CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Seventeenth meeting of the Conference of the Parties
Johannesburg (South Africa), 24 September – 5 October 2016

SUMMARY OF FINDINGS ON DEVIL RAY (*MOBULA* SPP.) GROWTH, PRODUCTIVITY, FISHING MORTALITY, AND RELATIVE EXTINCTION RISK

This document has been submitted by Fiji, in relation to agenda item 88 on *Proposals to amend Appendices I and II* and amendment proposal CoP17 Prop. 44 on *Inclusion of the genus Mobula spp. in Appendix II*.*

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Summary of findings on devil ray (*Mobula* spp.) growth, productivity, fishing mortality, and relative extinction risk**.**

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This is a summary document highlighting the key findings of the article "*Growth, productivity, and relative extinction risk of a data sparse devil ray*"[1] by Sebastian A. Pardo *et al.* published in the journal *Scientific Reports*.

This study used the only published devil ray length-at-age dataset together with available devil ray life history data to estimate 1) growth rates, 2) fishing mortality at the site of collection of the length-at-age data (Pacific coast of Mexico), and 3) maximum intrinsic rate of population increase, which is a measure of productivity, and compared it with that of 95 other shark and ray species. Their findings strongly indicate that:

1. The estimated growth rate is much lower than previously thought, in line with species deemed to have low productivity.
2. Devil rays have one of the lowest maximum intrinsic rates of population increase among chondrichthyans examined, and is comparable to that of manta rays.
3. Fishing mortality from catches around Baja California, Mexico (in 2002-2005), suggests that a small-scale artisanal fishery operating in the area was unsustainable.
4. The low growth, low fecundity, and low maximum intrinsic rate of increase, indicate that devil rays have low, or even very low, productivities.
5. The productivity of devil rays is very similar to that of manta rays, warranting a similar degree of protection for both.

[1] *Pardo, S. A., Kindsvater, H. K., Cuevas-Zimbrón, E., Sosa-Nishizaki, O., Pérez-Jiménez, J. C., Dulvy, N. K. (2016) Growth, productivity, and relative extinction risk of a data-sparse devil ray. Scientific Reports, **6**, 33745.*