Atelier
Atelier AARMS-CRM « Développement durable des écosystèmes aquatiques »
22—25 octobre 2013

Workshop
"AARMS-CRM Workshop on Sustainability of Aquatic Ecosystem Networks"
October 22—25, 2013

Connectivity and persistence in marine systems

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I will present results for persistence in marine systems based on work with Louis Botsford and Paul Williams. I will begin by reviewing results for persistence in a network of reserves, or equivalently areas of differing suitability, that is arranged along one dimension, such as a coastline. I will then consider the persistence in a system of patches with differing local conditions and connectivity, but in a deterministic setting. Finally, I will develop a model and present results for stochastic cases. I will first emphasize the difficulties of getting results on persistence in a stochastic setting, and then develop results for cases where variation in connectivity is more important than variation in local dynamics. In this case a striking result is that stochastic variation in connectivity can be an importance force promoting persistence.

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