

**MTSG UPDATE:**

**IUCN/SSC Marine Turtle Specialist Group Hosts the  
Second Burning Issues Assessment Workshop**

**Roderic B. Mast<sup>1</sup>, Brian J. Hutchinson<sup>2</sup>, Emily Howgate<sup>3</sup> & Nicolas J. Pilcher<sup>4</sup>**

*1 - Co-Chair, IUCN/SSC Marine Turtle Specialist Group, Conservation International, Center for Applied Biodiversity Science, 1919 M Street NW, Washington, DC 20036 USA*

*Email: r.mast@conservation.org*

*2 - Program Officer, IUCN/SSC Marine Turtle Specialist Group, Address as above*

*Email: bhutchinson@conservation.org*

*3 - Intern, Sea Turtle Flagship Program, Conservation International, Address as above*

*Email: ehowgate@conservation.org*

*4 - Co-Chair, IUCN/SSC Marine Turtle Specialist Group, Marine Research Foundation, 136 Lorong Pokok Seraya 2, Taman Khidmat, 88450 Kota Kinabalu, Sabah, Malaysia*

*Email: pilcher@tm.net.my*

**Introduction**

The second MTSG Burning Issues Assessment Workshop (BI2) was held at the Headquarters of Conservation International (CI) from August 18-20, 2005. Present were 16 MTSG members hailing from half a dozen countries and representing expertise from most of the MTSG's twelve sub-regions. Also present was the Program Officer of

the IUCN Freshwater Turtle and Tortoise Group, and other scientists with priority-setting expertise from CI's Global Marine Division, and the Center for Applied Biodiversity Science (CABS). After a brief introductory talk by MTSG Co-Chair Roderic Mast on the history of the Burning Issues; and another by CABS Scientist, Penny Langhammer, on strategies and methods for determining Key Biodiversity Areas (KBAs), the "BI2 Team"

launched into two full days of discussions on how the MTSG can best achieve its global priority-setting task as mandated in our mission statement:

### **MTSG MISSION**

*To develop and support strategies, set priorities, and provide tools that promote and guide the conservation of marine turtles and their ecological roles and habitats*

The MTSG takes its responsibilities in priority setting very seriously, and the group has embarked upon a multi-year plan to not only re-assess the IUCN Red List status of all seven sea turtle species at the global scale, but also to conduct Red Listing assessments at the level of genetic stocks, an effort that began in earnest in the Mediterranean in April 2005 under the leadership of MTSG Red List Focal Point, Jeffrey Seminoff (see MTN 109:12-14). Red Listing will continue to be of critical concern to the MTSG, despite the oft-cited difficulties that the Red List criteria pose when applied to wide-ranging, long-lived, long-generation marine species like sea turtles (Mrosovsky 2003).

The Burning Issues attempt go a step beyond Red Listing, and they offer an even more compelling tool to assist the global sea turtle research and conservation community for activities related to media, communications and public outreach. Moreover they serve as a guide to influence governments, foundations and donor agencies of all sorts; and they are an effective internal compass for our own movement, assuring that we are focusing our attention on those species, regions, and research and conservation needs that are of gravest and most urgent concern in preventing sea turtle extinctions.

### **Burning Issues History**

The concept, name and first draft of the Burning Issues were all born out of a December, 2003 MTSG Visioning Retreat that was held in Shepherdstown, WV, USA with some 30 MTSG members present (see MTN 104:21-22). The initial products were a series of lists highlighting what the experts at that meeting believed to be the most important global priorities for Research and

Conservation, as well as a single list that highlighted critical worldwide issues as they relate to certain sea turtle stocks regionally (i.e., leatherbacks in the Pacific). The group even produced a “good news” list that would focus attention on what appear to be success stories in the making (i.e., the apparent turn-around in Kemp’s ridley numbers and their return to nesting beaches in Texas, USA).

All of these Burning Issues lists were created with some trepidation by the scientists present, however, as it was questioned whether a small group could ever accurately represent the full scope of global understanding of sea turtles. Furthermore, it was feared that the Burning Issues might be seen as a sort of triage that would result in important, though non-listed populations being considered not worthy of attention. This uncertainty prevented the MTSG from aggressively marketing the Burning Issues, and though all of the results of the first Burning Issues Assessment were made public, very little was undertaken to widely share them with communities outside the readership of the MTN or the approximately 300 MTSG members worldwide.

The aforementioned list of critical worldwide issues by population and region however, passively drew the greatest attention, and demonstrated its value when its top issue (leatherbacks in the Pacific) was chosen as the theme of the 2004 Sea Turtle Symposium (STS) in San Jose, Costa Rica. The Pacific leatherback became the STS XXIV logo, and the centerpiece of a major global press campaign that reached several hundreds of millions of readers and TV and radio audiences worldwide (see Mast, MTN 104:15-19). The Burning Issues List validated the importance of that important conservation issue and elevated it to global-scale attention. The direct and indirect results of this ranged from enhanced public awareness of threats to sea turtles worldwide, to a declaration by Costa Rica’s President to enhance the protection of all marine biodiversity in that country by expanding protection in the marine realm (see Boza & Padilla, MTN 105:14-15).

These experiences provided solid evidence that the Burning Issues list could indeed be a valuable aid to conservation, and the MTSG leadership decided

that a greater attempt would be made to assess Burning Issues more effectively and on a more regular basis. This sentiment was echoed at the MTSG Annual General Meeting in Savannah, GA in January 2005, with several Members emphasizing the need to refine the methodology and solidify the criteria used for defining the Burning Issues.

### **Methods and Results of the BI2 Workshop**

The workshop began with a discussion of the group's expectations and the main questions that we would attempt to answer over the subsequent days. These included:

- What are the criteria for defining the Burning Issues?
- How many Burning Issues lists do we want and what will the final products look like?
- How do we involve the entire MTSG community in defining Burning Issues?
- How often do the Burning Issues need updating?
- How do we evolve from subjective (expert opinion) to increasingly more objective criteria over time?

The group set upon its task, and soon decided that to keep the process moving ahead, we would use "expert opinion" as the principle criteria for determining the Burning Issues, such that the process does not stagnate as do so many conservation processes due to "analysis paralysis," or being put "on hold" until more data (that is never quite enough) can be generated. It was felt that our greatest asset is the expert opinion of the MTSG network as a whole, and that the best way to proceed is to tap further into this group by devising mechanisms for full membership participation.

After lengthy dialogue on the pros and cons of site-based priority-setting methodologies, such as the KBA approach used by CI, and on taxon-based methods such as those used very effectively by BirdLife International, we recognized that both of these are desirable, but they pose serious limitations when applied to sea turtles. Hence, we chose to focus our prioritization efforts on a threat-based methodology, universally used in Risk Management, which identifies "Hazards" (what threatens turtles?), then proceeds to "Exposures" (how

specifically are they affected?), examines the "Effects" (what is the effect of exposure to the hazard?), and finally results in a Judgment – a path forward for conservation action to address each Hazard.

The group developed a simple questionnaire that will be administered on-line by SEATURTLE.ORG and will allow the entire MTSG membership to participate in assessing the relative intensity of each Hazard in their region / ocean basin for each species, allowing us to fill-in the blanks concerning "Exposures." As we refined the list of broad and specific Hazards we used the following questions to guide our choices:

- Is this Hazard important to prevent sea turtle extinction?
- Is this Hazard important for conserving marine biodiversity?
- Is this Hazard relevant for implementing conservation actions?

The list of broad Burning Issue Hazards as defined by the group follows below, and this list is currently under review by the entire MTSG membership using an on-line survey. It will be subsequently refined based on the membership's response in order to provide a more concise view of the relative intensity of these Hazards, and prioritized laundry list of more specific sub-hazards to sea turtles globally and by ocean basin. This represents the first step in what will become a consensus-driven Burning Issues Assessment process in which the entire MTSG membership will participate regularly.

***Burning Issues Assessment – Broad Hazards to Sea Turtles*** (Note: "Burning Issues" are defined as hazards that will result in decline, local extinction and / or prevent recovery of sea turtles.)

***Fisheries Impacts:*** *Sea turtles virtually everywhere are impacted by fisheries, especially longlines, gill nets, and trawls. The most severe of these impacts are bycatch mortality, habitat destruction and food web changes.*

***Coastal Development:*** *Sea turtle habitats are degraded and destroyed by coastal development. This includes both shoreline and*

*seafloor alterations, such as nesting beach degradation, seafloor dredging, vessel traffic, construction, and alteration of vegetation.*

**Directed Take:** *Sea turtles and their eggs are killed by people throughout the world for food, and for products including oil, leather and shell.*

**Pollution and Pathogens:** *Marine pollution, including plastics, discarded fishing gear, petroleum by-products, and other debris directly impact sea turtles through ingestion and entanglement. Light pollution disrupts nesting behavior and hatchling orientation, and leads to hatchling mortality. Chemical pollutants can weaken sea turtles' immune systems, making them susceptible to pathogens.*

**Global Warming:** *Global warming may impact natural sex ratios of hatchlings, will increase the frequency of extreme weather events, and may increase the likelihood of disease outbreaks for sea turtles. Global warming will result in loss of nesting beaches, and cause other alterations to critical sea turtle habitats and basic oceanographic processes.*

Next, the BI2 Team set out to refine the Burning Issues lists of key Research Needs, Conservation Themes, and what became known as the “top ten list” of sea turtle conservation priorities by stock and region. These lists are being reviewed and refined, and will be presented publicly at the STS XXVI in Crete. We agreed that reviewing the Burning Issues annually in a small forum such as the BI2 workshop and the one convened in December, with an ever-changing cast of MTSG experts, would be desirable, and that every effort should be made to follow these gatherings with fine-tuning of the results by the entire membership, as we are doing for BI2.

**Conclusion**

It has been said that, *“If you do not know where you are going, then any road will get you there.”*

Arguably, the MTSG’s most important function is to map out the fastest and best roads that will lead to our vision:

**MTSG Vision**

*We envision marine turtles fulfilling their ecological roles on a healthy Planet where all peoples value and celebrate their continued survival*

We want to emphasize that setting priorities is not triage, but rather focus. We understand that there is a value in pure scientific research, whether its themes appear on our priority research issues list or not; just as we understand that all conservation efforts for sea turtles are worthy ones, whether they are *Burning Issue* priorities or not. What the Burning Issues provide is a road map to assure that while we are undertaking the rest of the work, we are not losing sight of what matters the most.

We also know that, *“all journeys begin with a single step,”* and we recognize that the Burning Issues are merely a single, first step; they are not perfect, nor can they ever be given Nature’s mystery, the incomplete understanding of sea turtles, and the subjective nature of our human analyses. In their imperfection however, lies their perfection, which is their currency, their *now-ness*. What the Burning Issues aim to be is a *snapshot* of what the world’s top experts in sea turtle conservation and biology believe to be our most important priorities, *today*. In the end, we have pledged to not allow sea turtle extinctions to occur on our watch, and the Burning Issues will help us to keep that promise.

**Acknowledgements:** The authors recognize the ready, willing, able and indefatigable members of the BI2 Team: Alan Bolten, Charlotte Boyd, Milani Chaloupka, Michael Coyne, Nancy FitzSimmons, Nat Frazer, Arlo Hemphill, Emily Howgate, Brian Hutchinson, Penny Langhammer, Dimitris Margaritoulis, Roderic Mast, Frank Paladino, Barbara Schroeder, Kartik Shanker, Manjula Tiwari, Sebastian Troëng, Tony Tucker, and Peter Paul van Dijk. Special thanks to Emily Howgate for serving as Rapporteur.

MROSOVSKY, N. 2003. Predicting extinction: Fundamental flaws in IUCN’s Red List system, exemplified by the case of sea turtles. <http://members.seaturtle.org/mrosovsky/>