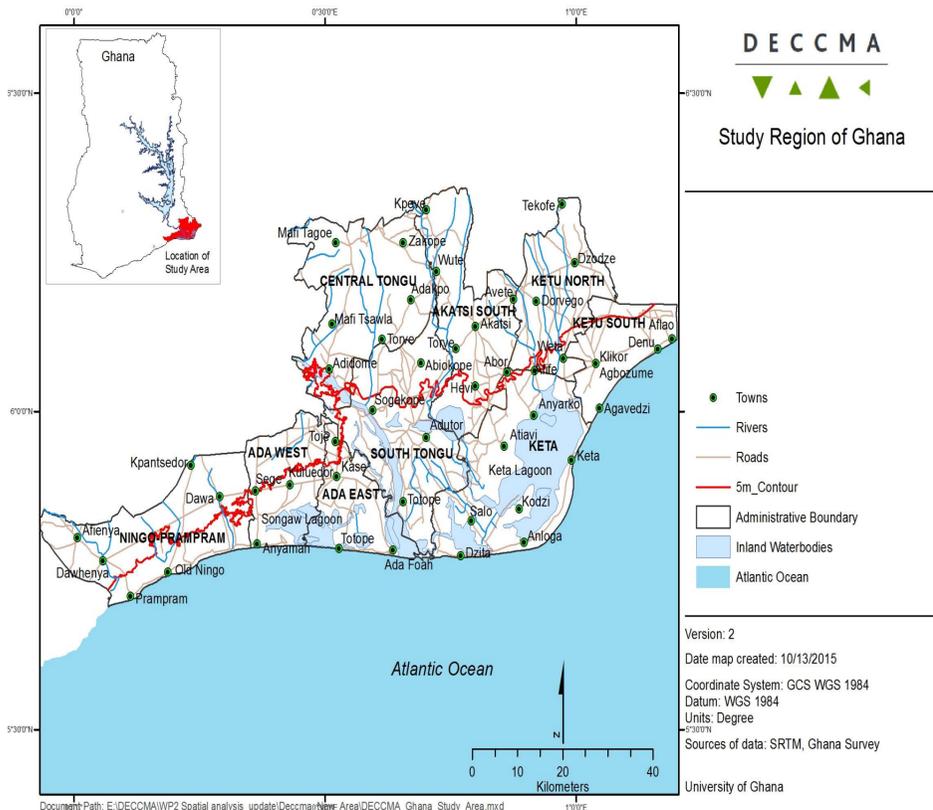


## Background

- Climate change is one of the large-scale global environmental changes likely to have damaging effects on natural and human systems
- The Deltas have however been also identified as one of the most vulnerable areas to climate change.
- In Ghana climate change and variability impacts in the lower Volta and wetland areas are evident. Increasing temperature and unpredictable rainfall patterns leading to changes in agro-ecological regimes and other ecosystems and influencing crop yields, human health and energy supply. Sea level rise has also led to the washing away of numerous residential, educational, commercial and historic structures such as; Fort Prinzenstein and the Cape St. Paul height house all in Keta Municipality. (Ayivor,1999; Andah et al, 2003, MOFA, 2011)



## RESULTS

There are generally very few peer reviewed journal papers on adaptation in the Volta basin (10 out of 28 papers)

## Drivers of Adaptation

- Main environmental stressors impacting the livelihoods of communities in the Lower Volta are flooding from the Volta River (influenced by upstream dams) and coastal erosion and flooding due to sea level rise.

Sector	Description of Adaptation Strategies	No. of Doc.	%
Agriculture & food Security	Irrigation and drainage, farming management enhancement (cultivation management, breed variety, irrigation association), including livestock and fisheries sub-sectors	10	35.7
Disaster Risk Reduction	Flood control, coastal protection, landslide disaster prevention, and information systems	11	39.3
Rural-Urban Development	Community resettlements etc.	3	10.7
Forestry/Natural Environment and Conservation	Forest preservation, afforestation and ecosystem integrity	2	7.1
Alternative Livelihood	Animal rearing, basketry, kente weaving and production of batik.	1	3.6
Water Resource Management	Water supply, sewage and drainage, including medical and healthcare sectors	1	3.6
Total		28	100.0

Source: Mensah and Anderson, 2015

## OBJECTIVE

- To develop an integrated adaptation inventory for the Volta Delta to serve as inputs for national adaptation strategies

## METHODOLOGY

A systematic literature review approach (peer and grey literature) assessing;

- Drivers of adaptation
- Sector specifics within which adaptations are mostly carried out
- Adaptation forms
- Type of beneficiary
- Type of provider
- Gender (deliberate to make adaptation option gender specific)
- Migration
- Maladaptation and barriers to adaptation

## Adaptation forms

- The main adaptation forms were mostly reactive and in response to the combined effect of the stressors that have resulted in the inundation of properties and farms, salinization of ground water, low productivity, shortage of water and increased incidence of water and sanitation related diseases.

## Providers and beneficiaries (individual/community)

- Adaptation strategies mostly benefitted individuals or households who could afford the cost.
- Those provided for by government or international NGOs however benefitted entire communities.

## Gender and Migration

- Where gender is mentioned, it focused on livelihoods
- Migration was described as a permanent response to relocating communities away from high risk flooding areas particularly in the disaster risk reduction sector
- Seasonal movements by different groups like fishermen, farmers, etc. were also reported.

## Next Step

- Household survey in 2016 to update information gathered in the systematic review



Totope a community in the Ada East District has been covered almost by sand.



Coastal erosion in the Ningo-Pramprom District

