

**Seamount Planning Workshop  
20-21 March 2006  
Oceanic Fisheries Programme  
Secretariat of the Pacific Community  
Nouméa, New Caledonia**

**AGENDA**

I suggest we divide the day in roughly 4 sessions of 1h30:

- 8:30-10:00: presentations-discussions
- 10:00-10:30: tea/coffee break
- 10:30-12:00: presentations-discussions
- 12:00-13:30: lunch break
- 13:30-15:00: presentations-discussions
- 15:00-15:30: tea/coffee break
- 15:30-17:00: presentations-discussions

Several speakers are invited to do presentations that will constitute the starting point of the discussions to elaborate the research plan.

My suggestion is to start with a short presentation of the context and expectations for this workshop. Then we will have several speakers who will present work already conducted on seamounts in the region and we should finish by the presentation of the new projects that are already planned but still in preparation/discussion, so now is a good time to modify them if necessary.

There is no formal timing for the presentations as I expect many discussions during and between the talks.

**PRESENTATIONS – provisional titles**

Valerie Allain

The OFMP and the objectives of the workshop

Bertrand Richer de Forges

Seamounts explored by IRD in the Pacific Ocean

Jock Young

The Southern Surveyor 2004 voyage, pelagic habitat and community comparisons in the fishing grounds of the tuna and billfish fishery off eastern Australia

David Itano

Seamount pelagic fisheries and research around Hawaii

Bruno Leroy

SPC-PNG Regional Tuna Tagging Project

Alex Rogers

IUCN / Deep-Ocean Quest joint study of seamounts in the Central Pacific Ocean.

## PRACTICAL INFORMATION

The meeting will be held in the small conference room of the conference center at SPC.

A video-projector and a computer will be available.

Wireless connection to the internet should be available and we should be able to find spare computers in different offices if you need to do some work on computers or for checking emails.

## PROVISIONAL LIST OF PARTICIPANTS

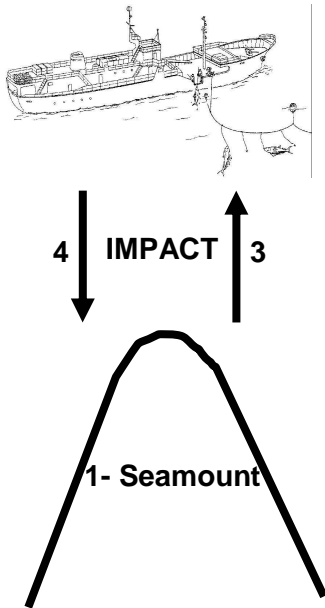
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## SOME THOUGHTS AND SOME QUESTIONS TO THINK ABOUT

To better understand the ecology of seamounts and to assess the impact of seamounts on the pelagic fisheries and the impact of the fisheries of the seamounts, we might consider to:

- 1- characterize the seamounts (biological and non-biological parameters) – there are very few data for this part of the study and that's where most of the sampling and work needs to be done
- 2- characterize the pelagic ecosystem and fisheries (CPUE, species composition of the catch, size of the catch, movement of the fish, trophic structure) – fisheries data are collected by SPC (CPUE, catch composition, length frequency) but more sampling is needed to collect data on trophic structure and movements of the fish
- 3- determine the impact of seamounts on the pelagic ecosystem and fisheries (comparison of fisheries and ecosystem characteristics in seamount and open ocean)
- 4- determine the impact of pelagic fisheries on the seamounts (comparison of seamount characteristics in areas with high and low fishing pressure – examination of the evolution of the fisheries data with time)

### 2- Pelagic fisheries



#### ***Who is involved and how?***

SPC, IUCN, IRD, NIWA, CSIRO, University of Hawaii...?  
Establish a list of “experts”

#### ***Which seamounts should we sample?***

It is estimated that more than 30,000 seamounts exist in the Pacific Ocean alone. The number of seamounts inferred from remote sensing and bathymetric data in the world oceans is more than 14,000 (14,675), which almost half reside on the Pacific Plate. A small number have been identified properly (less than 1000), and less (only 100 to 150) have been studied.

Should we focus on already known seamounts, should we explore new seamounts (need to be localized)?

We might identify areas with seamounts and low and high fishing effort to determine the fishing impact.

Are there specific areas we should focus on? (From the fisheries point of view the equatorial area is very important in terms of catch and effort.)

### ***Is the time of the year important?***

Should we try and sample at different times of the year, every year? (El Nino / La Nina event)

It is a 5-year project but we cannot expect to do some sampling in the final 1 or 2 years. Extensive sampling is time and money consuming, realizing similar sampling at different times is probably not very realistic.

### ***What do we sample?***

We want to characterize the seamounts and the pelagic ecosystem and fisheries in different conditions to determine the impacts (seamount – open ocean – high fishing effort – low fishing effort).

-Oceanographic and environmental parameters: bathymetry (detailed map), SST, temperature vertical profiles, currents at the surface and in the water column, nutrients vertical profiles, POM, geology...

-Biological components: pelagic (ppk, zpk, forage species - DSL, large predators) and benthic

### ***What do we measure on the sampled components?***

Biodiversity: list of species (benthic and pelagic), identification needs

Estimates of biomass (benthic, DSL by acoustic, CPUE)

Size of the individuals

Trophic studies (stomachs of large pelagic, isotope)

Horizontal and vertical movements of the fish: tagging, listening stations to measure the residency, acoustic...

### ***Is there a benthic-pelagic relationship on seamounts?***

Large pelagics (tunas...) rely mainly on the pelagic, planktonic and DSL organisms to feed. What about the benthic species, is the base of their food web the particulate matter? The tuna and other large pelagic don't feed directly on the benthic species, but is there another component that could be the link between pelagic and benthic? If this link exist, we should try and measure it.

### ***Which boats?***

-Deep Ocean Quest and IUCN are planning a 4-month cruise (more opportunities with this boat in other areas?)

-chartered fishing vessels for tagging and stomach samples

-any other research boats from other institutions (NIWA, IRD, CSIRO, others)?

What are the capabilities of these boats?

### ***Which equipment?***

Water samples for ppk, CTD

Zpk nets

Mid water trawls IKTM and acoustic for forage/DSL biomass estimates and movements

Longline for large pelagics

Submarine for benthic biodiversity observation, benthic sampling gears

Multibeam scanner for bathymetry and other oceanographic equipment

Listening stations for tagging?

***How many samples do we collect?***

***Who will do the analysis of the samples and data?***

Benthic samples: identification experts

Ppk/zpk ID and measurement of biomass

Acoustic interpretation

ID of forage/DSL species

Diet studies, isotope studies

Tagging data