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TOURISM

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Photograph: Alicia Bertolotti

Tourism as an economic alternative for Galapagos fishers: Opportunities and lessons learned

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Charles Darwin Foundation

Introduction

Overfishing has become an important issue worldwide in recent decades due to increased demand for marine resources, lack of proper management, and a fishing fleet whose capacity exceeds existing resources. The lives of over a billion people who inhabit the coasts and shorelines of the planet depend on existing marine resources in some form or another (FAO, 2008; Worm *et al.*, 2009; Srinivasan *et al.*, 2010). Globally, the collapse of several populations of marine resources has strongly impacted many families and societies, especially in developing countries (Castilla & Defeo, 2005).

In several cases, governments and NGOs have developed programs to support the fishing sectors by providing alternative livelihoods in other economic activities. Unfortunately, these projects have not always been implemented successfully. The cultural roots and traditions of fishers must be considered, as they are a major reason why in many cases fishers continue fishing despite their poor economic situation (Pollnac & Poggie, 2008; Pollnac & Bavinck, 2008; Cinner *et al.*, 2009).

In the Galapagos Islands the fishing fleet increased dramatically in the 1990s due to the rise of the sea cucumber fishery after its collapse along the coast of mainland Ecuador. Fishers from the continent migrated to the Galapagos to take part in fisheries development in the archipelago, which led to over-exploitation of marine benthic resources, such as sea cucumbers and spiny lobsters (Figures 1 and 2). Currently, there are 1035 registered fishers with a PARMA fishing license issued by the Galapagos National Park Service (GNPS; PARMA = Pescador Artesanal de la Reserva Marina de Galápagos or Artesanal Fisher of the Galapagos Marine Reserve); approximately 470 of licensed fishers are active. Due to overfishing, the decline of the local fishing industry was inevitable and has led fishers to seek other work.

One of the management measures used by the GNPS to reduce the over-exploitation of fisheries resources and to improve the socioeconomic situation of the fishers was to provide economic incentives to encourage "alternative livelihoods" related to tourism. The measure was proposed at different times via two alternatives: Experiential Artisanal Fishing (EAF) beginning in 2005 and new Tourism Operation Permits (TOP) beginning in 2009.

The concept of Experiential Artisanal Fishing (EAF) was originally presented by the fishing industry to the Participatory Management Board. The EAF is both a fishing and tourism activity, in which the Galapagos fisher uses his infrastructure (boat and equipment) to offer visitors the opportunity to learn about and engage

in the fisher's culture and way of life (Resolution 0012 of GNPS). When engaged in this activity, fishers harvest less but they receive greater economic benefit because tourists pay comparatively more for a fishing trip than could be earned from a day of fishing.

The concept of new Tourist Operation Permits (TOPs) was first introduced in 1990 by a small group of fishers interested in exchanging their fishing permits for tourism permits. At that time tourism was considered a more profitable and less risky business. However, despite the insistence of the interested fishers, this proposal was not accepted until 2008 (Decree No. 1416 of the President of the Republic). In that year any fisher interested in TOP projects could apply through a public competition held

by the GNPS through which fishers could exchange their fishing licenses and fishing vessels for a tourism permit. The idea is that a reduced number of fishing vessels operating in the Galapagos Marine Reserve (GMR) will decrease the fishing effort.

The study presented here focuses on a review of the current status of Experiential Artisanal Fishing, which began in 2005, and the Tourism Operation Permits granted to fishers in 2009. The key questions are:

- What are the main implementation problems?
- Have the initiatives achieved a reduction in fishing pressure?
- What are possible solutions?

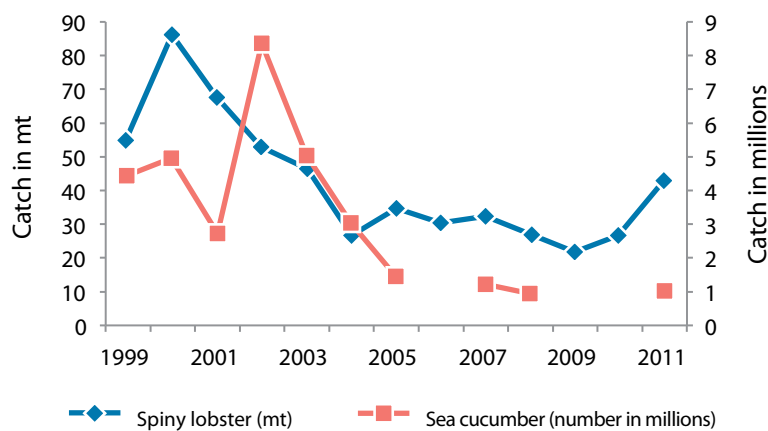


Figure 1. The decrease in catch in lobster and sea cucumber fisheries (no data for sea cucumbers indicates closure of the fishing season). Source: database CDF and GNPS



Figure 2. Registered (with PARMA license) and active fishers in sea cucumber and spiny lobster fisheries since 1999. Source: GNPS database

Methodology

Data collection was based on a semi-quantitative evaluation using surveys, in-depth interviews, logbooks, records of the GNPS and the Port Captaincies, observations, and literature review; and on a qualitative assessment through organized workshops and interviews with all interested and affected sectors and individuals (Table 1).

An estimate of fishing effort in the GMR in 2011 was calculated based on the number of fishing boats (fibras) multiplied by the number of fishing days per month.

Gathering information was difficult due to the fishing sector's skepticism towards scientists and research projects. However, through a series of participatory meetings it was possible to obtain the cooperation of the fishers and the process moved forward.

Table 1. Sources of information from key stakeholders who were interviewed during the period May to November 2011.

Participants	Sources
Fishers who obtained a Tourism Operation Permit (TOP)	21 semi-structured interviews (San Cristóbal, Santa Cruz and Isabela)
Fishers of the Experiential Artisanal Fishery (EAF)	13 meetings and workshops; 7 in-depth interviews (San Cristóbal)
Provincial Tourism Chamber of Galapagos (CAPTURGAL for its initials in Spanish)	2 in-depth interviews (San Cristóbal and Santa Cruz)
Conservation and science sector (nongovernmental organizations)	8 in-depth interviews (San Cristóbal, Santa Cruz and Quito)
Local tourism agencies and operators	4 interviews (San Cristóbal and Santa Cruz)

Current situation

The interviews revealed that few fishers actually benefit from either EAF or TOP activities. Of the more than 450 active fishers in Galapagos, to date only 28 have a boat registered for EAF and only five have TOPs.

From 2010 to 2012, each boat involved in Experiential Artisanal Fishing made a maximum of five trips per month, based on records from the GNPS and zarpes issued by the Port Captaincies. This information shows that registered EAF vessels do not generate enough activity to sustain the fisher's families. So far EAF does not attract enough customers to be profitable.

The potential number of TOPs available in 2008, calculated by a private consultant, was 72, distributed in the distinct modalities offered: Navigable Dive Tours, Dive Tours Class I and II, and Bay Tours. The GNPS would award these permits based on a public competition. Fishers presented 77 projects of which only 18 qualified as potential beneficiaries in specific modalities (mainly Navigable Diving Tour). The operationalization of the 18 winning projects and the elimination of these fishing vessels could represent a 21% reduction in fishing effort for the entire archipelago. However, due to implementation and financial problems only five fishers have successfully initiated tourism activities. This means that only three fishing boats, five launches and one dinghy have been removed from use in exchange for operating TOPs, which results in a reduction of only 5% of the fishing effort.

Seven interviews with fishers involved in EAF revealed that 50% of their revenues come from tourism; the rest is covered by commercial fishing or other work. On the other hand, the five fishers who have switched to tourism through public competition for TOPs are no longer engaged in commercial fishing and obtain 100% of their income from their new business.

The investment that fishers must make to initiate either TOP or EAF activities is high (TOP: US\$600,000–2,000,000; EAF: US\$50,000–300,000). The amount depends primarily on the size, use and origin of the vessel. Most fishers do

not have the necessary solvency to refurbish the boat they already own (in the case of EAF) or to obtain loans for the amount needed to invest in a new tour boat (in the case of TOPs).

While it is mandatory that EAF permits and new TOPs be used by those to whom they are granted, partnering with local and/or continental companies and investors allows fishers to invest in either new boats or to remodel their old boats. However, the result of this practice has been that some fishers become figureheads or employees, rather than the direct beneficiaries of the implemented measures. The purpose of the incentives is to promote socioeconomic development of local fishers. However, in practice there are legal ways that allow a few entrepreneurs—not the fishing sector—to benefit most.

Discussion

Elsewhere in the world the concept of offering economic alternatives to the fishing sector has failed because fishers fear that a change from fishing to tourism represents a possible loss of their tradition and culture. In the case of Galapagos, the majority of registered fishers have been inactive since 2005 (Figure 1). It is assumed that they have already changed their way of life, and because of this they should be excluded from "alternative livelihood" initiatives. Fishers who still fish for their livelihood should be the focus of such initiatives, and they need financial, administrative and legal advice and support from the government and NGOs to strengthen their business skills. For this to take place, it is essential that there be agreement within the fishing sector and with decision-making authorities.

Theoretically the EAF meets the important criterion of offering economic alternatives to the fishing sector. Unfortunately, the current situation shows that the objectives have not been achieved and that regulations are not providing the necessary guidance. Despite the efforts of several NGOs and the government, the EAF activity has yet to generate the economic benefits that the "pioneer" fishers had hoped for (Castrejón, 2008).

One reason may be that while many thought it was a good choice, in-depth cost:benefit studies and a thorough analysis of the potential demand among visitors for such an activity were never conducted.

In order to obtain tourism permits under the TOP concept, fishers must surrender their PARMA license and their fishing boats. Our results show that there is a greater success in reducing fishing effort under TOP than with EAF. If fishers compete successfully for a tourism permit, they must destroy their fishing boats. This part of the model effectively reduces the fishing effort as the number of boats in the GMR cannot be increased. In the case of EAF, the owner of a fishing vessel can initiate EAF while maintaining their commercial fishing license. Given

this, the fishing effort can increase rather than decrease. Although the TOPs better meet the goal of reducing the impact of fishing on the GMR, the process for obtaining a permit was poorly designed (Contraloría General del Estado, 2009), which is reflected in the fact that only five of the 21 fishers who obtained permits have successfully transitioned to tourism.

It is also clear that not only fishing has caused environmental impacts. Since 1996 tourism has tripled (Figure 3), with significant consequences: excessive population growth of villages, continentalization of inhabited islands (Grenier, 2007), and loss of island identity. The effects of tourism should be taken into account in decision-making and program design.

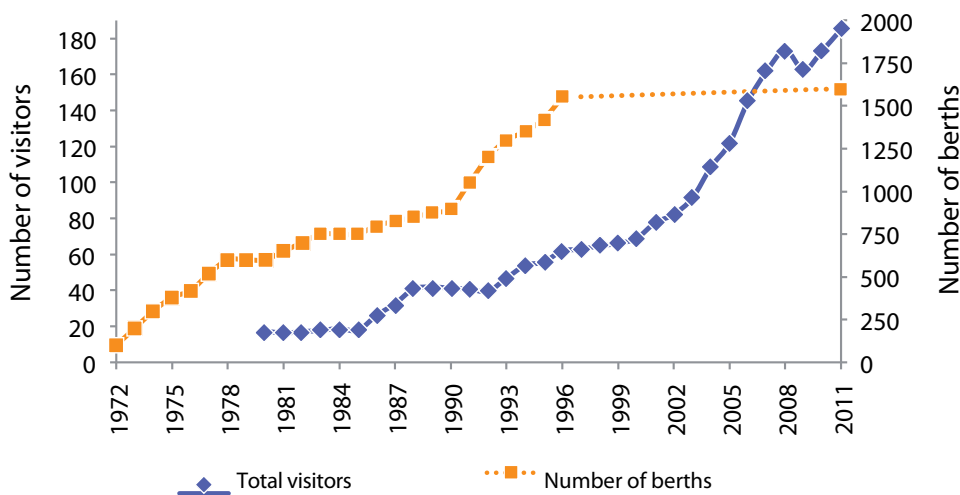


Figure 3. Increase in the number of tourists entering Galapagos per year and in the number of berths in cruise boats since 1972. Source: GNPS database and Grenier, 2007

Based on our results, the ecological impact on the GMR has been reduced with the new TOP system. It is obvious that overfishing compared to tourism has a greater impact in marine ecosystems because it is an extractive activity. However, simultaneously promoting TOPs for fishers with the intention of reducing the fishing effort and limiting the entry of visitors in an effort to control the growth of tourism are contradictory management measures, although both are necessary in the current context.

Recommendations

The following recommendations to improve the current situation of both TOPs and EAF emerged from our study:

1. Improve the design and implementation of the TOP and EAF projects based on the results presented. It is not sufficient to provide fishers with initial financial and logistical support. There must be continuity of assistance until the projects are operational.
2. Manage, either through cooperatives, associations or working groups, the artisanal fisheries and alternative economic activities for fishers under a model that benefits the majority of active fishers.
3. Eliminate the non-active fishers from the Fishing Registry.
4. Calculate the minimum possible investment needed by the fishers to reduce the risk of losing their capital. Before buying or building a large luxury boat, they should consider remodeling their existing boat for EAF or TOP or purchasing a less expensive dive boat. In this way, fishers who benefit from EAF or TOPs can be the exclusive owners of the business as opposed to figureheads.
5. Conduct socioeconomic studies of the costs and benefits of the proposed activities; implement long-term monitoring that includes the people involved and/or affected by decision-making regarding the management of these activities.

6. Conduct a study on the potential market for EAF to determine how realistic it is as a source of income.
7. Promote the organization, regulation and management of local tourism so that it can become a sustainable activity and so that fishers have better opportunities to integrate themselves into tourism operations.

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References

- Castilla JC & O Defeo. 2005. Paradigm shifts needed for world fisheries. *Science* 309:1324.
- Castrejón M. 2008. Evaluación del desempeño de la PAV en la RMG. Technical report for the WWF, Galapagos, Ecuador. 7 pp.
- Cinner JE, T Daw & TR McClanahan. 2009. Socioeconomic factors that affect artisanal fishers' readiness to exit a declining fishery. *Conservation Biology* 23:124-130.
- Contraloría General del Estado. 2009. Informe Contraloría DR1DPG-0001-2010. Examen especial a los subgrupos: especies fiscales y patentes y denuncias presentadas por el periodo comprendido entre el 01 de octubre del 2005 y el 31 de julio del 2009 del Parque Nacional Galápagos.
- FAO. 2008. The state of world fisheries and aquaculture. Food and Agriculture Organization, The United Nations, Rome, Italy. Accessed March 2012: <http://www.fao.org/docrep/011/i0250e/i0250e00.htm>
- Grenier C. 2007. Conservación contra natura: Las Islas Galápagos, Ecuador. Instituto Francés de Estudios Andinos (IFEA), Embajada de Francia en Ecuador, Institut de Rechercher Pour Le Développement (IRD), Universidad Andina Simón Bolívar, Ediciones Abya-Yala. 183 pp.
- Pollnak RB & M Bavinck. 2008. Alternative livelihoods and job satisfaction among fishermen: a cross-national study. In EOCST: Ecosystems, Societies, Consilience, Precautionary principle: Development of an assessment method of the societal cost for best fishing practices and efficient public policies. D4SA Ecoregion report on sociological aspects: Results of the Job Satisfaction surveys of all case-studies. 85 pp.
- Pollnac RB & JJ Poggie. 2008. Happiness, well-being and psychocultural adaptation to the stresses associated with marine fishing. Special Section on Vulnerability and Resilience in Fisheries. *Human Ecology Review* 15, No. 2.
- Srinivasan UT, WWL Cheung, R Watson & UR Sumaila. 2010. Food security implications of global marine catch losses due to overfishing. *Journal of Bioeconomics* 12:183-200.
- Worm B, R Hilborn, JK Baum, TA Branch, JS Collie, C Costello, MJ Fogarty, EA Fulton, J Hutchings, S Jennings, OP Jensen, HK Lotze, PM Mace, TR McClanahan, C Minto, SR Palumbi, AM Parma, D Ricard, AA Rosenberg, R Watson & D Zeller. 2009. Rebuilding global fisheries. *Science* 325:578-585.