Deltas, vulnerability and Climate Change; Mitigation and Adaptation (DECCMA)

CLIMATE CHANGE AND LIVELIHOOD SUSTAINABILITY THREATS IN THE VOLTA DELTA OF GHANA

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1.0 INTRODUCTION

- The Volta Delta, located at the lower part of the Volta basin of Ghana with about 181 towns and villages, lies primarily in the coastal savannah zone with an estimated total population of 945,827.
- Despite the numerous benefits, Deltas globally have come under intense climate change threats in recent times with likely socioeconomic implications. As a result, migration has become a major response to this development in these regions.

AIM:

- To examine the state of the Volta Delta from socioeconomic and identify some climate change induced threats within the Volta Delta.

2.0 METHODS

1. Dataset from the Global Trade Analysis Project v 9 used.
2. Environmentally extended input-output (IO) table applied
3. The regionalization method, Simple Location Method (SLQ) method was used in constructing the input –output table.
4. The main information for the regionalization was the District Analytical Reports
5. The Volta Delta region constituting the DECCMA study area covers a total area of about 3,301km^2 (Fig 1).

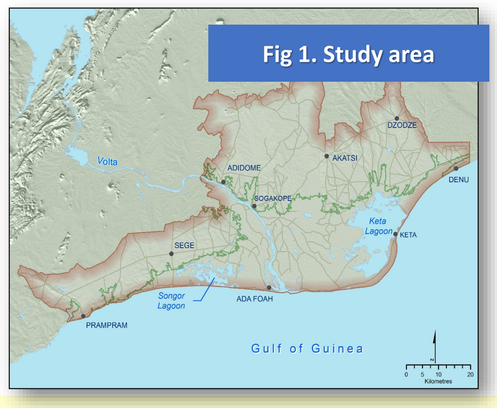


Fig 1. Study area

3.0 RESULTS

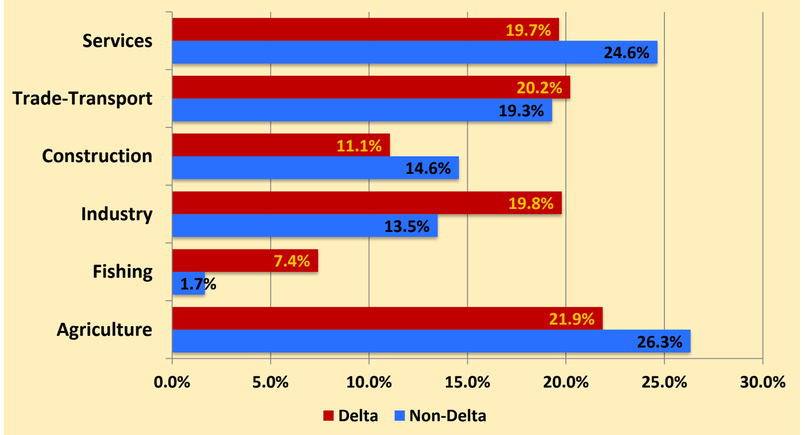


Fig. 2: Distribution of Value Added across the 6 main sectors of the Volta Delta

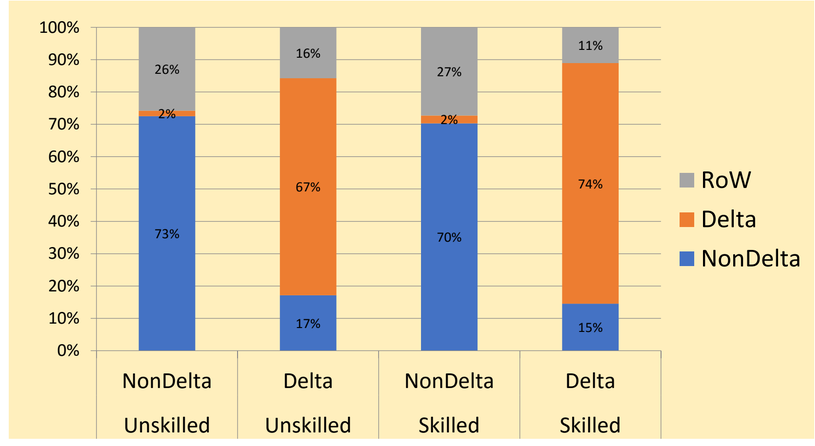


Fig. 3: Embodied labour by skill type

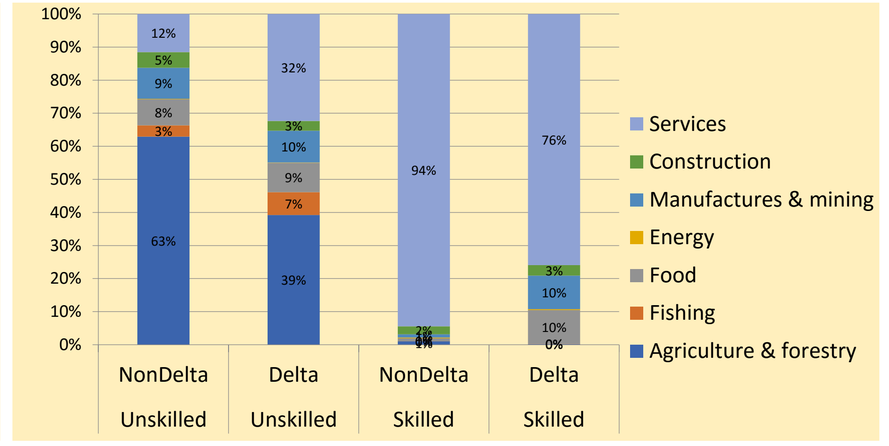


Fig 4: Embodied labour by sector and skill type

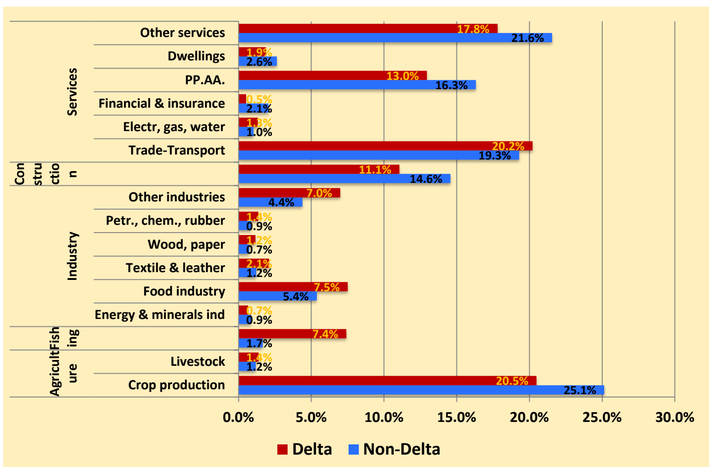


Fig. 5: Distribution of Value Added by 16 main sectors of the Volta Delta.

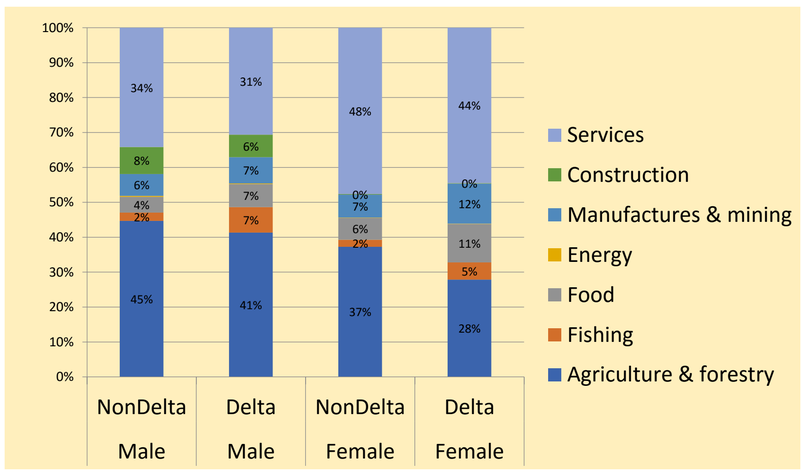


Fig. 6: Direct and embodied labour by sector and gender in the Non-Delta and Delta

Table 1. Summary of import, export and footprints

	Direct in production	Embodied exports (E)	Embodied imports (M)	Net trade (E-M)	Footprint
Delta. Employment (1000 people)	355	113	318	-205	560
Delta. Land (1000 hec.)	670	222	612	-390	281
Delta. Energy (Mtoe)	0.1	0.0	0.1	-0.1	0.0
Delta. CO_2 (Mt CO_2)	0.1	0.0	0.1	-0.1	0.0

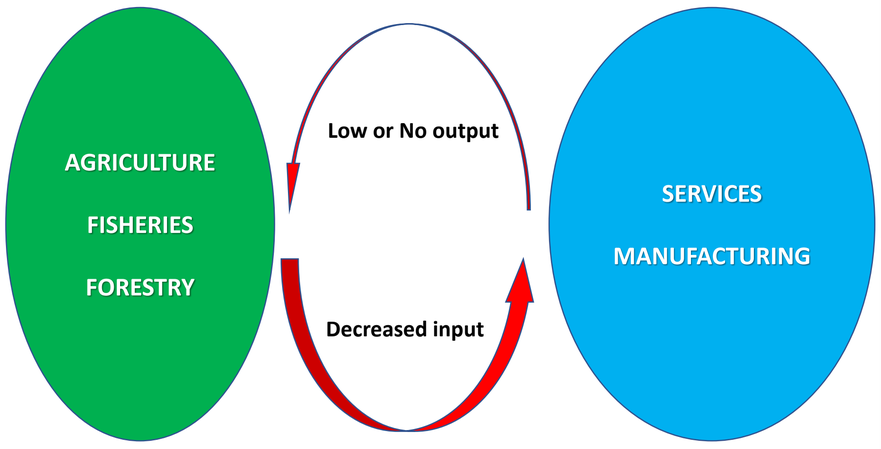
4.0 FINDINGS

1. Delta skilled workers are dominant in the services and manufacturing sectors (Fig. 4).
2. Unskilled workers are dominant in agriculture, including fishing (Fig 4).
3. The embodied work of the skilled and unskilled labour satisfied local consumption (Fig. 3).
4. Fishing and transport are higher within the Delta than the national average (Fig. 5).
5. Labour produced within the Delta mostly satisfy domestic demands (Fig. 3).
6. Women are dominant in services and manufacturing sectors (Fig. 6).
7. Men dominant in agriculture (including fishing) and construction subsectors (Fig. 6).
8. CO2 emissions is relatively absent in the Delta (Table 1).

5.0 CONCLUSIONS

1. Agriculture (including fishing) and services (particularly trade and transport) are major livelihood activities in the Volta Delta.
2. Delta remains a net importer of goods and services.
3. Employment within the delta is geared towards satisfying demands within the delta itself much more than demands of the rest of the country and the world.

6.1 CLIMATE CHANGE THREATS

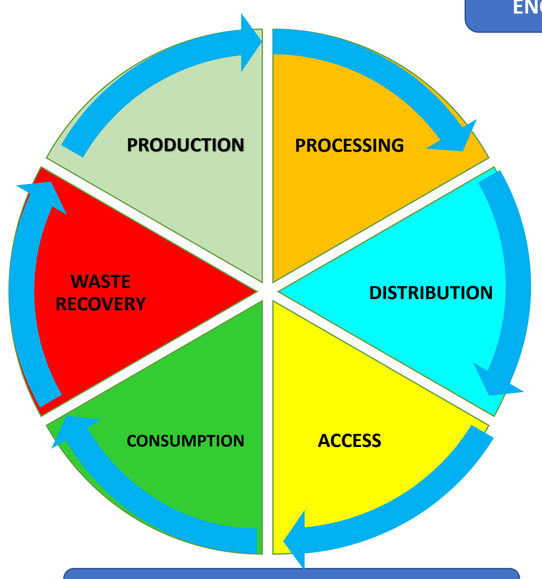


WEAKENED TARDE LINKAGES BETWEEN ECONOMIC SECTORS

OUT MIGRATION

POOR HOUSEHOLD WELLBEING

6.2 RECOMMENDATIONS



SUSTAINABLE AGRICULTURE SYSTEM

LIVELIHOOD ASSETS ENCHANCEMENT

GOOD ROAD AND TRADING STRUCTUREs

7.0 REFERENCES

1. Adjei, P.O.W., Cazcarro, I., Arto, I., Ofori-Danson, P.K., Asenso J.K., Codjoe, S.N., Appeaning-Addo K., and Amponsah S.K (2016): Biophysical and Socioeconomic State of the Volta Delta of Ghana from the Perspectives of Gender and Spatial Relations. DECCMA Working Paper, Deltas, Vulnerability and Climate Change: Migration and Adaptation, IDRC Project Number 107642. Available online at: www.deccma.com
2. Narayanan, G., A. A. Badri, and R. McDougall. 2015. *Global Trade, Assistance, and Production: The GTAP 9 Data Base, Center for Global Trade Analysis*. Purdue University.

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