Abstract for Amsterdam Conference

Title: Coastal resource mismanagement? People, land and sea, interconnectedness of coastal management for a fishing community in Ghana

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Coastal communities across the world are faced with the projected climate change stressors such as sea level rise. This is further challenging when global south rural coastal communities are also faced with interconnected physical, environmental, social, political and economic concerns. These fishing communities will not only be affected by sea level rise in the future, but at present are dealing with developmental issues related to livelihood, water, sanitation and waste. Local resource management and usage along with livelihood diversification strategies are the main developmental problems for these fishing communities. The research objective uses multidisciplinary lens through qualitative and quantitative methods to critically analyse Munni Lagoon in Winneba, Ghana, West Africa. The research context has a protective recognition of Ramsar designation for wetland and biodiversity management, however, implementation of this well-intentioned policy indicates a gap. The mangroves in the lagoon would enable to reduce flooding, maintain water quality in the lagoon and also in the future protect shoreline erosion. However, there has been mangrove depletion due to the over usage as fuel wood for cooking and smoking fish. Findings from this multidisciplinary data collected between 2014 to 2019 indicate that while people acknowledge the climate change threat, the community are prioritising livelihood strategies and diversification in the short term. Number of factors such as precipitation, over-exploitation of fishing zones and market saturation are affecting this predominantly fishing community that undertake drag-net fishing. Thus, community exposure to sea level rise appears to be secondary to adaptive strategies of improved income generation. Potential solutions such as biogas toilets at the household level can reduce overdependence on unsustainable use of cooking fuel improving indoor air quality, sanitation and waste management at the village level. Finally highlighting the participatory nature of coastal management, creating an integrated approach to prioritise resource protection and management through an interlinkage of ecosystems services, social, economic and environmental perspective to reduce coastal vulnerabilities to climate change. (316 words)

Key Words:

Mangrove depletion
Livelihood strategies
Adaptive strategies
Ecosystems services

Sensitivity: Internal

Recent Publications:

1. Davies-Vollum, K.S., Zhang, Z. and Angyekhumene, A, (2018), Impacts of lagoon opening and implications for coastal management: case study from Muni-Pomadze lagoon, Ghana, Journal of Coastal Conservation. 10.1007/s11852-018-0658-1
2. Davies-Vollum, K.S. and West, M., (2015) Shoreline change and sea level rise at the Muni-Pomadze coastal wetlands (Ramsar site), Ghana, Journal of Coastal Conservation 19 (4): 515-525.
3. Raha, D., Mahanta, P., Clarke, L. M. (2014) The implementation of decentralised biogas plants in Assam, NE India: The impact and effectiveness of the National Biogas and Manure Management Programme, Energy Policy 68: 80 - 91

Biography

Dr Deb Raha

I am Lecturer in Human and Developmental Geography at the School of Environmental Sciences. My key research expertise and interest lie in critically analysing impact of physical geography issues on people's lives such as climate change, sustainable cities, food security and renewable energy. I am current working in a multidisciplinary team studying the impact of sea level rise on coastal community in Ghana. The research is so-far emphasising the interconnectedness of social, economic, cultural, political and environmental factors that affect rural coastal livelihoods and wellbeing.

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Dr Sian Davies-Vollum

I am Head of School of Environmental Sciences in the College of Life and Natural Sciences. This means that I oversee the academic programmes and research across Environmental Sciences. I am a geologist/physical geographer by training and my research and teaching interests are in environmental and climate change. My current research focus is elucidating the physical and social impacts of climate change in coastal Ghana. I am also working with biologists to undertand the role of fresh water mussels on sediment in rivers and streams and with the Sheffield Area Geological Trust on the geosconservation and recording of urban geological sites.

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Sensitivity: Internal