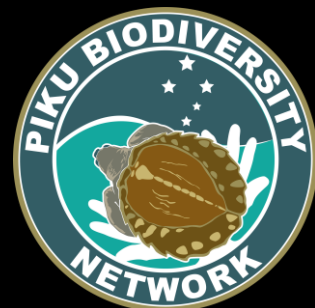
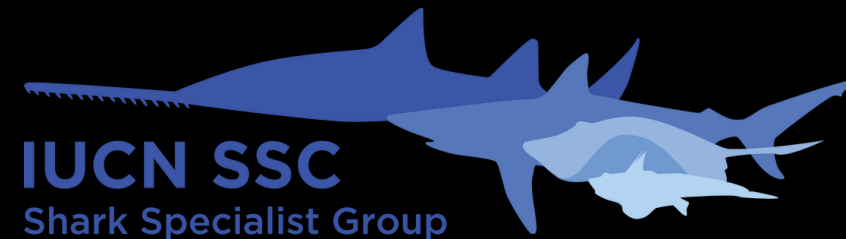


Conservation Management of Pacific Sharks & Rays

Dr. Michael Grant

James Cook University, Australia

IUCN Species Survival Commission Shark Specialist Group



Sharks and rays in the Pacific

- ~189 species
- New species yet to be described
- E.g., 12 new species described in recent Papua New Guinea fisheries project

New sharks and rays in PNG

A total of 12 new species of sharks and rays were discovered by the project team, ranging in size from the Papuan Lanternshark reaching only 28 cm in length to the Mumburarr Whipray reaching at least 1.6 m in width

| | | | |
|---|---|---|--|
|  Longfin Gulper Shark <i>Centrophorus longipinnis</i> Found in the Huon Gulf at depths of 330-460 m - described in 2017 |  Papuan Velvet Skate <i>Notoraja sereti</i> Found off Madang Province at depths of 800-890 m - described in 2017 |  Papuan Guitarfish <i>Rhinobatos mani</i> Found off New Ireland at depths of 191-290 m - described in 2016 |  Mumburarr Whipray <i>Urogymnus acanthobothrium</i> Found off northern Australia and in the Gulf of Papua in PNG - described in 2016 |
|  Papuan Lanternshark <i>Etmopterus samadiae</i> Found off East Sepik, Morobe and Madang at depths of 340-785 m - described in 2017 |  Luanah's Skate <i>Dipturus 'new species'</i> Found off Madang and Sandaun at depths of 440-520 m - to be described in 2019 |  Australian Bluespotted Maskray <i>Neotrygon australiae</i> Found off northern Australia, eastern Indonesia and Western Province of PNG - described in 2016 |  Bluebanded Eagle Ray <i>Aetomylaeus caeruleofasciatus</i> Found off northern Australia and PNG - described in 2015 |
|  Yang's Longnose Catshark <i>Apristurus yangi</i> Found in the Vitiaz Strait and off New Ireland at depths of 630-786 m - described in 2017 |  Corrigan's Catshark <i>Galeus corriganae</i> Found off Madang and New Britain at depths of 500-742 m - described in 2016 |  Oceania Fantail Ray <i>Taeniura lessoni</i> Found off Fiji, Solomon Islands, and New Britain and New Ireland in PNG - described in 2016 | |

The information in this poster was collected during a project led by PNG's National Fisheries Authority entitled "Sustainable management of the shark resources of Papua New Guinea: socioeconomic and biological characteristics of the fishery" between 2014 and 2018. The biodiversity component of this work was taken from the book "Sharks and Rays of PNG" by White et al. (2017) which is available in electronic form at <https://www.aciar.gov.au/publication/Sharks-and-rays-Papua-New-Guinea>









Freshwater whipray
Urogymnus dalyensis
Grant et al. (2021)



RESEARCH ARTICLE

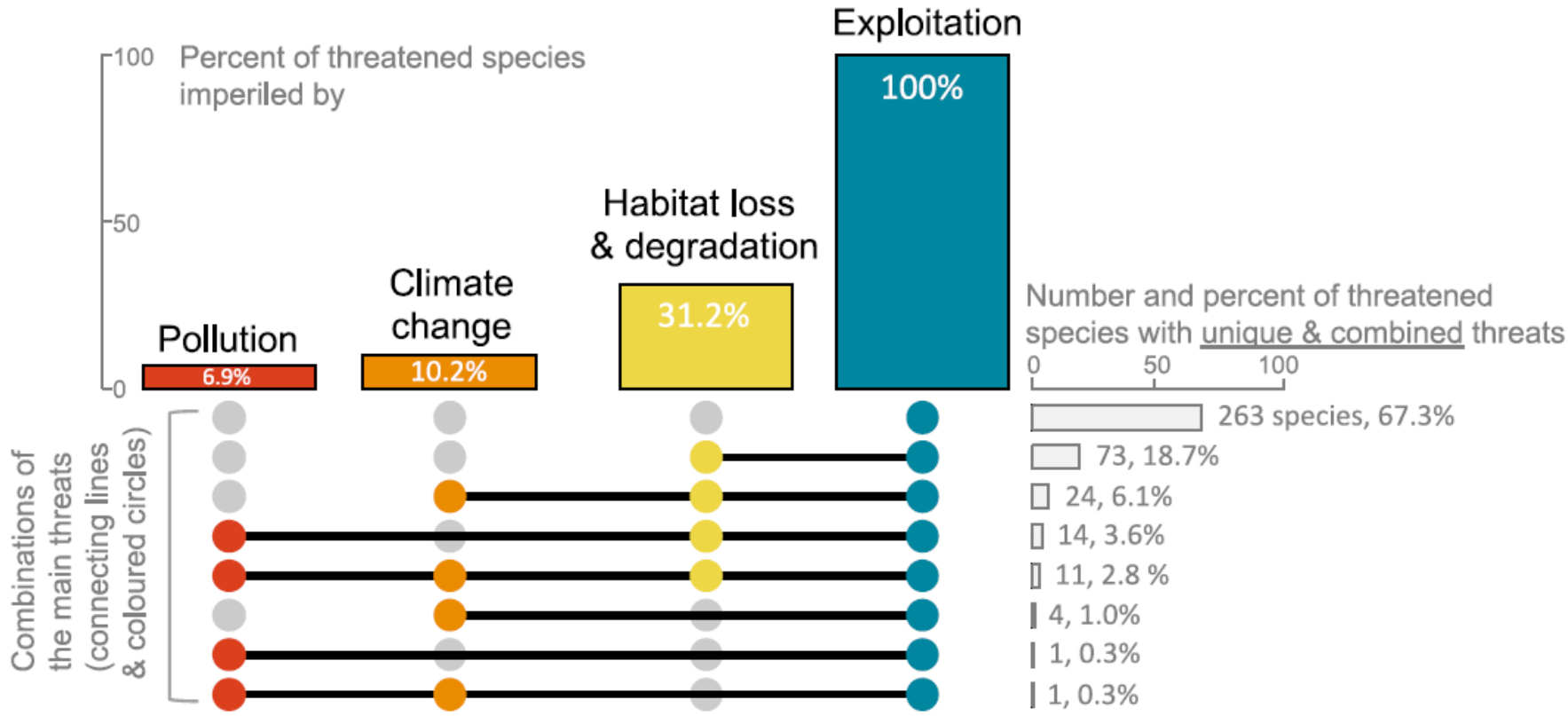
Rediscovery of the Threatened River Sharks, *Glyphis garricki* and *G. glyphis*, in Papua New Guinea

William T. White^{1,2*}, Sharon A. Appleyard^{1,2}, Benthly Sabub³, Peter M. Kyne⁴, Mark Harris⁵, Rickson Lis³, Leontine Bajo³, Thomas Usu³, Jonathan J. Smart⁶, Shannon Corrigan⁷, Lei Yang⁷, Gavin J. P. Naylor⁷

Article
Overfishing drives over one-third of all sharks and rays toward a global extinction

Nicholas K. Dulvy,^{1,16,19,*} Nathan Pacoureau,^{1,*} Cassandra L. Rigby,² Riley A. Pollom,³ Rima W. David A. Ebert,^{5,6} Brittany Finucci,⁷ Caroline M. Pollock,⁸ Jessica Cheok,¹ Danielle H. Derrick,¹ C. Samantha Sherman,¹ Wade J. VanderWright,¹ Julia M. Lawson,¹⁰ Rachel H.L. Walls,¹ John K Patricia Charvet,¹² Kinattumkara K. Bineesh,¹³ Daniel Fernando,^{14,15} Gina M. Ralph,¹⁶ Jay H. M. Craig Hilton-Taylor,⁸ Sonja V. Fordham,¹⁷ and Colin A. Simpfendorfer^{2,*}

A Threats



More than 38,500 species are threatened with extinction

That is still 28% of all assessed species.

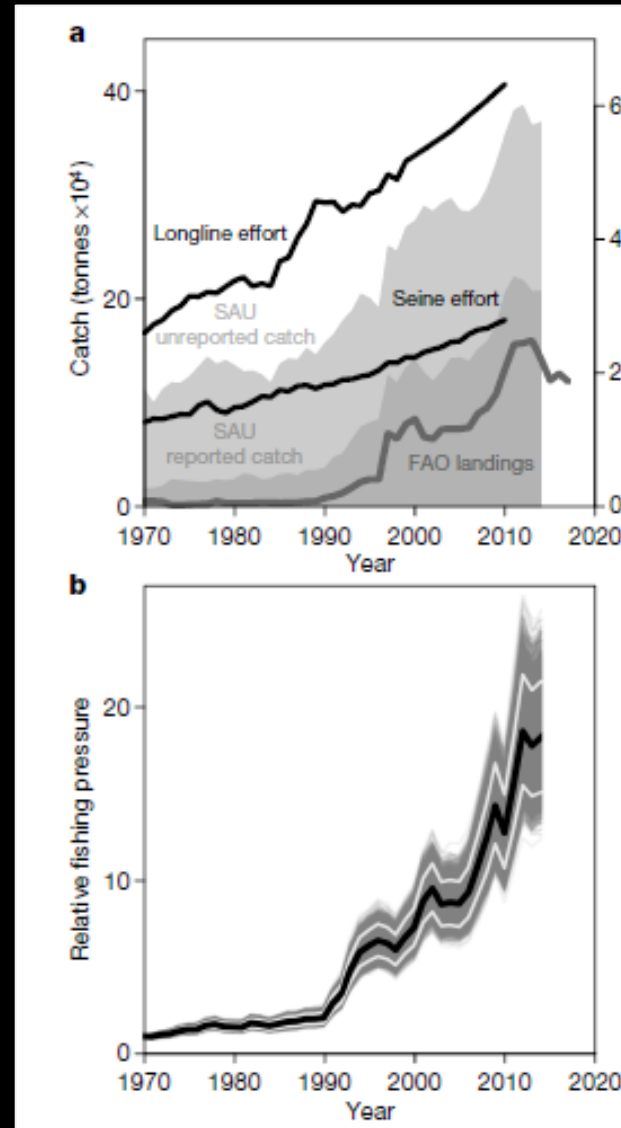


Oceanic sharks and rays

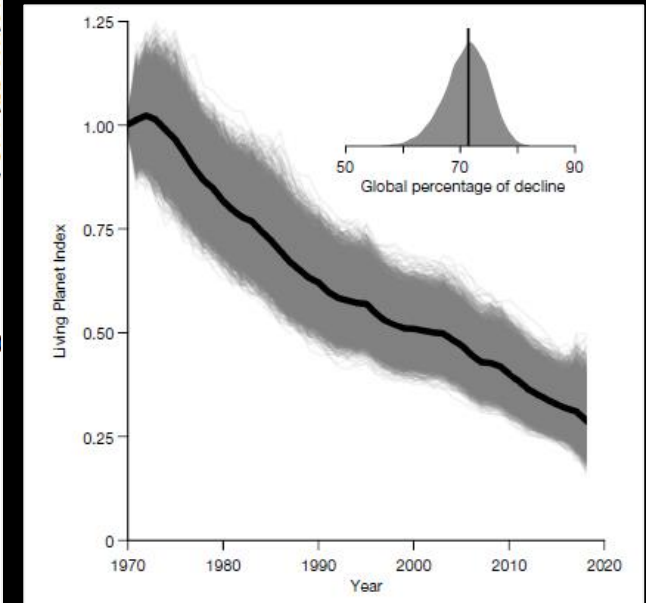
- High seas fisheries (mainly WCPFC)

Various research needs e.g.,

- Improved species resolution in catch data
- Bycatch mitigation
- Post release survival + best handling practices



Pacoureaux et al. (2021)



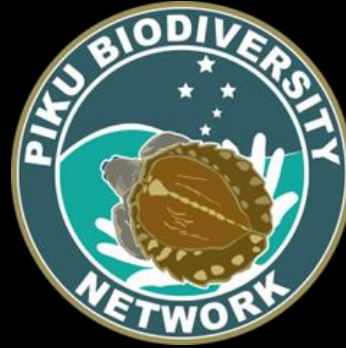
Papua New Guinea: A Potential Refuge for Threatened Indo-Pacific River Sharks and Sawfishes

Michael I. Grant^{1}, William T. White^{2,3}, Yolarnie Amepou⁴, Sharon A. Appleyard^{2,3}, Leontine Baje⁵, Floriaan Devloo-Delva^{2,6}, Pierre Feutry², Dotty Ibana⁷, Dick J. Jogo⁸, Stanley Jogo⁸, Peter M. Kyne⁹, Ralph Mana¹⁰, Nigel Mapmani¹⁰, Anthony Nagul¹¹, Darcy Roeger¹, Colin A. Simpfendorfer¹ and Andrew Chin¹*



Small-scale fisheries in the Pacific

Culture | Food | Economic opportunity



Swim bladder – an unexpected driver of small-scale fishing effort in PNG



Target species:
'Stone fish' *Nibea sqamosa*
Barramundi *Lates calcarifer*





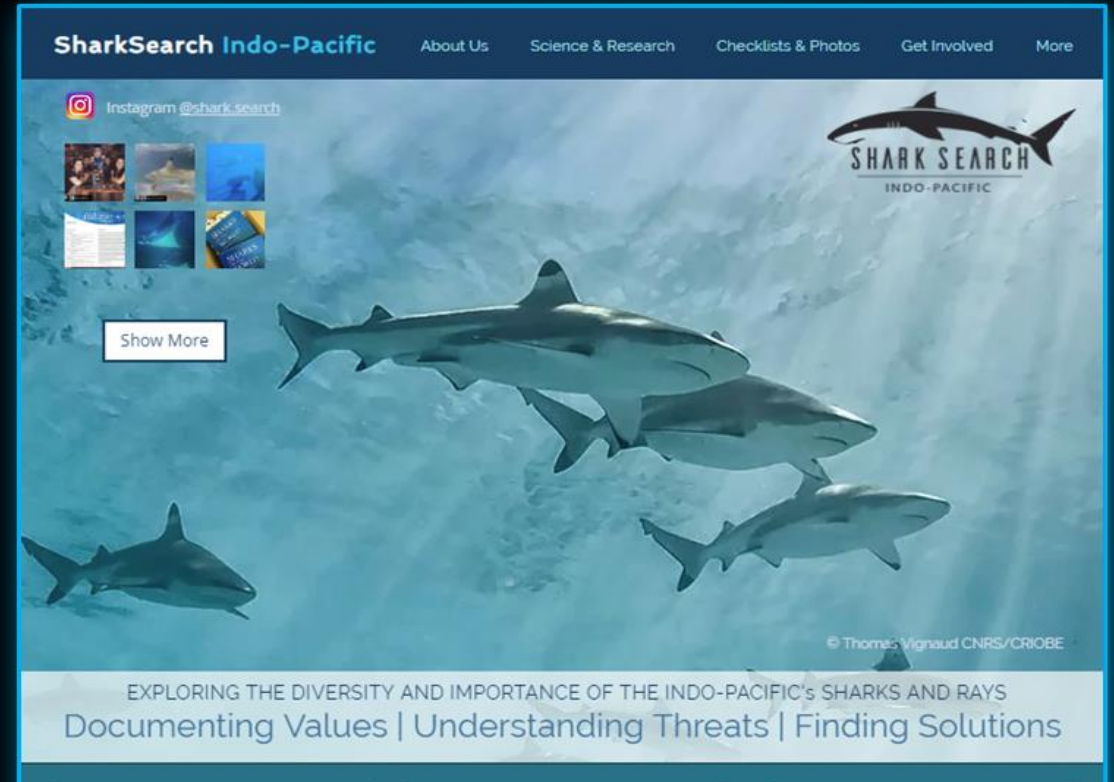
<https://www.sharksearch-indopacific.org/>

Provide national biodiversity lists

Additionally collate information on;

- Threats
- Use and value
- Cultural significance
- Management legislation

Framed to be a well-rounded resource to assist with national management, support NPOA's etc.



PUBLISHING



REVIEW

<https://doi.org/10.1071/PC20063>

PACIFIC CONSERVATION BIOLOGY

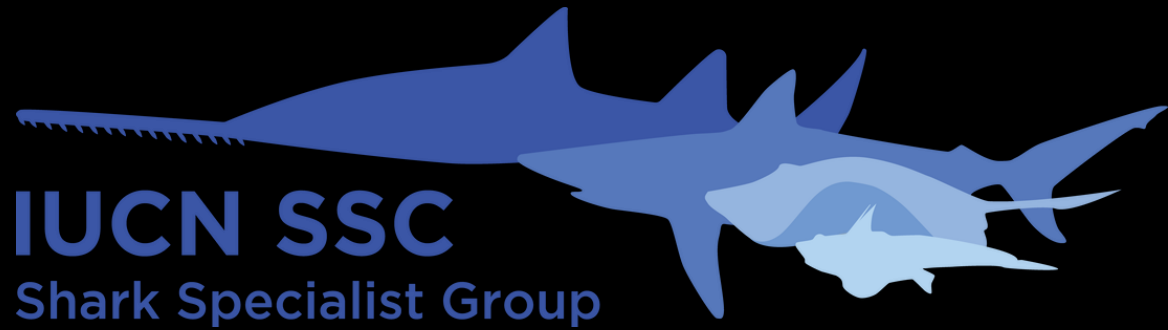


The sharks and rays of Palau: biological diversity, status, and social and cultural dimensions

Katelyn Hari^{A,*} , Vanessa Jaiteh^B and Andrew Chin^A 

Sharks, Rays and Chimaeras: The Status of the Chondrichthyan Fishes

Compiled and edited by Sarah L. Fowler, Rachel D. Cavanagh,
Merry Camhi, George H. Burgess, Gregor M. Cailliet,
Sonja V. Fordham, Colin A. Simpfendorfer and John A. Musick



SHARK AND RAY ACTION PLAN

GOAL: To conserve sharks, rays, and their habitats, ensuring healthy populations in the long term, recognising the traditions and aspirations of the peoples of the Pacific islands region.



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