



Agenda Item 6: Update on progress toward a synchronized approach for assessing and managing the risk of significant adverse impact (SAI)

- See SWG Intersessional Document VME-2025-01

Tasks:

- Developed synchronized approach
- Determine data needs
- Determine resolution of spatial and temporal data



SWG VME-01 May 2025

Japan and Canada have independently developed similar approaches to assessing the risk of SAIs to vulnerable marine ecosystems (VMEs)

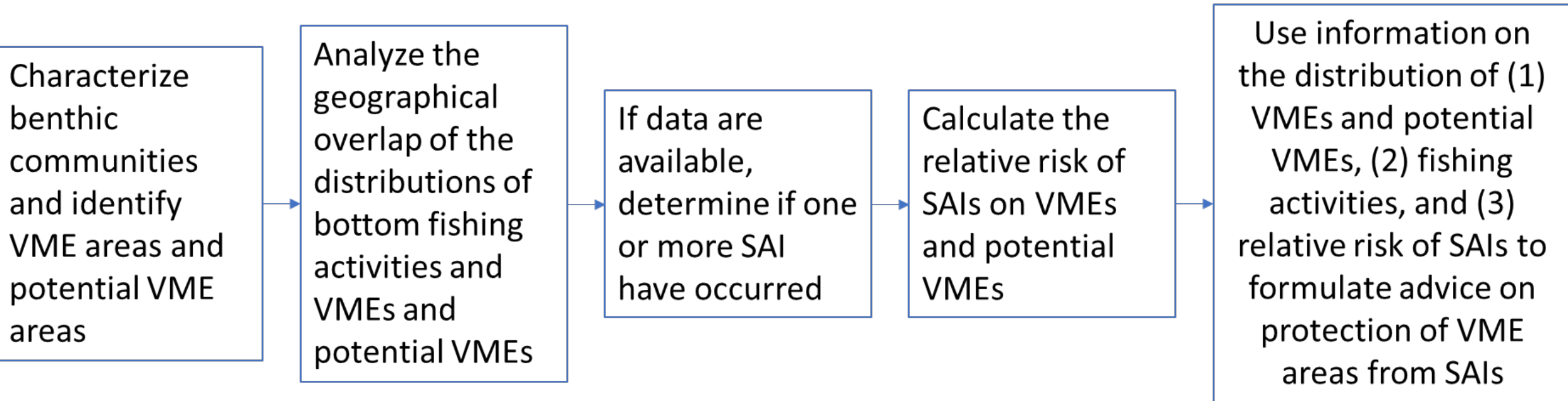
- Miyamoto and Yonezaki (2019) NPFC-2019-SSC VME04-WP02
- Gasbarro et al. (2022) NPFC-2022-SSC BFME03-WP02

Both approaches assess the relative risk of SAIs by evaluating the overlap between the distribution of fishing activity and VMEs.



SWG VME-01 May 2025

Flow chart for assessing and managing the risk of a Significant Adverse Impact (SAI) in the NPFC Convention Area





Some data requirements for assessing relative risk of SAIs

Step in the Flowchart for SAI Assessment	Data Requirements
1 – Identify VMEs and areas likely to be VMEs	Spatially-explicit data layers of VMEs and areas likely to be VMEs: spatial location of map grid cells where VMEs are known or likely to exist that correspond to a compatible spatial resolution of fishing activity (Step 2) See Miyamoto and Sawada (2023) NPFC-2023-SSC BFME04-WP11, and Warawa et al. (2023a, 2023b) NPFC-2023-SSC BFME04-WP12 and NPFC-2023-SSC BFME04-WP13.



Some data requirements for assessing relative risk of SAIs

Step in the Flowchart for SAI Assessment	Data Requirements
2 – Map the spatial overlay between VME areas and bottom fishing activities	Fishery footprint data: Georeferenced location and cumulative frequency of individual fishing events (effort) by gear type mapped onto grid cells that are compatible (standardized) with maps of grid cells where VMEs and areas likely to be VMEs are plotted. Gear-specific area of impact per set (bottom-contact footprint for an individual set): data to calculate this could include start and end coordinates coupled with information about the width of a gear set for trawls, gillnets, and longline pots) or the set location coupled with the estimated area of impact for individual pots/traps. Cumulative fishing impact per grid cell can be calculated as the number of polygons of bottom-contact footprints within each grid cell (e.g. Gasbarro et al. 2022) NPFC-2022-SSC BFME03-WP02.



Some data requirements for assessing relative risk of SAIs

Step in the Flowchart for SAI Assessment	Data Requirements
3 – Determine if an SAI has occurred	NPFC has not yet endorsed a method to determine if an SAI has occurred.



Some data requirements for assessing relative risk of SAIs

Step in the Flowchart for SAI Assessment	Data Requirements
4 – Calculate the relative risk of SAIs on VMEs	For an example using longline traps, see the data needs and methodology outlined in Gasbarro et al. (2022) NPFC-2022-SSC BFME03-WP02.



SWG VME-01 May 2025

Resolution of spatial and temporal data

Data type	Data Requirements
Spatial	SWG VME and SSC BFME05 agreed spatial data should match the spatial extent of VMEs (a habitat patch, or a series of neighboring survey points that host similar benthic fauna)
Temporal	SWG VME and SSC BFME05 agreed that SAI evaluation should be with the best available temporal scale data that can ensure the spatial resolution required for SAI evaluation. Japan and Canada also noted that ideally there would be data on the entire historical distribution of fishing effort.