

**Annotated Agenda**  
MAFAC Meeting – Portland, Oregon  
April 25-27, 2016

**1. Title of Discussion: Coastal Resiliency**

**2. Presenters: (Listed below)**

**3. Objective/Purpose (Informational)**

At the October 2015 MAFAC meeting, MAFAC established a new Resilience Ad Hoc Working Group to address coastal and community resilience issues and questions posed by NOAA and NOAA Fisheries leaders. The Working Group is working in four primary areas:

- Task 3 – Aquaculture benefits
- Task 4 – Social and economic community impacts
- Task 5 – Improved communications
- Task 6 – Management approaches

These presentations have been chosen to provide background and augment the work of the smaller task groups. In particular, these examples highlight the ongoing work in the West Coast Region and Northwest Fisheries Science Center, as well as across other NOAA Fisheries Regions and Science Centers.

**4. Background/Synopsis:**

**a. Overview of the NMFS GARFO/WCR Fishing Community Resilience Study Group Discussions**

**Steve Freese and Sarah Towne**  
Sustainable Fisheries Division  
West Coast Region

Community resiliency is an increasingly important element in NOAA policy guidance.<sup>1</sup> NMFS' Greater Atlantic Regional Fisheries Office (GARFO) and West Coast Region (WCR) recently integrated community resiliency goals and objectives in their respective strategic plans:

**West Coast Region**

**Goal** - Ensure sustainable and productive West Coast fisheries and resilient fishing communities through science-based and collaborative management.

**Objective** - Consultations and Support: Help minimize impacts from non-fishing activities to protect essential fish habitat and maintain healthy and resilient ecosystems that support productive fisheries.

**Greater Atlantic Regional Fisheries Office**

**Goal** - An integrated approach among programs to enhance fishery community resiliency in order to ensure sustainable fisheries, recovery of protected resources, and healthy habitat.

**Objectives** -- addressing work to improve groundfish business practices and economic vitality; incorporation of climate change, ocean acidification, and ecosystem analytical information into GARFO program activities; and administration of resource disaster funding.

NMFS lacks a uniform definition of community resiliency, which creates a challenge for our next step, which is to determine priority actions for working towards our community resiliency goals and objectives, and identifying indicators and performance metrics to monitor our progress. Therefore, GARFO and the WCR convened a joint study group to explore community resiliency in the context of our strategic plans.

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<sup>1</sup> NOAA: **Vision** - Healthy ecosystems, communities, and economies that are resilient in the face of change. **FY15 Priority** - Provide information and services to make communities more resilient.

**b. Harmful algal blooms (HABs) and importance of early warnings & forecasts for fishermen**

**John Stein, PhD**  
Director  
Northwest Fisheries Science Center

John Stein will be presenting the work of Dr. Stephanie Moore, who leads this effort, but could not participate at the MAFAC meeting. Shellfish contamination from harmful algal blooms (HABs) is both costly and a significant health risk to coastal communities. Blooms of *Pseudo-nitzschia* can produce the neurotoxin domoic acid (DA) which can bio-accumulate in marine shellfish and finfish and be transferred to humans and wildlife through consumption of contaminated seafood. Toxic blooms of *Pseudo-nitzschia* have caused closures of the razor clam fishery resulting in an estimated \$24.4 million in annual lost expenditures in two coastal counties of Washington state (Dyson and Huppert, 2010). Coastal tribal communities are disproportionately impacted by toxic HABs because shellfish are an integrated part of the culture as well as being significant dietary items and income sources.

The primary sources of toxic cells of *Pseudo-nitzschia* are offshore; however, opportunities to obtain offshore measurements are limited by access to small boats or ships and samples could take days to analyze. The Environmental Sample Processor (ESP) represents an advancement in obtaining near-real time observations of HABs and their toxins. The ESP is an autonomous, underwater, robotic biosensor that will be deployed on an existing moored observatory located ~15 miles offshore of La Push, Washington within the Olympic Coast National Marine Sanctuary through an IOOS funded project with support from NWFSC.

ESP observations will be distributed to coastal shellfish managers and other users to enable informed and timely management decisions in conjunction with data from models, offshore and beach monitoring through a new MERHAB project that will be partially funded by NOAA NCCOS. These data will be integrated into a Pacific Northwest HAB bulletin, part of NOAA's Ecological Forecasting efforts. The early warning generated by the ESP and risk assessment bulletins will increase the resiliency of coastal communities and economies to toxic HABs by generating information to help understand the drivers of blooms, informing fisheries management decisions around shellfish harvesting opportunities and closures, improving communication by providing near-real time information, and reducing the risk of exposure to harmful biotoxins.

For more information: [http://www.ioos.noaa.gov/ocean\\_tech/habs\\_pnw.html](http://www.ioos.noaa.gov/ocean_tech/habs_pnw.html)

**c. Communications Strategies that target particular topics and audiences**

**Katherine Cheney**  
Branch Chief, Communications and  
External Affairs, West Coast Region

MAFAC's Resilience Task 5 aims to identify effective communications strategies to provide forecasts of the information that various NOAA Fisheries audiences and stakeholders want and need. This discussion will present three diverse examples of West Coast Regional outreach efforts to demonstrate the targeted nature of their communications strategies.

The three examples are:

1. Dynamic oceans ---- Telling a comprehensive story with many agencies
2. Science in the Studio partnership with Pacific Northwest College of Art and EPA on toxics ---- Changing individual behavior
3. Fish passage engineering ---- Sharing information across a wide-array of audiences from technical to international