

## **IMPROVING ASSESSMENTS OF WEST COAST GROUNDFINH**

### **Problem Statement**

The abundance of nine West Coast groundfish stocks has fallen below the overfished threshold due to excessive historical harvest levels, lack of timely tracking of the downtrend and poor stock productivity. Accurate and timely stock assessments are needed to track and guide the rebuilding of these overfished species and to determine sustainable harvest levels for other species.

### **Critical Factors**

- The Pacific Fisheries Management Council sets stringent harvest quotas for groundfish based on stock assessments prepared and coordinated by the Northwest Fisheries Science Center (NWFSC).
- Accurate stock assessments are needed to track and guide the rebuilding of overfished stocks.
- Accurate stock assessments are needed to balance achieving optimum yield with reducing the risk of overfishing healthy stocks.
- The status of many groundfish species cannot be determined from available information. Long-term shifts in the ocean climate hamper understanding of stock productivity and rates of rebuilding.
- The NWFSC is the only NOAA Fisheries Center that does not have a dedicated Fisheries Research Vessel (FRV) for multi-disciplinary field research and scientific surveys.
- The NWFSC collaborates with states, industry and universities to collect information needed to assess the status of stocks.

### **Status of Research**

Scientists from the NWFSC assess the status of groundfish stocks by using population models that incorporate data from the fishery, scientific surveys and life-history studies. Since 1997, the NWFSC has conducted or coordinated assessments of about six stocks per year. These assessments determine the stock abundance relative to historical levels and determine the level of stock productivity. The results indicate that nine stocks have fallen below the overfished threshold and must be rebuilt to their target level according to requirements of the Sustainable Fisheries Act. Stock productivity has been low, even in comparison to other long-lived species. Therefore, rebuilding periods may often take many decades.

The NWFSC has several programs designed to improve the data available to stock assessment scientists. In particular, the observer program, which started in 2001, will improve data on total catch. Efforts to expand surveys of groundfish populations will track trends in abundance more closely. Advanced technology studies are helping to provide data on previously unassessed species and habitats. Collaborative projects with industry and universities are augmenting the survey and life history data.

In addition to its goal to improve data, the NWFSC is involved in projects focused on the future of groundfish. One current area of research involves developing a better understanding of climate effects on productivity in order to improve forecasts of stock rebuilding. Also, the NWFSC's participation in NOAA Fisheries' Stock Assessment Improvement Plan has provided the Center with the opportunity to train several graduate students, which will expand the pool of scientists for future stock assessment studies. The NWFSC led development of a West Coast groundfish research plan to coordinate these efforts and those of other involved agencies.

### **Future Considerations**

As concerns grow about the health and abundance of West Coast groundfish—and pressures intensify to allocate the total allowable catch among commercial, recreational and tribal interest groups—stock assessments must become more accurate and timely. Recovering from the current fisheries failure and preventing future failures, while minimizing the impact on coastal fishing communities, will require precise and comprehensive information on a sustained basis. Government and university scientists must pool their resources with fishing industry leaders to produce more reliable assessment data. Assessments on additional species also must be conducted. More scientists must be trained and hired to increase our capacity to produce timely stock assessments. Additionally, more ecosystem and climate information must be integrated into stock assessments. This will require new projects with university collaborators in this area.



**Key Players**

**Fishery Resource Analysis & Monitoring (FRAM) Division, NWFSC**

Southwest Fisheries Science Center, NOAA  
Fisheries

Pacific Fishery Management Council

Pacific States Marine Fisheries Commission

Oregon Department of Fish and Wildlife

Washington Department of Fish and Wildlife

California Department of Fish and Game

Oregon State University

University of Washington

Oregon Trawl Commission

Coast Driggers Association

Fishermen's Marketing Association

Midwater Trawlers Cooperative

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