**IDENTIFICATION**

**SCIENTIFIC NAME**
Merluccius paradoxus

**SPECIES NAME(S)**
Deep-water Cape hake

**STOCK IDENTIFICATION**
The distribution of Deep-water Merluccius paradoxus and shallow-water Merluccius capensis Cape hakes overlap along the continental shelf and upper slope of South Africa; both species occupy different depths but coincide between 150 and 300m (DAFF 2012).

The relation between this and the neighboring Namibian population is as yet unclear. The most recently available data on the stock structure was discussed in a workshop on the subject, held in November 2014 (OLRAC SPS 2014).

According to the workshop report, for *M. paradoxus* there are “two 2-stock hypotheses (differing in the area of overlap of the two stocks), and a single stock hypothesis.” In South African waters *M. paradoxus* is currently treated as a single stock for assessment purposes, but discussions on the stock structure will continue.

**RELATED LINKS**
- South African Department of Agriculture, Forestry and Fisheries (DAFF)
- Fisheries Research and Development, South Africa Department of Agriculture, Forestry & Fisheries , Marine Resource Assessment and Management Group, University of Cape Town

**ASSESSMENT**

**Strengths**
- The spawning stock is well above the limit reference point.
- Industry has taken a proactive interest in hake conservation, improving catch accounting and tightening effort controls.
- Rebuilding goals are in place for this stock.
- Deep-water and shallow-water stocks are now distinguished in the assessment and on-board observers were placed on the boats to distinguish the two species in catches. Assessments are peer reviewed periodically by a high level panel of international scientists, particularly in the buildup to Operational Management Procedure revisions; a harvest control rule is defined as well as limit and target reference points for biomass.
- Based on the status of the stocks and analysis of the Catch per Unit Effort estimates, a partial catch limit is set annually for deep-water Cape hake (and distinct catch limit for the shallow-water Cape hake). The aggregated approach for the management of both Cape hake species is considered as appropriate and in accordance with the Precautionary Approach. The two hakes are managed as distinct entities within an aggregated TAC which is limited by the weaker condition of deep-water Cape hake.
- Bycatch species are being monitored from observers and landing records; precautionary catch limits for horse mackerel, monk and kingklip are in place. Tori lines have substantially reduced the interaction with seabirds and are mandatory as part of fishing permit conditions. The National Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries launched in 2008 addresses the interactions of the fishery.
- There is still some uncertainty surrounding how effective are the current measures to manage long-term impacts on sea floor habitats.

**Weaknesses**
- The spawning stock is estimated to have decreased and in 2015 was below target MSY levels.
- The distinction of both species is difficult in operational terms.
- There are still some concerns over potential impacts on some protected species such as picked dogfish and black-browed Albatrosses; seabirds have been a group of concern due to trawl and longline interactions, and information on bycatch is still considered limited in terms of the inshore fleet.
- Bycatch represents around 20% of total catches. Observers’ coverage improved but still not optimal.

**SCORES**

**Management Quality:**
- Management Strategy: ≥ 8
- Managers Compliance: 10
- Fishers Compliance: ≥ 8

**Stock Health:**
- Current Health: 7.9
- Future Health: 6

**FIPS**
No related FIPs

**MSC**
- South Africa hake trawl: MSC Recertified
Fisheries

Within FishSource, the term "fishery" is used to indicate each unique combination of a flag country with a fishing gear, operating within a particular management unit, upon a resource. That resource may have a known biological stock structure and/or may be assessed at another level for practical or jurisdictional reasons. A fishery is the finest scale of resolution captured in FishSource profiles, as it is generally the scale at which sustainability can most fairly and practically be evaluated.

<table>
<thead>
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<th>ASSESSMENT UNIT</th>
<th>MANAGEMENT UNIT</th>
<th>FLAG COUNTRY</th>
<th>FISHING GEAR</th>
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<tbody>
<tr>
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<td>South Africa</td>
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<td>Longlines</td>
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<td></td>
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<td>Single boat bottom otter trawls</td>
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Management Unit

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<tr>
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<th>ORGANIZATION</th>
<th>FISHING AREA</th>
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<td>FAO 51, FAO 40, FAO 47.1.6, FAO 47.1.5, FAO 47.2.1, FAO 47.2.2, FAO 47.2.3</td>
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