

## Launch MEASO Summary for Policymakers

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I am glad to have been asked to launch this important publication.

But when I started planning how I should do so I made a disconcerting discovery.

I found that in 1953 the International Hydrographic Organisation, the body which has the responsibility for surveying, mapping and naming the oceanographic features of the globe, did not include the Southern Ocean in the fourth edition of its authoritative “Limits of Oceans and Seas”. As I understand it the reasoning was that the Indian, Pacific and Atlantic Oceans were deemed to extend to the Antarctic continent and there was no justification for regarding their southern extremities as a fourth ocean which had no special distinguishing characteristics. That omission was not remedied until May of this year when a resolution recognising the existence of the Southern Ocean was carried by the IHO while “duly acknowledging”, in the words of the resolution, “national positions and possible reservations”. In other words, according to the IHO, for the last seventy years, including the first five years of the operation of MEASO, the Southern Ocean simply did not exist and even now its existence is not unreservedly recognised.

That little piece of history is an example of what the result can be if there is a disconnect between scientists and policymakers. Of course, as you all know, in the real world outside international bureaucracy and politics not only has the Southern Ocean most definitely existed since 1953 and for that matter for some 30 m years before then, in recent years it has asserted its existence and revealed its special distinguishing characteristics more emphatically than ever.

One of the most significant advances in Antarctic and Southern Ocean science in recent decades has been the demonstration of the

reach of the influence which the Southern Ocean has on the Earth System. This has been a dramatic development. To change the perception of the Southern Ocean from being a remote piece of water corralled within the Antarctic Circumpolar Current which had little interaction with anything north of 60° South into an ocean whose processes have an influence on the rest of the world out of all proportion to its size, has been a revolutionary step. It has transformed our understanding of the Earth System and transformed Southern Ocean science into global science.

As a result, the work of MEASO as the first circumpolar interdisciplinary assessment of the status and trends of the Southern Ocean ecosystem has correspondingly extensive and significant ramifications.

While the doing of the science and research which support its findings are a basic part of MEASO'S work, synthesising and publishing those findings to policymakers and others are equally significant aspects of its role. The launch of this summary of its assessment of the Marine Ecosystem of the Southern Ocean is therefore an important step in the history of MEASO.

Do not be misled by the description of this work as a summary. It is compact but it is not in any way a brief superficial survey. This assessment is a high-quality comprehensive work of real substance.

At the heart of the summary are assessments of the impact which biogeochemical drivers are having or projected to have on key habitats and various species and, bringing the reader right up to date, records observations which suggest a possible sudden recent decline in sea ice cover and what the ramifications of that might be.

A prominent feature of this assessment is the complexity of the processes it is dealing with. For example, sea ice is changing in different ways around the continent, there are differences in the sensitivities of different species to individual drivers of change in

habitats and there are different interacting effects between different species as they respond to change. Dealing with this complexity is an important aspect of this assessment. Conscious that policy makers are understandably predisposed to advice which minimises reservations and qualifications, some advisors tend to over simplify their conclusions to the extent that they threaten their integrity.

Commendably, while MEASO has not allowed this assessment to be compromised by over simplifying its conclusions, it has still succeeded in keeping it accessible to non-scientists.

After dealing with changing habitats and biological changes and vulnerabilities in the Southern Ocean the assessment highlights the close interconnections between the Southern Ocean and the Earth System and the value and importance of Southern Ocean ecosystems in the Earth System.

The assessment concludes with advice as to how future assessments and policy relevant advice may be improved and the strategy needed to protect and enhance the resilience of Southern Ocean ecosystems.

An important quality of the assessment is that every statement is supported by citations of authority. This recognises that however high the regard policy makers may have for those who provide them with advice, it is they who have to take ultimate responsibility for their decisions and must therefore be put in the position of being able to examine the basis for that advice for themselves.

However, having said that, it is also appropriate to note that given the high standing of the 203 authors of this assessment and the 110 institutions with which they are affiliated, this report carries considerable weight by itself.

The presentation of this assessment is admirable.

The text is well written and clearly expressed throughout. It is augmented by infographics and illustrations which provide helpful clarifications of the text or are useful expressions of propositions in themselves. They stand in contrast to the sort of illustrations which

some editors or authors appear to feel compelled to insert merely for aesthetic reasons or to give the reader periodical relief from text.

The assessment is enhanced by the inclusion of a glossary which helpfully guides the reader through the inevitable forest of Antarctic and marine science acronyms which are employed in it and gives the meaning of specialised terms including importantly the meaning of ordinary words such as driver, ecosystem services or primary production which might be used in a special sense.

Let me conclude with these observations.

Eventually this summary will be published widely to a broad constituency of scientists, policy makers and the wider community by a variety of means, print, online or otherwise. But the launch of this assessment this afternoon in this place is unique.

Tasmania is the home of MEASO and by virtue of the very terms of its Convention, Hobart is the home of CCAMLR. So today the most comprehensive and authoritative Marine Ecosystem Assessment for the Southern Ocean ever undertaken is being published to the most significant policy maker in the Southern Ocean CCAMLR. And what is more on this occasion, by virtue of the presence here of our colleagues from CCAMLR, that publication is being done personally and directly.

That makes this a very special collegial occasion and Tasmania is proud to be hosting it.

I regard it as a privilege to launch the Marine Ecosystem Assessment for the Southern Ocean Summary for Policymakers.