

Edem Mahu

MARINE GEOCHEMISTRY

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Who are you?

My name is Edem Mahu. I am a lecturer in the Department of Marine and Fisheries Sciences at the University of Ghana. My research focuses on sediment dynamics, pollution in marine systems and the cycling of metals and nutrients in the coastal marine environment.

How did you come to be involved with Tema Port and this project?

Professor Appeaning Addo, contacted me to ask if I was interested in a potential position in a project on Sustainable Ports in Africa. I was very interested and my name was included in the proposal. My focus lies on the sediment dynamics of the Ghana coast, especially the project area of Tema. I collaborate in the geochemical aspects of the project such as the water quality of the Sakumono Lagoon, trying to understand the biophysical functioning of the system.

What do you think of Sustainable Ports?

I think a sustainable port is a port whose design has taken multiple aspects into consideration, such as social aspects, economics, the environment in addition to engineering aspects. These aspects interact, and a port cannot be considered in isolation. As such, a sustainable port doesn't only focus on money, but considers the environment and the livelihoods of the people that the port interacts with or affects. Such a port looks into the future, while considering the short-term

benefits, so that both present and future generations can all enjoy the economic, ecological, social and cultural benefits that come with this.

How does this differ from present practice?

The Sustainable Ports concept is different from how things are done in Ghana. It strives to involve stakeholders from scratch. It is the other way here and in most of Africa. Typically, engineering infrastructures and buildings are completed without any input from key stakeholders. When the very people who are supposed to benefit start receiving negative impacts due to system failure, then we start thinking of what actions to take. Our planners do not anticipate how many people a port development will attract, for example. Maybe these people cannot be accommodated by the environmental system. It could collapse. This is not just true for ports, it is even happening with other major projects in the country. Key questions to ask include whether or not possible environmental consequences of such projects have been duly considered. We need to conduct good environmental impact assessments, particularly with state-owned projects. The private sector is mostly obliged to comply with environmental protocols. A colleague at the Environmental Protection Agency confirmed that most state-owned projects are rolled out without duly assessing environmental impacts. So, the project is initiated, the problems start and then we start trying to find solutions. We need to change the way we do things.

What is your particular learning?

I've learned that every development requires a systems approach. I applaud this project, because it began by talking to stakeholders. In the past we would have ignored stakeholders, even though we know that problems can arise by ignoring them. In this project, we talked to them from the beginning, exploring ways in which the port development might benefit them, trying to design a green port for what they need.

What are the next steps?

In moving forward, I see the big problem as finding ways of collaborating between academia, industry and communities. We need to come together to solve problems. As a scientist you can't do it alone. We need to involve stakeholders so that we all can benefit from research and our environment now and in the future. Right now, each sector is doing their own thing and we only realise later that it could have been done differently, in collaboration. It is not helpful to continue along this line. We need to learn to work together in Ghana.