

great enough to prevent the depletion of one of the populations as a result of increased mortality or lower birth rates.

This explanation in the Guidelines for Preparing SARs has generally been interpreted to mean that DIPs should be designated as stocks. However, this characterization does not evaluate whether the designated stock can function as a “*management unit*” (e.g., can the stock be adequately assessed, can takes be apportioned to specific stocks, see Section B below), given potential limitations in our ability to assess the stock and implement and monitor conservation measures. Such evaluation is particularly important when there are multiple DIPs in a limited geographic area with uncertain, unknown, or inadequate information and for those stocks that may be subject to Take Reduction Plans under section 118 of the MMPA. Recognizing that, in some cases, our tools for identifying DIPs may outpace our ability to effectively manage them and mitigate threats, this procedure:

1. reiterates that a stock generally comprises a single DIP,
2. notes that in practice there may be some situations (anticipated to be relatively few) where it would be impractical or there are insufficient data and analytical tools to assess and manage at the level of a DIP (e.g., DIPs cannot be assessed, takes cannot be apportioned to DIPs),
3. clarifies that in some cases it may be pragmatic to designate a stock comprising more than one DIP, such as if Distinct Population Segments (DPSs) have been established under the Endangered Species Act (ESA),
4. outlines questions to consider when determining when it would be appropriate to combine multiple DIPs into a single stock, and
5. provides direction for implementing this procedural directive in the SARs.

This procedural directive complements anticipated revisions to the Guidelines for Preparing SARs that will clarify management considerations in marine mammal stock designations.

In addition, regarding stock designation and the stock assessment process, NMFS has identified a need for: increased communication between NMFS scientists and managers and between the agency and the public; increased transparency in decision-making, both internally and externally; clarification of the role of managers; and an understanding of who makes final decisions. This document clarifies and, where necessary, establishes a process for prioritizing stocks for evaluation and making and documenting marine mammal stock designations in SARs.

Three terms or phrases used in this procedural directive require definition: stock, DIP delineation, and stock designation. As noted earlier, a stock is defined in the MMPA as “a group of marine mammals of the same species or smaller taxa in a common spatial arrangement that interbreed when mature.” DIP delineation is the process of interpreting the scientific lines of evidence supporting whether or not groups of animals meet the definition of DIP laid out in the Guidelines for Preparing SARs, including determining the geographic range of the groups (which may shift through time, especially for migratory species). Stock designation is the official naming of a stock as a management unit that will then be assessed in SARs. This document primarily deals with the latter and clarifies some special cases where management of DIPs as individual stocks may be challenging.

II. Objective

The objective of this procedure is to establish a process for designating stocks under the MMPA. This procedure clarifies science and management roles, formalizes coordination between NMFS Science Center and Regional Office staff in setting priorities, emphasizes the definition of a stock as a management unit, and describes questions to consider when determining whether multiple DIPs may be combined into one or more stocks for management purposes.

III. Guidance

In accordance with priorities established jointly by Science Center and Regional Office staff, Science Center staff are responsible for DIP delineation based on a transparent and well-documented process³. Science Center, Regional Office, Office of Protected Resources (OPR), and Office of Science and Technology (ST) staff are collectively responsible for determining and documenting stock designations. Where necessary, this process is informed by and based on consideration of whether effective management can be implemented for a single DIP or whether management would be more effective if multiple DIPs were combined into a single stock.

The process steps are outlined in more detail and in Figure 1 below.

A. Process steps

1. Science Center and Regional Office staff meet regularly to prioritize marine mammal stock assessment needs to support management. At least six months prior to annual SAR updates, Science Center and Regional Office staff meet to identify if there are (1) any stocks that should be examined for possible revision, or (2) potential new stocks that should be added⁴. A stock might be considered a high priority for possible revision if, for example:
 - a. DPSs for the species to which the stock belongs have recently been recognized under the ESA,
 - b. there are emerging and/or localized threats likely to affect the stock,
 - c. there are known upcoming take authorizations affecting the stock,
 - d. the stock comprises multiple DIPs, and takes of the stock are likely to disproportionately affect particular DIPs,
 - e. the stock comprises multiple DIPs, and new information might lead to a revised stock

³ Such a process is outlined by the Stock Delineation Guidelines Initiative Working Group (Martien *et al.* 2015) and further detailed in the forthcoming handbook. Martien, K.K., A.R. Lang, and B.L. Taylor. 2015. Report of the Meeting on the Use of Multiple Lines of Evidence to Delineate Demographically Independent Population. NOAA-TM-NMFS-SWFSC-538.

⁴ Here and in subsequent steps, for stocks that span multiple regions, staff and/or leadership from all affected Science Centers and Regions should be involved, as appropriate.

designation,

- f. the Scientific Review Groups (SRGs) or public comments suggest possible revision of the stock, or
- g. new data, analyses, or other information for the stock become available.

Stock revisions may require additional data collection and/or analysis before lines of evidence can be reviewed in Step 2 below, keeping in mind that the MMPA states that the best available data should be used and therefore unreasonable expectations for data collection should be avoided. Given this, if there is reason to suspect that any stock may warrant a revision prior to six months before annual SAR updates, the affected Science Center and Regional Office staff should meet to discuss any possible revisions as soon as information on a possible stock revision becomes available, preferably a year in advance of annual SAR updates. To allow adequate time to complete Steps 2-13 below, if information is available to suggest a possible revision during the drafting of a SAR in one year, a summary may be included in that year's SAR in a "prospective stocks" section, as described in the Guidelines for Preparing SARs.

2. For stocks identified for a possible revision in Step 1, Science Center staff review lines of evidence to delineate DIPs as guided by Martien *et al.* (2015)⁵ and further detailed in the associated forthcoming handbook.
3. Following the review of lines of evidence in Step 2, Science Center staff meet with Regional Office staff to provide an overview of the findings. If the review resulted in a change in the delineation of DIPs (e.g., lumping, splitting, or redefining boundaries of existing DIPs) and/or identification/delineation of new DIPs, Science Center, Regional Office, OPR, and ST staff collectively consider how to designate stocks relative to DIPs (see Section B below for questions to consider). Whenever possible, each DIP should be designated and managed as a separate stock. In cases where there is consensus that DIPs can be assessed and managed as separate stocks, Science Center staff, in coordination with Regional Office, OPR, and ST staff as appropriate, document the lines of evidence that support any changes in DIP delineations and how DIPs can be effectively managed in a stand-alone, publicly-available supporting document (e.g., NOAA tech memo, reference document). Then Science Center staff prepare draft SARs accordingly (see Step 5 below). In cases where there is no consensus that DIPs can be assessed and managed as separate stocks due to insufficient data and/or a lack of effective management tools, the agency convenes an *ad hoc* Working Group (see Step 4 below) to determine how best to designate stock(s).
4. The Working Group comprises staff from the affected Regional Office(s) and the Science Center(s) responsible for the stock assessment, OPR, ST, and representatives from another Regional Office and Science Center. The Working Group considers whether the objectives of the MMPA would be better met by designating a stock that comprises more

⁵ Martien, K.K., A.R. Lang, and B.L. Taylor. 2015. Report of the Meeting on the Use of Multiple Lines of Evidence to Delineate Demographically Independent Population. NOAA-TM-NMFS-SWFSC-538.

than one DIP and whether the management benefits outweigh the risks (see Section B below). If so, the Group identifies which DIPs to combine into a single stock and what adjustments might be necessary for calculation of the potential biological removal (PBR)⁶ for the stock. Note that members of a stock must be in a common spatial arrangement and interbreed when mature, so for migratory animals, stocks should be designated so as to include only animals that share a breeding ground. The Working Group, before the SRG meeting following the identification of the need for a Working Group, develops a management solution and details this in a stand-alone, publicly-available supporting document (e.g., tech memo, reference document), which includes a description of the lines of evidence supporting DIP delineations and how DIPs can be effectively managed as stocks.

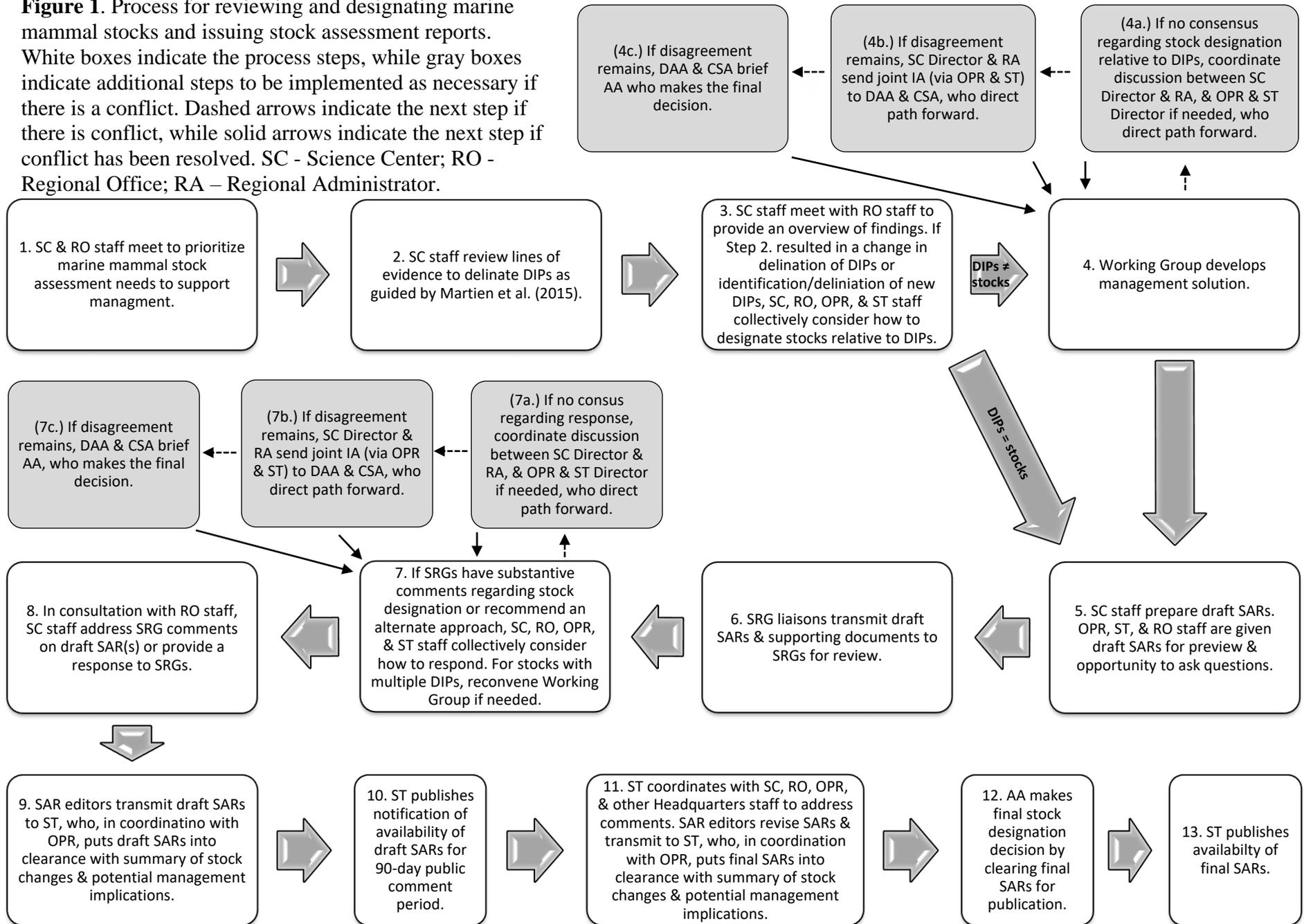
- a. If there is no consensus among the Working Group regarding the designation of stocks relative to DIPs and a management solution, staff coordinate a discussion between the Science Center Director(s) and Regional Administrator(s), and OPR and ST Director(s) if necessary. The Science Center Director(s) and Regional Administrator(s), and OPR and ST Director(s) if necessary, then direct the path forward.
 - b. If disagreement remains, the Science Center Director(s) and Regional Administrator(s) draft and transmit (via OPR and ST) a joint Issues Advisory (IA) to the Deputy Assistant Administrator (DAA) for Regulatory Programs and the Chief Science Advisor (CSA) outlining the issue and articulating their positions. The DAA and CSA may request a briefing by the Science Center Director(s) and Regional Administrator(s). The DAA and CSA then direct the path forward.
 - c. If disagreement remains, the DAA and CSA brief the Assistant Administrator for Fisheries (AA). The AA then makes the final decision.
5. Science Center staff prepare draft SARs. In the draft SAR, Science Center staff provide a summary of the rationale for any changes in stock designation, referencing the stand-alone supporting document detailed in Step 3 or 4 as needed. OPR, ST, and Regional Office staff are given draft SARs for preview and opportunity to ask questions. At the time draft SARs are provided for preview, Science Center, ST, OPR, and Regional Offices staff agree on a date after which Science Center staff proceed with providing the SARs to the SRG if no comments have been received.
 6. Following this internal preview, the SRG liaisons transmit the draft SARs and any supporting documents to the SRGs for review.
 7. If the SRG(s) have substantive comments regarding stock designation or recommend an alternate approach, Science Center, Regional Office, OPR, and ST staff collectively

⁶ The potential biological removal level means the maximum number of animals, not including natural mortalities that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population. 16 U.S.C. 1362.

consider how to respond. For stocks comprising multiple DIPs, if necessary, the Working Group reconvenes to try to resolve the SRG(s)'s comments.

- a. If there is no consensus regarding the response at the staff level or within the Working Group, staff coordinate a discussion between the Science Center Director(s), the Regional Administrator(s), and OPR and ST Director(s) if necessary. The Science Center Director(s) and Regional Administrator(s), and OPR and ST Director(s) if necessary, then direct the path forward.
 - b. If disagreement remains, the Science Center Director(s) and Regional Administrator(s) draft and transmit (via OPR and ST) a joint IA to the DAA for Regulatory Programs and CSA outlining the SRG's recommendations and articulating their positions. The DAA and CSA may request a briefing by the Science Center Director(s) and Regional Administrator(s). The DAA and CSA then direct the path forward.
 - c. If disagreement remains, the DAA and CSA brief the AA. The AA then makes the final decision.
8. In consultation with the Regional Office, Science Center staff address SRGs comments on the draft SARs or provide a response to the SRGs (via the SRG liaisons) explaining why NMFS has not accepted their advice.
 9. SAR editors transmit the draft SARs to ST for review, clearance, and release for public comment. ST, in coordination with OPR, develops the draft SAR decision memo with review by other appropriate Headquarters, Science Center, and Regional Office staff, and includes a brief summary of draft changes to the SARs and their management implications.
 10. ST publishes a notice of availability of the draft SARs in the *Federal Register*, with a public comment period of 90 days, as directed by the MMPA.
 11. ST coordinates with Science Center, Regional Office, OPR, and other Headquarters staff to develop responses to public comments on the draft SARs. For stocks comprising multiple DIPs, if necessary, the Working Group reconvenes to assist in the development of responses to public comments. The SAR editors revise the SARs as necessary and transmit the final SARs to ST for review and final clearance. ST, in coordination with OPR, develops the SAR decision memo with review by other appropriate Headquarters, Science Center, and Regional Office staff, and includes a brief summary of changes to the SARs and their management implications.
 12. The AA makes final stock designation decision by clearing the final SARs for publication.
 13. ST publishes a notice of availability of the final SARs in the *Federal Register*.

Figure 1. Process for reviewing and designating marine mammal stocks and issuing stock assessment reports. White boxes indicate the process steps, while gray boxes indicate additional steps to be implemented as necessary if there is a conflict. Dashed arrows indicate the next step if there is conflict, while solid arrows indicate the next step if conflict has been resolved. SC - Science Center; RO - Regional Office; RA – Regional Administrator.



B. Combining Multiple DIPs

As noted above, a stock generally comprises a single DIP. However, in practice, there may be some situations where it would be impractical or there are insufficient data and analytical tools to assess and manage at the level of a DIP. In some cases, it may be pragmatic to designate a stock comprising more than one DIP. Per Steps 3 and 4 in Section A above, consider the following questions in determining whether to combine multiple DIPs into a single stock.

- Is it feasible to manage each DIP as a single stock? For example:
 - Is there an abundance estimate for each DIP that could be used for calculating the PBR level?
 - Is there a way to attribute takes to each DIP other than allocating each take to all possible DIPs in the area?
 - Are there any other potential analytical or practical barriers that would limit our ability to manage each DIP?
- Is there a reason to believe that human-caused serious injury/mortality or threats differ significantly between DIPs in the area?
- What are the conservation and management benefits and risks of managing each DIP as individual stocks versus together as a single stock?
- Have DPSs for the species to which the DIPs belong been recognized under the ESA?
- Do members of the DIP overlap in space and time with members of at least one other DIP of the same species? For migratory marine mammals, the evaluation should focus on overlap in the breeding ground(s).

The first three main questions aim to determine the feasibility of managing the DIP, the risks associated with managing it jointly with other DIPs, and whether there is a conservation benefit to doing so. These questions provide examples of key factors to evaluate when determining whether we can manage each DIP individually, including whether there is an abundance estimate (which is essential for calculating the PBR level) or a way to attribute takes to each DIP. If each DIP cannot feasibly be managed given the available information and management tools, consider whether DIPs could be more effectively managed if combined to into a single stock.

NMFS should align stock designations with DPSs established under the ESA unless there is compelling reason not to. For species that are listed under the ESA, only DIPs from the same ESA-listed DPS should be combined. The MMPA and ESA have different objectives and criteria for defining management units, but maintaining incongruent MMPA and ESA management units is neither practical nor implementable.

If NMFS determines that two or more DIPs should be combined into a single stock, Science Center, Regional Office, OPR, and ST staff collectively evaluate the factors impeding individual management of the DIPs and determine what additional data or tools are needed to manage DIPs on their own. The results of this evaluation may be included in the SAR for the combined DIPs (e.g., in a “prospective stocks” section as detailed in the Guidelines for Preparing SARs). The SAR should: a) describe the identified DIPs; b) cite to this procedural directive and describe the evaluation of the questions; and c) describe how the DIPs are being combined (e.g., into a single stock, into several regional stocks). The SAR should provide DIP-specific information where available, including a DIP-specific PBR if it can be calculated, but identify stock-wide estimates/calculations of minimum population abundance, maximum net productivity rate, PBR,

and mortality and serious injury, and make determinations of status for the stock as a whole.

Assignment of multiple DIPs to a single stock is not necessarily permanent. DIPs combined into a stock due to the lack of abundance data or information necessary to apportion takes to specific DIPs should be evaluated for designation as separate stocks if sufficient data or information become available in the future. Additionally, stocks should be evaluated regularly, particularly with regard to patterns of human-caused mortality, to consider whether DIPs within the stock might be experiencing disproportionate impacts that could lead to depletion or extirpation.