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Agenda Item 28.1

REPORT ON THE IMPLEMENTATION OF THE CONCERTED ACTION FOR THE WHALE SHARK (*Rhincodon typus*)*

(Prepared by Large Marine Vertebrates Research Institute Philippines)

Summary:

Large Marine Vertebrates Research Institute Philippines has submitted the attached report on the implementation of the Concerted Action for the Whale Shark (*Rhincodon typus*), UNEP/CMS/Concerted Action 12.7.

REPORT ON THE IMPLEMENTATION OF THE CONCERTED ACTION FOR THE WHALE SHARK (*Rhincodon typus)*

UNEP/CMS/ CONCERTED ACTION 12.7

1. CONCERTED ACTION

Title: Concerted Action for the whale shark (*Rhincodon typus*)

Document number: *UNEP/CMS/Concerted Action* 12.7

2. LARGE MARINE VERTEBRATES RESEARCH INSTITUTE PHILIPPINES

Large Marine Vertebrates Research Institute Philippines (LAMAVE) is Filipino non-stock non-profit dedicated to the conservation of marine megafauna and their habitats. LAMAVE has been working with whale sharks since 2012, and supported the Concerted Action and the listing into Appendix I of CMS during CoP12 in Manila, 2017. LAMAVE has multiple partners and collaborating institutions from across the globe. LAMAVE is a Cooperating Partner to the CMS Sharks MOU.

3. TARGET SPECIES

Class: Chondrichthyes

Order: Orectolobiformes

Family: Rhincodontidae

Species: *Rhincodon typus*

4. PROGRESS IN ACTIVITIES

1.1: Investigate (through research, including satellite tagging and genetic studies) the connectivity of local populations and migrations.

LAMAVE is currently monitoring 5 major aggregations in the Philippines. A new global hotspot in Palawan, where connectivity was established with Malaysia and Indonesia using satellite telemetry and photographic identification is currently in review for publication (Araujo et al. *in review*). From this site, collaborations for global genetics, genomics and kinship mark-recapture are currently being pursued.

In 2019, the Philippines became the second world's largest known population of whale sharks as investigated through photo-ID, with 1,750 individuals identified to date, second only to Mexico (Pacific + Caribbean).

1.3: Investigate locations and conditions in which pollution (such as discarded fishing gear, noise, plastics etc.) may be affecting whale shark populations.

LAMAVE is currently undertaking a microplastic study in the central Visayas region of the Philippines. Preliminary results highlight a high abundance of different plastics (polypropelene, polyethelene, polymethylmethacrylat and polyethylenterephthalat) present in whale shark foraging grounds. The work is ongoing.

2.1: Identify potential threats to whale sharks from tourism activities.

Oslob in Cebu, Philippines, is the largest non-captive whale shark watching industry in the world, receiving >500,000 tourists in 2018. LAMAVE identified issues with the tourism activities (Ziegler et al. 2018), high incidence of injuries (Penketh et al. *in review*) and changes to the whale sharks habitat use and metabolic rate (Araujo et al. *in review*).

LAMAVE is also monitoring the tourism activities in Southern Leyte, Donsol and Puerto Princesa. Management recommendations have been made in Southern Leyte and Puerto Princesa, but the work in Donsol is ongoing.

2.4: Develop unified tourism guidelines to limit impacts on whale sharks and provide a code of conduct.

Dearden and Ziegler (*in press*) conducted a thorough review of whale shark tourism globally. Upon publication, this will be used to produce a small publication depicting the minimum recommended code of conduct based on global tourism standards. In collaboration with the Maldives Whale Shark Research Programme (MWSRP), a global effort 'Swim with whale sharks' is currently in pre-production to create an informative, educational video that would align with the unified tourism guidelines.

2.6: Develop appropriate education and awareness tools, incorporating scientific and traditional knowledge for a range of different stakeholders.

LAMAVE works with local communities, local government units, business owners, tourism operators, regional and provincial governments and agencies, and the national government to ensure scientific findings are shared with all stakeholders. LAMAVE continues to do so at all the whale shark sites where it works, and disseminates information accordingly to advice policy.

5. REFERENCES

Araujo G, Agustines A, Tracey B, Labaja J, Snow S, Ponzo A. *In review.* Citizen science, photo-ID and telemetry highlight a global whale shark hotspot in Palawan, Philippines. *Scientific Reports.*

Araujo G, Labaja J, Snow S, Huveneers C, Ponzo A. *In review.* Changes in diving behaviour and habitat use by provisioned whale sharks: implications for metabolic rate and wildlife tourism management. *Royal Society Open Science.*

Dearden and Ziegler. *In press*. Protecting an Endangered Species: The Role of Whale Shark Tourism as an Incentive-based Conservation Approach. *In*: The whale shark: research and conservation. *Eds*. Pierce S & Dove A.

Penketh L, Labaja J, Schleimer A, Snow S, Ponzo A, Araujo G. *In review*. Scarring patterns of whale sharks *Rhincodon typus* at a provisioning site in the Philippines. Journal of Fish Biology.

Ziegler JA, Silberg JN, Araujo G, Labaja J, Ponzo A, Rollins R, Dearden P. 2018. A guilty pleasure: Tourist perspectives on the ethics of feeding whale sharks in Oslob, Philippines. Tourism Management 68:264-74.

6. ACTION

It is recommended that the Concerted Action and its activities are renewed as most activities are ongoing and need long-term monitoring for success and eventual adaptation.