

Documents for the MARAM/DFFE International Fisheries Stock Assessment Review Workshop, 2023

General

General 1: Announcement and Schedule. MARAM/IWS/2023/General/1. 2 pp.

General 2: Document list. MARAM/IWS/2023/General/2. 4 pp.

General 3: Questions to the panel. MARAM/IWS/2023/General/3. 1 pp.

General 4: Presentation of the Panel Report.

General 5: IWS 2023 Final Panel Report.

Hake Genetics

Primary papers

HAKE/P1: Durholtz, D. 2023. SA hake genetics and stock structure. MARAM/IWS/2023/HAKE/P1: 2pp.

Background documents

HAKE/BG1: Forde, S., von der Heyden, S., Le Moan, A., Nielsen, E.S., Durholtz, D., Kainge, P., Kathena, J.N., Lipinski, M.R., Ndjaula, H.O.N., Matthee, C.A. and Henriques, R. 2022. Management and conservation implications of cryptic population substructure for two commercially exploited fishes (*Merluccius* spp.) in southern Africa. *Molecular Ecology Resources*, 00: 17pp.

HAKE/BG2: Durholtz, D. 2023. Excerpt from the 2019 IWS panel report pertaining to SA hake stock structure. MARAM/IWS/2023/Hake/BG2: 6pp.

HAKE/BG3: Butterworth, D.S. and Rademeyer, R.A. 2014. First cut at broad model specifications for the development of transboundary hake stock assessments. MARAM/IWS/2014/Hake/P10. 4pp.

HAKE/BG4: Dunn, A., Link, J.S. Punt, A.E., Stefansson, G. and Waples, R.S. 2014. Hake extracts from the International Review Panel report for the 2014 International Fisheries Stock Assessment workshop. 6pp.

Presentations

Hake/Pres1: Durholtz, D. 2023. Hake Stock Structure - background. 4 slides

Working papers

Hake/WP1: Tiedemann, R. 2023. Comparison of pool-seq methods in 2019 and 2023 hake papers
MARAM/IWS/2023/Hake/WP1: 1 pp.

Sardine

Primary papers

SARDINE/P1: Anon. 2023. List of the key focus question(s) for the panel regarding sardine, together with brief summaries of the documents provided. MARAM/IWS/2023/Sardine/P1: 2 pp.

SARDINE/P2: van der Lingen, C.D., de Moor, C.L. and Coetzee, J.C. 2023. Available data for determining the occurrence and distribution of Cool Temperate and Warm Temperate Sardine components by life history stage. MARAM/IWS/2023/Sardine/P2: 31 pp.

SARDINE/P3: de Moor, C.L., van der Lingen, C.D., Teske, P.R. 2023. A revised hypothesis for South African sardine stock structure. MARAM/IWS/2023/Sardine/P3: 8 pp.

SARDINE/P4: de Moor, C.L. 2023. Proposed equations for the model of the revised South African sardine stock structure hypothesis. MARAM/IWS/2023/Sardine/P4rev: 19 pp.

SARDINE/P5: de Moor, C.L. 2023. Initial results from the revised population dynamics model of the South African sardine resource modelling two components in two areas. MARAM/IWS/2023/Sardine/P5: 18 pp.

Background Documents

SARDINE/BG1: Coetzee, J.C., de Moor, C.L., van der Lingen, C.D. and Butterworth, D.S. 2022. A summary of the sardine (and anchovy) fishery. MARAM/IWS/2022/Sardine/BG1. 19 pp.

SARDINE/BG2: Teske, P.R., Emami-Khoyi, A., Golla, T.R., Sandoval-Castillo, J., Lamont, T., Chiazzari, B., McQuaid, C.D., Beheregaray, L.B. and van der Lingen, C.D. 2021. The sardine run in southeastern Africa is a mass migration into an ecological trap. *Science Advances*, 7: 9 pp.

SARDINE/BG3: de Moor, C.L., van der Lingen, C.D. and Teske, P.R. 2022. A new hypothesis for South African sardine stock structure. MARAM/IWS/2022/Sardine/P3. 8 pp.

Presentations

SARDINE/Pres1: de Moor, C. 2023. An Introduction to the South African Sardine Resource and Fishery. 17 slides

SARDINE/Pres2: van der Lingen, C.D., de Moor, C.L. and Coetzee, J.C. 2023. Available data for determining the occurrence and distribution of Cool Temperate and Warm Temperate Sardine components by life history stage. 23 slides

SARDINE/Pres3: de Moor, C., van der Lingen, C. and Teske, P. 2023. A new hypothesis for South African sardine stock structure. 9 slides

Squid

Primary papers

SQUID/P1: Brandão, A. and Butterworth, D.S. 2023. Initial simulation exercise to generate pack data for the chokka squid (*Loligo reynaudii*) resource of South Africa. MARAM/IWS/2023/SQUID/P1. 18 pp.

SQUID/P2: Brandão, A. 2023. Excerpts from the 2022 IWS panel report pertaining to the squid resource. MARAM/IWS/2023/SQUID/P2: 2 pp.

Background documents

SQUID/BG1: Brodziak, J.K.T. and Macy III, W.K. 1996. Growth of long-finned squid, *Loligo pealei*, in the northwest Atlantic. MARAM/IWS/2023/SQUID/BG1: 25 pp.

SQUID/BG2: Mwanangombe, C.H., Durholtz, D., Yemane, D., Githaiga-Mwicigi, J.M.W., Sauer, W.H.H. and Lipinski, M.R. 2023. Growth rates of the chokka squid *Loligo reynaudii* D'Orbigny, 1845 (Cephalopoda: Myopsida: Loglignidae) off South Africa, investigated over two years. *Folia Malacologica*, 29 (3): 10 pp.

SQUID/BG3: Durholtz, M.D. and Glazer, J.P. 2022. Squid: summary of resource and fishery, and on improving the assessment model. MARAM/IWS/2022/Squid/P1. 6 pp.

SQUID/BG4: Glazer, J.P. 2019. Updated assessment of the squid resource, *Loligo reynaudii*. FISHERIES/2019/MAR/SWG-SQ/06. MARAM/IWS/2022/Squid/P2. 19 pp.

SQUID/BG5: Anon. 2022. Squid assessment discussion points. MARAM/IWS/2022/Squid/P3. 2 pp.

Slides and presentations

SQUID/Pres1: Githaiga-Mwicigi, J.M.W., Glazer, J., Louw, G. and Durholtz, D. 2023. The South African commercial squid jig fishery. 10 slides

Working papers

SQUID/WP1: Brandão, A. 2023. Generating pack data for squid for different relative ratios of the mid-April cohort. MARAM/IWS/2023/SQUID/WP1: 2 pp.

SQUID/WP2: Brandão, A. 2023. Further results when generating pack data for squid. MARAM/IWS/2023/SQUID/WP2: 3 pp.

SQUID/WP3: Brandão, A. 2023. Fits to the age-length data of squid. MARAM/IWS/2023/SQUID/WP3: 4 pp.

Non-stationarity**Primary papers**

NonSTAT/P1: Butterworth, D.S. and Johnston, S.J. 2023. Possible approaches to detect non-stationarity (such as caused by climate change) on the dynamics of local fish stocks. MARAM/IWS/2023/NonStat/P1. 18 pp.

Background documents

NonSTAT/BG1: Sellinger, E.L., Szuwalski, C. and Punt, A.E. 2023. The robustness of our assumptions about recruitment: A re-examination of marine recruitment dynamics with additional data and novel methods. *Fisheries Research*, 269 (2024): 11 pp.

NonSTAT/BG2: Hollowed, A. and D. Stram* (editors). 2023. Seventh National Meeting of the Scientific Coordination Subcommittee of the Council Coordination Committee. Report of the Regional Fishery Management Council's National SSC Workshop. North Pacific Fishery Management Council, Anchorage AK: 72 pp.

NonSTAT/BG3: Szuwalski, C.S., Hollowed, A.B., Holsman, K.K., Ianelli, J.N., Legault, C.M., Melnychuk, M.C., Ovando, D. and Punt, A.E. 2023. Unintended consequences of climate-adaptive fisheries management targets. *Fisheries Research*, 24 (3): 15 pp.

Slides and presentations

NonSTAT /Pres1: Punt, A.E. 2023. Overview of some considerations related to non-stationarity. 20 slides