Key Questions

- What is the current migration trend in the GBM, Volta and Mahanadi deltas?

- What are the drivers of migration today in these deltas?

- How might these drivers change in the future?

- What are the current and potential adaptation options, including the role of migration?

- Which adaptation options (planned and autonomous) are successful today, and could be in the future?

- What are the impacts of other adaptation options on migration?

Project Partners

Project led by:

Northern
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For additional partners, please see our website

DECCMA

DEltas, vulnerability and Climate Change: Migration and Adaptation

February 2014 – November 2018

@deccma
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Participatory

Vulnerability

Adaptation

Migration

Poverty

UNIVERSITY OF Southampton

CARIAA
Collaborative Adaptation Research Initiative in Africa and Asia

IDRC | CRDI

Canada

UKaid

Introduction

Migration is already an established household adaptation to cope with environmental and economic change. This can be both a successful form of adaptation, increasing the resilience of the migrant household, and unsuccessful, perpetuating vulnerability in a new location with differential impacts on men and women.

The DECCMA project will analyse the impacts of climate change and other environmental drivers across three contrasting deltas. Processes of migration will be analysed using survey, participatory research and economic methods. Potential migration of men and women will be contrasted with other adaptation approaches using a stakeholder-driven and co-produced integrated assessment approach.

"Deltas are home to over 500 million people worldwide who are vulnerable to sea level rise."

Project Aims

Large tracts of land at low elevation make deltas vulnerable to sea-level rise and other climate change effects. Deltas have some of the highest population densities in the world: in total with 500 million, often poor, residents. The adaptive strategies available to delta residents (e.g. disaster risk reduction, land use management or polders) may not be adequate to cope with pervasive, systematic, or surprise changes associated with climate change. Hence large movements of deltaic people are often projected under climate change.

DECCMA is an approximately 5 year long programme of applied research on the adaptation options, limits and potential in deltaic environments to current weather variability and extremes, as well as climate change.
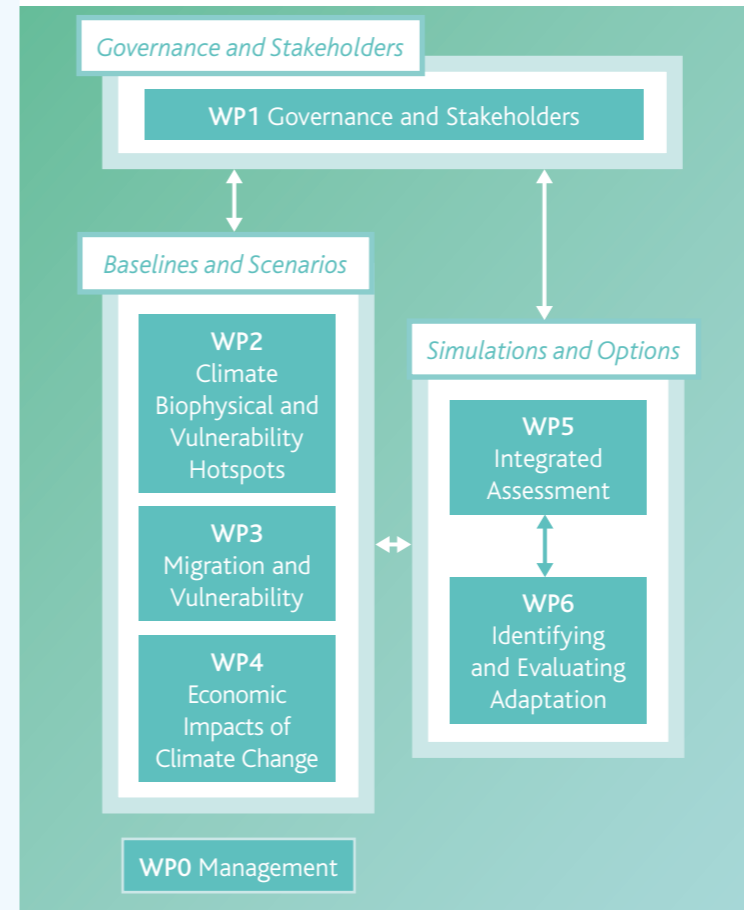
DECCMA will also network with other deltas across Africa and Asia to transfer knowledge.

DECCMA has three main aims:

1 To evaluate the effectiveness of adaptation options in deltas.

2 To assess migration as an adaptation in deltaic environments under a changing climate.

3 To deliver policy support to create the conditions for sustainable gender-sensitive adaptation.

Project Structure

Governance and Stakeholders

WP1 Governance and Stakeholders

Baselines and Scenarios

WP2 Climate Biophysical and Vulnerability Hotspots

WP3 Migration and Vulnerability

WP4 Economic Impacts of Climate Change

Simulations and Options

WP5 Integrated Assessment

**WP6** Identifying and Evaluating Adaptation

WP0 Management

The project comprises of seven Work Packages as illustrated above.

Case Study Areas

Research will focus on three deltas – the largest in population: the Ganges-Brahmaputra-Meghna (Bangladesh and India); and two smaller examples – the Volta (Ghana) and the Mahanadi (India).

Map Imagery © TerraMetrics, Map data ©2015 Google

c

a

b
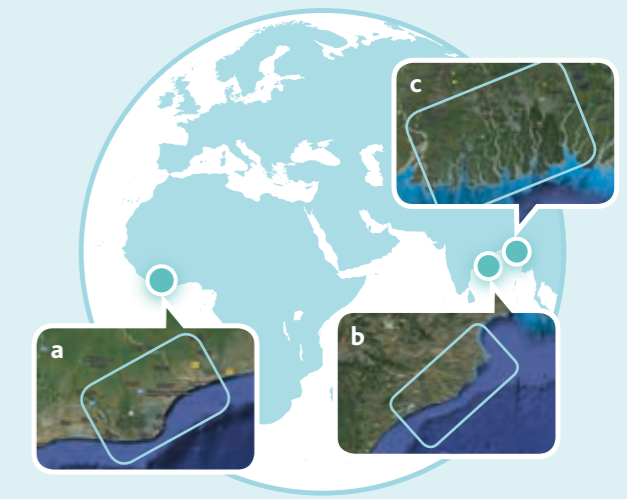
a Volta Delta   **b** Mahanadi Delta   **c** GBM Delta

a

b

c