OARS
Ocean Acidification
Research for Sustainability

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

SCIENCE TO ACTION ON OCEAN ACIDIFICATION

As a global community, we must not delay actions that minimize and address the effect of ocean acidification (OA)

Partners across the Ocean Acidification Research for Sustainability (OARS) are prioritizing monitoring, research, and information for **tangible OA mitigation and adaption** by identifying the information and tools needed for specific decisions and actions.

Ocean acidification information for decision making

Targeted information can help policymakers, resource managers, stakeholders, and communities better **understand impacts** of OA on marine resources, and **enable** them to identify the most appropriate mitigation or adaptation actions to minimize and address the effect of OA.

Implementing actions to minimize and address the effect of OA **requires considerations** of:

- Time, space, and cost constraints;
- Alignment with existing policy or management goals; and
- Assessment of broader environmental and socio-economic risks and benefits.

To encourage a diversity of OA actions across different scales, OARS has outlined 6 key decision-making categories

These categories provide a **framework** for identifying targeted or increased OA information needs for mitigation and adaptation actions. **OARS can provide guidance** to policymakers, resource managers, stakeholders, and communities to help them determine which actions and information are most beneficial in which oceanic regions.

Learn more about the OARS Programme, an endorsed programme of the UN Decade of Ocean Science: www.oars-commitments.org

Decision making category	How might OA information support mitigation and adaptation actions under this category?
Evaluate the impacts of GHG emissions on human and ocean health and resources.	Accelerate call for urgent actions to reduce carbon dioxide emissions. *(mitigation)* Improve climate risk and vulnerability assessments and outline associated policy and financing needs. *(adaptation)*
Increase food security and resilience of seafood economies and coastal communities.	Support better understanding of climate resilient fisheries management needs, aquaculture strategies, coral reef resilience and/or shellfish hatchery growing practices. *(adaptation)*
Utilize marine management tools to protect and restore biodiversity and marine habitats.	Improve sustainable ocean planning. Guide targeted regulations, seasonal closures, or conservation measures like Locally Managed Marine Areas (LMMAs), Marine Protected Areas (MPAs), and shared -use planning tools like Marine Spatial Planning (MSP). *(adaptation)*
Deploy blue carbon sequestration projects or increase ecosystem resilience with marine and coastal habitats.	Identify and verify high impact blue carbon ecosystems to support carbon sequestration goals. *(mitigation)* Guide the use of natural shorelines and coastal or marine habitat to support ecosystem resilience. *(remediation)*
Apply local remediation strategies through the reduction of coastal pressures and land-based pollution.	Improve water quality, identify OA "hot spots" and implement actions that reduce local pressures from coastal and terrestrial activities that contribute to coastal acidification and eutrophication. Strategies like "catchment management" and minimizing land-based pollution can reduce negative impacts on species and improve ecosystem function. *(mitigation/remediation)*
Assess the potential risks, benefits, monitoring, and evaluation needs of different marine carbon dioxide removal (mCDR) strategies.	Establish carbonate chemistry baselines; identify potential environmental risks (biodiversity loss/ habitat loss) of mCDR strategies and OA and their connection to socio-economic and cultural considerations. This will help partners understand the pros and cons of different strategies. *(mitigation/remediation)*

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OA ALLIANCE INTERNATIONAL ALLIANCE TO COMBAT OCEAN ACIDIFICATION