THE HABITAT ASSESSMENT IMPROVEMENT PLAN: HABITAT DATA TO ENHANCE STOCK ASSESSMENT

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SUBTHEME: Building habitat condition in the stock assessment process and fishery management strategies

BIO

Dr. Thomas Noji is an oceanographic researcher with NOAA and has spent considerable time in both Europe and North America. After completing undergraduate studies in the USA, Dr. Noji worked and studied in Germany for ten years and received his Ph.D. in biological oceanography at the University of Kiel. This was followed by 11 years at the Institute of Marine Research in Bergen, Norway. In 2001 he and his family moved back to the USA to work in NOAA's Northeast Fisheries Science Center.

Dr. Noji serves on several international, national and regional advisory committees and research organizations. Until recently he was the chair of the board of directors for the Canadian Healthy Ocean Network. He was the co-founder of the Gulf of Maine Mapping Initiative as well as the Norwegian MAREANO, which is one of the largest marine habitat mapping programs in Europe. Dr. Noji served as chair of the ICES (International Council for the Exploration of the Ocean) Marine Habitat Committee as well as the ICES Steering Group on Human Interactions on the Ecosystem, and is currently the US representative on the ICES Science Committee.

His personal research has focused on oceanic plankton ecology; benthic-pelagic coupling; oceanic carbon cycling; marine contaminant transport; essential fish habitat; habitat mapping and classification; ocean acidification and spatial planning. Currently he is the Director of the NOAA Fisheries Laboratory in Sandy Hook and the Chief of the NEFSC's Ecosystems Processes Division, with staff in four laboratories in the Northeast.

ABSTRACT

In response to the ever-increasing demands placed on marine habitats across many sectors of the U.S. economy, and due to our poor understanding of the dependence of marine fisheries on habitat availability and condition, the *Marine Fisheries Habitat Assessment Improvement Plan* (HAIP) was published in May 2010. The Plan was the product of two years of preparation by scientists in each of the six NMFS Science Centers and the Office of Science and Technology. The HAIP is predicated upon the understanding that gaps in NMFS' habitat science constrain our attempts to achieve sustainable fisheries. The Plan is

intended to help close those gaps and be the foundation for a nationally-coordinated fisheries-focused habitat science program.

The HAIP is centered on several goals to support sustainable fisheries, including the reduction of habitat-related uncertainty in stock assessments, and the incorporation of ecosystem considerations and spatial analyses. Although the HAIP has not to date generated a large, steady line of funding as was the case for the Stock Assessment Improvement Plan, the agency has provided some funding targeting initiatives aimed to enhance stock assessments through marine habitat research. This science has been diverse and is delivering data focusing on habitat characterization and mapping, vulnerability of species to degrading habitat condition, metabolic rates and behavior in relation to habitat condition, and affinity of species to dynamic 3-dimensional habitat. These findings can be used to improve survey design, the accuracy of models and more generally the breadth of information to support fisheries management decisions. Multiple examples are given to illustrate the utility of this information to enhance stock assessments.