



Biological Sampling Newsletter

for Observers and Port Samplers

SPC-OFP Ecosystem Monitoring and Analysis Section*

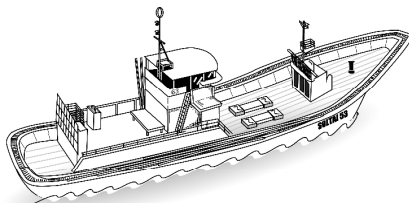
Issue #10 — 30 April 2009

Welcome

to the tenth issue of the *Biological Sampling Newsletter*, which provides news about the Ecosystem Monitoring and Analysis Section of the Secretariat of the Pacific Community's (SPC's) Oceanic Fisheries Programme (OFP).

In this issue we present the new Lab Assistant who joined the team, updates on tagging and albacore projects, as well as a reminder on the stomach samples still required for collection.

Hope you enjoy this new issue!



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Our new Lab Assistant

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Let's reach the objective!

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* SPC (Secretariat of the Pacific Community) OFP (Oceanic Fisheries Programme), EMA (Ecosystem Monitoring and Analysis) Section, BP D5, 98848 Noumea Cedex, New Caledonia. Tel: +687 262000, Fax: +687 263818.

Contacts: Valérie Allain (valeriea@spc.int) and Caroline Sanchez (carolines@spc.int).



LAB STAFF

Senior Lab Assistant Caroline Sanchez, who has been working in sample management and stomach content examination, now has new duties within the team. With the commencement of the albacore project more samples are expected, and Caroline will now spend most of her time organising this important aspect of the work. She will continue to communicate with the observer programmes to organise the collection and transportation of samples including albacore (gonads, otoliths, stomachs) as well as other tuna and species (stomachs).

Laboratory Assistant Aude Chenet, who has made many valuable contributions to our work, has left the team to work with the Coral Reef Initiatives for the Pacific (CRISP) project at SPC. She can still be contacted at AudeC@spc.int.



Aude Chenet

In February, we had the pleasure of welcoming our new Lab Assistant Cyndie Dupoux. She is from France, where she recently finished her studies in Marine Biological Engineering, Aquaculture and Fisheries. During the past eight months, she gained working experience in reef fish parasites at IRD Nouméa (the French Institute of Research for Development) within the Systematic Adaptation Evolution Section. She is very meticulous in the laboratory and she shows a great interest in identifying preys. Her main work at the moment is to examine stomach contents of the samples you have been sending to us. You will have the opportunity to meet her during the meetings to held in Nouméa this year.



Cyndie Dupoux, the new Laboratory Assistant

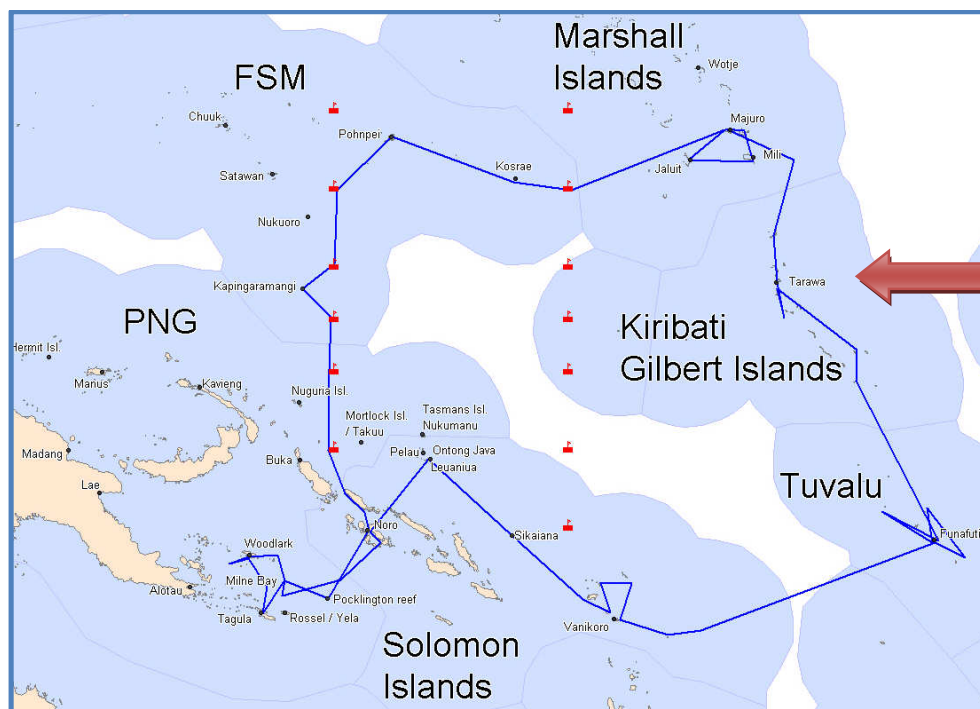


PACIFIC TUNA TAGGING PROGRAMME (PTTP)



The second Western Pacific project started on 15 March this year, with the Solomon Islands pole-and-line vessel *Soltai 105* departing from Noro. This three-month cruise will end in June.

So far fishing and tagging were conducted in Milne Bay in Papua New Guinea (PNG) waters, as well as along the Tropical Atmosphere Ocean (TAO) weather buoys in PNG and Federated States of Micronesia (FSM). The boat stopped in Pohnpei and Majuro and is now in Kiribati waters around Tarawa. Before the end of the cruise more work will be undertaken in Kiribati but also in Tuvalu and the eastern part of Solomon Islands before coming back to port in Noro in mid-June.



Map of the second Western Pacific tagging cruise, March–June 2009

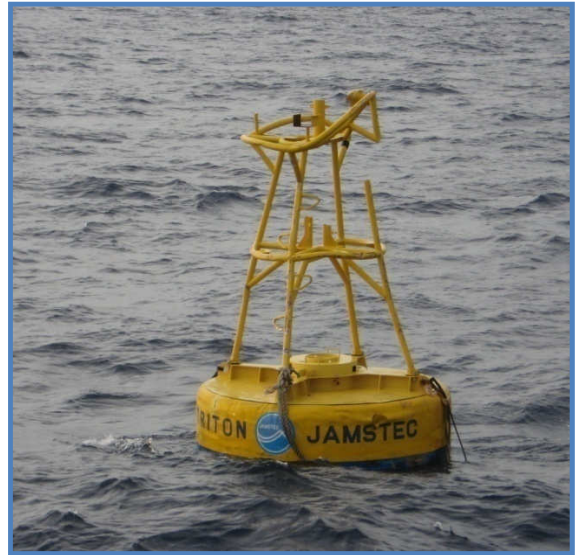
Red icons indicate TAO weather buoys; red arrows indicate where the boat was located in late April 2009.

Since 15 March, 19,424 conventional tags have been released, with 12,588 skipjack, 6368 yellowfin and 480 bigeye. A total of 31 archival tags have been released and 148 stomach/muscle/liver samples have been collected (47 skipjack, 79 yellowfin, 22 bigeye).

So far, 4 skipjack from this cruise have been recovered already and we are expecting many more in the coming months.

Milne Bay proved to be a highly productive area where lots of logs were encountered, as well as some whale shark schools and free schools, while there were no anchored fish aggregating devices (FADs).

From Noro to Pohnpei the team targeted the TAO weather buoys — large anchored buoys aggregating tuna; one of them had an unusually large number of bigeye. Finally between Majuro and Tarawa, most of the schools were associated with islands and reefs or were free schools, but no anchored FADs or drifting logs were encountered. Bad weather conditions in this last leg did not allow us to tag as many fish as we would have liked.



A JAMSTEC (Japan Agency for Marine-Earth Science and Technology) weather buoy from the multinational TAO array under which tuna aggregate

More information on TAO is available at <http://www.pmel.noaa.gov/tao/>.

These figures add to the impressive number of tags released and recaptured since the beginning of the project in 2006. Indeed, after three years of tagging in PNG, Solomon islands, FSM, Palau, Philippines, Indonesia, Marshall Islands and Kiribati, the SPC team, with the help of colleagues from Australia and Hawaii but also most importantly from fisheries services and national observer programmes in the region, managed to release **175,847** conventional tags and **398** archival tags.

Of those, 21,372 conventional tags (12.1 per cent) and 58 archival tags (14.6 per cent) were recaptured.

The work is ongoing and we still need your assistance in collecting the recovered tags.

The next tagging cruise will be over another three-month period starting in mid-July and will target the high seas pocket between PNG and FSM as well as possible areas in Indonesia's exclusive economic zone (EEZ).



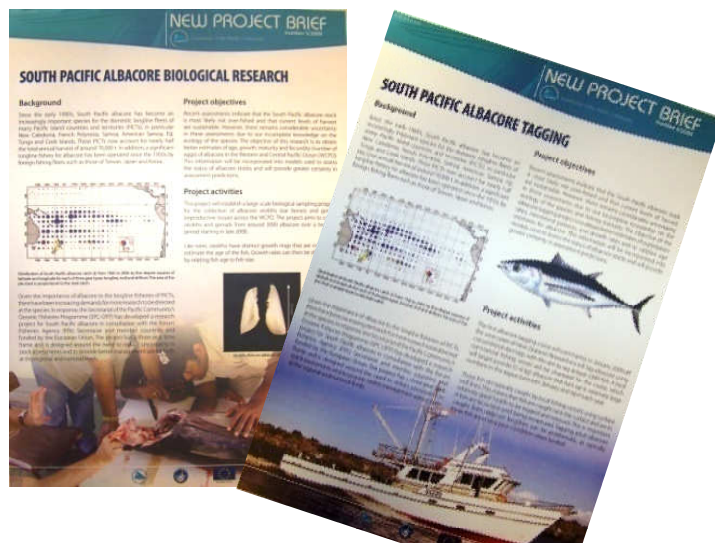
Fish on the hook during tagging operations



ALBACORE PROJECT

Biological sampling research

The albacore biological sampling has started and sampling kits have been sent to observer coordinators in a number of different countries and territories. Some otoliths and gonads have already been received and have been sorted at the laboratory.



Please contact Caroline when you have started to collect samples, if you encounter problems or if you need any advice.

Thank you again for your collaboration!

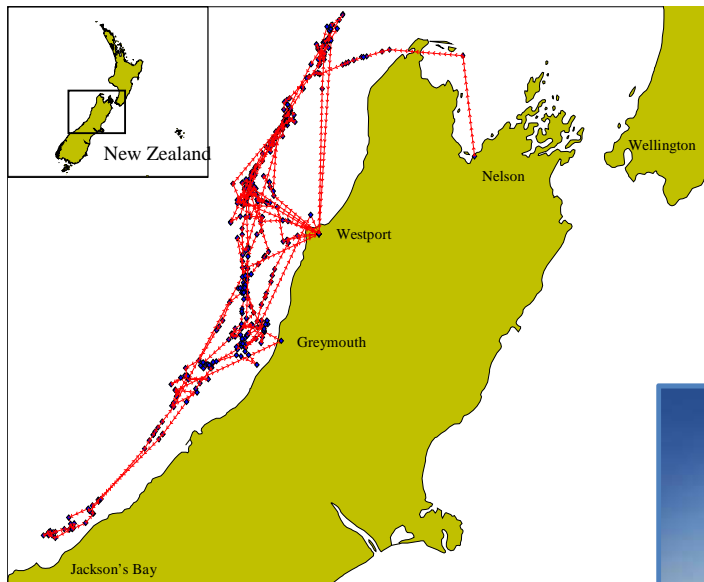
Country/territory	No. of sampling kits	No. of otoliths and gonads
Cook Islands	1	~
Fiji	1	~
French Polynesia	1	~
New Caledonia	1	49
Tonga	1	~
Samoa	1	~



Number of sampling kits distributed, and number of otoliths and gonads collected per region

South Pacific Albacore Tagging Project (ATP)

The South Pacific Albacore Tagging Project (ATP) commenced in January 2009. Its objectives are to obtain better estimates of exploitation rates, movement patterns and growth rates and to validate age estimates for South Pacific albacore. Albacore were tagged off the west coast of New Zealand's South Island between Cape Farewell in the north and Jackson's Bay in the south. A total of eight cruises of between four and nine days were completely between 12 January 2009 and 20 March 2009. A 74 ft commercial albacore troll vessel, the *F.V Genesis*, was chartered as the tagging vessel throughout this period. Two scientists were onboard for each cruise, with at least one scientist from SPC. An observer from the New Zealand Ministry of Fisheries was a scientist on three of the cruises.



Cruise tracks of *FV Genesis*

(red line) during the Albacore Tagging Project (ATP) off the west coast of New Zealand between January and March 2009 with tagged school positions shown (blue diamonds).



FV Genesis

During this three-month cruise, a total of 2766 albacore were tagged. Only conventional tags were used, but a large number (1481) of tagged fish also received an injection of oxytetracycline (OTC) as part of an age validation experiment. Fish injected with OTC received a white conventional tag and carry a USD 100 reward upon recapture, while all other fish received a yellow conventional tag and carry a standard USD 20 reward upon recapture.



New Zealand observer and a crew member getting ready to tag



Conventional tag inserted at the base of the second dorsal fin

During this trip, biological samples were also collected from fish that could not be tagged. Otoliths, gonads, stomachs, muscle and liver were collected from 68 albacore. Fat content was measured for 147 albacore.

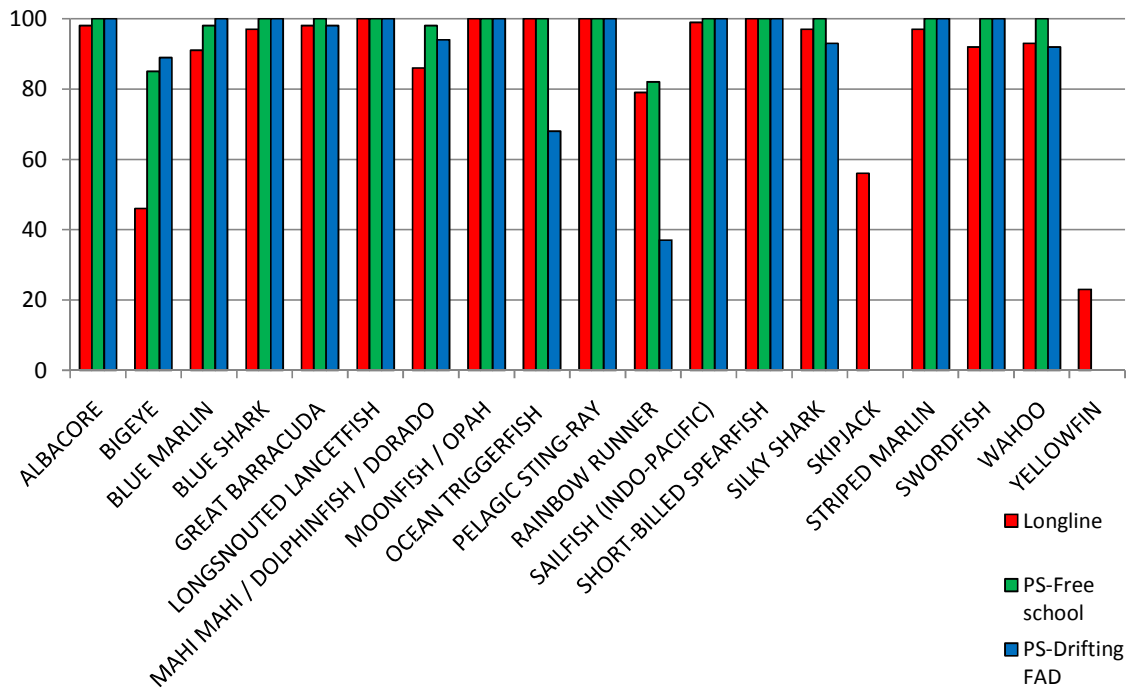


STOMACH SAMPLING

As explained in the latest newsletter, to ensure good qualitative and quantitative results on diet studies we need to analyse at least 100 samples per species per region and type of fishing gear. The following graphs show the number of samples per species that need to be collected for each region and type of fishing gear to reach the objective of 100 samples.

For some species, only a few samples still need to be collected to reach the goal of 100 samples. It would be of great assistance if you could mention this to observers within your region. Thank you in advance for continuing the collection of samples and helping us to fill in the gaps in our research.

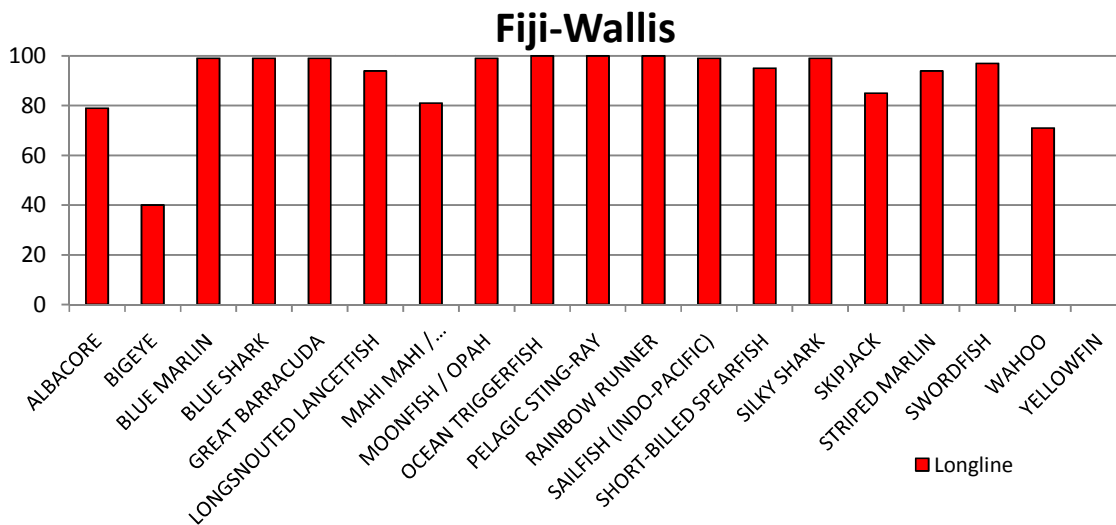
Micronesia



Number of stomach samples needed per species per gear in Micronesia

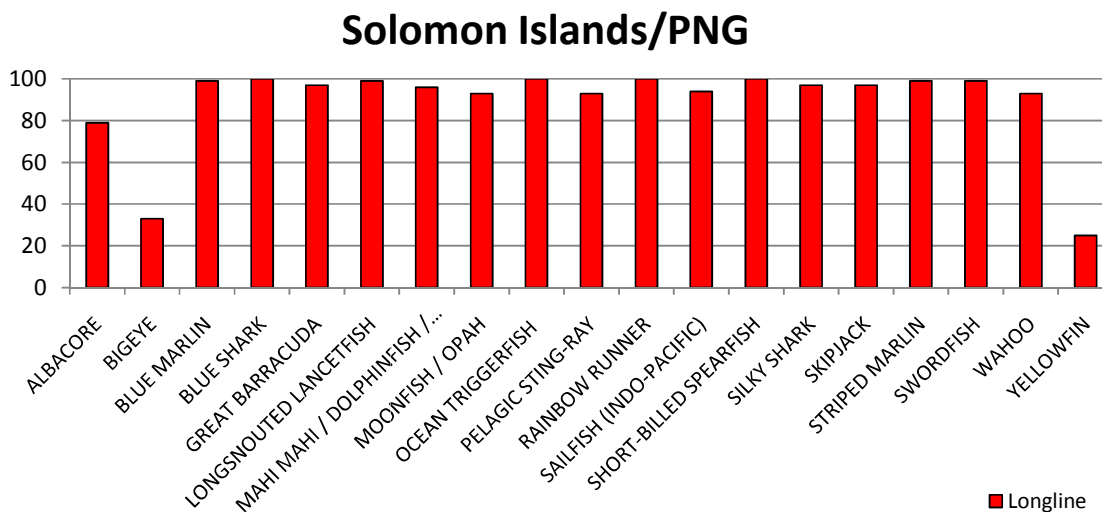
In Micronesia on longline we advise observers to concentrate on collecting **yellowfin** — only 23 samples are still needed! In general and for other types of fishing gear, we recommend focusing on the collection of tuna samples.





Number of stomach samples needed per species in the Fiji-Wallis area from longline fisheries

In the longline fisheries of the Fiji-Wallis area, we advise observers to concentrate on collecting **bigeye** — only 40 samples are still needed !

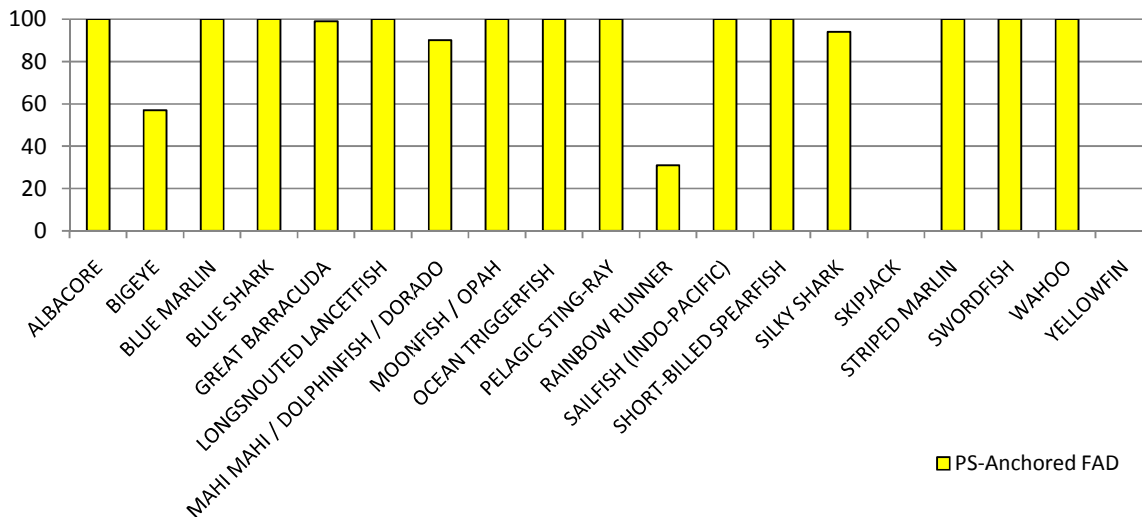


Number of stomach samples needed per species in the Solomon Islands/PNG area from longline fisheries

In the longline fisheries of the Solomon Islands/PNG area, we advise observers to concentrate on collecting **yellowfin** (only 25 samples still needed) and **bigeye** (only 33 samples still needed)!



PNG

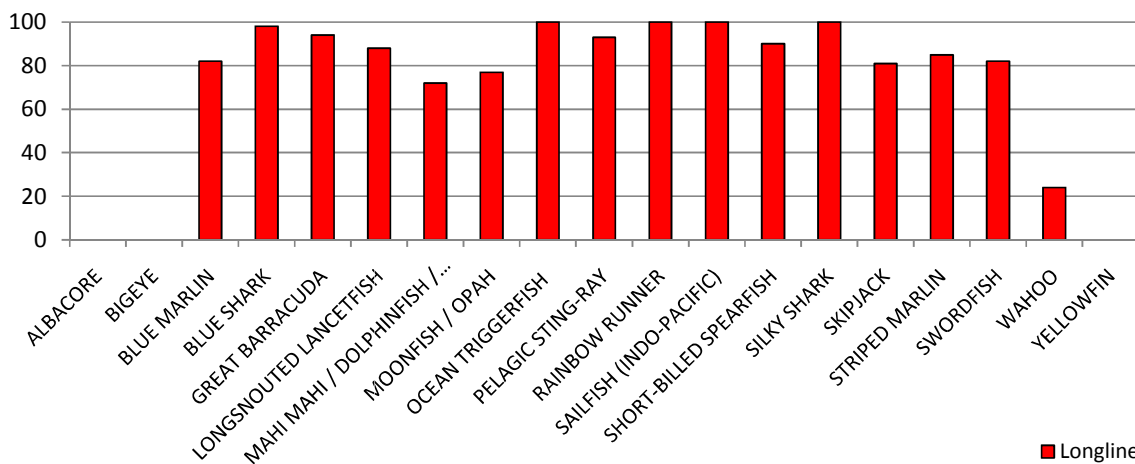


Number of stomach samples needed per species in PNG from pure-seine fisheries

In the pure-seine fisheries of the PNG area, on anchored FAD, we advise the observers to concentrate on collecting **bigeye** (only 57 samples still needed) and **rainbow runner** (only 31 samples still needed)!



Polynesia

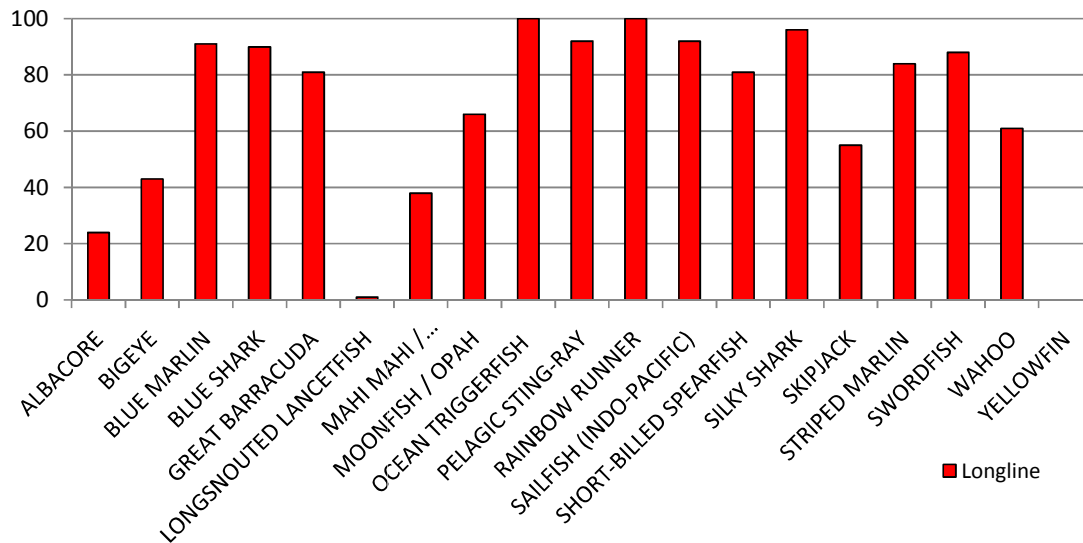


Number of stomach samples needed per species in Polynesia from longline fisheries

In the longline fisheries of the Polynesia region, we advise observers to concentrate on collecting **wahoo** — only 24 samples are still needed!



New Caledonia



Number of stomach samples needed per species in New Caledonia from longline fisheries

In the longline fisheries of New Caledonia, we advise observers to concentrate on collecting **lancetfish** (only 1 sample still needed) and on **albacore** (only 24 samples still needed)!



Thank you again for your collaboration!

The success of this project is dependent upon the efforts of the observers. If you are experiencing difficulties with collecting, storing and transporting samples or delays in payment please contact Caroline Sanchez (carolines@spc.int).

**NEXT NEWSLETTER:
END OF JUNE/BEGINNING OF JULY 2009**

We welcome your comments on the content of this newsletter — please send them to Valérie Allain (valeriea@spc.int) or Caroline Sanchez (carolines@spc.int).