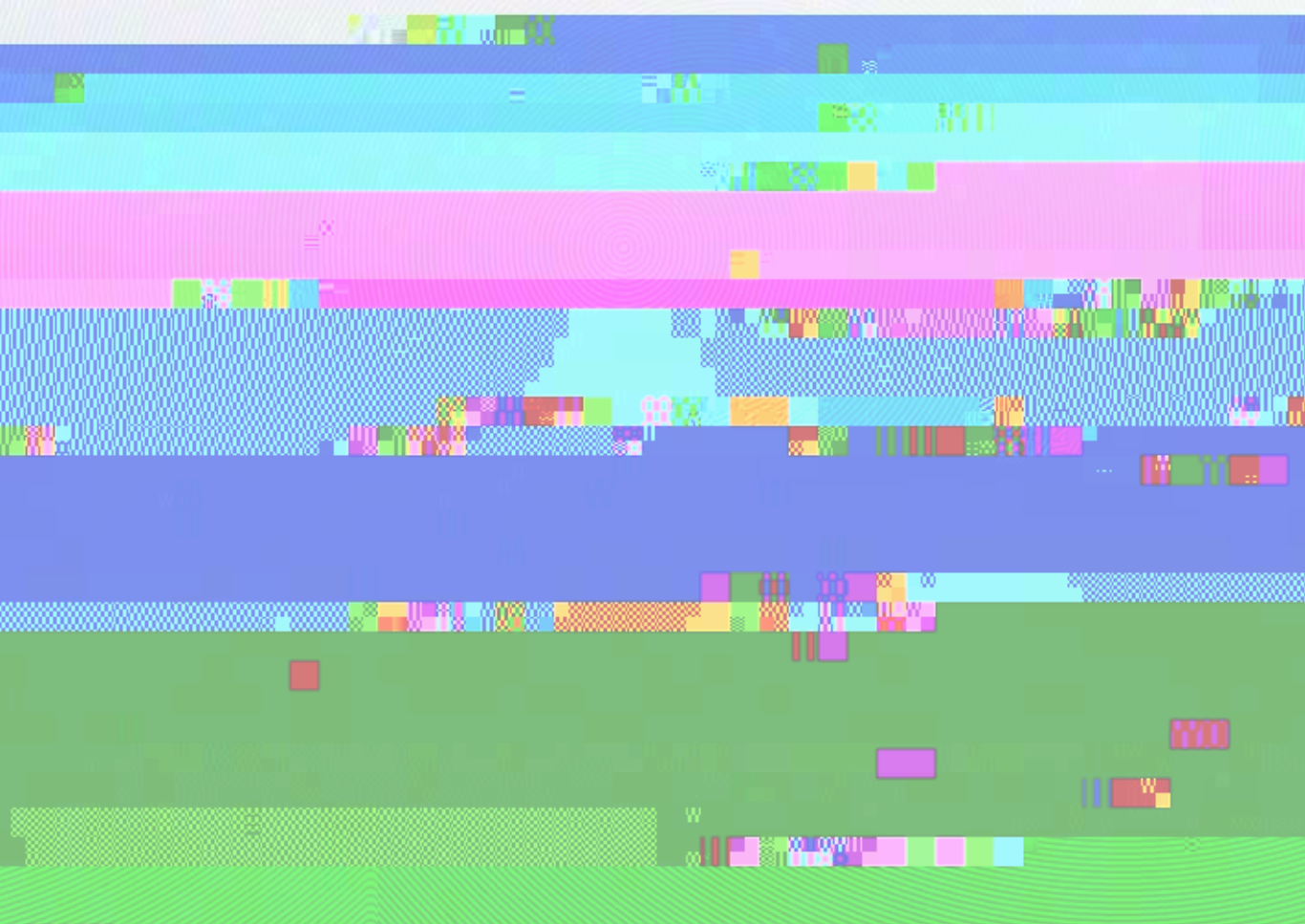
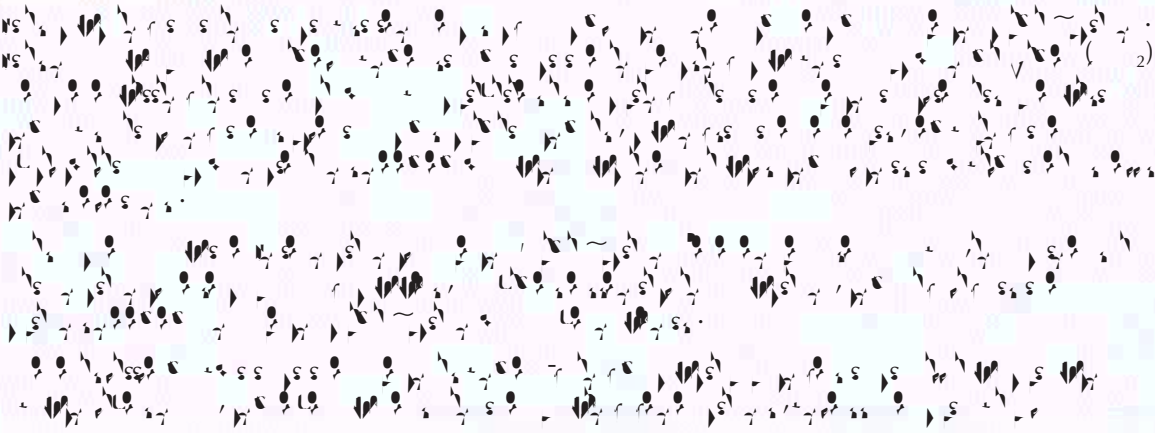
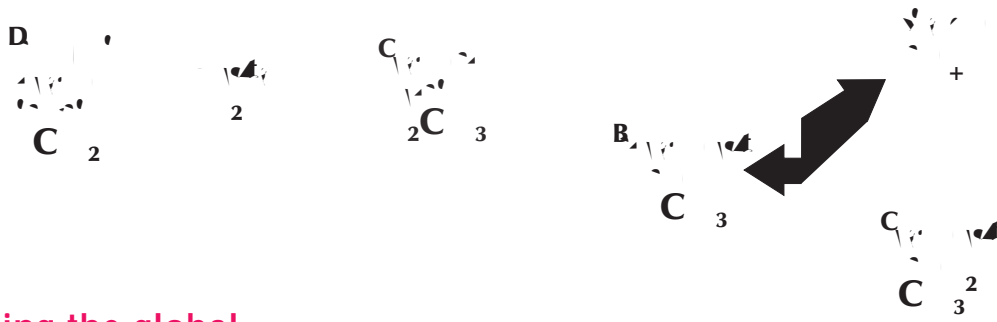


Updating what we know about ocean acidification and key global challenges



The burning of fossil fuels not only increases CO₂ in the atmosphere but also in the ocean. As a result, the concentration of hydrogen ions increases (increasing acidity) whilst the concentration of carbonate ions decreases.



Building the global policy framework

1. The global policy framework is built on the principle of common but differentiated responsibilities and respective capabilities. This means that all countries have a responsibility to address climate change, but the extent of their responsibility is determined by their historical and current contributions to the problem, as well as their economic and technological capabilities.

2. The global policy framework is also based on the principle of equity. This means that all countries should have a fair and just opportunity to contribute to the solution of the problem. This is achieved through the use of a common carbon price, which allows countries to trade their carbon allowances and thus to find the most cost-effective way to reduce their emissions.

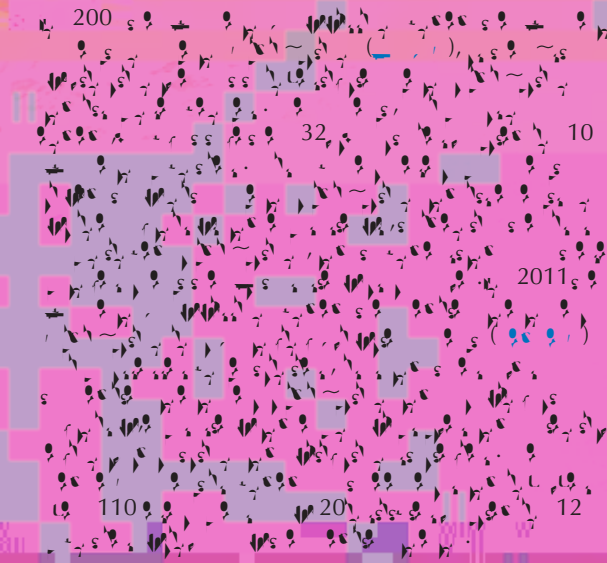
3. The global policy framework is also based on the principle of transparency. This means that all countries should have access to the same information about the progress of the global effort to address climate change. This is achieved through the use of a common set of indicators, which allow countries to compare their emissions and to track their progress over time.

4. The global policy framework is also based on the principle of flexibility. This means that the global policy framework should be able to adapt to changing circumstances. This is achieved through the use of a common set of rules, which allow countries to negotiate and to reach agreements that are tailored to their specific needs and circumstances.

5. The global policy framework is also based on the principle of cooperation. This means that all countries should work together to address the global challenge of climate change. This is achieved through the use of a common set of goals, which provide a clear and shared vision of the future that we want to create for ourselves and for our children.

Major studies underway or in advanced stages of planning

European Union



Japan



Korea



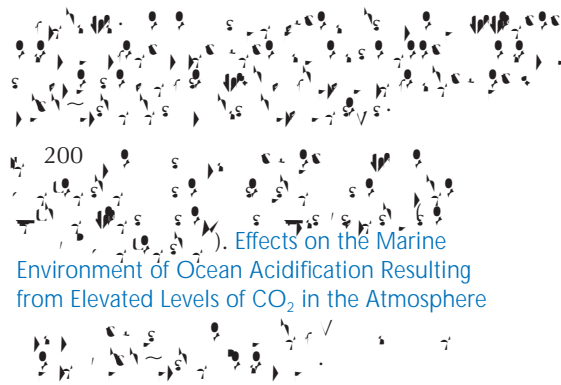
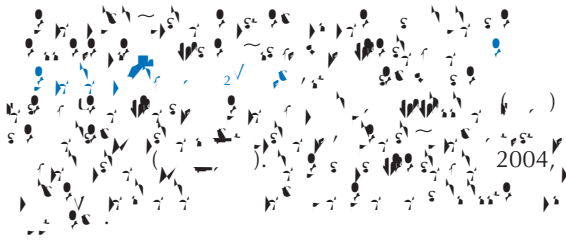
Monaco



United Kingdom

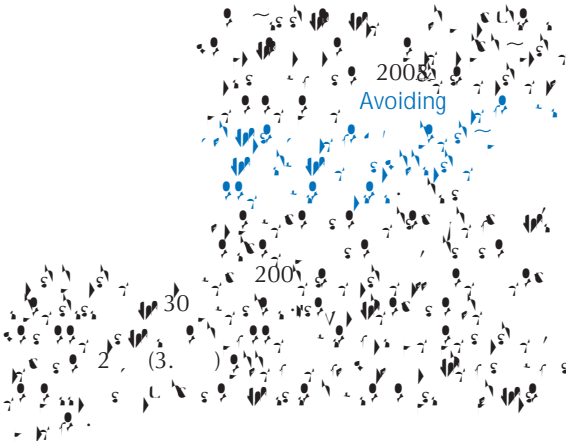


Finding out more about ocean acidification – useful sources of further information

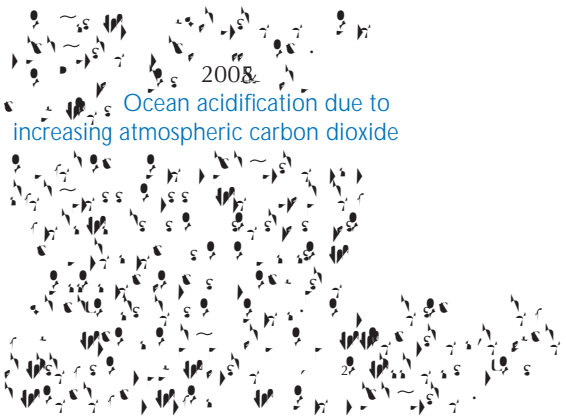


2007
Effects on the Marine Environment of Ocean Acidification Resulting from Elevated Levels of CO₂ in the Atmosphere

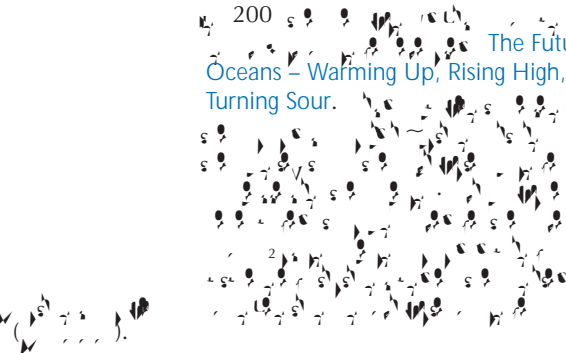
Key reports that together provide a comprehensive source of knowledge



2008
Avoiding Dangerous Climate Change



2008
Ocean acidification due to increasing atmospheric carbon dioxide



2007
The Future Oceans – Warming Up, Rising High, Turning Sour.

Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers: A Guide for Future Research



2007



2007
Annual Report Cards

200
Position Statement on Ocean Acidification.

200
Oceanography

200
Impacts of ocean acidification on marine biodiversity

200
Monaco
Declaration

200
Impacts of ocean acidification on marine biodiversity
2011

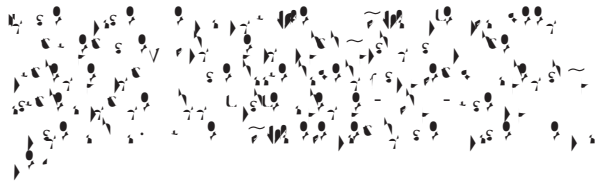
200
Summary for Policy Makers
Research Priorities for Ocean Acidification (200)

200
Essential facts for policy makers and decision takers on ocean acidification.
2013.

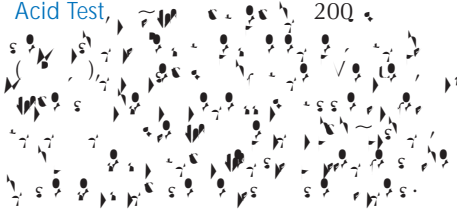
The Interacademy Panel (IAP) statement on ocean acidification (200)
2080, 480, 80%

European Science Foundation
Science Policy Briefing on Impacts of Ocean Acidification (200)

Films



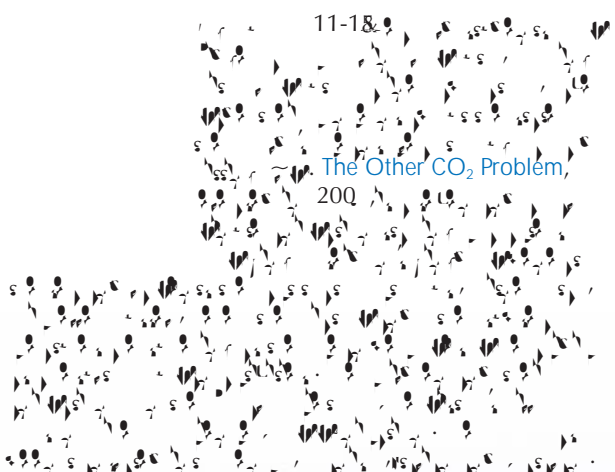
Acid Test, 200



11-18

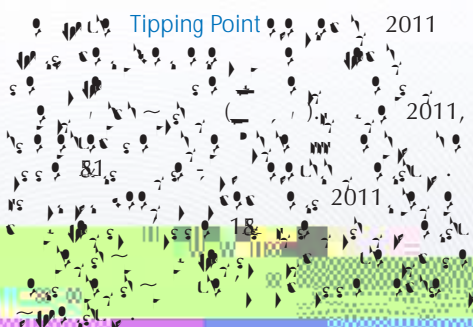
The Other CO₂ Problem,

200



Tipping Point

2011

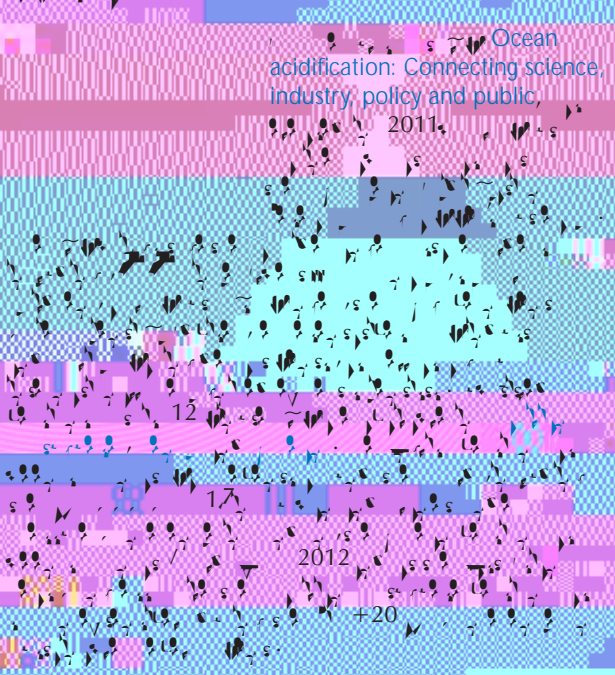


2011,

2011

Ocean acidification: Connecting science, industry, policy and public,

2011



12

17

2012

+20

Online paper

[View the online paper](#)

What is the International Ocean Acidification Reference User Group?

The International Ocean Acidification Reference User Group (IOARUG) is a community of scientists, policy-makers, and other stakeholders who are interested in ocean acidification. The group was established in 2009 and has since held several meetings. The group's main focus is on providing a forum for the exchange of information and ideas, and for the development of a common framework for ocean acidification research and policy.

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Further details and contacts

For more information, please visit the IOARUG website at [http://www.ioarug.org](#) or contact the IOARUG Secretariat at ioarug@earthlink.net.

Sources and contributors

This document is based on the IOARUG website and the IOARUG Secretariat's work. The IOARUG Secretariat is supported by the National Science Foundation (NSF) and the National Oceanic and Atmospheric Administration (NOAA). The IOARUG Secretariat is located at the University of California, San Diego (UCSD).