Vulnerability and Resilience in West African Coastal Communities: Considering Environment and Social Interactions

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Abstract

1. The scientific question is how the combined effects of globalization and environmental changes may affect the access to natural resources and generate inequalities of ecosystem services? Resilience analysis is therefore conducted by considering the reaction of the ecological and social systems to the environmental degradation and the pressures that affect and create inequality (Professor Alioune Kane). Three instances are provided.

2. The concepts of vulnerability and resilience can be considered as twin concepts (Dr Diatou Thiaw). Particularly, when considering the social and environmental adaptation to climate change. The coastal and touristic cities of Mbour and Sally provide interesting instances when addressing the monitoring of their space and natural resources. The analysis of resilience is then made by referring to specific monitoring applications, by addressing policies measures and management guidelines for disaster prevention, and by examining some processing activities.

3. The morphological and related socio-environmental vulnerability may also be caused by human action generating chronic instability. The case of the estuary of Senegal is a perfect instance (Dr Awa Niang-Fall). A breach was dug across the coastline near the city of St Louis that become increasingly wide over 10 years. It finally generated a shock which, in this case, was specifically human, and not related to climate. Fresh water was dried up in the area requiring people to collect water far away from their communities. Then the question is: can we speak of resilience from these communities?

4. A particular case of coastal basins in West Central Senegal (Saloum) allows relating the environmental vulnerability to the social vulnerability of communities (Dr Anastasia Mendy). The rainfall deficit due to too small watersheds generates the entrance of salted marine water and pollution of natural resources. This has led to environmental degradation even if the population tries to enhance the management of water resources. This can be considered as an instance of resilience when looking at the current forms of reaction: new irrigation schemes, agricultural use of wet valleys, and other sources of revenues...

5. Based on these three examples a few questions can be raised through discussion and debate. When people are forced to engage in the exploitation of salt to draw some income, can this be considered as a sign of resilience within a context of environmental degradation? There is a continuum of options after a shock. However, in some cases the people only have

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the choice between leaving and dying. Would it be resilience, if the population has to leave the place? In such cases, can we still speak of shock and resilience? To what extent the notion of freedom of choice should be included in the definition of resilience?

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