



Submission to NSW DPIRD: Rebuilding Programs for NSW Fish Stocks

Grey Morwong | Silver Trevally | Pearl Perch | Redfish

Submitted by: Wild Caught Fishers Coalition

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Executive summary

Purpose and position: Wild Caught Fishers Coalition (WCFC) supports sustainability and rebuilding of stocks where it is demonstrably required. WCFC's position is that rebuilding programs must be evidence-based, transparent, and reproducible, with stock status classifications grounded in sector-complete data rather than precaution applied in the presence of material information gaps.

Member engagement and consultation: WCFC currently represents 25 active members across all regions of New South Wales. While these members provide an important foundation for our organisational insight, WCFC did not rely solely on formal membership to inform this submission. We also engaged directly with active commercial fishers who are currently operating in, and economically dependent on, the fisheries subject to the proposed rebuilding programs. This broader engagement ensured that WCFC's analysis reflects real-world operational conditions, behavioural responses to regulation, and on-water observations from those directly affected, rather than relying only on aggregate data or organisational perspectives.

Core problem identified: For the four species proposed for rebuilding (Grey Morwong, Silver Trevally, Pearl Perch and Redfish), WCFC's concern is that current decision frameworks can conflate declines in reported landings with declines in biomass, despite major structural and behavioural changes in fisheries (business adjustment, spatial access changes, targeting substitution, and shifting effort between sectors).

Why landings are insufficient: Landings can fall because fewer operators participate, operators shift to other species, or access and costs change. WCFC highlights that Silver Trevally catch is highly concentrated among a small number of operators, meaning total landings are a poor proxy for abundance without additional indicators.

What must be published to make determinations credible: WCFC calls for DPIRD to publish, for each species, a sector-by-sector removals ledger (commercial, recreational, charter, Aboriginal cultural and IUU) with uncertainty bounds, alongside participation counts (unique



businesses/vessels), method-relevant effort and spatial footprint metrics, and clear definitions of targeted versus incidental catch.

CPUE requirement: Where gradual declines are cited as evidence, DPIRD should publish a standardised CPUE index (model form, covariates, diagnostics and uncertainty) or provide a technical justification for why CPUE is not reliable and what evidence replaces it. Sensitivity testing must demonstrate how results change under plausible effort displacement and targeting substitution scenarios.

Cross-jurisdiction alignment: For stocks managed across NSW and Commonwealth jurisdictions (notably Pearl Perch and Redfish), WCFC requests explicit alignment and attribution of what NSW measures are expected to achieve in terms of mortality reduction and rebuilding contribution.

Outcome sought: WCFC asks DPIRD to provide a clear evidence-to-decision pathway for each species, showing how the evidence base supports the depleted classification and how proposed actions will reduce total fishing mortality and improve recruitment, with scheduled review points as data quality improves.

Introduction

This submission responds to the NSW DPIRD public consultation on Rebuilding Programs for NSW Fish Stocks and the associated species rebuilding proposals.

A central concern for WCFC is ensuring that stock status conclusions and rebuilding measures are grounded in evidence that distinguishes genuine abundance change from changes in fishing behaviour. Where participation declines over time, or where operators shift effort to alternative species for economic, regulatory, or operational reasons, aggregate landings can fall gradually even if stock abundance is stable.

For that reason, catch per unit effort (CPUE) is a critical indicator for interpreting trends, provided it is standardised for changes in fishing power, area, season, depth, and vessel effects. A standardised CPUE series (and the assumptions underpinning it) is essential to avoid misinterpreting an effort or targeting signal as a biomass signal.

Silver Trevally provides a practical example of why this matters. WCFC's understanding is that, since the introduction of quota arrangements for Silver Trevally, landings have become highly concentrated, with one Sydney-based trawler accounting for approximately 60% of reported landings in recent years. In circumstances where a small number of operators account for a large share of catch, total landings become a poor proxy for stock status and should be interpreted alongside standardised CPUE, participation counts, and method-relevant effort and spatial footprint metrics.



Wild Caught Fishers Coalition supports sustainability, the precautionary approach, and rebuilding where credible evidence indicates depletion. WCFC's core position is that rebuilding decisions and the distribution of restrictions must be anchored in transparent accounting of total fishing mortality across all sectors, including commercial, recreational, charter, Aboriginal cultural fishing, and illegal, unreported and unregulated fishing.

Where key sources of removals are unquantified or treated as assumptions, rebuilding programs should quantify the uncertainty, demonstrate sensitivity to those assumptions, and prioritise measurement before imposing highly consequential changes to one sector.

WCFC requests that NSW DPIRD ensure any 'depleted' status determination is evidence-based, transparent, and reproducible, and not driven solely by precaution in the presence of known data gaps. This is particularly important where the available time series may reflect structural change in fisheries rather than abundance change.

Background: structural change and effort displacement

Between 2017 and 2019, NSW implemented major structural reforms through the Commercial Fisheries Business Adjustment Program, resulting in rationalisation and a reported reduction of over 30% in commercial fishing businesses and endorsements across all commercial fisheries, including the Ocean Trawl and Ocean Trap and Line fisheries. Where assessments rely on time series landings and catch rates, these structural changes must be explicitly separated from abundance signals.

WCFC also notes that changes to Silver Trevally size limit settings were associated with a material decline in recorded catch around the time of implementation. At the same time, participation and targeting behaviour in the Ocean Trawl Fish Northern Zone have continued to evolve, with many businesses retaining Fish Northern Zone shareholdings but no longer actively participating in the Silver Trevally component, instead directing operational effort into the prawn sectors where they hold prawn endorsements. These dynamics reinforce why stock status interpretation must distinguish abundance from changes in participation, targeting, and effort allocation, and why standardised CPUE and effort metrics are essential when landings show gradual decline.

NSW also established Recreational Fishing Havens in 2002 that removed commercial fishing from major estuarine areas. This materially altered the spatial footprint of commercial fishing and can shift effort into other areas and fisheries. Effort displacement should be treated as a core assessment input where landings and catch rates are used as indicators.



Australia is a net seafood importer. It has been estimated that 62% of the edible seafood Australians consume (by weight) is imported, predominantly from Asia. Rebuilding frameworks should consider the broader sustainability implications of displacing domestic wild catch supply without credible evidence of net conservation benefit.

What WCFC is calling for

- Ensure that any 'depleted' status classification is based on transparent, reproducible evidence, including clear reference points and documented assumptions, not precaution alone.
- Adopt a whole-of-stock, whole-of-mortality approach for each species, with a clear statement of what is measured, what is modelled, and what is assumed.
- Publish a standardised sector-by-sector removals accounting table for each stock and year, covering commercial, recreational, charter, Aboriginal cultural fishing, and IUU removals, with uncertainty bounds and estimation methods.
- Publish participation series for each stock and year: counts of unique reporting fishing businesses and vessels with recorded landings by relevant fishery sector, aggregated to protect confidentiality.
- Publish method-relevant effort series and spatial footprint metrics used in assessments and determinations (for example, hours trawled or shots, days fished, depth and area strata), and describe how major access, cost and participation changes are treated.
- Define and report targeted versus incidental catch (criteria and time series split), especially where species are avoidable or frequently secondary.
- Where CPUE is relied on, publish the standardised CPUE index (model form, covariates such as area, season, depth and vessel effects, diagnostics, and uncertainty). Where CPUE is not relied on, publish a technical justification and specify what evidence replaces it.
- Publish behavioural sensitivity analyses that test plausible effort displacement and targeting substitution scenarios so landings trends are not misinterpreted as abundance trends.
- Implement a program to materially improve NSW offshore recreational catch estimates for low-frequency demersal species, and publish a pathway to estimate or bound Aboriginal cultural catch and IUU removals.
- For each proposed management action, publish the expected biological benefit and a clear causal pathway showing how the action reduces total fishing mortality and improves recruitment outcomes, alongside socio-economic trade-offs.
- Publish a clear evidence-to-decision link for each determination, showing how each evidence line (catch, effort, standardised CPUE where applicable, size and age composition,

fishery independent data if available, and model diagnostics) translates into stock status classification and management response.

Species considerations

1. Silver Trevally (*Pseudocaranx georgianus*)

NSW DPIRD's 2024 to 2025 Stock Status Summary reports an integrated assessment estimating female spawning biomass at 21.2% of unfished levels at the beginning of 2024. The Summary also states that Aboriginal cultural catch and IUU fishing have not been quantified and are assumed to be at a consistent or low level.

The Summary references a joint Commonwealth and NSW assessment prepared for AFMA. Given acknowledged sensitivity of the biomass estimate to key assumptions, and the presence of sensitivity scenarios that materially change stock status conclusions, the rebuilding program should treat uncertainty as a primary decision input and should publish the sensitivity results in a form suitable for independent technical review.

Commercial fishing perspective and key technical considerations:

- Given concentration risk (small number of operators contributing a large share of landings), publish standardised CPUE, participation counts, and effort and spatial footprint metrics so abundance is not inferred from landings alone.
- Publish model inputs, priors, diagnostics, and sensitivity runs that materially change depletion estimates or rebuilding timelines.

Species-specific requests:

- Publish, by year and fishing period, counts of unique reporting fishing businesses and vessels with Silver Trevally landings in the Ocean Trawl Fishery (and relevant endorsement classes), plus an aggregated distribution of landings to demonstrate concentration risk.
- Publish the effort metrics underpinning the Trevally catch series (for example, trawl hours and shots in Trevally-relevant strata), and explicitly describe how marine park access changes, operating cost pressures, and structural reduction in participation are treated.
- Publish a Trevally targeting definition for Ocean Trawl operations and report the time series split between targeted and incidental catch.
- Publish the standardised Silver Trevally CPUE index for each relevant fleet and method, or provide a technical justification for exclusion, including diagnostics and uncertainty.
- Provide sensitivity analyses testing plausible targeting substitution scenarios where operators shift effort to other species, and show how depletion estimates and rebuilding timelines change.

2. Grey Morwong (*Nemadactylus douglasii*)

The NSW Grey Morwong stock assessment classifies the Eastern Australia biological stock as depleted, based primarily on a surplus production model estimating biomass at approximately 0.11 of unfished levels at the end of 2021 to 2022. The report also states there are no data on Indigenous harvest and highlights substantial uncertainty in recreational harvest estimation.

Grey Morwong is also reported through the national Status of Australian Fish Stocks framework. The rebuilding program should explicitly map how NSW decisions align with, or differ from, the national stock status evidence base and reference points.

Commercial fishing perspective and key technical considerations:

- The assessment identifies material uncertainty in recreational harvest estimation and notes missing data for Indigenous harvest. These uncertainties should be carried into stock status and rebuilding advice.
- Grey Morwong is taken across NSW and Commonwealth fisheries, so rebuilding measures require clear cross-jurisdiction alignment and attribution of expected mortality reduction.

Species-specific requests:

- Publish the removals accounting for Grey Morwong by sector with uncertainty bounds, and document how recreational estimates are constructed and validated.
- Publish how Aboriginal cultural catch and IUU removals are incorporated or bounded, and fund a pathway to move these components from 'no data' to quantified estimates.
- Publish a cross-jurisdiction coordination note describing what mortality is controlled under NSW settings and what requires Commonwealth alignment, including the expected mortality reduction attributable to NSW measures.

3. Pearl Perch (*Glaucosoma scapulare*)

Pearl Perch from the Eastern Australia biological stock are assessed as depleted in the Status of Australian Fish Stocks reporting. The report indicates the most recent assessment estimated

spawning biomass at around 22% of unfished levels, and notes that NSW recreational harvest estimates are not robust and that Indigenous catch is listed as unknown.

Commercial fishing perspective and key technical considerations:

- Pearl Perch rebuilding requires cross-jurisdiction alignment and transparency about how uncertainty in NSW recreational estimates and unknown Indigenous catch is treated.
- Decision transparency is essential so that restrictions are allocated in proportion to evidenced contribution to total fishing mortality.

Species-specific requests:

- Establish and publish an agreed cross-jurisdiction removals accounting framework for Pearl Perch, including a plan to materially improve NSW recreational estimates.
- Publish how Aboriginal cultural catch and IUU removals are incorporated or bounded in rebuilding analysis and how those bounds affect decisions and timelines.
- Commit to scheduled review points where improved recreational and cultural estimates can recalibrate rebuilding settings if sectoral contributions materially change.

4. Redfish (*Centroberyx affinis*)

Redfish is assessed as depleted in the Status of Australian Fish Stocks reporting and is managed under Commonwealth rebuilding arrangements. The SAFS report indicates NSW catch represents less than 23% of total fishing mortality (based on the last 10 years) and that the NSW component status is based on the Commonwealth assessment.

AFMA's Redfish Stock Rebuilding Strategy sets an objective to rebuild Redfish above 20% of unfished biomass and describes management focused on restricting targeted fishing and controlling incidental catch within strict limits while keeping total fishing mortality low.

Commercial fishing perspective and key technical considerations:

- Redfish rebuilding is primarily managed under Commonwealth arrangements. NSW measures should be aligned and the expected NSW contribution to mortality reduction should be explicit.
- Where redfish interactions are predominantly incidental, controls should focus on measurable mortality reduction aligned to the rebuilding strategy.

Species-specific requests:

- Align NSW rebuilding measures with Commonwealth arrangements and publish the coordination mechanism and expected mortality reduction attributable to NSW measures.
- Publish an avoidability analysis for NSW fisheries that interact with redfish, structured by area, season, and method, demonstrating how NSW measures reduce mortality.
- Ensure removals from recreational, charter, Aboriginal cultural and IUU sources are explicitly estimated or bounded in NSW decision-making for the NSW component.

Conclusion and WCFC requests

WCFC requests that NSW DPIRD adopt an evidence-based, transparent and reproducible approach to stock status and rebuilding decisions for Grey Morwong, Silver Trevally, Pearl Perch and Redfish. In particular, WCFC calls on NSW DPIRD to:

- Ensure that any 'depleted' status classification is based on transparent, reproducible evidence, including clear reference points and documented assumptions, not precaution alone.
- Adopt a whole-of-stock, whole-of-mortality approach for each species, with a clear statement of what is measured, what is modelled, and what is assumed.
- Publish a standardised sector-by-sector removals accounting table for each stock and year, covering commercial, recreational, charter, Aboriginal cultural fishing, and IUU removals, with uncertainty bounds and estimation methods.
- Publish participation series for each stock and year: counts of unique reporting fishing businesses and vessels with recorded landings by relevant fishery sector, aggregated to protect confidentiality.
- Publish method-relevant effort series and spatial footprint metrics used in assessments and determinations (for example, hours trawled or shots, days fished, depth and area strata), and describe how major access, cost and participation changes are treated.
- Define and report targeted versus incidental catch (criteria and time series split), especially where species are avoidable or frequently secondary.
- Where CPUE is relied on, publish the standardised CPUE index (model form, covariates such as area, season, depth and vessel effects, diagnostics, and uncertainty). Where CPUE is not relied on, publish a technical justification and specify what evidence replaces it.
- Publish behavioural sensitivity analyses that test plausible effort displacement and targeting substitution scenarios so landings trends are not misinterpreted as abundance trends.
- Implement a program to materially improve NSW offshore recreational catch estimates for low-frequency demersal species, and publish a pathway to estimate or bound Aboriginal cultural catch and IUU removals.
- For each proposed management action, publish the expected biological benefit and a clear causal pathway showing how the action reduces total fishing mortality and improves recruitment outcomes, alongside socio-economic trade-offs.
- Publish a clear evidence-to-decision link for each determination, showing how each evidence line (catch, effort, standardised CPUE where applicable, size and age composition, fishery independent data if available, and model diagnostics) translates into stock status classification and management response.