

**1. Project Title:** Joint China/USA Living Marine Resources Sea Turtle Workshop at the Guangdong Huidong Sea Turtle National Nature Reserve

## **2. Names, Affiliations, and Contact Information**

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## **3. Project Objectives and Background**

*Background:* In April 2012, a US-China Living Marine Resources Panel Meeting was convened in Shanghai China. During this meeting, representatives attended from U.S. National Marine Fisheries Service, the Chinese Academy of Fishery Sciences (CAFS), and Guangdong Huidong Sea Turtle National Nature Reserve Management Bureau (The Reserve). During the meeting, the China-LMR Panel identified two potential projects as the initial sea turtle research collaborations among the team. These two projects included 1) studying foraging ecology of sea turtles in coastal China and 2) analyze existing telemetry data from China to explore oceanographic influences on sea turtle movements. This proposal outlines a 5-day sea turtle workshop to be held at The Reserve. During this meeting a variety of themes will be pursued, and among these is training in sea turtle lavage techniques, which will provide the foundation for furthering collaborative studies of sea turtle foraging ecology in China. Also during this workshop, we expect that additional potential collaborations will be identified that may be pursued in the future under the China-US Living Marine Resources Initiative.

The People's Republic of China and the USA Pacific have significant foraging and breeding habitats for sea turtles. Sea turtles play an important cultural role in Chinese society, and there is increasing interest on the part of marine scientists in China to gain greater knowledge about the ecology and conservation of sea turtles in the China region. Furthermore, sea turtles regularly travel across international borders during their life history, hence factors adversely impacting sea turtles have ramifications across broad areas of the Pacific. Recent preliminary collaborations between NOAA and CAFS, through The Reserve, have expanded the potential for information exchange between China and the USA for greater understanding of sea turtle biology for improved management and cooperation. Scientists at NOAA have expertise in demographics and ecology of sea turtles in the Pacific that will enhance and enrich USA-China collaborations. Conversely, scientists at CAFS and The Reserve have high knowledge about sea turtles of their South China Sea and East China Sea regions.

*Objectives:* The goal of the proposed workshop is to promote meaningful information exchange and strengthening of collaborations among scientists and to produce the initial data on sea turtle health that comes from the joint group's necropsy efforts. The Reserve is an ideal location for focused research and training for scientists from all China, in partnership with the USA because of its location near one of the most important green turtle nesting beaches in China and its captive husbandry facility that houses numerous sea turtles. It is at this site that we propose to conduct a 5-day workshop on sea turtle health assessment, necropsy techniques, and foraging ecology.

The three primary themes of this workshop (health, necropsy, foraging ecology) are fundamental components of sea turtle research. For example, understanding the health of turtles, and the causes of disease and mortality are critical for determining why populations may be increasing or decreasing.

Further, learning about sea turtle foraging ecology can help identify the most important marine habitats and foods for sea turtles, and thus pinpoint the most important coastal areas for protection and conservation efforts. Each of these workshop themes will be pursued in a hands-on way. To conduct health assessment training, we plan to use live sea turtles; for necropsy training we will use recently stranded dead turtles. Topics in the foraging ecology of sea turtles will be conducted with the use of power point / slide presentations and may include training in the use of research equipment such as flipper tagging and lavage with real gear on live turtles. Together, this hands-on experience will leave all workshop participants with a more in-depth understanding of sea turtle assessment and research techniques.

We expect roughly 12 people will participate in the workshop, 8 from PR China, and 4 from the USA. The US participants will include George Balazs (PIFSC) Jeffrey Seminoff (SWFSC), Thierry Work, Wildlife Disease Specialist at the National Wildlife Health Center in Honolulu, and John Wang (PIFSC / Joint Institute of Marine and Atmospheric Research Honolulu. Because the Living Marine Resources is a China/USA bilateral program, the workshop will be confined to PR China and USA participants for highest achievement of bilateral goals.

#### **4. Consistency with NMFS International Science Strategy and Criteria for International Engagement**

The efforts for the US-China LMR Sea Turtle Workshop link directly to several priorities in the NMFS International Science Strategy and broadly consistent with the NOAA Criteria for International Engagement. First and foremost, there are two endangered marine turtle stocks (Pacific leatherback turtles and North Pacific loggerhead turtles) that inhabit coastal waters of both nations. By engaging in this Workshop, we can work mutually toward better science and thus, more informed management efforts, that will promote sea turtle conservation and population recovery in the Pacific. Among the most important aspects of this project is that it will help NMFS foster a greater collaborative relationship with a federal agency from China, a Priority Partner Country. This workshop effort is consistent with the following Criteria for International Engagement: A. Criteria for engagement in bilateral science agreements (Promote sustainability of living marine resources; Peer-to-peer high-level science collaboration; Research across similar ecosystems and large-scale effects on living marine resource; Promote joint research, data collection and assessments to strengthen NMFS science), B. Criteria for scientific exchange (Ability to strengthen expertise and address research gaps; Opportunity to advance partnerships and leverage resources; Ability to promote joint research, data collection, and assessments; Experience for U.S. Scientists; Political goodwill), and C. Criteria for capacity building (Ability to conserve living marine resources; Collection of data and information; Contribution to the scientific and technical capacity of developing countries; Political goodwill; Experience for U.S. Scientists).

#### **5. Budget**

<i>Team Member</i>	<i>Item</i>	<i>Cost</i>
Jeffrey Seminoff	Airfare/Travel, RT San Diego to the Turtle Reserve (via Hong Kong)	3,000
	Lodging & Per diem	1,500
George Balazs	Airfare/Travel, RT Honolulu to the Turtle Reserve (via Hong Kong)	3,500
	Lodging & Per diem	1,500
Thierry Work	Airfare/Travel, RT Honolulu to the Turtle Reserve (via Hong Kong)	3,500
	Lodging & Per diem	1,500
John Wang	Airfare/Travel, RT Honolulu to the Turtle Reserve (via Hong Kong)	3,500
	Lodging & Per diem	1,500
<b>TOTAL</b>		<b>19,500</b>