



Presentation of IUCN activities under the Pacific Islands Oceanic Fisheries Management Project

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1

In this presentation we describe the project components being implemented by IUCN (International Union for the Conservation of Nature) under the Pacific Islands Oceanic Fisheries Management project.

2

In January of this year, due to indefinite delays in securing a research vessel, *MV Alucia*, to conduct a series of research cruises in the region in 2008, IUCN postponed the planned expedition. IUCN assigned Eric Gilman, based in Honolulu, and Taholo Kami, who heads the IUCN Oceania Regional Office in Suva, to take over coordination of IUCN's work under the project. Kelvin Passfield joined IUCN in August and is now part of the IUCN team implementing the project.

3

IUCN initially proposed three project concepts. The table below describes the three proposed activities and FFA, SPC and UNDP counterparts' explanations of why they were deemed to not be good fits under the project.

IUCN Proposed Activity	FFA/SPC/UNDP Rationale for Rejection
Conduct PIC longline company-based sustainability assessments, in collaboration with EU and US retailers and buyers. This was proposed to be a component of a larger in-progress IUCN initiative to develop and manage a single set of global standards for the environmental sustainability of tuna fisheries.	Departs from IUCN's originally planned scientific seamount research and the core ideas expressed in the LOA between the FFA and IUCN, and as a result, this project would require potentially prolonged process to receive authorization.
Contribute to FFA's provision of legal technical assistance to FFA member countries to develop enabling legislation and implementing regulations to institute WCPFC management and conservation measures.	Duplicates existing extensive activities by FFA.
Implement activities in support of the establishment of the proposed South Pacific Regional Fisheries Management Organization (SPRFMO), including technical advice on observer program data collection protocols, and conservation measures for avoiding and minimizing bycatch of sensitive species groups.	Several of the OFM project countries are not parties to SPRFMO.

4

Subsequently, by early March we (FFA, SPC and IUCN) reached agreement on a revised workplan and budget to implement IUCN's fourth proposed set of activities related to pelagic fishing effects on seamount ecosystems. The state of understanding of effects of pelagic fisheries on seamount ecosystems is relatively limited, as is the relationship between seamounts, pelagic species and pelagic fisheries. There have been very few studies of the association between pelagic longlining and seamounts.

This slide identifies the five main components of the final, agreed OFM project components:

- (i) Interview pelagic longline fishermen regarding fishing methods and gear and other strategies for fishing on seamounts versus in the open ocean. (OFM Project Activity Component 1, Activity 1.3.2.2)
- (ii) Review the state of understanding of conservation issues resulting from pelagic longline fishing around seamounts; review and critique regional and national legal and policy frameworks to manage pelagic longline fisheries around seamounts in domestic waters and on the high seas. (OFM Project Activity Component 2, Activity 2.2.3.1)
- (iii) Convene a technical workshop to discuss the state of knowledge of sustainability issues and alternative methods for managing pelagic longline fisheries around seamounts (tentatively planned to be held on two days during the 2nd half of October 2009 in Noumea, New Caledonia);
- (iv) Conduct outreach with relevant stakeholders, including national governments and longline fishing industries of the 15 OFM participating countries, to enhance their understanding of sustainability issues related to fisheries at seamounts. (OFM Project Activity Component 2, Activity 2.2.3.2)
- (v) Prepare an information paper for the 15 OFM participating countries outlining options for management of longline vessel fishing around seamounts. (OFM Project Activity Component 2, Activity 2.2.3.3)

- (vi) (Complimentary component) Analyses of observer program data from the Hawaii longline tuna fishery comparing the catch, bycatch and depredation rates of sets on vs off seamounts.

A sixth component is separate from but complimentary to the OFM project, and is funded by the U.S. Western Pacific Fishery Management Council. This component is a study involving analyses of observer program data for the Hawaii longline tuna fishery, to compare catch characteristics between sets made on vs. off of seamounts. We will also tap Hawaii longline fishers' knowledge through interviews, as we are doing in the other Pacific Island countries.

Outputs to result from these project components are listed below, in anticipated chronological order and tentative completion dates:

- (i) Publication of a technical report, 'Effects of Pelagic Longline Fishing on Seamount Ecosystems.' [This will include results from the interviews with fishermen from select Pacific Island region longline fisheries to draw upon existing fisher knowledge of associations between pelagic longlining and seamounts] June 2009
- (ii) Publication of study results from Hawaii longline observer program data analyses on differences in catch characteristics between sets made on vs. off of seamounts. August 2009
- (iii) Educational pamphlet on effects of pelagic longlining on seamount ecosystems. October 2009

- (iv) Proceedings of a technical workshop on the effects of pelagic fisheries on seamount ecosystems. October 2009
- (v) Information paper for the 15 OFM participating countries. December 2009

Agreement was also reached to reallocate US\$160k of IUCN project funds under the OFM scientific component to SPC to enable SPC to contract a spatial analyst/physical oceanographer to contribute to SPC's research related to (a) identifying and classifying seamounts, and (b) analyzing historical fishing patterns by longline and purse seine vessels around seamounts.

5

For the fishermen survey component of the project, we have confirmed that longliners from Tonga, Fiji, Samoa and Hawaii routinely conduct sets at seamounts. We're continuing to research which of the other domestic and foreign-licensed longline fleets to include in this study component.

The table in this slide describes the pelagic longline fisheries of the countries and territories of the tropical and subtropical Pacific Islands region. The entries highlighted YELLOW are the 15 PICs participating in the OFM project.

Country or territory	Number of PIC Domestic Pelagic Longline Vessels	Number of Foreign-licensed Longline Vessels in WCPFC Convention Area	Number of Non-PIC Longline Vessels Operating in the WCPFC Convention Area (Both Licensed and non-Licensed to fish in PIC EEZs)
American Samoa (USA)	70 (2002)	0 (2002)	Not applicable
Chinese Taipei (Taiwan)	Not applicable	133 (2005)	1,060 (2004, offshore vessels based in PICs)
China	Not applicable	Don't know	Don't know
Cook Islands	27 (2005)	9 (2002)	Not applicable
Federated States of Micronesia	20 (2005)	138 (2005)	Not applicable
Fiji	119 (2002)	15 (2002)	Not applicable
French Polynesia (France)	72 (2005)	0 (2005)	Not applicable
Guam (USA)	1 (2006)	0 (2008)	Not applicable
Hawaii (USA)	123 (2008)	9 (2008)	Not applicable
Indonesia	Not applicable	Don't know	Don't know
Japan	Not applicable	Don't know	1,447 (2004)
Kiribati	9 (2002)	89 (2002)	Not applicable

Korea	Not applicable	Don't know	190 (2004)
Marshall Islands	0 (2005)	92 (2005)	Not applicable
Nauru	2 (2005)	0 (2005)	Not applicable
New Caledonia (France)	27 (2005)	0 (2005)	Not applicable
Niue	0 (2005)	13 (2005)	Not applicable
Northern Mariana Islands (USA)	0 (2003)	0 (2003)	Not applicable
Palau	0 (2005)	127 (2005)	Not applicable
Papua New Guinea	27 (2006)	0 (2006)	Not applicable
Philippines	Not applicable	Don't know	39 (2004)
Samoa	80 (2002)	0 (2002)	Not applicable
Solomon Islands	25 (2002)	46 (2002)	
Spain	Not applicable	Don't know	8 (2004)
Tokelau	0 (2002)	0 (2002)	Not applicable
Tonga	15 (2005)	0 (2005)	Not applicable
Tuvalu	0 (2005).	51 (2005)	Not applicable
Vanuatu	13 (2002)	72 (2002)	Not applicable
Wallis and Futuna (France)	0 (2002)	0 (2002)	Not applicable

6

The Hawaii longline tuna observer program data analyses will include observations of differences between sets on vs. off seamounts between the following variables, using a Poisson generalized additive regression modeling approach with informative covariates of temporal and geo-referenced spatial effects of fishing effort:

- (i) Timing of initiating setting;
- (ii) Bait type;
- (iii) Number of hooks per set, and hooks per basket;
- (iv) Length of sea surface covered per set;
- (v) Temporal distribution of fishing effort (month, season);
- (vi) Geo-referenced spatial effects of fishing effort;
- (vii) Catch rates and length of tuna species
- (viii) Shark catch rate
- (ix) Seabird catch rate

- (x) Sea turtle catch rate
- (xi) Marine mammal catch rate
- (xii) Shark and cetacean depredation (removal of hooked fish and bait) rates.

7

The aims of the technical workshop are:

- Review the state of understanding of the effects of seamounts on large pelagic fish and pelagic sensitive species groups (seabirds, sea turtles, sharks, marine mammals);
- Review the state of understanding of seamount pelagic and benthic functional links;
- Review available information on the amount and temporal and spatial distribution of pelagic fishing at seamounts in the Pacific Islands region;
- Review the state of understanding of the effects of pelagic longlining on seamount ecosystems, including relatively high rates of bycatch of sensitive species groups, high depredation (removal of hooked fish and bait primarily by cetaceans and sharks), high catch of juvenile tunas and non-target species, high catch of fish species that are important target species for artisanal coastal fisheries, altered trophic functioning due to the sharing of prey species by pelagic and demersal species, and reduced availability of baitfish at the sea surface due to declines in populations of persistent pelagic predatory fish; and
- Identify key information gaps and research priorities.

8

This is the tentative contents of the in-progress technical report, which we'll use as a background document for the technical workshop, and basis for production of the educational pamphlet.

1. Problem identification, study aims and report structure
2. Seamounts definition
3. Seamount pelagic and benthic functional links
4. Seamount oceanography
5. Effects of seamounts on large pelagic fish and pelagic sensitive species groups
6. Pelagic longline tuna fisheries
 - 6.1. General gear and methods
 - 6.2. Status of target stocks, trends in reported landings, allocation
 - 6.3. Bycatch
 - 6.4. Depredation
 - 6.5. WCPO pelagic longlining status and trends
7. Effects of pelagic longlining on seamount ecosystems
8. State of Management of Pelagic Longlining at Seamounts
 - 8.1. Eastern Australia longline swordfish fishery
 - 8.2. Pacific Island Countries national management frameworks and intergovernmental measures
9. Pelagic Longline Fishing on Seamounts: Fishers' Perspective
 - 9.1. Survey methods, fisheries assessed
 - 9.1.1. Tonga
 - 9.1.2. Fiji
 - 9.1.3. Samoa
 - 9.1.4_ Hawaii, U.S.A.
 - 9.1.____. Additional longline fisheries active in the WCPO with effort at seamounts??
 - 9.2. Proportion of effort by fishery reported to target seamounts
 - 9.3. Incentives for targeting/not targeting seamounts

9.4. Fishing gear and methods at seamounts
9.5. Depredation at seamounts
9.6. Ecosystem effects, including catch rates of target, incidental and discard species
9.7. Implications for effects of pelagic longlining on seamounts
9.8. Limitations of social surveys
10. Information gaps and research priorities
Acknowledgements
11. References
Appendix 1: Survey Form. Pelagic Longline Fishing on Seamounts: Gear, Methods, Effort and Ecosystem Effects

9

The June 2008 midterm evaluation of the OFM project included a few constructive recommendations related to IUCN's project components:

- (i) Improve IUCN's knowledge of the overall OFM Project;
- (ii) Improve coordination within IUCN and with other OFM Project partners; and
- (iii) Ensure the IUCN activities are "...integrated with the wider OFM Project objectives and be collaborative with other regional research" [sic].

We aim to improve communication with relevant regional organizations, and will discuss with SPC and FFA how to optimize integration of the IUCN components into the greater project.

10

That concludes my review of the IUCN activities under the OFM project after about 7 months since we agreed on the new focus. Are there any questions?