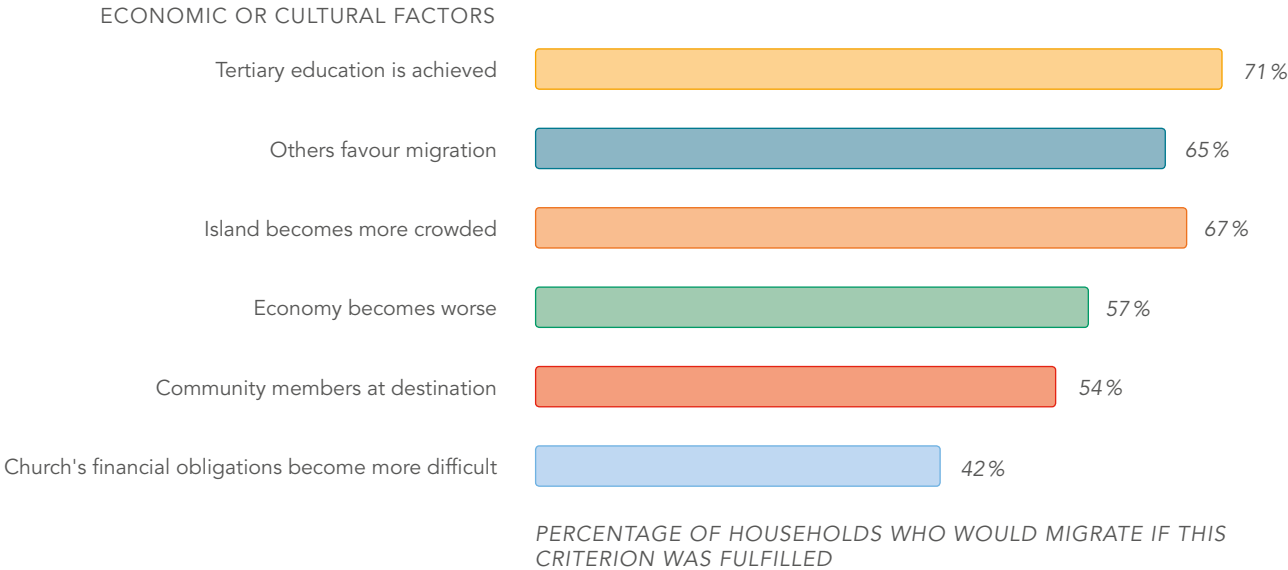


Figure 25: Perceived impact of economic and cultural factors on future migration

Source: PCCM Kiribati fieldwork

## CIRTERIA TO BE FULILLED FOR MIGRATION

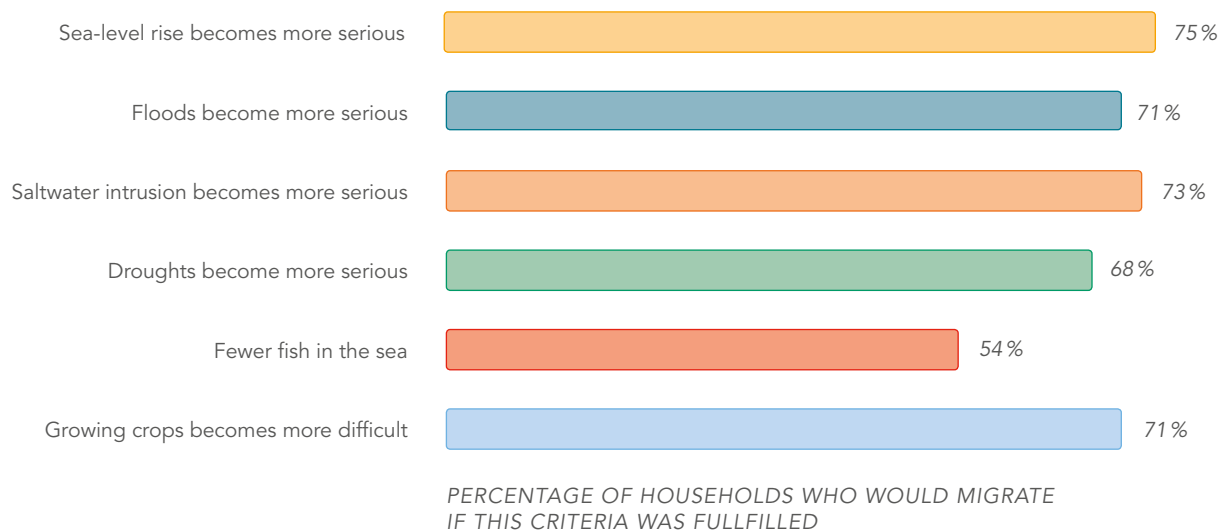
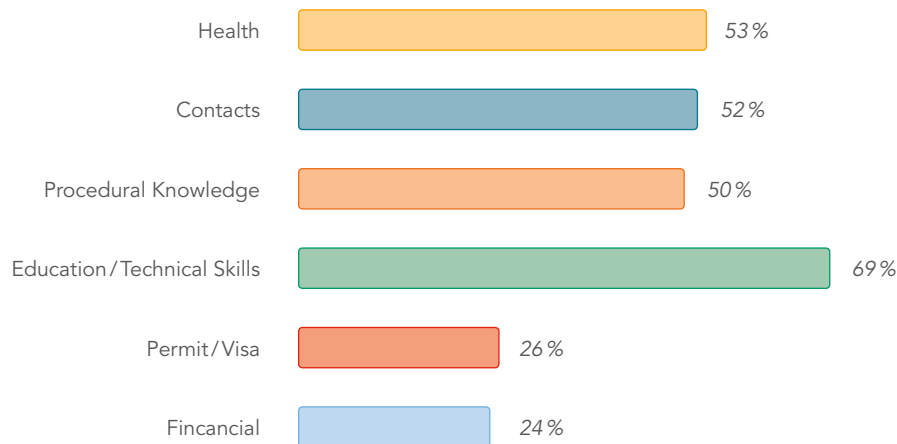


Figure 26: Perceived impact of climate change manifestations on future migration

Source: PCCM Kiribati fieldwork



## CRITERIA FOR PERCEIVED ABILITY TO MIGRATE



## PERCENTAGE OF HOUSEHOLDS WITH THE MEANS TO MIGRATE

Figure 27: Perceived ability to migrate in the future

Source: PCCM Kiribati fieldwork

This supports the contention that potential migrants will continue to be frustrated in their attempt to move.

Another perspective on future migration was provided by the Q study. Seventeen of the 24 participants were statistically associated with exactly one of three composite attitudes. The remaining seven participants are statistically associated with two or more of the attitudes and as a result are excluded from the main analysis. Each of the three attitudes recognises the impact on climate change and expects that it will encourage further migration which would present a challenge to I-Kiribati culture. The box (p. 61) summarizes the attitudes on climate change and migration expressed by the participants. Any quotes given are the exact words of the participants who make up the composite attitudes.

### Attitude 1 God will decide our fate

**This was the most popular of the three shared attitudes in Kiribati as it reflects the beliefs of nine participants, six of whom were from North Tarawa. The defining aspect of this attitude is the importance given to the role of God in Kiribati's future.**

This shared attitude reflects the importance of religion in Kiribati and in particular its relevance when understanding environmental threats. As one interviewee put it, it is ultimately God who decides if we live or die "because God rules the world and whatever he wants we should appreciate." However, there is also a feeling that "God promised us there will be no flood, it is in the Bible." There is recognition that climate change is already having a negative impact on the islands of Kiribati. The group believes that the effect on the environment is significant and rising temperatures are already impacting the marine ecosystems, although as yet there has been little impact on crops or catches. They believe that it is possible to adapt to the new environment or economic situation, with one confident that "if there is no food at the market then still we can eat traditional food." However, migration is viewed as problematic, as the land "makes us known...is our identity and also our culture".

### Attitude 2 Climate change is real; we will have to leave

**Five participants shared the attitude that climate change is caused by developed countries and is already having a significant impact on the environment of Kiribati, and as a result it is likely the population will have to leave. All of the participants' households had experienced a migration in the preceding 10 years.**

This attitude seems to be pessimistic, angry and frustrated about the future of Kiribati under a changing climate as the statement they rated the most highly was "the angry sea will kill us all" (a line from a famous protest song). Climate change is seen as definitely occurring; king tides are already flooding crops, damaging trees and polluting the water supply and unseasonal storms are perceived as becoming more frequent. In contrast to the other attitudes, they are not confident that they can survive through traditional methods of gathering and fishing if it is not possible to buy food. The I-Kiribati who hold this attitude do not understand climate change and its impacts through religion. For them it is the result of people's behavior. Although this group do not view migration or relocation favourably, they think that due to climate change it might be necessary. If mass migration takes place this group does not think that I-Kiribati culture will be disappear, they think it is strong enough to survive.

### Attitude 3 Climate change is a threat to our islands, population and culture

**The three participants who share this attitude believe that climate change is a very real threat and will likely result in large scale migration. As one interview explained, "if a place is covered with fire, we should leave it." They also think migration might have a significant effect on overpopulation and a negative impact on I-Kiribati culture. Only one of the households had experienced a migration in the preceding 10 years.**

Holders of this attitude think that the environment has worsened over the last 30-40 years as king tides and storms are occurring more frequently and "sea level rise turns our well water brackish". This group do not see God as responsible for climate change or that God will decide Kiribati's fate. Despite their relatively low income, those who share this attitude do not feel constrained by their ability to migrate. Whilst some think that migration could help overcome the problem of overcrowding in Kiribati, others think that overcrowding could worsen in some areas. They are reluctant to leave their country but believe "if that time comes then I will find other country to live in." In contrast to the second attitude, they are pessimistic about what migration will mean for the I-Kiribati and are worried that the I-Kiribati will be scattered to the detriment of their culture.

#### 4.7 Modelling of future migration shows similar patterns to the present, but with increased flows of movements. By the middle of the century, this could mean the population of South Tarawa reaches 86,510, representing an increase of 72 per cent from the 2010 census

This section presents the results from the Kiribati Climate Change Migration Model (KCCMM), designed to simulate migratory flows around and from Kiribati in the years 2015-2055. Further details on the design of the model are contained in the annex published at <https://collections.unu.edu/view/UNU:5856>. As shown above, I-Kiribati migrate for a range of different reasons; work, education, health and climate change. In the model the migration rates for each reason is determined by the flows observed in the household survey. The model is based on the assumption that the rates for work, education and health remain constant, while the number of movements motivated by climate will increase as the climate changes over time, impacting households and livelihoods. These impacts are modelled by using projected rises in CO<sup>2</sup> concentrations as a proxy for the impact of climate change using the Representative Concentration Pathways (RCP) which are used in the IPCC 5<sup>th</sup> Assessment and frequently used for future projections. As there is little difference in the CO<sup>2</sup> concentration up to the middle of the century for RCP 4.6 and 6, it was decided to not include RCP 4.6. Model runs were also recorded for no climate change, in order to show the effect that climate has on the model.

Each month every person in the model can either stay or migrate according to the observed probabilities from the

household survey or die according to life tables. The probabilities for migration for work, education and health vary according to age, and therefore change for an individual over time. Each month the desire to migrate due to climate change is related to CO<sup>2</sup> concentration as agents are deemed to be impacted by climate change if a random number is generated which is lower than the current CO<sup>2</sup> concentration. Therefore, the probability increases as time progresses.

As table 13 shows, the model generates increased flows of migrants as time progresses. It shows a fairly large gap in the number of total movements between the different scenarios. In all four projections, the number of international and seafaring movements is quite similar, suggesting that increases in these types of migration are unrelated to climate change, and limited by other factors. In contrast the number of internal movements is drastically affected by climate change. For RCP 6, a medium climate change scenario, there is a 140 per cent increase in migration for the period 2045-2055 compared to 2005-2015. It can be seen that this increase is largely due to an almost threefold increase in internal movement. In contrast, international movement only increases by 39 per cent and seafaring by 44 per cent.

By the middle of the century, this could mean the population of South Tarawa reaches 86,510, representing an increase of 72 per cent from the 2010 census.

The total population of Kiribati is projected to increase under each of the scenarios due to a natural increase. Fertility and death rates are constant across the models; therefore it is migration flows which cause the differences in populations across the four scenarios. In each climate change projection, the population of Kiribati increases by approximately the same amount. The difference is in the way the population is divided among the islands, with higher climate change impacts resulting in higher concentration of population on South Tarawa.

AVERAGE ANNUAL MOVEMENTS <sup>4</sup>		NO CLIMATE CHANGE	LOW CC IMPACT (RCP 2.6)	MEDIUM CC IMPACT (RCP 6)	HIGH CC IMPACT (RCP 8.5)
	2005-2015	2045-2055	2045-2055	2045-2055	2045-2055
<b>Total</b>	734	1,189 (+62%)	1,695 (+131%)	1,973 (+169%)	3,095 (+322%)
<b>International</b>	113	191 (+69%)	174 (+54%)	181 (+60%)	180 (+59%)
<b>Internal</b>	496	816 (+65%)	1,380 (+178%)	1,615 (+226%)	2,724 (+449%)
<b>Seafaring</b>	125	182 (+46%)	141 (+13%)	177 (+42%)	191 (+53%)

Table 13: Projected average movements per year by decade

Source: Kiribati Climate Change Migration Model

	2010 CENSUS	NO CLIMATE CHANGE	LOW CC IMPACT (RCP 2.6)	MEDIUM CC IMPACT (RCP 6)	HIGH CC IMPACT (RCP 8.5)
<b>Kiribati</b>	<b>103,058</b>	<b>175,360 (+70%)</b>	<b>176,670 (+71%)</b>	<b>175,560 (+70%)</b>	<b>175,540 (+70%)</b>
<b>South Tarawa</b>	50,182	81,590 (+63%)	84,790 (+69%)	86,510 (+72%)	91,180 (+82%)
<b>Kiritimati</b>	5,586	9,640 (+73%)	8,950 (+60%)	9,520 (+70%)	9,930 (+78%)

Table 14: Total population of Kiribati in 2055 under different climate change scenarios

Source: Kiribati Climate Change Migration Model

<sup>4</sup> The movement generated by the model is different from the observed amount of movements in the household survey, as in the model only movements with definite starting points and destinations were included. As such, the model underestimates the total number of projected movements.

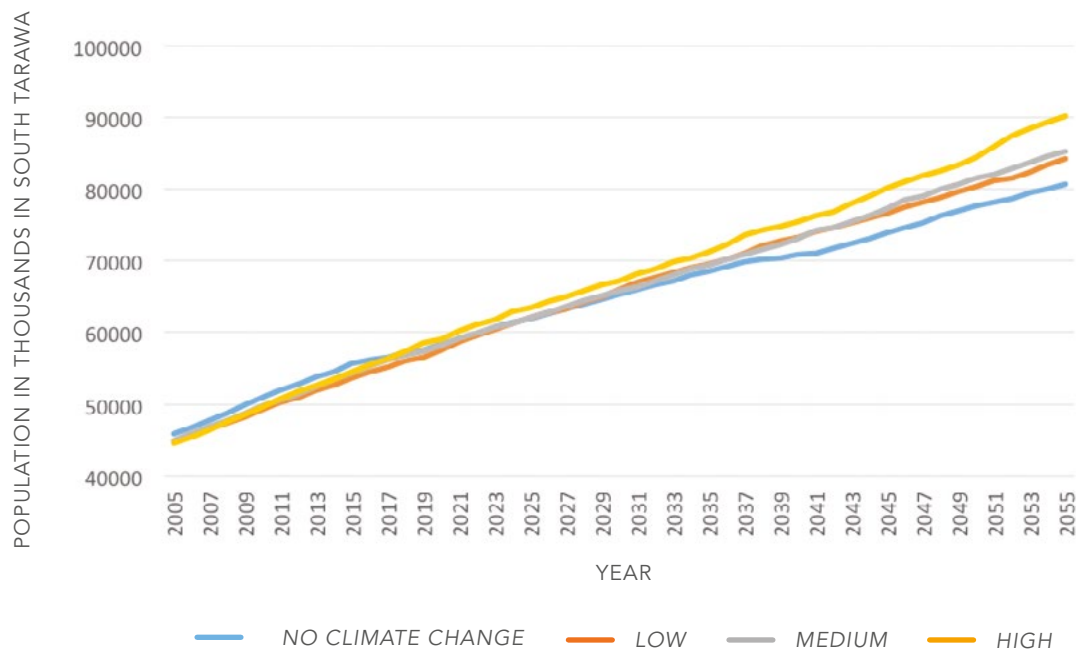


Figure 28: Projected population of South Tarawa under different climate change scenarios

Source: Kiribati Climate Change Migration Model

For RCP 6, compared to the 2010 census, the population of Kiribati rises by approximately 70 per cent, and is more concentrated than South Tarawa, as its population increases by 72 per cent. The corresponding figure for Kiritimati is 70 per cent. The populations of South Tarawa and Kiritimati are projected to increase as climate change leads to a concentration of population in these islands.

As Figure 28 (above) shows, by 2055 the population of South Tarawa could vary significantly under different climate change projections. The high climate change projection results in a much higher population than the other scenarios, which are rather similar until 2035, after which they diverge.













## 5. Policy Implications and Recommendations

- 1. Environmental change is already impacting the vast majority of Kiribati households. Migration is an option, but in tandem with disaster risk reduction and climate change adaptation.**

Kiribati is exposed to a variety of natural hazards, with almost every household impacted over the preceding 10 years. Over the same period of time, almost a quarter of all observed movements were attributed to the environment. Migration is generally viewed as undesirable as enshrined by the Niue Declaration (2008) which stated “the desire of the Pacific peoples to continue to live in their own countries, where possible”. The I-Kiribati have a strong sense of attachment to place, but environmental pressures are already leading to migration and under climate change it is likely that differing forms of human mobility will become increasingly necessary.

To that end, sustainable development is vital for Kiribati, including the implementation of the Sustainable Development Goals (SDGs) through the Samoa Pathway (2014), which provides a framework for turning the SDGs into action. This will facilitate increased resilience. Kiribati should integrate these frameworks into their national development and adaptation plans. It is essential that policy and planning considers future environmental impacts, and avoids intensifying the projected physical impacts of climate change.

## **2. Forms of human mobility which reduce household vulnerability should be facilitated.**

There are clear links between migration and reduced household vulnerability. Although causality is difficult to attribute, it is likely that households benefit from sending out a migrant and international movements are more beneficial than internal movements. Migration can bring diversification of income and livelihoods and reduce the strain on households. Through remittances households are also able to improve physical infrastructure, thereby increasing their resilience.

There are a variety of views on migration and climate change within Kiribati. All perspectives should be recognized. The Q study showed that there are a range of valid perspectives on climate change and migration which exist in Kiribati. One of the more striking results from the Q study is the possible impact of migration on identity and culture, a theme which has been discussed in further detail in a recent study (Farbotko, Stratford and Lazrus, 2015). It is doubtful that a policy designed to facilitate migration will maximize its utility unless this range of views is recognized and validated.

## **3. Migration to South Tarawa combined with population growth is unsustainable. Action is necessary.**

The vast majority of movements are to the capital South Tarawa, which places additional strains on a delicate ecosystem and overcrowded environment. The environment is already degraded as almost one-third of movements from the capital are triggered by the environment.

As the impacts of climate change become more severe, the carrying capacity of South Tarawa will reduce as fresh water becomes less available and floods more frequent. This will occur at the same time as I-Kiribati seek the developmental benefits of urbanization, such as work and access to education and other services. Measures need to be taken to mitigate

against this intensification of existing environmental issues. Increased resilience, and temporary migration from the outer islands could reduce the necessity of leaving outer islands for South Tarawa. At the same time further investment is necessary in the capital to include disaster risk reduction and climate change adaptation.

## **4. Kiritimati is a viable internal destination but such movements present risks to existing communities which must be mitigated. Likewise, international relocation will have to be approached thoughtfully.**

The findings on Kiritimati support government policy to encourage migration there. It is a viable destination for migrants, as the environment is comparatively more secure than other islands and relatively abundant in land and fish. Only half of households have been affected by sea level rise in Kiritimati, compared to 85 per cent on South Tarawa and 80 per cent on the outer islands. Nonetheless, the distance from South Tarawa and other islands presents a natural and financial barrier to migration.

Kiritimati is the largest land area in Kiribati and the largest coral atoll in the world. It has a diverse and healthy marine ecosystem and potentially better access to markets in Fiji and Hawaii than Tarawa. For this reason, Kiritimati is viewed as having great potential for economic growth for tourism and fisheries. Climate change may even have a beneficial effect on fisheries, as the projected shift in migration patterns of skipjack tuna could be profitable for boats operating around the island. The Kiritimati Integrated Fisheries Master Plan (KIFMP) seeks to develop the fishing industry and includes plans to use European Union funds to improve the infrastructure by constructing a jetty and increasing the number of flights serving the island (Ministry of Fisheries, 2014). However, the plan also mentions the need for resource management to maintain the islands natural resources, especially in light of the fact that the population of the island has increased over the

last 10 years, leading to squatter settlements and illegal fishing activities. This shows that it will be important to balance social and economic development with the environment – the resource that the development depends on.

Moreover, integration with the existing community could prove difficult as there are already underlying tensions, as the PRA exercise on Kiritimati showed. However, it can be achieved when there is buy-in from all parties; this can only come about through consultation and genuine participation at all stages of the process (Nansen Consultation, 2013). One of the main obstacles to overcome is land ownership. In the case of Vanuatu, the government has the power to force the sale of customary held land (Nansen consultation, 2013).

The government of Kiribati has agreed the purchase of Vanua Levu from Fiji with a view to acquire land for settlement and for food security. However, this raises further questions about whether households will be able to adapt to a different island, with a distinct form of agriculture and culture. Additionally, how many I-Kiribati can the island maintain, what employment options will be available and how would people feel about this move? The fieldwork confirmed that many I-Kiribati will be reluctant to leave their country, and that Fiji is not the most popular potential destination for migration overseas.

#### **5. Policy support will be needed to facilitate international migration with dignity.**

Without further support, there is a risk of international migrants becoming economically, politically, socially and culturally marginalized. This could lead to them having little voice in the host community, contributing to a lack of well-being and dignity. The vision of former President Tong, coined “Migration with Dignity” is a term which has spread to be included in other countries policies and international frameworks. It recognizes the need to help enable people to have the education, skills and means to migrate.

The current vision is based around developing networks with the diaspora and training I-Kiribati. However, it is questionable whether the more vulnerable people, without contacts overseas or education will be in a position to benefit from this support from the government. The success of I-Kiribati migrants in the international labour market is partially determined by their level of education. The government has the ambitious target of improving the level of education on Kiribati to the level of Australia and New Zealand. The Pacific Qualification Framework and Regional Education Framework are attempts to standardise education and improve graduates prospects internationally. In addition, migrants would benefit from cultural awareness training (Nansen Consultation). Teacher recruitment seems to be preventing this at present, with PRA sessions revealing a deficit of trained teachers. Through the further development of the Marine Training Centre the number of seafaring opportunities can be maximized.

#### **6. I-Kiribati who are unable to migrate would benefit from assistance or they may be “trapped”.**

In the 10 years leading up to the household survey, 9 per cent of the population wanted to migrate, but could not. Most of these people were frustrated by a lack of money to migrate, while others were constrained by a lack of sufficient permits for international movements. This represents approximately the same proportion of people that migrated in this time, suggesting that only half of all desired movements are realized. Women are less likely to move internationally than men, this could be because decisions which affect women are often made by the men of the household. Some of this population could be termed “trapped”; unable to move from a degrading environment that erodes their coping capacity. As migration is a potential livelihood risk mitigation strategy by the government, it is clear that assistance could facilitate future flows. For



this further research is needed on the (primarily financial) barriers to migration.

Any policies to promote additional movements would have to be carefully managed, as existing migration patterns suggest that the overcrowding of South Tarawa would continue. The possibility of further migration to Kiritimati could be explored and overseas migration could potentially relieve some of this pressure.

## **7. Further regional integration could help Kiribati both to adapt and facilitate mobility.**

Existing bonds between Pacific Island states are strong and have the potential to act as a support mechanism for Kiribati. The Samoa Pathway (2014) sets out the importance of maintaining and developing partnerships at all levels. Countries in the region have previously been able to support each other in times of crises as evidenced by the informal agreement between Samoa and the Cook Islands (Nansen Consultation, 2013). As Australia and New Zealand have low population densities, a history of Pacific migration and strong economies, they would potentially be able to absorb large numbers of I-Kiribati. An extension to existing labour migration schemes which presently only accept small numbers of I-Kiribati, would lead to increased opportunities for voluntary migration. Furthermore, new agreements with other countries in the Pacific region would present I-Kiribati with more options. Seafaring provides excellent opportunities for remittance and boosting household resilience in general, however there are limits to the number of jobs seafaring can provide as it is determined by demand driven by the global economy.

## **8. The Paris Agreement was not totally satisfactory for Kiribati. Nonetheless it presents opportunities for the country.**

Migration with dignity or other climate adaptation plans should not lessen the necessity of climate change mitigation, both

within Kiribati and globally. As Minister of Environment, Lands and Agriculture Development, Tiarite George Kwong, stated in his 2014 speech at the 1<sup>st</sup> UNEA meeting: “Adaptation is important to us as it provides us with some short-term solutions to cope but in the long-term we need us all to commit to cutting emissions” (UNEA, 2014). The agreement reached at the 2015 Paris Climate Conference (COP 21) is to limit global warming to 2°C above pre-industrial levels, and to strive for 1.5°C. This means that Pacific Island States such as Kiribati will likely be unable to avoid severe impacts of climate change in the 21<sup>st</sup> century.

The text of the agreement made no provision for granting affected people the title of climate refugee, such a status would facilitate international migration for displaced I-Kiribati. However, the COP 21 agreement called for the establishment of a task force under the executive committee of the Warsaw International Mechanism for Loss and Damage (WIM) “to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change” (UNFCCC, 2015). Recently Pacific leaders have called on the United Nations to appoint a Special Representative on Climate and Security which would facilitate this undertaking.

Other elements of the agreement are more positive for Kiribati. For the first time, adaptation has been put on equal footing to mitigation, with the promise of USD100bn per year in transfers from rich countries to be disbursed through the Global Environment Fund (GEF), Adaptation Fund and Green Climate Fund (GCF). It is essential Kiribati is able to access these funds. Moreover, the concept of Loss and Damage has been included for the first time, recognizing the economic and non-economic costs of climate impacts. The challenge now is to determine how Kiribati and the international community can support those exposed to the increasing impacts of climate change to migrate with dignity.











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