

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT
ON DRIFT GILLNET MANAGEMENT

The Highly Migratory Species Management Team (HMSMT) developed and analyzed the range of alternatives for the drift gillnet fishery. The HMSMT notes that most of the alternatives would require approval of an exempted fishing permit (EFP) to allow access to all, or portions of, the currently closed area. Absent an EFP, regulatory action could be taken to allow access to the closed area, but participation could not be limited without an amendment to the fishery management plan.

Leatherback Turtle Conservation Measures

The HMSMT developed conservation measures designed to be implemented with the EFP to minimize impacts on endangered leatherback sea turtles. These are in the form of a turtle cap only, set limit only, or a combination of a turtle cap and set limits. The HMSMT notes that applying a turtle cap on mortalities would increase subjectivity on the part of observer, who would have to determine the condition of a turtle that was caught and released. Therefore, the HMSMT recommends that the turtle cap be implemented as a “take limit” whereby the EFP would be terminated once the number of encounters reached the cap. As there is a chance that some encountered turtles would survive, the “take limit” is slightly higher than the estimated number of mortalities (Table 1.). However, with a take limit of three, there would be less than 100% assurance that no more than two mortalities would occur.

Table 1. The HMSMT’s estimates, based on the available data, of the turtle mortalities and takes that would occur at the corresponding set amounts, and the incidental take limits that would apply if a turtle cap is adopted as part of the EFP.

Set Limits	Mortality Estimates	Incidental Take Estimates	Take Limits
300	2	2.31	3
500	3	3.85	4
600	4	4.62	5

For example, some EFP alternatives constrain effort to 300 sets without a turtle cap; some impose a turtle cap of 1 without a set limit; and some include a set limit of 300 sets in combination with a turtle cap of 1. For an alternative with both a set limit and a turtle cap, the turtle cap could be reached prior to the set limit and, conversely, the total number of allowable sets could be made prior to reaching the turtle cap, resulting in foregone opportunity. The conservation community has expressed support for an alternative that would combine a set limit with a turtle cap as a precautionary measure. If the set limit is reached before the turtle cap, this reduces the expected impacts to other protected species (since, in this example, one leatherback take would shut down the EFP regardless of the amount of sets expended). However, if the EFP participants complete more sets before the turtle cap is reached, then there would be additional economic benefits to the fishery. In any case, as long as a turtle cap is selected, there would be a maximum limit on the number of turtle takes.

The turtle caps and corresponding set limits were developed during the fall of 2005 using the best available information at that time. Since then, additional analysis of the observer records has been conducted suggesting that the leatherback mortality rate in the observed historic DGN is approximately 70% (up from the original estimate of 61%). Utilizing this mortality rate, it is projected that 300 sets may result in two mortalities, not one as originally calculated. This does not invalidate the use of the set limits and turtle caps shown above, since either variable can constrain the fishery.

Incidental Marine Mammal Takes

First of all, the HMSMT would like to orient the Council to Agenda Item J.3.a, Supplemental Attachment 2), which is an errata sheet with corrected Tables 4.8.a. and 4.8.b (draft Environmental Assessment (EA), p. 135). These tables list the projected marine mammal mortalities in the drift gillnet fishery under the baseline plus specified set increments.

All marine mammals are protected under the Marine Mammal Protection Act (MMPA) and a number of marine mammal species have been observed taken in the historic drift gillnet fishery. Under the MMPA, each stock of marine mammals has a calculated potential biological removal (PBR) level, which is the estimated total anthropogenic impact (through mortalities or serious injuries) that a marine mammal stock can sustain. In the early to mid 1990's, high levels of bycatch were observed in the DGN fishery. To limit marine mammal incidental take, NMFS implemented the Pacific Cetacean Take Reduction Plan (TRP) in 1997 requiring that all drift gillnets to be set at least 36 feet from the surface of the water with a full complement of acoustic deterrents (pingers) and that drift gillnet skippers attend workshops on means to reduce impacts on protected species. Since implementation of the TRP, take rates of most marine mammals have declined substantially. Some of the species observed taken in the DGN since the TRP have very low PBRs; short-finned pilot whale PBR is 1.2, sperm whale PBR is 1.8, humpback whale PBR is 2.3. Takes of three Endangered Species Act (ESA) listed marine mammal species—sperm whales, humpback whales, and fin whales—have been observed in the drift gillnet fishery since implementation of the TRP. Fisheries are managed to ensure that levels of incidental take and mortalities do not exceed the stock's PBR (under MMPA) or result in jeopardy to the species (ESA). For some species, including short-finned pilot whales with a PBR of 1.2, environmental variables may significantly affect the probability of incidental takes.

If the EFP is approved, the HMSMT supports the use of a turtle cap only without a set limit as there would still be a maximum amount of turtles that could be taken under the EFP and the implementation of a set limit would be difficult to track (i.e., keeping a running tally of the number of sets that EFP participants make when multiple vessels fish at the same time). However, in the absence of a set limit, the HMSMT also recommends that the Council consider take limits for marine mammals to ensure that PBR is not exceeded.

Finfish Bycatch

The HMSMT reviewed the potential impacts of the alternatives on DGN target species (swordfish and common thresher shark), and non-target species (finfish, sharks, billfish, and prohibited species). The criterion used to evaluate the impact of the alternatives were whether they would result in overfishing, or an over-fished condition, for any management unit species in the highly migratory species (HMS) fishery management plan (FMP); whether the alternatives would be consistent with the management goals and objectives of the HMS FMP (e.g., stay within harvest guidelines); whether the alternatives would elevate, to an unacceptable level,

conservation concerns for prohibited species; and whether the alternatives would provide sufficient monitoring resources to meet the HMS FMP management objectives. The draft EA relied upon available information from, among other sources, historic observer records and fishing logbooks. The impact analysis was constrained, however, by significant data gaps and lack of basic population dynamic information for many of the non-target species under consideration. These constraints confounded the ability to objectively evaluate the alternatives. Based upon the available information, none of the alternatives were considered to have substantial impacts on the target, non-target, and prohibited species under consideration.

EFP Proposal

As noted in November 2005, the HMSMT worked extensively with Chuck Janisse, the EFP applicant, to ensure the EFP application: 1) met the requirements of the draft proposed Interim Protocol for Consideration of EFPs for HMS Fisheries; 2) included adequate specificity for an analysis of the estimated impacts of the proposed action; and 3) addressed the issues of primary concern, such as the potential for interactions with protected species (in this case, leatherback sea turtles). The HMSMT reviewed the EFP application and believes that the provisions of the EFP, including 100% observer coverage, fishing under a maximum limit on turtle mortalities (and/or limits on the number of sets), and near real-time data reporting (via satellite phone) help ensure that turtle encounters will be accounted for and that limits or caps will not be exceeded.

The HMSMT would also like to point out that, with 20% coverage, the observer data are expanded by a magnitude of five; whereas, with 100% coverage, all encounters would be directly measured. The expansion of the observer data at 20% could result in overestimating the amount of turtle encounters in the fishery, or, given the rarity of the event, some encounters may be missed. Therefore, with 100% observer coverage, bycatch data will be collected that could better inform management of this fishery. As mentioned above, currently, this fishery is managed using assumed take and mortality rates for turtles and marine mammals, using data collected through an observer program with 20% coverage. By observing all trips within the closed area, data could be collected to determine whether the assumed rates are correct or need to be adjusted. On one hand, this could help determine whether the turtle conservation area needs to remain in effect; this could also potentially affect the drift gillnet fishery operating in the open area south of Pt. Sur, California, in a negative or positive manner, depending on the results.

Southern Boundary of Closed Area (Regulatory Amendment)

There is a substantial risk that additional leatherback and marine mammal mortalities will result from revising the southern boundary of the closed area (which is the northern boundary of the current open area) and the HMSMT would like to remind the Council that, while the EFP would have 100% observer coverage, the portion of the fleet fishing in the southern area would continue to have only 20% observer coverage. Not only would the risk of protected species bycatch increase, but future fishing opportunity would also face a risk of curtailment; for instance, a single leatherback take in an area reopened under a regulatory amendment may result in a level of take that would require re-initiation of a Section 7 consultation and potential emergency closure of the fishery an indefinite period of time. Because of this increased risk and the inability to adequately monitor turtle and other protected species encounters in this area, the HMSMT does not recommend changing the southern boundary.

Oregon Proposal

The HMSMT discussed a proposal from Oregon that would extend the turtle conservation closure north from 45°N. lat. to the Oregon/Washington border (46°16'N. lat.). The expansion of the turtle conservation area would apply from August 15-November 15 and would allow Oregon to manage the waters adjacent to the state in a consistent fashion. The HMSMT notes that this portion of the proposal would require Council action at a later date and a separate regulatory amendment.

HMSMT Preferred Alternative

The HMSMT supports Alternative 3.6, with the addition of marine mammal take limits (i.e., serious injury or mortality), such that, if any marine mammal PBR is reached, the EFP would cease for the year. This alternative includes approving the EFP, implementing a turtle take limit of 4 (which would correspond to an estimated mortality of 3), not including a set limit, not including an area restriction, and not including a change to the southern boundary of the closed area, and including marine mammal take limits of the PBR (rounded down to the nearest whole animal). As a fallback position (i.e., if NMFS determines that a turtle take limit of 4 is too high), the HMSMT would recommend Alternative 3.5, which is the same as 3.6, but with a reduced turtle limit of 3 (which would correspond to an estimated mortality of 2), again, with the addition of marine mammal take limits.

Decision-Making Tools

To assist the Council through its decision-making process, the HMSMT arranged the alternatives by degree of risk relative to turtle mortalities (Attachment 1) and developed a Decision Tree (Attachment 2), and recommends that the Council follow this step-wise list. This will help ensure that the Council's discussion remain focused on the trade-offs associated with the alternatives in each row. After completing the list of decision points, the HMSMT will then translate the actions into an overall selection of a preferred alternative.

HMSMT Recommendation:

1. Consider approving an alternative for the drift gillnet fishery; the HMSMT recommends Alternative 3.6, with marine mammal take limits set at PBR rounded down to the nearest whole animal.
2. Consider selecting a fallback alternative; the HMSMT recommends Alternative 3.5, with marine mammal take limits set at PBR rounded down to the nearest whole animal.
3. Provide guidance to the HMSMT on whether to proceed with a regulatory amendment to extend the turtle conservation area north to the Oregon/Washington border.