Thank you chairperson.

A brief context. On May 9th, it will be 30 years that the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC) adopted the UN Framework Convention on Climate Change (UNFCCC). Today, global average temperatures have already increased by on average 1.1 °C above pre-industrial levels and continue to rise. The impacts on the marine environment are becoming increasingly – and alarmingly – evident, causing disruption and harm to ecosystems and humans and across the planet.

As we speak, experts and governments are meeting to finalize the 3rd working group report of the IPCC’s sixth assessment cycle. In response to the findings of the 1st working group report, the UN Secretary-General issued a “code red for humanity” and described the 2nd report as an “atlas of human suffering”. What will be the message of the 3rd remains to be seen.

The Special Report on the Ocean and Cryosphere in a Changing Climate issued in 2019 highlights not only the impacts of climate change on the oceans, but also the key role oceans play in regulating the climate system (SROCC, 2019).

According to a High-level Review by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) and the IPCC’s Special Report on Global Warming of 1.5 °C, in addition to mitigation and adaptation, emerging marine techniques for carbon dioxide removal and solar radiation modification are being actively explored to reduce climate change and its impacts (GESAMP, 2019; IPCC-SP15, 2018). For example, introducing additional nutrients to enhance photosynthesis of plankton to remove CO2 from the ocean surface and transport it to the deep ocean; cultivating large-scale seaweed to capture carbon through photosynthesis for sequestration; and brightening marine clouds through spraying sea water to deliver cooling locally. However, all these approaches may present potential benefits, risks and governance challenges. The 2nd Working Group report confirms that risks also arise from responses that are intended to reduce the risks of climate change and such new marine techniques introduce new risks, that are poorly understood (IPCC AR6 WG-II SPM, 2022).

The risks of these approaches need to be considered in the context of managing temperature overshoot. The IPCC Working Group-I report shows that even in its most optimistic scenario it is still more likely than not that global warming would overshoot 1.5 °C. “The 1.5-degree goal is on life support” while the world is “sleepwalking to climate catastrophe” said the UN Secretary-General recently. In light of the growing risk of overshoot, policymakers may now need to better understand if and when there is overshoot of the agreed temperature goals, will the world – and in particular the marine environment - be better off with-or without-deploying additional response options, such as for example solar radiation modification. Furthermore, policymakers also need to better understand how combinations of large-scale
carbon dioxide removal can be deployed and governed such that negative impacts on sustainable development are minimised.

With the above in mind, we suggest additional texts as follows:

- to paragraph 11 a: “including transdisciplinary knowledge development to better understand and eventually manage risks from temperature overshoot on the one hand, and risks and benefits for the marine environment from potential use of emerging techniques for carbon dioxide removal and solar radiation modification on the other.”

- to paragraph 11 f: “strengthened governance is needed to manage the risks arising for the marine environment from some responses that are intended to reduce the risks of climate change, including risks from maladaptation, adverse side effects of some emission reduction techniques and carbon dioxide removal measures or solar radiation modification approaches.”

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