

REVISED CONNECTIVITY SUBCOMMITTEE WORKPLAN

Dec. 14, 2015

This outline describes the outputs and timeline for the Connectivity Subcommittee’s work regarding enhancing connectivity and resilience in MPA networks in the face of climate change. The subcommittee anticipates creating four related products between now and the final meeting in Fall 2016. These will include a set of specific recommendations for action by DOC, DOI and other federal MPA agencies (Part IV). In addition, each product may serve as a stand-alone document for specific purposes and target audiences.

PLANNED PRODUCTS: CONDENSED OUTLINE

PART 1 – SPATIAL ECOLOGICAL CONNECTIVITY AND MPAs

Focus = on established ideas about the types and mechanisms of spatial connectivity among populations and ecosystems and how this influences both the purposes and effectiveness of MPAs (in the *absence of climate change*, relying heavily on simple graphics illustrating each idea).

Purpose = provides a basic, user-friendly primer on spatial ecological connectivity and implications for both the purposes and the effectiveness of MPAs that can be used in many contexts and audiences; includes graphics.

Contents:

1. Introduction – importance of spatial ecological connectivity in the marine environment
2. Description of types and ecological consequences of spatial connectivity in marine ecosystems
3. Explanation of relevance of spatial ecological connectivity to purposes (i.e. conservation, fisheries) and effectiveness of MPAs

PART 2 – CONNECTIVITY AND MPA NETWORK DESIGN

Focus = on the rationale and benefits of incorporating spatial ecological connectivity into the design and management of MPA networks.

Purpose = provides a practical summary and guide to the design of MPAs based on the implications of spatial ecological connectivity for their purpose and effectiveness (Part 1). Sets the stage for how climate change will interact with spatial ecological connectivity to influence both the vulnerability and adaptive management of MPAs and their application for ameliorating impacts of climate change (Part 3).

Contents:

1. Introduction – summary of Part 1
2. Implications of spatial connectivity for design of *individual* MPAs per conservation and fisheries goals
3. Implications of spatial connectivity for design of *networks* of MPAs per conservation and fisheries goals

PART 3 – CLIMATE CHANGE AND CONNECTIVITY AMONG MPAs

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Focus = short conceptual piece on environmental and ecological manifestations of climate change and implications for MPA networks, both with respect to their vulnerability for achieving management goals and how a well-designed and adaptively managed networked of linked MPAs can enhance resilience of populations and ecosystems. This high-level synthesis paper will rely heavily on user-friendly info-graphics to illustrate key principles and actions (e.g. source/sink arrows become diverted elsewhere as ocean currents change).

Purpose = explains the implications of climate change for MPAs (vulnerability and applications) and design, and creates the bridge between Parts 1 and 2's basic info on MPA connectivity and design and Part 4's more action-oriented recommendations about how agencies can begin taking action now to enhance connectivity and resilience to climate change.

Contents:

1. Introduction - manifestations of climate change and ecological consequences
2. Implications for vulnerability of MPAs in meeting management goals
3. Implications for how MPAs can enhance resiliency of species and ecosystems in the face of climate change
4. Design considerations for enhancing resilience in MPA networks and surrounding ecosystems in a changing environment, including strengthening or simply maintaining important ecological connections threatened by climate change.
5. Implications for planning and managing effective MPA networks

PART 4 – DESIGNING AND MANAGING RESILIENT MPA NETWORKS: AN ACTION AGENDA

Focus = a short, action-oriented piece based on the above ideas, laying out concrete steps that can be undertaken with existing information to reduce threats of climate change to MPA goals and effectiveness, and how well designed MPA networks can be designed to ameliorate the ecological impacts of climate change throughout the wider regional ecosystems.

Purpose = will serve as the MPAFAC's specific recommendations on MPA Connectivity and Climate Change, in conjunction with Parts 1,2 and 3, or as a stand-alone product.

Contents:

1. Brief summary of the critical importance of enhanced connectivity within MPA networks for resilience to climate change in US waters, and of the MPAFAC charge.
2. Recommended actions by federal MPA agencies to enhance resilience in MPA networks. *(NB: the ideas listed in the earlier background documents are intended solely as examples of the types of actions the Subcommittee might address in its recommendations. The ultimate topics and level of detail will need considerable discussion and refinement by the group.)*

TIMELINE

- ✓ SC Telecon #1 – 12/10/15
- ✓ Outline and Project Plan revised and finalized after Dec. telecon – 12/15/15
- Full FAC conference call – 12/17/15

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- SC telecom #2 – early Jan 2016 (tbd)
- Part I - Connectivity 101 – by late Feb 2016 (tbd)
 - initial draft revised after Dec. 10 telecon - target for distribution = 12/22/15
 - SC reviews draft -- comments in by mid-Jan 2016
 - final draft to SC for review -- early Feb 2016
 - final version – late Feb 2016
- Part II – Designing Connected MPA Networks – by Mar 2016 (tbd)
- Part III - Connectivity, Networks and Climate Change – by Jun 2016 (tbd)
- Part IV - Designing and Managing Resilient MPA Networks – by Fall 2016 (tbd)
 - initial draft of Recommendation for SC review – by April 2016
 - draft of report and recommendations to full FAC –by July 2016
 - revised version based on FAC comments – by Aug/Sep 2016
 - full FAC votes on recommendations at final meeting – by Fall 2016