

# *Deepwater Horizon* Open Ocean Monitoring and Adaptive Management (MAM) Priorities

July 22, 2020 Webinar – Presentation Script

## **Slide 1: Open Ocean Restoration Area Monitoring and Adaptive Management (MAM) Priorities**

Hello, I am Stephen Heverly with NOAA, presenting today on behalf of the Open Ocean Trustee Implementation Group. Welcome to our webinar. Today we will present the latest developments of the Open Ocean Restoration Area Monitoring and Adaptive Management Strategy, including our initial priorities.

## **Slide 2: Webinar Participation**

I'd like to quickly run through some webinar logistics with you. Hopefully everyone's logged in to the webinar by now. You should be able to see the control panel on the right hand side of your screen.

If you're using a phone for audio, you should all be dialing in using the phone number provided by GoToWebinar—that's the number and access code listed under "Audio" in the control panel. Please note that only presenters will be heard over the phone during the webinar; attendees will be muted.

Take a look at the "Questions" box at the bottom of the control panel (shown on this slide). If you have questions about the presentation along the way, please enter those in the "Questions" box. You'll also have an opportunity to submit questions at the end of the presentation.

After our presentation, we'll answer as many questions as we can in the time allotted. We'll also post the presentation slides and a copy of the webinar to the [GulfSpillRestoration.noaa.gov](http://GulfSpillRestoration.noaa.gov) website in a few days.

## **Slide 3: Today's Agenda**

Here's the agenda for today's webinar. First, we'll have a brief introduction to the Open Ocean Trustee Implementation Group and monitoring and adaptive management, which we abbreviate as MAM. Next, we'll go over the Open Ocean MAM strategy. Third, we'll discuss the TIG's initial MAM priorities. Finally, we'll discuss the next steps for the strategy. Now I'll turn the webinar over to Eric Weissberger of NOAA to take us through the rest of the presentation.

## **Slide 4: Open Ocean Trustee Implementation Group**

Thank you Stephen. I'd like to start by introducing the Open Ocean Trustee Implementation Group, or TIG. The Open Ocean TIG comprises the four federal agencies involved in Deepwater Horizon restoration: the National Oceanic and Atmospheric Administration, the United States Department of Agriculture, the Environmental Protection Agency, and the Department of the Interior.

## **Slide 5: Resources covered by the OO TIG**

The Open Ocean TIG is responsible for addressing six resources injured by the Deepwater Horizon oil spill and associated response activities: sturgeon, mesophotic and deep benthic communities, fish and

water column invertebrates, marine mammals, sea turtles, and birds. Three of these resources (sturgeon, mesophotic and deep benthic communities, and fish and water column invertebrates), are covered only by the Open Ocean TIG.

#### Slide 6: Open Ocean Settlement Allocation

During the settlement, the Trustees committed to a robust monitoring and adaptive management, or MAM, program. Of the \$350 million allocated to MAM and administrative oversight, \$200M is dedicated to MAM.

#### Slide 7: The Adaptive Management Process

What is adaptive management? Adaptive management is basically learning by doing, taking information acquired during implementation of our restoration program and feeding it back into the planning process. Monitoring and adaptive management can occur at the project level, the restoration type level (habitats and resources), and across the entire Deepwater Horizon program.

#### Slide 8: Monitoring and Adaptive Management

Monitoring data are the basis for adaptive management. There are two places in the adaptive management cycle where monitoring comes into play. First, we may monitor during the planning stage to gather baseline data and information to help with project implementation. Second, we monitor after implementation to evaluate our progress toward restoration goals and refine our restoration work. The process is iterative, and we may go through many cycles. We need to choose appropriate things to measure to assist with restoration planning and evaluation.

#### Slide 9: Why is MAM Important?

- Why is monitoring and adaptive management important?
- The Gulf of Mexico is a **dynamic environment**, influenced by external factors and stressors such as pollution, increasing temperature, sea level rise, hurricanes, and other events. Restoration will take place over many years, and restoration may have to be modified to adapt to changing environmental conditions.
- **Many entities are conducting restoration efforts** in the Gulf of Mexico (for example, the Gulf Coast Ecosystem Restoration Council [RESTORE], and the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund [NFWF GEBF]). As Open Ocean TIG restoration work represents only a subset of restoration done by one program, information gathered by other programs must be considered during planning and implementation.
- There is also the potential that **currently unknown conditions** may influence restoration outcomes.

### **Slide 10: Identification of Data Gaps**

An important component of MAM is the identification of data gaps. While much is unknown about our trust resources, we are focused on that information that is needed to help plan, implement, and evaluate restoration for these resources.

### **Slide 11: Evaluation of OO TIG Restoration Outcomes**

Another important component of MAM is the evaluation of our restoration work, especially at the programmatic level. Are we achieving the restoration goals set forth in the Programmatic Damage Assessment and Restoration Plan? What adjustments do we have to make to our restoration program to achieve those goals?

### **Slide 12: OO TIG MAM Strategy**

The initial version of the Open Ocean TIG's MAM strategy was released in May 2019. This document contained the TIG's processes for identifying and prioritizing MAM needs, developing and releasing MAM activities (These are activities the TIG will undertake to provide information to address MAM priorities.), and coordinating with other TIGs and restoration programs. Today we will describe the initial set of the TIG's MAM priorities laid out in the updated MAM strategy. These priorities were developed by implementing the processes laid out in the first version of the MAM strategy.

### **Slide 13: Identifying MAM Needs**

As specified in the first version of the MAM strategy, to develop our MAM priorities we consulted with subject matter experts and reviewed existing management plans and data gap analyses. We also held two outreach events to get public input, one at the 2019 Gulf of Mexico Oil Spill and Ecosystem Science conference, and one in conjunction with the release of Open Ocean restoration plan 2.

### **Slide 14: Input from the Public**

Some general themes emerged from the public input, and these agreed well with themes provided by subject matter experts. Some of the themes we heard from the public included the gathering of baseline data, the use of conceptual models in restoration planning and evaluation, the importance of mapping habitats, connections among habitats, and the use of indicator species to evaluate restoration progress.

### **Slide 15: Prioritizing MAM Needs**

MAM needs were evaluated based on the criteria specified in in the initial version of the MAM strategy. These criteria include:

- Relevance to Open Ocean resources and the Open Ocean ecosystem
- Importance for restoration planning and implementation
- Importance for programmatic evaluation
- Importance for multiple Restoration Types
- Importance at the ecosystem level

- Feasibility of obtaining data of sufficient quality and timeliness to meet objectives
- Urgency of the MAM need
- Likelihood of success in meeting the MAM need

### **Slide 16: Open Ocean TIG MAM Priorities**

Three priorities emerged from the TIG's evaluation process:

- Evaluate restoration progress
- Identify stressors
- Assess focal resources and important habitats

Let's explore each of these in detail.

### **Slide 17: Evaluate Restoration Progress Introduction**

Let's start with the evaluation of restoration progress.

### **Slide 18: Progress Toward Restoration Objectives**

The Programmatic Damage Assessment and Restoration Plan lays out goals for each of the resources damaged by the Deepwater Horizon oil spill. Larger-scale ecosystem processes were also impacted. A priority for MAM is to determine our progress toward reaching our restoration goals, at the resource type level and at the ecosystem level.

### **Slide 19: Cumulative Effects of Multiple Projects**

We would also like to look at the cumulative effects of our projects. Multiple projects are being developed for each restoration type, and some projects may benefit multiple restoration types. Are the effects of multiple projects greater than the sum of the parts?

### **Slide 20: Indirect Impacts of Restoration Actions**

The TIG would also like to evaluate the indirect impacts of our restoration work. For example, how does restoration for a particular species affect other species in the food web? How does habitat restoration affect species that use that habitat? How do benefits of restoration of inshore species and habitats flow to offshore species and habitats?

### **Slide 21: External Factors**

Our restoration work takes place against a backdrop of external factors such as changing environmental conditions and extreme weather events. We need to account for these phenomena in planning our restoration work as well as evaluating it. For example, where should we site projects to minimize hurricane impacts? How do we evaluate reductions in fish bycatch given that species' ranges may be shifting due to changing temperatures?

### **Slide 22: Identify Stressors**

Our next priority is the identification of stressors. Let's explore this in more detail.

### **Slide 23: Spatiotemporal Overlap of Open Ocean Stressors and Resources**

For important stressors, the TIG is interested in where they overlap in space and time with Open Ocean species and habitats. This information will help the TIG focus restoration in areas that would have the most benefit to open ocean resources, as well as help us evaluate whether we are reducing the overlap between resources and stressors.

### **Slide 24: Fisheries Interactions**

One important stressor is interactions with fisheries. Fisheries interactions affect many Open Ocean Resources. For example, non-target species may be caught accidentally while fishing for commercially or recreationally important species. The TIG recognizes that data on fisheries interactions already exist in some sectors through observer programs, electronic monitoring, protected resource databases, and other sources, although not always at a scale necessary to adequately assess protected species/rare event interactions or inform specific restoration actions. Existing data and analyses do not always meet the TIG's MAM needs for restoration, and supplemental data collection or analysis may be needed.

### **Slide 25: Other Stressors**

Other stressors that affect many Open Ocean resources include marine debris, vessel traffic, underwater noise, and mineral extraction activities. For all of these stressors, we would like to know where they overlap in space and time with important habitats and species.

### **Slide 26: Assess Focal Resources and Important Habitats**

The next MAM priority is the assessment of focal resources and important habitats.

### **Slide 27: Locations and Characteristics of Important Habitats and Areas of High Productivity and/or Biodiversity**

The identification of the location and characteristics of important habitats is needed to plan restoration in places where it might have the greatest impact. These locations may include migration corridors, breeding habitats, and areas of high productivity and biodiversity.

### **Slide 28: Distribution, Abundance, Health, and Status of Focal Species**

The TIG also needs information about the abundance, health, and status of focal species to both plan restoration activities and evaluate progress toward our restoration objectives. It is not feasible to track the distribution and abundance of every species injured by the *Deepwater Horizon* spill, but assessing a set of focal species may contribute to understanding overall ecosystem restoration progress in the Gulf of Mexico.

### Slide 29: Next Steps

Now that the TIG has determined its initial MAM priorities, we will identify opportunities to most effectively address them. The TIG will select a subset of focus areas under these priorities for further refinement. As part of this process, the TIG may conduct inventories of existing datasets, models, and ongoing science and monitoring efforts that may be leveraged to help address priorities; review project ideas submitted to the Trustees' project portal; and hold workshops or webinars to obtain further input from stakeholders, technical experts, and other interested members of the public. Through this work, the TIG will develop and evaluate activities to address the MAM priorities.

### Slide 30: Summary

Through our monitoring and adaptive management program, the Open Ocean TIG hopes to be able to gather information that will result in effective and efficient restoration of Open Ocean resources and their ecosystem.

### Slide 31: Questions

I'll now turn the program back over to Stephen Heverly with NOAA to guide us through the question and answer portion of the webinar.

### Slide 32: Questions Logistics

Ok. We've been collecting your questions along the way and we're going to paraphrase some of them, or combine similar themes to try to answer as many questions as possible.

Remember, if you still have a question at this point, you can plug it into the "Questions" box at the bottom of the GoToWebinar control panel (shown on this slide).

We'll take a few minutes to give you time to enter any additional questions before we begin. Please be as concise as possible.

Next, we'll pass them on to someone on our team that can best respond, and they'll provide an answer if they can.

We may not get to all of the questions, but we'll try to get to as many as possible.

Here we go...

Now back to Eric for some closing remarks.

### Slide 33: Thank You

Thanks Stephen.

Thank you for your time and interest in Open Ocean Restoration.

We'll post information from today's webinar to the Trustee's website in the next few days.

To find the meeting materials, please go to [gulfspillrestoration.noaa.gov](http://gulfspillrestoration.noaa.gov), and click on the Open Ocean icon, which is shown in the upper right of this slide.

Finally, if you're not signed up for our email blasts, please consider signing up. Aside from visiting the website, it's the best way to stay up to date on all of the Deepwater Horizon NRDA restoration activities.

You can easily do that on our home page by scrolling down to the green boxes and clicking the 'sign up now' button.

We'll now conclude our webinar. Thank you very much for participating.