

**Conservation and Trade Management of
Freshwater and Terrestrial Turtles in the United States**

St. Louis, Missouri, September 20-24, 2010

Convened and hosted by the

U.S. Fish and Wildlife Service, International Wildlife Trade Program

Conservation, Status & Monitoring Working Group

FINDINGS and RECOMMENDATIONS

Shaded recommendations are those determined by the workshop to be the most important and most actionable in a short timeframe.

Group Charge - Discuss the state of knowledge of the biology (especially reproductive biology/life history parameters), population status, and threats. Make recommendations on conservation measures and research needs for freshwater turtle species (with examples such as population studies, CITES listings, etc).

Discuss implications of life history on the harvest ('off-take') of these species and the sustainability of current harvest levels. Discuss implications of life history on captive breeding, ranching, and farming of turtle species, and the impact of these activities on the conservation of wild populations.

Formulate recommendations on science-based conservation measures and research needs for freshwater turtle species.

Task #1 - Evaluate existing knowledge and research.

Recommendations - Standard methods

1. Develop and validate rapid monitoring techniques for turtle populations and harvest;
2. Develop national reporting standards for harvesters to ensure credibility and quality control; and
3. Develop citizen science monitoring protocols and projects for turtles.

Recommendations - Administration

1. Develop interstate/regional turtle advisory groups (an example can be drawn from the fish arena – Mississippi Interstate Cooperative Resource Agreement (MICRA));
2. Develop methods for safely providing range distributions;
3. Provide funding for State Wildlife Grant (SWG) programs, and multi-state wildlife & federal grants; and
4. Recognize staff & resource limitations (feasibility) in the administration of turtle population monitoring and management.

Task #2 - Identification of science/information gaps and what is needed to address these gaps. Gaps the group identified:

1. Population size;
2. Comparing un-harvested with harvested populations;
3. Interaction of threats with harvest impacts;
4. Impacts of released turtles (e.g., disease, genetics);
5. Knowledge of wide-ranging species (e.g., big river systems); and
6. Lack of life history information (good studies exist for a handful of species).
7. Review historical studies and resurvey previously studied sites;
8. Develop forensic methods, including genetic patterns, to determine source of harvested turtle populations;
9. Undertake long-term studies (clutch frequency, life history, density-dependent responses);
10. Develop a list of poorly studied turtle species in trade;
11. Develop and use stochastic models to determine effects of harvest & release of animals from turtle farms, especially for species under consideration for harvest;
12. Undertake economic studies on trade in wild-caught turtles, especially international trade;
13. Undertake sociological studies on public opinion and non-biological factors associated with trade;
14. Determine more precise distributional occurrences for all species; and
15. Undertake taxonomic studies of turtle species.

Task #3 - Discuss implications of life history on the harvest ('off-take') of these species and the sustainability of current harvest levels.

Recommendations to categorize (classify) species include:

1. Determine why some species may be somewhat resilient to harvest (e.g. common snapping turtle);
2. Evaluate common factors for well-protected species (delisting);
3. Understand turtle population stressors and the effects of harvest through studies;
4. Identify other primary threats to turtle populations and rate their vulnerability; and
5. Identify vulnerable/rare species in trade.

Recommendations for management strategies:

1. Address obvious threats to turtle populations in management plans;
2. Undertake cultural shift campaigns – recognize turtles are iconic/charismatic species (public perception of abundance);
3. Provide funding in SWG programs for turtles in trade;
4. Distinguish use before determining necessary science;
5. Address interstate pressure and tracking underground harvest when State regulations vary – respect regulations of States related through trade routes;
6. Develop regulatory tools to limit harvest (gear, size);
7. Provide for the State regulation of turtle farms; and

8. Track turtles in trade, to determine origin of harvest (farm raised or wild-caught) and sales for non-CITES listed species

Recommendation: Address existing science/information data gaps through the development of projects/studies that evaluate:

1. Population size, stability, density dependent responses, life history, basic taxonomy;
2. Use trapper harvest surveys (catch/distribution);
3. Economic viability for commercial trade;
4. Status of knowledge; and
5. Habitat specialization & availability.

Recommendation for trade/biological data for CITES listing Appendix II.

1. Support new listings of diamondback terrapin, spotted turtle, Blanding's turtle (life history) in Appendix II; and
2. Change listing of alligator snapping turtles, map turtles from CITES Appendix III to Appendix II (range-restricted are highest concern but difficult identification of map turtles for enforcement).

Recommendation for trade/biological data for CITES listing Appendix III (Unilateral country decision to issue export permit to assure legal acquisition):

1. Consider new listings for common snapping turtle, softshells (to regulate populations and acquire data) in CITES Appendix III.

The Working Group offered the following caveat for consideration in decision making on CITES listings: States may resist these decisions due to limited resources; use Appendices to protect very rare animals; be mindful of the cost of regulation and who pays for it - exporters pay permit fee, which may not cover cost; export creates burden on State regulatory agencies; examine economic consequences to harvesters; one function of government is to promote commerce.

Recommendations for legal protection status of species:

1. The Working Group agreed that science shows no sustainable unregulated harvest of native turtle species.
- No wild-caught commercial off-take of the following species:
 1. Any diet or habitat specialist, limited distribution. Species that meet this include:
 - i. *Graptemys pearlensis*- Pearl River map turtle (drainage endemic, mollusk feeding specialist, habitat – gravel mining)
 - ii. *Deirochelys*- basking turtles (small localized populations, small isolated waters including ephemeral, road mortality – clustered dry wetlands, landscape fragmentation)
 - iii. *Sternotherus carinatus* - razorback musk turtle (mollusk specialist, riverine)

- iv. *Sternotherus minor*- common musk turtle (mollusk specialist, riverine, bigger range, potential pet trade)
- v. *Malaclemys terrapin* - diamondback terrapin (estuarine specialist / habitat, road & crab pot mortality, historical decline in Chesapeake Bay due to commercial harvest in some States including Louisiana with personal in Delaware, not enough info on distribution & abundance)

• **For wild-caught well-regulated turtle species. The recommendation is to:** Consider very limited and monitored domestic (United States market) commercial harvest in States where they are not rare with concern about economic pressure. These species need to be subject to modeling and further investigation. Err on the side of conservation.

Recommendation on turtle species in commercial trade commercial use (used draft IUCN table of turtle species in use (see attachment): From perspective of science, would not recommend any commercial use of turtle species. However:

- Common, well-studied, life tables for populations may sustain very limited harvest in some States depending on population size and location (see above)
 - Common snapping turtle (greatest agreement on some use)
 - Sliders (needs further consideration)
 - Painted turtles (needs further consideration)
- Lacking published demographic data
 - Spiny softshell (may have more data in some areas)
 - Florida softshell
 - Smooth softshell
- Some published demographic data with no evidence of sustainable harvest include:
 - Other species in Group 1 (*G. ouachitensis*, *G. geographica*, *G. pseudogeographica*, *P. nelsoni*, *S. odoratus*, *Kinosternon spp.*)

Recommendation - Development of science guidelines for farm regulation. Factors to be considered include:

1. Let market determine the farmed species but may be some limits for rare or endangered species;
2. Disease control;
3. Invasive species;
4. Genetic impacts on wild populations;
5. Permits for brood stock collection (limits on wild capture, tagging, certification, inspection, disposition, replacement, breeding stock obtained through regulated channels);
6. USDA guidelines for health of captive species (housing, quarantine, inspection);
7. Production capacity (baseline number brood stock);
8. Track origin of animals and official definitions & certification (captive bred, laundering wild-caught);

9. No release into wild due to disease and genetic concerns (disposition of unwanted production);
10. Production for food and pet trade (rare species concern about enforcement);
11. Existing production facilities - legality of existing stock; and
12. As an alternative to science, emphasize experience.

Other recommendations on science-based conservation measures:

1. Recognize the sensitivity for States already closed to harvest or farming;
2. Harvest of local populations on a state-by-state basis;
3. Compelling information for decision-makers (directors) – ecological services provided by turtles, charismatic species, etc; species for State action by directors and legislators (AFWA);
4. Habitat management for species in trade;
5. Monitoring take for personal use; consider feasibility for records;
6. Consider Nonnative invasive species listing under Lacey Act - commercial import for pets & food;
7. Evaluate 2);
8. Bycatch of turtles from crabbing, shrimping, furbearer traps, fisheries – TED turtle excluder devices on recreational but not commercial traps;
9. Science needs esp. for farming;
10. Action plans or products – consensus statements, alternative science-based justifications; timelines and assignments for actions; and
11. Related issues for freshwater turtle conservation that WG did not address but felt are important issues and should receive attention:
 - a. Contaminants (food use/consumption advisories, imports) – compilation of studies (PCBs, Hg).