REPORTE 1/2018: PROYECTO INVESTIGACIÓN

31 JULIO DE 2018

SOCIOECONOMIC VULNERABILITY IN MARGINAL ISLANDS

Programa Vulnerabilidad Riesgo Climatico FCE-UBA

Editor Responsable: Esteban Otto Thomasz, Universidad de Buenos Aires, Facultad de Ciencias Económicas.
Av. Córdoba 2122 - 2° piso (C1120AAQ). Ciudad Autónoma de Buenos Aires

Executive summary

- The small island states, especially those in the southern hemisphere, are possibly the most affected by the effects of climate change.
- This scenario implies the need to consider mechanisms and rights of relocation, within a context where international diplomacy has not yet responded.
- These groups are the least responsible for the causes of climate change, but paradoxically, they are the most affected.
- The extreme effect of this scenario goes from the destruction of its means of life to the loss of its sovereign rights.
- How to change the agenda of adaptation" towards an agenda of damage and compensation" to the "climate refugees".

ESTEBAN OTTO THOMASZ

VALERIA VIDAL ALVARADO

FACULTAD DE CIENCIAS ECONOMICAS

UNIVERSIDAD DE BUENOS AIRES

Socioeconomic vulnerability in marginal islands
¿Mitigation, adaptation or "damage and compensation"?

The small island states, especially those in the southern hemisphere, are possibly the most affected by the effects of climate change. The rise in sea level, the acidification of the oceans, the greater frequency and intensity of the hurricane winds are causing serious damage in the present (negative impact on agriculture, salinization of drinking water, erosion of coastal fronts, etc.) and can jeopardize the survival of vulnerable groups in the future. In particular, small islands of the Pacific, such as the island of Tuvalu, can directly face a horizon of physical and legal disappearance as a state due to the effects of sea level rise.

Otto Thomasz and Valeria Vidal with Aunese Simati (Tuvalu Ambassador to the United Nations)

This scenario implies the need to consider mechanisms and rights of relocation (resettlement) of the population, within a context where international diplomacy has not yet responded. There are still no legal figures or financing instruments that plan migrations within socially acceptable standards due to climate issues.

Socially acceptable standards involve providing conditions for cultural and labor reintegration in the host country in the context of extreme situations of communities at risk of losing their habitat, their culture, their identity and their territoriality. However, official compensation to the state or its inhabitants continues to be discussed among international organizations as a taboo.

It is worth noting that in general, populations of such islands have unique cultural characteristics and have survived outside the global economic system under subsistence economies, many of which are based on non - monetary systems. However, these groups are the least responsible for the causes of climate change, but paradoxically, they are the most affected. The extreme effect of this scenario goes from the destruction of its means of life to the loss of its sovereign rights. This scenario implies and urges us to discuss the moral dilemma of who should take responsibility and the costs of such problem. It is necessary to change the agenda of "adaptation" towards an agenda of "damage and compensation" to the "climate refugees". This climate exile can go so far as to discuss the sovereign rights of communities that have lost their habitat in an international context where sovereignty is closely linked with territoriality.

1. Study of vulnerability of climate change in Small Islands

This problem at hand formed part of the project "Study of vulnerability of climate change in Small Islands" funded by the Massachusetts Institute of Technology and conducted by Valeria Vidal and Esteban Alvarado Otto Thomasz. This work is currently being continued by the Climate Risk Program of the Economics Department in the University of Buenos Aires.

Otto Thomasz and Valeria Vidal with Craig Hawke (United Nations, NY)

In the framework of different interviews with specialists from MIT, Harvard University, Columbia University, United Nations, Climate Analytics, Industrial Economics Inc., The World Bank, as well as ambassadors and representatives of the islands, the following questions were raised:

- **Is there any kind of infrastructure or technology that allows the long term adaptation of small islands of the South Pacific given the alarming predictions of sea level rise?**
- **What have we learned about the infrastructure of adaptation in the small islands? Have they been successful?**
- **If one were to proceed with a mass migration strategy: how do we assess the potential damage of sea level rise versus the problems of resettlement (legal, cultural, economic insertion, etc.)?**
- **What should be the conditions and the legal framework for a relocation (resettlement) process and who is morally responsible for assuming the costs?**
- **In the case of the disappearance of small islands, what would happen with their sovereign rights and their exclusive economic zones?**

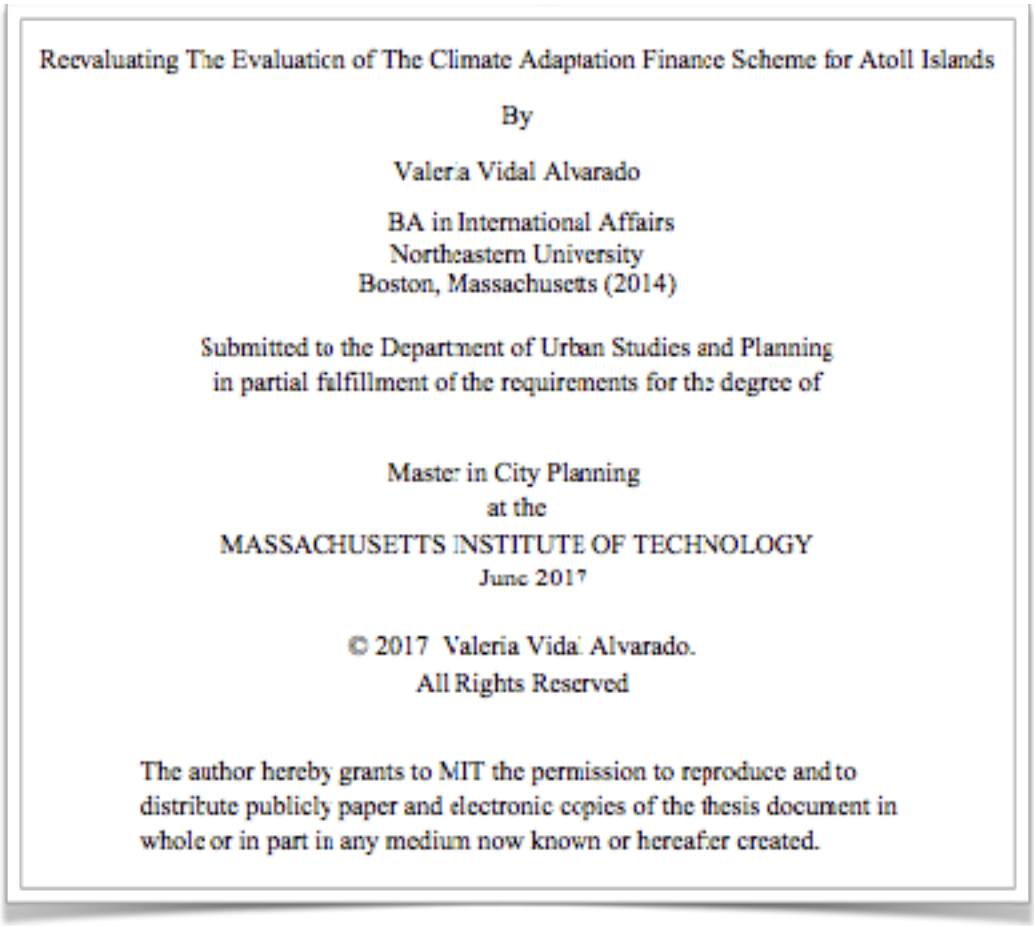
Otto Thomasz and Valeria Vidal with Laetitia De Marez (Climate Analytics, NY)

The premise of such extreme case, like Tuvalu, may shed light on similar situations in the southern hemisphere (potentially leading to promoting cooperation agreements) but also within the countries facing similar problems, especially marginalized populations housed in flood - prone areas such as the northeast, the coast, the delta and informal settlements of the basin, in the case of Argentina. Evacuations, migration and resettlement of communities are a current issue that must be addressed within the framework of maintaining the human rights and opportunities of the affected population.

PROJECT FUNDED BY THE SPECIAL PROGRAM FOR URBAN AND REGIONAL STUDIES (SPURS), Massachusetts Institute of Technology (MIT), SPRING 2017

2. MIT Master in City Planning Thesis: "Reevaluating The Evaluation of The Climate Adaptation Finance Scheme for Atoll Islands", by Valeria Vidal Alvarado (Thesis Supervisor Dr. Gabriella Carollini, MIT Reader: Dr. Esteban Otto Thomasz).

Abstract: There are only three countries in this world comprised only of atoll islands, Kiribati, Marshall Islands and Tuvalu. These atoll islands, only 2 or 3 meters above seal level, have had structural disadvantages of geographical and physical nature that have hindered their socioeconomic development throughout history. While atoll islands have been inherently vulnerable due to their unique topography, the impacts of anthropogenic climate change are already threatening their capability to be inhabitable. According to IPCC predictions, sea level rise will ultimately lead to the disappearance of these islands in the next 100 years. Current climate adaptation finance responds to such alarming situation with conventional interventions, such as seawalls, which are not only detrimental to this unique ecosystem but expensive and lengthy investments. The available adaptation finance architecture fails to adequately adapt its conditions for atoll islands. My thesis argues that planned resettlement should be included and financed as an adaptation strategy. It provides a stylistic model comparing traditional hard infrastructure adaptation projects and planned resettlement through five different dimensions: financial costs, transactional costs, opportunity costs, adaptability and level of ownership of costs.



Reevaluating The Evaluation of The Climate Adaptation Finance Scheme for Atoll Islands

By

Valeria Vidal Alvarado

BA in International Affairs
Northeastern University
Boston, Massachusetts (2014)

Submitted to the Department of Urban Studies and Planning
in partial fulfillment of the requirements for the degree of

Master in City Planning
at the
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
June 2017

© 2017 Valeria Vidal Alvarado.
All Rights Reserved

The author hereby grants to MIT the permission to reproduce and to distribute publicly paper and electronic copies of the thesis document in whole or in part in any medium now known or hereafter created.

3. Accepted submissions

Asia-Pacific Conference on Economics & Finance (July 26-27, 2018) - Singapore

8th International Conference on Building Resilience (Nov 14-16, 2018) - Lisbon, Portugal