SIOFA | APSOI
Southern Indian Ocean Fisheries Agreement
Accord relatif aux Pêches dans le Sud de l'Océan Indien

Scientific Committee

La Réunion, 5 June 2025

SC CIRCULAR n° 2025-03

SUBJECT: Information and schedule of the Alfonsino age workshop under project ALF-2024-01

Dear Heads of Delegation of the SIOFA Scientific Committee,

Dear Colleagues,

At SC10, the SC noted that project ALF-2024-01 (Alfonsino age protocol development, https://siofa.org/science/sc-works/ALF-2024-01) had been delayed due to social unrest in Noumea (New Caledonia) and that it planned to develop its activities this year instead.

The ALF2024-01 project leads, Dr Stephen Brouwer and Dr Takehiro Okuda, have proposed that the project be developed through an in-person workshop, to be held at the premises of the Pacific Community (SPC) in Noumea, 13-17 October 2025.

This workshop will develop an age protocol for alfonsino (*Beryx splendens*) in the Indian Ocean, with a follow up within the project on otolith reading and reader validation taking place in laboratories in the Cook Islands and Japan.

In addition, the work under project ALF2024-01 may also contribute to the ageing work that was envisaged under project ALF2025-01 (Alfonsino age and growth). The Conveners have indicated that they may be able to conduct the ageing work for the assessment as a part of the age protocol development.

Annex 1 to this circular provides information on the agenda and the activities foreseen during the 2025 workshop under project ALF-2024-01.

Please note this information and reach out to the Secretariat (Science Officer, marco.milardi@siofa.org) by 30 June 2025, should your alfonsino ageing experts wish to attend the workshop.

Please don't hesitate to contact me if you have any questions.

Sincerely yours,

Alistair Dunn -SIOFA Scientific Committee Chair

Annex 1 - ALF-2024-01 - SIOFA Alfonsino age protocol development - age workshop

Location: South Pacific Community (SPC) Noumea, New Caledonia

Date: Proposed 13-17 October 2025

Agenda

1. Confirmation of the agenda
2. Planned activities in Noumea:
    a. Discussion on preparation methods used by participant countries and determine if a standardised approach is required for best practise.
    b. Discussions regarding previous age validation data (e.g. bomb radiocarbon), and potential for complimentary methods (e.g., sclerochronological synergies with time-specific climate records).
    c. Comparison of whole and sectioned otoliths.
    d. Preparation of a small reference set of otoliths for ageing.
    e. Develop an ageing protocol for alfonsino.
        i. Develop otolith preparation procedures;
        ii. Develop reading protocol;
        iii. Develop multivariate ensemble model to determine the influence of each variable (otolith weight and thickness measurements).
    f. Advise on the number samples and size/age range required to develop reliable growth curves.
    g. Otolith sample selection (random vs stratified). Currently the objective is for a reliable growth curve for the assessment (stratified sample) but if the age data are also to be used for mortality estimates derived from age compositions, then random sampling would be required.

Post-Workshop Activities

3. Age full sample and provide additional otolith weight and thickness measurements at home laboratory in Cook Islands and Japan [October 2025 - January 2026].
4. Cross validation between laboratories. Swop 100 processed and aged otoliths between Cook Islands and Japan and 50 from each of these sub-samples to be aged at FAS and SPC. Compare the results.
5. Growth estimates produced. Provide data to the stock assessment team who should assess the suitability for use in the assessment [and a random sample for mortality estimation - possibly only if

reliable thickness/weight age relationship is achievable and a larger data set can be easily obtained in time for the assessment]. Aim to be completed by March 2026 the assessment team will need the data by April 2026.

6. Potential for bomb radiocarbon dating for heaviest otoliths to determine longevity, important for estimating natural mortality required for stock assessments (Allen, SPC), and validate periodicity of annuli using sclerochronologies (Joe, SPC). [Note that currently there is no funding from SIOFA for this work]

7. Planned paper to SIOFA SC in 2026 by Japan, Cook Islands, FAS and SPC.

    a. One joint paper including presentation of available age data. Noting that the full age sample and cross validation may not be completed by the SIOFA SC paper submission date (mid-February). *An updated version of this paper once the work is completed could be produced as an information paper and provided to the SC in 2027 alongside the assessment*.

8. Develop an alfonsino age protocol manual for future use.