Tradeoffs between ecological and economic stakes for biodiversity offsets. How mitigation banking support marine and freshwater ecosystems resilience in Florida, USA?

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Abstract

Markets are more and more used to manage natural resources (e.g. individual transferable quotas or carbon emission trading). For biodiversity conservation, it seems more complicated since there is more complexity (site specificity, habitat-species specificity, uncertainty, dynamics) which not seems in adequacy with the needs of homogeneous goods and services for the market. Despite of this, some biodiversity markets connected with conservation policies are in development all over the world like the mitigation banking system in the United-States. This mitigation banking system is used within the mitigation hierarchy of the Clean Water Act (CWA) in order to compensate for some impacts on marine and freshwater wetlands and to reach a no net loss goal of biodiversity. Mitigation banking consists in an ecological restoration project (the mitigation bank) from which some biodiversity credits are released. Besides, project developers that have some impacts on biodiversity in another place buy these credits to the mitigation bank in order to meet the requirements for compensatory mitigation. The impact and the restoration project must occur in a same hydrologic unit named a service area. The exchanged credits are defined by their biophysical nature (freshwater credits, marine estuarine credits etc.) and must correspond to the components of the impacted biodiversity. The no net loss goal mentioned in the CWA is a strong sustainability principle, which is a core concept of ecological economics. What does this no net loss mean for marine and freshwater ecosystems and how far mitigation banking might be an attractive biodiversity offset for respecting a no net loss goal in an ecological resilience perspective? It is the purpose of this communication to question these issues. More precisely, our communication discusses how the stakeholders involved in the mitigation banking system deal with tensions between ecological and economic stakes around biodiversity conservation.

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This communication is based on a field work carried out in Florida (United-States) during spring 2013. We met various stakeholders of the social ecological system of mitigation banking and hence we had the opportunity to study the perspectives of different types of people: private and public mitigation bankers, state and federal regulators, attorneys, academics, associations, etc.

The preliminary results reveal that the tradeoffs, influenced by the different individual strategies and aspirations of the stakeholders, have an impact on the ecological goals regarding biodiversity conservation and on the economic efficiency regarding the reduction of transaction costs as well as the returns on investments for bankers. The most negotiated points between bankers and regulators are the number of credits and the size of the service area approved for a given mitigation bank. Regulators have a core role to maintain a strong quality of conservation and restoration action. Environmental consultants, hired by mitigation bankers and dealing with regulators, are "in the middle of the road" and they have a central role in the quality of the mitigation bank.

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