THE APPLICATION OF ECONOMIC INSTRUMENTS TO THE MANAGEMENT OF THREATENED SPECIES: A FISHERIES CASE STUDY IN THE GALÁPAGOS ISLANDS

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ABSTRACT

Under open access conditions fisheries tend to suffer from overexploitation and rent dissipation. This situation makes regulation necessary to achieve sustainability. In the Galápagos Marine Reserve, ineffective fisheries management has created a 'regulated' open access situation. The major fisheries, sea cucumber and spiny lobster, have been exploited beyond sustainable levels and catches have decreased significantly. Given the state of the resources, fisheries management in Galápagos needs to effectively limit catch and effort to sustainable levels. This research analyses the feasibility of an individual transferable quota (ITQ) scheme in Galápagos, evaluating the suitability of the context and assessing the expected economic benefits and equity implications from such a regulatory instrument.

The spiny lobster fishery is considered to be suitable for an ITQ scheme while the sea cucumber fishery is not, given that the resource is on the verge of commercial extinction, the difficulties in monitoring exports and the variability of prices. The optimal management scenario for the spiny lobster fishery, of those evaluated in this study, is an ITQ scheme where the total allowable catch is set at the maximum economic yield. This scenario resulted in the largest economic benefit and efficiency gains. Major equity implications are expected from an ITQ scheme in this fishery also. These, however, are consistent with the amount of catch that needs to be reduced in order for the fishery to operate sustainably. With this in mind, it is concluded that the Galápagos National Park Service and other stakeholders that participate in fisheries management in the archipelago should consider the adoption of an ITQ scheme to manage the spiny lobster fishery. The sea cucumber fishery on the other hand, needs to remain closed until the stock recovers.

Current challenges to more effective fisheries management are limited monitoring and enforcement and weaknesses within fishing cooperatives. An enhancement of the monitoring and enforcement component, and a strengthening of fishing cooperatives through more meaningful grassroots participation in fisheries management are necessary to improve the current situation. Complementary restrictions and policies to achieve particular socio-economic and environmental objectives will also be necessary in order to reduce potential negative impacts from an ITQ scheme.

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ABBREVIATIONS

CBFM	Community-based Fisheries Management
CDF	Charles Darwin Foundation
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CPUE	Catch per Unit of Effort
COPAHISA	*Artisanal Fishing Cooperative 'Horizontes de Isabela'*
COPESAN	*San Cristóbal Fishing Cooperative*
COPES-PROMAR	*Fishing and Sea Products Cooperative 'San Cristóbal'*
COPROPAG	*Artisanal Fish Production Cooperative 'Galápagos'*
GMR	Galápagos Marine Reserve
GNP	Galápagos National Park Service
IMA	Inter-institutional Management Authority
ITQ	Individual Transferable Quota
IUCN	International Union for Conservation of Nature and Natural Resources
MEY	Maximum Economic Yield
MSY	Maximum Sustainable Yield
NTZ	No-take Zone
PMB	Participatory Management Board
SLG	*Special Regime Law for the Conservation and Sustainable Development of the Province of Galápagos, Ecuador, 1998*
TAC	Total Allowable Catch
UCOOPEPGAL	*Union of Fishing Cooperatives of Galápagos*
UNESCO	United Nations Educational, Scientific and Cultural Organisation