

# Center for Community-Based Resource Management (CBRM)

Natural Resources Institute, University of Manitoba

## CBRM Database

<b>Date:</b>	<b>May 17, 2010</b>	<b>Entry Number:</b>	<b>1065</b>
<b>Case Study Name:</b>	Building adaptive capacity to climate variability: The case of artisanal fisheries in the estuary of the Patos Lagoon, Brazil		
<b>Authors:</b>	Kalikoski, D.C., Quevedo Neto, P., Almundi, T		
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<b>Region:</b>	South America		
<b>Country:</b>	Brazil		
<b>Ecosystem Type:</b>	Wetlands and/or marshes		
<b>Social Characteristics:</b>	Remote community		
<b>Scale of Study:</b>	regional		
<b>Resource Type:</b>	Fisheries (fish and aquatic invertebrates)		
<b>Type of Initiative:</b>	Research –driven project		
<b>Community-Based Work:</b>	Resource management		

<b>Keywords:</b>	Brazil, small-scale fisheries, artisanal fisheries, vulnerabilities, adaptive capacity, climate change, Patos Lagoon
<b>Summary:</b>	<p>The vulnerabilities of fishing communities to climate and environmental change represent major issues for the governance of fisheries resources which have a direct effect on human security, livelihoods and rights. This paper explores the dynamics of social-ecological systems in the estuary of the Patos Lagoon in southern Brazil. The paper identifies key factors that increase and/or minimize the vulnerabilities of the fishing communities in this lagoon with the objective of understanding: (a) the degree to which fishing communities are able to build adaptive and learning capacities to minimize/reduce vulnerabilities and maintain their livelihoods; and (b) how and under what circumstances external and internal factors may influence and disrupt the social-ecological resilience in this lagoon system. Results show that fishing communities with a higher degree of self-organization are able to create ways to minimize their vulnerability to adverse climatic conditions. However, only a few communities have developed adaptive mechanisms to cope with the influence of climate on resource abundance and availability. Little external institutional support for small-scale fishing communities, erosion of their traditional resource use systems and decreasing fish stocks in recent decades have all led to a gradual increase in the vulnerability of fishing livelihoods in this lagoon. The uncertainties associated with climate are related to increasing vulnerability and influence the degree of resource conservation and exploitation. The lack of public policies to deal with the impact of climate variability on the livelihoods of fishing communities and the presence of weak institutions in resource governance represent major threats to the social security of fishers in this region.</p>