Overview of the Current Status, Challenges and Opportunities of Sea Turtle Research and Conservation in China –

Finding the Key to Navigate Conservation Actions across Disciplines and Boundaries

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All sea turtle species are listed as the Category I of the national protected animals in China. Together with the Government, the China Sea Turtle Conservation Alliance, established in 2018, has formulated a 15-year Sea Turtle Conservation Action Plan (2019-2033). By building on our scientific knowledge from existing studies on the population demography, habitat use and connectivity, and ecology of sea turtles, coupled with the perspectives of current conservation effort and public education, this presentation aims to identify essential information gaps, propose potential research opportunities, and explore collaboration. We wish to draw attention to the two below key directions, to facilitate and engage stakeholders, including you, in a cross-sectoral discussion for developing sustainable conservation measures, rooted with the local community and traditional knowledge.

The need of studies on ecology and threat assessment which are instrumental to sustainable conservation













Distribution of major nesting and foraging grounds of sea turtles in China and the neighboring area (Foraging ground = Closed circle symbol, Nesting site = Open circle/ Star symbol, Green = green turtle, Orange = hawksbill, Blue = olive ridley, Purple = loggerhead, Black = leatherback) **Critical Habitats & Migratory Corridors used by Sea Turtles identified** by Satellite Tracking and Literature Review (Ng et al. 2018)





Genetic connectivity of green turtle rookeries, Xisha & Ogasawara were unique (Ng et al. 2024)



Foraging green turtles (blue) came from potential source rookeries (red) in the Pacific (Ng et al. 2017)

What should be done in response to information gaps & protection? Besides existing protection of major nesting sites, e.g. Xisha and Huidong, we should -1. Protect a network of critical habitats and migratory corridors identified in published and future further studies from (2) to (4)

2. Build a National database of standing & salvage network for monitoring population 3. Explore innovative means to identify or monitor sea turtles in potential nesting/

foraging sites, e.g. by environmental DNA (Ng et al. 2024)

4. Focus study on wild-ranging sea turtles, e.g. at Xisha Islands & East China Sea (i) Tracking movement on nesting green turtles in Xisha Islands (Song et al. 2022) (ii) Pursue collaborative research on habitat use by loggerhead and other sea turtles, and their interactions with human activities in East China Sea (Ng et al. 2024)

East China Sea is a major foraging ground of nesting loggerheads from Japan (Figures adopted from Oki et al. 2019 & Okuyama et al. 2022)

BUT we lack important information of habitat use by sea turtles from other nesting sites or life stages

Who are the stakeholders? How should we co-develop and navigate our conservation actions and public education?



Develop Science-informed Conservation Action Plan Review Each Action Objective & Effectiveness





Energise Communication & Collaboration in China and Across Regions





Marine Science Discovery Centre

State Key Lab of Marine Env Science Ocean Open Day at Xiamen University





Adopt and Emphasise Blue Economy Leverage on Socio-economic Initiatives

Acknowledgement: We would like to thank the many pioneers who have been involved in previous studies, and the government officials, local communities, scientists, educators, relevant organizations at present and in the future, for their committed hard work and enormous efforts in sea turtle conservation. You can access to the key references and NG's LinkedIN by the QR Codes.





護北島,守護這片生命之海的故事是人們 個世紀八十年代以來,由於長期的濫捕濫 非法貿易、過度開發以及海洋污染等人為 每候變化的威脅,全球海龜種群數量和分 園均鋭減。中國 2021 年調整後的《國家重點保 野生動物名錄》,將分布在中國的5種海龜全 為國家一級重點保護野生動物



Integrate Local Knowledge & Community **Respect Tradition & Cultural Significance**



Marine Turtle Specialist Group Sea Turtle Conservation East Asia Region, IUCN Action Plan in Cina



Ng et al. (2024) Genetics Overview of Sea Turtles in East Asia Region



Ng et al. (2018) Habitats & Migratory Ng et al. (2017) Genetic Stock Corridors of Green Turtles in China Composition of Green Turtles in China

Song et al. (2022) New Management Unit of Green Turtles in Xisha Islands

PEOPLE are the KEY

Public Education as Facilitator & Influencer to Engage Public & Stakeholders

The above photos were captured by Connie NG in her professional and personal occasions when working with colleagues and friends on marine conservation and education in China and East Asia Region. Those moments earmarked the trust and friendship, along with the collaboration opportunities, in her career with marine science education and sea turtles.