



**CONVENTION ON
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FOURTH MEETING OF THE SIGNATORIES TO
THE MEMORANDUM OF UNDERSTANDING FOR
THE CONSERVATION OF CETACEANS AND THEIR
HABITATS IN THE PACIFIC ISLANDS REGION

5-6 August 2021, *Online*

**REPORTS FROM COLLABORATING ORGANIZATIONS ON IMPLEMENTATION OF THE MOU:
SOUTH PACIFIC WHALE RESEARCH CONSORTIUM**



AGENDA ITEM 2.4 – REPORTS FROM COLLABORATING ORGANISATIONS SOUTH PACIFIC WHALE RESEARCH CONSORTIUM

The South Pacific Whale Research Consortium was formed in 1999, as an affiliation of whale biologists resident in, or with strong research connections to, the South Pacific region. One of the Consortium's primary aims is to provide evidence-based research to provide guidance to Pacific Islands governments in the formulation and implementation of management advice for the conservation of cetaceans in the region. The Consortium is an active Collaborating Organisation in the CMS (see attached summary progress report). We look forward to discussions over the next two days about the MOU on the Conservation of Pacific Islands Cetaceans, and welcome the opportunity to take part in MOS 4.

Since MOS 3 in 2012, members of the Consortium have been involved in a number of activities of direct relevance, including coordinated research programmes on humpback whales and other species in American Samoa, Australia, the Cook Islands, Fiji, French Polynesia, New Caledonia, New Zealand, Niue, Samoa, and the Solomon Islands. Through a network of members, the Consortium supports collaboration with researchers active in Antarctic and sub-Antarctic feeding grounds of migratory whales. Meetings of the Executive Committee and members are held every two years, typically at the University of Auckland.

Relevant research programmes conducted by the Consortium on the implementation of the MOU on the Conservation of Pacific Islands Cetaceans and their Habitats include studies on:

- migratory destinations of humpback whales throughout breeding grounds of the South Pacific and connectivity with feeding grounds of the Antarctic;
- the provenance of humpback whales migrating past New Zealand and the Kermadec Islands;
- the evolution of humpback whale song as it spreads across the South Pacific Ocean;
- the responses of humpback whales to anthropogenic noise, especially in oil and gas prospecting;
- the abundance of Indo-Pacific bottlenose dolphins in the Solomon Islands and documentation of the drive-kill of dolphins in the Solomon Islands.

Relevant management advice has been provided to the International Whaling Commission, the International Union for the Conservation of Nature and to several PIC governments on the declaration of Sanctuaries and Marine Protected Areas throughout the region.

The Consortium also initiated and promoted a website for whale and dolphin strandings (<https://www.sprep.org/ioe/strandings-of-oceania-database>) which SPREP has now upgraded; participated actively at the Whales in a Changing Ocean conference in Tonga in 2017; and has been instrumental in promoting the designation of Important Marine Mammal Areas in the Pacific Islands.

Expertise within the Consortium includes acoustical, behavioural, demographic and genetic approaches to the study of whales, dolphins and dugongs. The South Pacific Whale Research Consortium welcomes the opportunity to participate in MOS 4 and to provide scientific advice in the future research into and conservation of cetaceans in the Pacific Islands.

Members of the Executive Committee:

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Publications (2012-2020) by Consortium members that are relevant to the CMS MOU on Pacific Islands cetaceans

The range of experience and knowledge available through Consortium members is reflected in the recent publications of relevance to the MOU on the Conservation of Pacific Islands Cetaceans and their Habitats:

Small cetaceans:

- Baker, C. S., A. Hutt, K. Thompson, M. L. Dalebout, J. Robins, R. L. Brownell, and G. S. Stone. 2013. Species identity and human consumption of beaked whales in the Gilbert Islands, Republic of Kiribati. *Animal Conservation* **16**:641-647.
- Oremus, M., J. Leqata, and C. S. Baker. 2015. Resumption of traditional drive hunting of dolphins in the Solomon Islands in 2013. *Open Science* **2**:140524.
- Oremus, M., J. Leqata, J. Hurutarau, S. Taei, M. Donoghue, and C. S. Baker. 2013. Population status of Indo-Pacific bottlenose dolphins, *Tursiops aduncus*, in the Solomon Islands and assessment of live-capture sustainability. Report (SC/65a/Forinfo32) to the Scientific Committee of the International Whaling Commission.
- Poole, M. M., M. Oremus, R. Albertson, and C. S. Baker. 2013. Expedition Marquesas: Photo-identification surveys and biopsy sampling of small cetaceans in northern French Polynesia. Report (SC/65/SM09) to the Scientific Committee of the International Whaling Commission,
2016. Laran, S.L., Van Canneyt, O., Poole, M.M., Oremus, M. Mammifères marins des Marquises. In: Glazin R., Duron, S.-D., Meyer, J.-Y. (eds). Biodiversité terrestre et marine des îles Marquises, Polynésie française. Société française d'Ichtyologie, Paris. ISBN 2-9514628-9. pp. 117-158.

Humpback whales:

- Albertson, G. R., A. S. Friedlaender, D. J. Steel, A. Aguayo-Lobo, S. L. Bonatto, S. Caballero, R. Constantine, A. L. Cypriano-Souza, M. H. Engel, C. Garrigue, L. Florez-Gonzalez, D. W. Johnston, D. P. Nowacek, C. Olavarria, M. M. Poole, A. J. Read, J. Robbins, A. L. Sremba, and C. S. Baker. 2018. Temporal stability and mixed-stock analyses of humpback whales (*Megaptera novaeangliae*) in the nearshore waters of the Western Antarctic Peninsula. *Polar Biology* **41**:323-340.
- Constantine, R., J. Jackson, D. Steel, C. S. Baker, L. Brooks, D. Burns, P. Clapham, N. Hauser, B. Madon, D. Mattila, M. Oremus, M. Poole, J. Robbins, K. Thompson, and C. Garrigue. 2012. Abundance of humpback whales in Oceania using photo-identification and microsatellite genotyping. *Marine Ecology Progress Series* **453**:249-261.
- Constantine, R., D. Steel, J. Allen, M. Anderson, O. Andrews, C. S. Baker, P. Beeman, D. Burns, J.-J. B. Charrassin, S. Childerhouse, M. Double, P. Ensor, T. Franklin, W. Franklin, N. Gales, C. Garrigue, N.

- Gibbs, P. Harrison, N. Hauser, A. Hutsel, C. Jenner, M.-N. Jenner, G. Kaufman, A. Macie, D. Mattila, C. Olavarria, A. Oosterman, D. Paton, M. Poole, J. Robbins, N. Schmitt, P. Stevick, A. Tagarino, K. Thompson, and J. Ward. 2014. Remote Antarctic feeding ground important for east Australian humpback whales. *Marine Biology* **161**:1087-1093.
- Derville, S., L. G. Torres, R. Albertson, O. Andrews, C. S. Baker, P. Carzon, R. Constantine, M. Donoghue, C. Duthiel, A. Gannier, M. Oremus, M. M. Poole, J. Robbins, and C. Garrigue. 2019. Whales in warming water: Assessing breeding habitat diversity and adaptability in Oceania's changing climate. *Global Change Biology* **25**:1466-1481.
- Garrigue, C., S. Derville, C. Bonneville, C. Baker, T. Cheeseman, L. Millet, D. Paton, and D. Steel. 2020. Searching for humpback whales in a historical whaling hotspot of the Coral Sea, South Pacific. *Endangered Species Research* **42**:67-82.
- Poole, M.M. Les cétacés des îles Australes et l'emblématique baleine à bosse.
In: Salvat, B., Bambridge, T., Petit, J. (eds). Environnement marin des îles Australes, Polynésie française. Institut Récifs Coralliens Pacifique, CRIOBE et The Pew Charitable Trusts Polynésie française. ISBN 978-2-905630-08-7, EAN 9782905630087. Tahiti, French Polynesia, pp. 102-111
- Riekkola, L., A. N. Zerbini, O. Andrews, V. Andrews-Goff, C. S. Baker, D. Chandler, S. Childerhouse, P. Clapham, R. Dodv@mont, D. Donnelly, A. Friedlaender, R. Gallego, C. Garrigue, Y. Ivashchenko, S. Jarman, R. Lindsay, L. Pallin, J. Robbins, D. Steel, J. Tremlett, S. Vindenes, and R. Constantine. 2018. Application of a multi-disciplinary approach to reveal population structure and Southern Ocean feeding grounds of humpback whales. *Ecological Indicators* **89**:455-465.
- Schmitt, N., M. C. Double, S. Baker, N. Gales, S. Childerhouse, A. M. Polanowski, D. Steel, R. Albertson, C. Olavarria, C. Garrigue, M. Poole, N. Hauser, R. Constantine, D. Paton, K. C. S. Jenner, S. N. Jarman, and R. Peakall. 2014. Mixed-stock analysis of humpback whales (*Megaptera novaeangliae*) on Antarctic feeding grounds. *Journal of Cetacean Research and Management* **14**:141-157.
- Steel, D., M. Anderson, C. Garrigue, C. Olavarria, S. Caballero, S. Childerhouse, P. Clapham, R. Constantine, S. Dawson, M. Donoghue, L. Flórez-González, N. Gibbs, N. Hauser, M. Oremus, D. Paton, M. M. Poole, J. Robbins, L. Sooten, D. Thiele, J. Ward, and C. S. Baker. 2018. Migratory interchange of humpback whales (*Megaptera novaeangliae*) among breeding grounds of Oceania and connections to Antarctic feeding areas based on genotype matching. *Polar Biology* **41**:653–662.

Humpback whale song:

Warren VE, Constantine R, Noad M, Garrigue C, Garland EC (2020) Migratory insights from singing humpback whales recorded around central New Zealand. *Royal Society Open Science* 7: 201084.

Owen C, Rendell L, Constantine R, Noad MJ, Allen J, Andrews O, Garrigue C, Poole MM, Donnelly D, Hauser N, Garland EC (2019) Migratory convergence facilitates cultural transmission of humpback whale song. *Royal Society Open Science* 6:190337.

Garland EC, Rendell L, Lamoni LU, Poole MM, Noad MJ (2017) Song hybridization events during revolutionary song change provide insights into cultural transmission in humpback whales. *Proceedings of the National Academy of Sciences* 114:7822-7829.

Garland EC, Goldizen AW, Lilley MS, Rekdahl ML, Constantine R, Garrigue C, Daeschler Hauser N, Poole MM, Robbins J, Noad MJ. (2015) Population structure of humpback whales in the western and central South Pacific Ocean as determined by vocal exchange among populations. *Conservation Biology* 29:1198–1207.

Garland EC, Goldizen AW, Rekdahl ML, Constantine R, Garrigue C, Daeschler Hauser N, Poole MM, Robbins J, Noad MJ. (2011) Dynamic horizontal cultural transmission of humpback whale song at the ocean basin scale. *Current Biol*