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MEMORANDUM

April 16, 2024

To: Regional Fishery Management Council Executive Directors

From: *Kitty* Kitty Simonds, Executive Director, WPRFMC

Subject: Discussion of 'America the Beautiful' at the May CCC 2024 Meeting

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This past March, the Western Pacific Regional Fishery Management Council SSC reviewed a recently published study entitled “New Framework Reveals Gaps in US Ocean Biodiversity Protection” under an agenda item *Assessing Conservation and Biodiversity Protections Through Spatial Management*. Attached to this memo are excerpts from this agenda item, including commentary and recommendations from the SSC.

The Council endorsed the SSC report and recommendation. The Council further *directed staff to work with the Council Coordinating Committee (CCC) to ensure that any area-based conservation management measures proposed have stated abatable threats, a means to evaluate those threats, and evidence that such action would mitigate those threats*. At our next CCC meeting in May 2024, I ask that we discuss this matter to ensure that further guidance on the “America the Beautiful” Initiative (ATB) include provisions that the use of area-based management tools abide by this recommendation. The CCC should also request that relevant federal agencies provide an update on ATB, including a definition of conservation.

## **D. Assessing Conservation and Biodiversity Protections Through Spatial Management**

### **1. Simulating Benefits, Costs and Trade-offs of Spatial Management**

Dan Ovando (IATTC) discussed his recent publication on simulating benefits, costs and trade-offs to spatial management in marine social-ecological systems. His paper presents a modeling framework called “marlin” that can be used to efficiently simulate the bio-economic dynamics of marine systems in support of both management and research. The paper presents two case studies on the conservation and food production impacts of marine protected areas (MPAs). In the coastal coral reef example, the paper explores how heterogeneity in species distributions and fleet preferences can affect distributional outcomes of MPAs. In the pelagic case study, the paper shows how their model can be used to assess the climate resilience of different MPA design strategies, as well as the climate sensitivity of different fishing fleets. This paper demonstrates how intermediate complexity simulation of coupled bio-economic dynamics can help communities predict and potentially manage trade-offs among conservation, fisheries yields and distributional outcomes of management policies affected by spatial bio-economic dynamics.

The SSC thanked Ovando for his informative presentation.

### **2. New Framework Reveals Gaps in US Ocean Biodiversity Protection**

Sarah Gignoux-Wolfsohn (University of Massachusetts-Lowell), Daniel Dunn (University of Queensland), and Emmett Duffy (Smithsonian Institute), presented a recent publication that proposes a scientific framework for assessing marine biodiversity at multiple spatial scales to assess gaps in biodiversity knowledge and protection. The framework prioritizes ecologically and societally important taxa, characteristics of effective networks, and existing data. Applying the framework to assess biodiversity inside and outside US marine protected areas, the analysis found that these areas contain a fraction of the biodiversity found in US waters. The paper shows that none of the nation’s 24 marine ecoregions meet all criteria for an effective protection network and that biodiversity coverage in protected areas varies among regions and taxa.

Duffy advised that this work has now been extended to examining the efficacy of marine biodiversity protection for different stakeholders through regional discussion groups. Duffy also advised that they are near completing a National Ocean Biodiversity Strategy that is anticipated for release by June 2024.

The SSC noted that any definition of “protection” is contentious and needed careful consideration, especially given that the paper indicated that the total closure of an area was the “best” protection. The SSC noted that a total closure might not be as effective as technical measures for specific conservation and fisheries management objectives.

Dunn indicated that the framework used an independent predetermined definition of protection of biodiversity. The use of OECMs (“Other Effective area-based Conservation Measures”) was also considered. Duffy also noted that the primary aim of the approach was to examine how the current network of protected areas worked to protect the biodiversity of US ocean habitats.

An SSC member noted that threats need to be identified in order to assess protection or effectiveness of spatial measures. Stated threats such as climate change or human interactions have been noted as key concerns for biodiversity protection, which the implementation of protected areas does not necessarily address.