

SCIENTIFIC AND STATISTICAL COMMITTEE STATEMENT ON  
GROUND FISH ESSENTIAL FISH HABITAT ENVIRONMENTAL IMPACT STATEMENT  
ANALYTICAL MODEL

Mr. Steve Copps presented a brief summary and progress reports on the development of the Essential Fish Habitat-Environmental Impact Statement (EFH-EIS) analysis at both the March and April, 2004 Council meetings. In March, the groundfish subcommittee reviewed their report for the Scientific and Statistical Committee (SSC) that summarized their February 23-24, 2004 meeting with the EFH model development team (Exhibit C.6.c, Attachment 1).

There are two components to the EFH Analysis; (1) designation of EFH and (2) determination of fishing impacts. Both components utilize a Geographic Information System (GIS) platform that allows presentation of disparate datasets in an intuitive visual format that allows for real time data processing and display. EFH designation reflects the likelihood of occurrence of each species by depth, latitude, and substrate type. The greatest obstacle in developing a methodology for designating EFH is in constructing a comprehensive coastwide database applicable to all species in the groundfish fishery management plan (FMP). This requirement severely limits the possible approaches for designating EFH. For example, while detailed habitat and species associations are available from submersible surveys, these data are restricted spatially precluding their use coastwide. Despite the limitations of available data, the SSC endorses the use of this analytical tool and the underlying data as the best available science for evaluating EFH. The SSC notes the model development team has assembled the most comprehensive dataset of bathymetry and substrate ever compiled for the West Coast, which will be a valuable resource in the future.

Notwithstanding this endorsement, the SSC is concerned that uncertainty in the underlying data on species' depth and habitat preferences will not be reflected in the final GIS output maps. The distribution and habitat preferences of some species are well known, while others are poorly known. However, the output from the model (GIS maps) will be similar regardless of the quality of the underlying data. The SSC recommends that each output map contain an expression of the uncertainty, even if only qualitative, and this be considered in EFH designation.

There are a number of weaknesses inherent in the model as it currently exists. These are outlined below:

1. Biogenic habitat is both of potential importance and potentially susceptible to fishing impacts. The current model does not consider some of these habitats (e.g., corals, sponges, sea pens) in EFH designation. While this reflects the lack of comprehensive data on the distribution of these species, this, nonetheless, remains a concern.
2. The use of presence-absence information rather than relative abundance may result in failure to detect EFH with precision. For example, a species may have a broad depth or geographic distribution, but may only reach high densities in a limited area.

3. Species that exhibit seasonal movement patterns by depth or latitude may not be adequately characterized by presence-absence data from trawl surveys. For example, the inshore winter spawning and nesting grounds of lingcod would not be identified as EFH using summer trawl survey data.
4. Existing surveys have a strong bias towards habitats that can be trawled. Thus, species associated with untrawlable habitat will not be adequately sampled. Likewise, juvenile fish are not well sampled by trawl surveys, and their distributions and habitat preferences are often poorly known, yet these may be the most critical life history stages. Biogenic habitats may provide refugia from predation for juvenile stages, but these habitats would not be identified as EFH if the sampling gear does not capture juveniles.
5. Many species occupy different habitats at different life history stages. Information about these ontogenetic shifts present in the trawl data is not being utilized in the present analysis. Therefore, while presence-absence analyses should be relatively robust, EFH designations resulting from such analyses are initial approximations that will need to be refined as additional information becomes available. The SSC notes that the model is constructed to allow for these updates and refinements, and considers this one of the strengths of the current approach.

#### Fishing Impacts Model

The fishing impacts model is still under development, thus the SSC is unable to provide a review at this time. The fishing impacts model has two components; (1) determining fishing effort by gear type and area and (2) determining impacts of gear on habitat.

Based on the current status of the model and the time frame for EFH designation, the SSC cautions there may not be sufficient time for an adequate SSC review and/or response by the model development team before the June Council meeting. Further, since the date and location of the review have not yet been scheduled, but must take place no later than May, the SSC cautions that it may not be possible for the groundfish and economic subcommittees to meet on such short notice. The SSC also notes that extensive data limitations (e.g., no coastwide data on distribution and intensity of fixed gear or recreational fishing) may preclude the use of the model to determine gear impacts on habitat. Rather, the SSC recommends that the model development team consider what questions the current version of the tool can answer, and, if necessary, develop an alternative strategy for evaluating fishing impacts on EFH and that the latter be available in sufficient time for SSC review.