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PRESS RELEASE

OCEAN CHANGE IS EXACERBATING THE CLIMATE CRISIS

New scientific paper says we will not reach Paris Agreement without urgent ocean action

A scientific paper published in the peer review Journal, Aquatic Conservation says that measures to address climate change and reach the Paris Agreement will not succeed unless the ocean is taken into account. Addressing leaders at the UNFCCC CoP26 being held in Glasgow, UK, the authors of the paper set out examples of how feedback loops between the ocean and climate are exacerbating climate change, pointing out that “... the rate of climate change is still accelerating, **largely linked to changes in the ocean**, causing a continuing decline in nature, and disruption at the planetary scale to the environment, people, and all our futures.”

This role of the ocean in both mitigating and aggravating climate change is understood by scientists but ignored by politicians. The paper titled *The forgotten ocean - why COP26 must call for vastly greater ambition and urgency to address ocean change* is the work of scientists from around the world and sets out six important areas in which progress has to be made to integrate the ocean into climate action. Lead Author of the report Professor Dan Laffoley said “there simply isn’t time to waste. The changes we have already put into the ocean system will last for centuries and are making the climate crisis worse. Anything we can do now to help the ocean withstand the climate onslaught will in turn help us. Ocean protection is about human survival.”

Pointing to the need for an Earthscape approach to decision making, the paper identifies key ways in which the ocean both mitigates climate change by absorbing excess heat and carbon from the atmosphere and aggravates it, failure in ocean systems exacerbating extreme weather, shifting ocean currents and reducing its ability to absorb carbon.

Calling on Leaders to urgently take action to protect the ocean, the authors say “To turn the tide in favour of humanity and a habitable planet we need to **recognize and better value the fundamental role that the ocean plays in the earth system**, and prioritize urgent action needed to heal and protect it at the ‘Eandscape ’level – the planetary scale at which processes to support life operate.”

The ocean is carrying the heaviest load in terms of climate mitigation, absorbing over 90% of the excess heat produced, in comparison with only about 3% absorbed by land. It is also the largest carbon sink on Earth. However, this work is damaging to the ocean, eroding its ability to function and creating feedback loops which actually exacerbate climate change.

An example of how interconnected ocean and climate change are, is stratification – a process in which warm and cold water, along with salinity, become more separate. Stratification is driven by ocean heating but also by increased rainfall which is in turn driven by heating and stratification. A stratified ocean has multiple negative effects from driving an increase in marine heatwaves and extreme weather events to a reduction in the ocean's ability to take up carbon and a change in ocean circulation.

The six proposals in the paper are:

1. Scale up solutions to an 'Earthscope level' - ambition must match the challenge.

We need to simultaneously address climate change impacts *and* reduce all cumulative direct and indirect stressors.

As a bare minimum, that means protecting the half of the planet currently ignored with a robust and strong High Seas Treaty that will enable protective action to be taken. It also means shielding at least 30% of the ocean through fully or highly protected MPAs.

2. Accelerate and integrate the efficacy of climate/biodiversity actions to achieve greater impact and effect

We need to think of protected areas as serving both the biodiversity they help to protect and the carbon sequestration ability of the ocean – MPAs protect and retain carbon.

3. Stop support for activities that damage the ocean - redirect incentives to positive outcomes for the planet.

One of the most obvious things to do in a crisis is to stop making it worse – stop financially supporting those activities that are highly damaging to the ocean – overfishing, pollution, extraction and dumping. We actually subsidise some of these behaviours rather than limiting or banning them.

Bottom trawling; dredging; offshore oil and gas exploration; sewage releases and nitrogen run offs are all permitted to continue and we threaten the ocean with new activities such as deep sea mining which will wreak unknown damage in an area of the ocean that is known to be important for carbon storage and overall ocean health and function.

4. Drive ocean recovery and restoration through enhanced global cooperation and momentum

Time is not on our side. The deadly trio of climate impacts on the ocean – warming; acidification and deoxygenation - are irreversible for centuries to millennia but we can stop making it worse and start making it better.

Active restoration of marine habitats will help to recover marine life over one to three decades. Mangrove restoration, for example, can help to restore ecosystem services and meet climate change, biodiversity conservation, and sustainable development objectives.

5. Highlight the connection between nature and global economics – value the ocean’s natural capital to invest in all our futures

Ocean action must be adequately financed as investment in global resilience, human well-being and sustainability.

6. Deliver the science we need for a healthy, productive, and resilient ocean that benefits people and inspires humankind as a whole

To keep pace with accelerating ocean change and the cumulative effects of stressors, we must constantly improve our understanding of ocean processes and rapidly translate these findings and other forms of knowledge into informed decision-making, based both on precautionary and proactive initiatives.

The paper is being published on the eve of Ocean Day at COP.

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The paper will be published in *Aquatic Conservation: Marine and Freshwater Ecosystems*.
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