

Kiribati: a nation at the very front of the climate change frontline

The Republic of Kiribati is an island nation in the central Pacific made of 32 low-lying coral atolls and 1 raised limestone island. The islands are stretched across an ocean of 2 million square miles. The average height of the islands is about 2m above sea level and they are generally long, narrow and horse-shoe shaped. Total land area is 500 sq miles with poor coral soils. The population is about 103,000. Children under 18 comprise about 40% with over half the population under 25 yrs.



The islands of Kiribati are thus small, remote and isolated, home to a small but often over-crowded population with few of the kinds of resources needed to prevent or help recover from the impacts of climate change.

Kiribati's changing climate

The Pacific Climate Change Science Program has been collaborating with the Kiribati Meteorology Service to research the current and future climate of Kiribati. It has found that:

- since 1950 maximum temperatures have increased at the rate of 0.18°C per decade;
- since 1993, the sea level has risen between 1 and 4 mm per year;
- since the 18th century, Kiribati's waters have slowly become more acidified.

It predicts:

- Air and sea surface temperatures will continue to rise. There will be a large increase in the number of very hot days and warmer nights.
- An increase in rainfall over the region with more intense storms and heavier rainfalls.
- By 2055 sea level will rise by 9 - 25 cm under a low emissions scenario, by 10-29 cm under a high emissions scenario. (This does not take into account what will happen if there is melting of ice sheets on Antarctica and Greenland.)



Threats to water and food

Salinated water well

Long before the islands are covered by rising seas they will be uninhabitable because of lack of fresh water. The fresh water lenses underneath the islands become salty during droughts and during storm surges when salt water underlying the lens heaves upwards mixing and churning with the fresh water. During storms and king tides salt water also surges over the narrow landscape and seeps down into the water lenses.

Coconuts, breadfruit and pandanus trees will continue to decline because of loss of land due to inundation and erosion. Te babai (giant taro) pits suffer from saltwater intrusion as a result of storm surges. *Clear ground on right was a babai pit on the island of Abaiang –it was destroyed by salt water intrusion.*

Degradation of coastal ecosystems is causing a decline in the usually, easy to access, shell fish and crustaceans. The key food resource in Kiribati is fish. Fish stocks, also represent a huge renewable resource and, properly managed, could



provide a path towards development. But these are threatened not only by increasing acidification and warming of the seas but also by over-fishing and illegal fishing by international fishing boats.

It's not just climate change

Kiribati's future is not just threatened by climate change. Unsustainable and often short term aid and development strategies, often designed by overseas consultants, have led to fragile environments becoming even more fragile e.g. poor design and lack of maintenance of solid waste containment structures. With such a small population to call on, local people often lack some of the specific capacity and skills needed for adaptation e.g. plumbing skills for installing and maintaining rain water tanks. It is often hard to get sufficient information together to plan effectively to reduce risks. As in many other Pacific Island nations, there is a tendency for people to move from outer islands to the urban centre on the main island with consequent severe overcrowding and stress on infrastructure.

Thus climate change, combined with development pressures, has multiple effects: coastal erosion, salination and leaching of soils, contamination of water lenses, dying trees, disappearing roads, declining fish stocks, food insecurity, inadequate sanitation and health threats. Kiribati now has the highest infant mortality rate in the Pacific: 37.68 per 1000 live births. There is a huge need for improved education, particularly about how best to protect coastal shores from erosion by bigger storms and higher king tides. This education needs to respect traditional knowledge, integrating indigenous ecological knowledge and practice with newer scientific strategies. And lurking always behind all of this is the knowledge that I-Kiribati may face the sad prospect of forced migration to other countries by 2050. Citizens of Kiribati are proud of their national identity and their cultural heritage. They fear losing it if they are forced to leave their own place.

Shaping the Future

According to a report by OXFAM, the complexity of certain funding applications works against low capacity countries. It says that Climate Change strategies need to target 5 core areas:

1. Direct budget support to enable capacity building,
2. Partnership and coordination with a mainstreaming of policy and approaches,
3. Better information and communication with inclusive, culturally appropriate processes,
4. A culture of learning that enhances and encourages innovation ,
5. Direct access to climate finance and a 2-way strengthening of the accountability of donors to communities & receiving governments to donors.

Like people everywhere, local people have been slow to accept that climate change is happening. According to Claire Anterea, a Kiribati local and a member of the Pacific Calling Partnership, though many do not understand climate change they do understand the changes they are experiencing. Over the last few years more and more locals have come to see that the changes they are witnessing are evidence of a changing climate, and so a society that traditionally has placed celebrating the present at the core of its culture, is now grappling with unprecedented fears and questions about the future for their children and grandchildren.

References

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The Pacific Calling Partnership provides opportunities for Pacific Island climate change advocates to tell their stories in Australia and internationally.