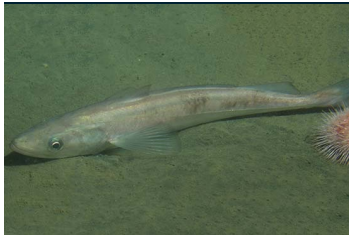


## 6 | Active Harvest Strategy

# Deep-water and Shallow-water Hake



### Management Authority:

South Africa (domestic)

### Adoption Year:

1990; Updated in 2018

### Management Objectives:

Maintain both stocks about  $B_{MSY}$  and balance trade-offs between catch, effort and inter-annual variability in TAC

### Reference Points:

**Target Reference Point:**  $B_{MSY}$

### Harvest Strategy:

A fully specified harvest strategy that has been tested via MSE. It includes rules for Exceptional Circumstances for when certain key indices drop below pre-determined threshold values, or when further observations fall outside the range tested within the MSE. Operating models for the MSE continue to be updated, most recently in 2021, to account for new data.

#### Specifications:

- **Type:** Empirical
- **Management cycle:** Annual
- **Data inputs:** Commercial CPUE and survey abundance indices.
- **Management output:** Quota
- **Harvest Control Rule:** TAC recommendations are based on the output of the harvest strategy formula

### Outcome:

The 2021 assessment showed both hake stocks above the B-based target reference points. While the TAC trend has been downwards since 2020, the harvest strategy is responding properly to some recent recruitments lower than average to ensure the stocks are maintained near or above  $B_{MSY}$ . The harvest strategy will be revised in 2022.

### Link to relevant policy document or update:

- [The 2018 Operational Management Procedure for the South African \*Merluccius paradoxus\* and \*capensis\*](http://webcms.uct.ac.za/sites/default/files/image_tool/images/302/pub/2018/IWS2018/Hake/MARAM_IWS_2018_Hake_BG4%20OMP-2018%20specifications.docx)  
([http://webcms.uct.ac.za/sites/default/files/image\\_tool/images/302/pub/2018/IWS2018/Hake/MARAM\\_IWS\\_2018\\_Hake\\_BG4%20OMP-2018%20specifications.docx](http://webcms.uct.ac.za/sites/default/files/image_tool/images/302/pub/2018/IWS2018/Hake/MARAM_IWS_2018_Hake_BG4%20OMP-2018%20specifications.docx))
- [Update to the Reference Case model incorporating the 2020 commercial and 2021 survey data](https://zivahub.uct.ac.za/articles/report/Update_to_the_hake_Reference_Case_model_incorporating_the_2020_commercial_and_2021_survey_data/17068142/1)  
([https://zivahub.uct.ac.za/articles/report/Update\\_to\\_the\\_hake\\_Reference\\_Case\\_model\\_incorporating\\_the\\_2020\\_commercial\\_and\\_2021\\_survey\\_data/17068142/1](https://zivahub.uct.ac.za/articles/report/Update_to_the_hake_Reference_Case_model_incorporating_the_2020_commercial_and_2021_survey_data/17068142/1))