List of key questions (requests) to the 2025 IWS Panel on DFFE pelagic and demersal fishery-independent surveys, together with brief summaries of the documents provided.

Background:

DFFE ship-based fishery-independent surveys of small pelagic and demersal fish abundance have generally been conducted annually since the mid-1980s using the Department's research vessel *Africana*. Data collected from these surveys are largely used in the form of abundance indices for inputs to stock assessments (and OMPs in some cases) for important commercially targeted and by-catch species (including small pelagic fishes, Cape hakes, horse mackerel, Agulhas sole, chokka squid, monkfish and kingklip). Note that in the cases of the small pelagic and demersal by-catch species, the surveys are the ONLY source of abundance data. Data and samples collected during the surveys are also used to inform various biological parameters (e.g. age and growth, maturity etc) in stock assessments. When the *Africana* has been unavailable for technical reasons, the Department has chartered commercial fishing vessels to conduct the surveys. In recent years, however, increasingly stringent financial constraints have resulted in some of the surveys not being conducted due to insufficient funds to maintain the *Africana* in a seaworthy condition or to finance the charter of an industry vessel. Considering that these circumstances may persist (or deteriorate even further) in future, the IWS Panel is requested to advise on how best to proceed, as detailed more specifically below.

Key requests:

1. Comment on the pertinence of evaluating the impacts of reduced frequency/intensity of surveys. For example: conducting only one pelagic survey (spawner biomass) every year; "staggered" demersal surveys (i.e. each coast surveyed every other year); only one demersal survey per coast every second (or third year).
2. Comment on whether there are alternatives to survey and assessment-related estimation methods.
3. Advise on how to best to inform higher levels of government on the importance of/need for surveys and ensure sufficient resources are made available for this purpose.

Primary papers:

IWS/2025/Survey/P1: Key questions and documents
[This document]

IWS/2025/Survey/P2: Coetzee and Shabangu (2025). The importance of regular hydroacoustic biomass surveys off South Africa.
[Provides a background to the small pelagic hydroacoustic surveys and their importance to monitoring, assessing and managing small pelagic fish species]

IWS/2025/Survey/P3: Ross-Gillespie and Maphumulo (2025). Updated hake OMP robustness tests
[Presents the results of forward projections of the updated hake Reference Case Operating Model under the rules of OMP-2022 for various assumptions regarding future surveys]

IWS/2025/Survey/P4: Landman and Copeland (2025): Industry concerns and requests to the IWS Panel.
[Presents demersal and pelagic fishing industry perspectives on the role of the DFFE demersal and pelagic surveys, with some questions to the Panel regarding missing or discontinued surveys]

IWS/2025/Survey/P5: Somhlaba (2025): Treatment of uncertainty in input variables for a Net Present Value computation for a new research survey vessel investment appraisal.
[This paper presents a Net Present Value (NPV) analysis for the replacement of Research Vessel *Africana*. employs a simulation-based approach to evaluate project viability in terms of investment and operational costs versus future Total Allowable Catches (TACs) and revenue streams from both levies and taxation]

Background papers:

IWS/2025/Survey/BG1: Coetzee *et al.* (2024). Summary cost implications of not conducting a November 2024 small pelagic biomass survey with comments on the financial benefits of having conducted the 2024 demersal surveys. *Unpublished DFFE Pelagic Scientific Working Group document*. *FISHERIES/2024/OCT/SWG-PEL/53*. 7 pp.
[Describes calculations of potential revenue loss resulting from likely TAC reductions if the November 2024 Pelagic Spawner Biomass survey was not conducted. Also provides an estimate of the likely revenue loss associated with the hake TAC reduction yielded by the hake OMP if the two demersal surveys had not been conducted in 2024]

IWS/2025/Survey/BG2: Fairweather, Singh and Durholtz (2025). Summary of DFFE Demersal surveys.
[Provides a background to the objectives, design and importance of demersal surveys to the monitoring, assessment and management of demersal and other species]

IWS/2025/Survey/BG3: Ross-Gillespie, Butterworth and Maphumulo (2025). Update to the hake Reference Case Operating Model with inclusion of the 2024 commercial data. *Unpublished DFFE Demersal Scientific Working Group document. FISHERIES/2025/OCT/SWG-DEM/17.* 17 pp.
[Provides the results of the most recent (2025) update of the hake Reference Case Operating Model]

IWS/2025/Survey/BG4: Brandão and Butterworth (2025). Updated "Replacement Yield" model fit to catch and survey data for the South coast and for the West coast kingklip resources off South Africa to include data up to 2024. *Unpublished DFFE Demersal Scientific Working Group document. FISHERIES/2025/OCT/SWG-DEM/08.* 13 pp.
[Provides the results of the most recent (2025) update of the kingklip Replacement Yield Model. Kingklip is a key by-catch species in the hake-directed trawl and longline fisheries. This is an example of how survey results provide the primary basis for management advice on more than the primary species harvested.]

IWS/2025/Survey/BG5: Ross-Gillespie and Butterworth (2022). Robustness tests results for the hake OMP-2022 revision. *Unpublished DFFE Demersal Scientific Working Group document. FISHERIES/2022/OCT/SWG-DEM/28.* 22 pp.
[Provides results of several of the robustness tests that were considered during the development of hake OMP-2022. Of relevance are the robustness tests RT1 to RT6 described in Table 1 and Appendix A]