



Photo Credit: Dieter Tracey

2022 Scientific Consensus Statement

Project Update: July 2024



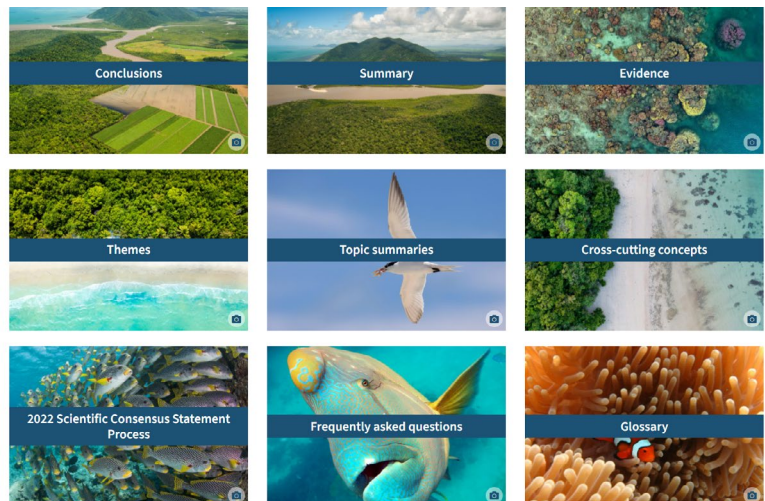
The Scientific Consensus Statement on land-based impacts to Great Barrier Reef water quality and ecosystem condition brings together the best available scientific evidence to understand how land-based activities can influence water quality in the Great Barrier Reef, and how these influences can be managed. The Scientific Consensus Statement is used by policy makers as a key evidence-based document for making decisions about managing Great Barrier Reef water quality.

Release of the 2022 Scientific Consensus Statement

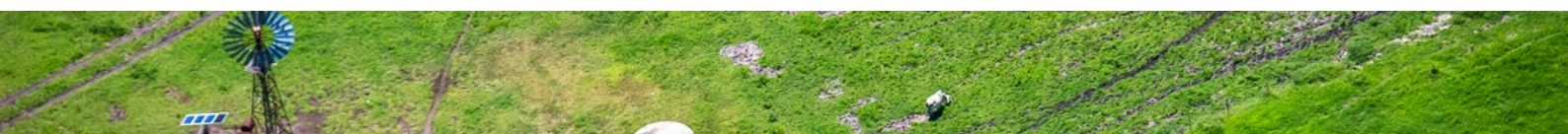
We're delighted to share with you that we are in the final stages of preparing the 2022 Scientific Consensus Statement (SCS) for formal release. The development of the 2022 SCS was led by [C₂O Consulting](#) and funded by the Australian and Queensland governments. It has been an incredible effort that has involved more than 200 experts including 78 authors and 69 reviewers from Australia and overseas. The 2022 SCS has been developed over two years (2022–2024) and is the most comprehensive and rigorous review of land-based impacts on the water quality and ecosystem health of the Great Barrier Reef ever undertaken. It draws on evidence from over 4,000 studies, typically published between 1990 and the end of 2022.

Release date: 1 August 2024

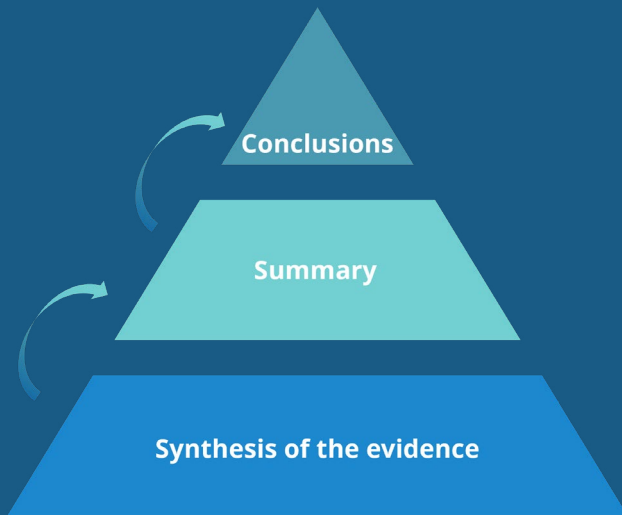
The 2022 SCS will be released on Thursday 1 August 2024. All the outputs from the 2022 SCS will be available on the 2022 SCS website as well as details about the processes used to develop the SCS. We will circulate the link to the website on the release date and share via social media channels.



Snapshot of the 2022 SCS website



Primary outputs of the 2022 SCS



The primary outputs of the 2022 SCS are:

- Conclusions
- Summary
- Synthesis of the Evidence and high-level Evidence Statements.

These outputs follow an informal hierarchy in the level of detail presented, moving from the full details of the synthesis of the evidence, to a summary of that material followed by the highest-level conclusions.

Overview of the processes used to develop 2022 SCS

There were several changes to the way the 2022 SCS was developed, designed, and delivered compared to earlier versions. These changes were introduced following stakeholder feedback which identified a need to build greater trust and confidence in the process. Development of the 2022 SCS followed international best practice standards for the evidence synthesis, peer review and consensus processes.

Guiding Principles

A set of guiding principles were developed that underpinned the delivery and implementation of all aspects of the 2022 SCS process. These principles were supported and endorsed by a variety of audiences, stakeholders and end-users including Australia's Chief Scientist, the Reef Water Quality Independent Science Panel and the Reef 2050 Advisory Committee.



Transparency

Increase transparency and robustness in design and delivery



Minimise Bias

Minimise the potential for bias in reviewing outputs and synthesis



Engagement

Ensure inclusive, genuine & timely engagement with end users, stakeholders & audiences.



Confidence

Assess and present levels of confidence in the evidence



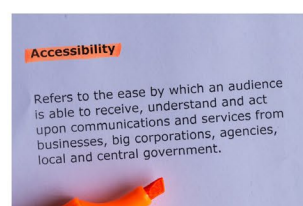
Independence

Demonstrate independence from end users in the synthesis of the evidence and review of the outputs



Fit for purpose

Establish and use fit for purpose methods and processes, and engage fit for purpose experts



Accessibility

Improve accessibility to the science underpinning the Scientific Consensus Statement



2022 SCS Questions

There was extensive consultation with policy, management, science and stakeholder representatives to identify and prioritise 30 questions.

The 30 prioritised questions are organised into eight themes: values, condition and drivers of health of the Great Barrier Reef, sediments and particulate nutrients, dissolved nutrients, pesticides, other pollutants, human dimensions of water quality improvements, and emerging science, and cover topics including pollutant distribution and impacts, delivery and source, and management options.

Author selection



Lead authors were selected through a transparent selection process following broad calls for expressions of interest (EOI). Selection criteria were established to screen and assess applicants. A formal Selection Panel evaluated applicants. Due to a combination of potential conflicts of interest, science discipline gaps, offers declined, and applicant withdrawals, three EOI rounds were needed before all Lead Authors were appointed.

Evidence synthesis methods



The 2022 SCS adopted a formal evidence review and synthesis method, with each question led by expert authors and contributors. The methods were developed by an independent evidence synthesis expert with an emphasis on promoting transparency, enhancing consistency, minimising bias and demonstrating levels of confidence in the evidence.



Peer review

An Editorial Board was established to run the peer review process for the primary outputs. The process followed a similar approach to that used by indexed scientific journals. For the 30 questions, a total of **63** reviewers were appointed, and each question typically had one reviewer with Great Barrier Reef experience and one national or international reviewer. The Summary and Conclusions were reviewed by three eminent reviewers.



Consensus process



Scientific consensus among experts from multiple research fields and disciplines is extremely important for building confidence in the findings of the 2022 SCS. The 2022 SCS adopted best practice consensus methods guided by an expert working group. Based on the evidence, 35 scientific experts reached consensus on eight overarching conclusions, concluding statements and a summary.

Oversight and Assurance



Oversight and assurance was provided by Australia's Chief Scientist to ensure the process to develop the 2022 SCS was transparent, robust and credible. The Reef Water Quality Independent Science Panel (ISP) and the Reef 2050 Independent Expert Panel (IEP) had technical advisory (ISP and IEP) and review roles (ISP only) for specific steps in the process.

