

# Law and Policy Approaches to Address Ocean Acidification



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# ENVIRONMENTAL LAW INSTITUTE

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- Convening seminars, workshops, webinars
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## ANALYSIS & APPLICATION



- Law, policy, & institutional research
- Rigorous analysis
- Legal design and drafting

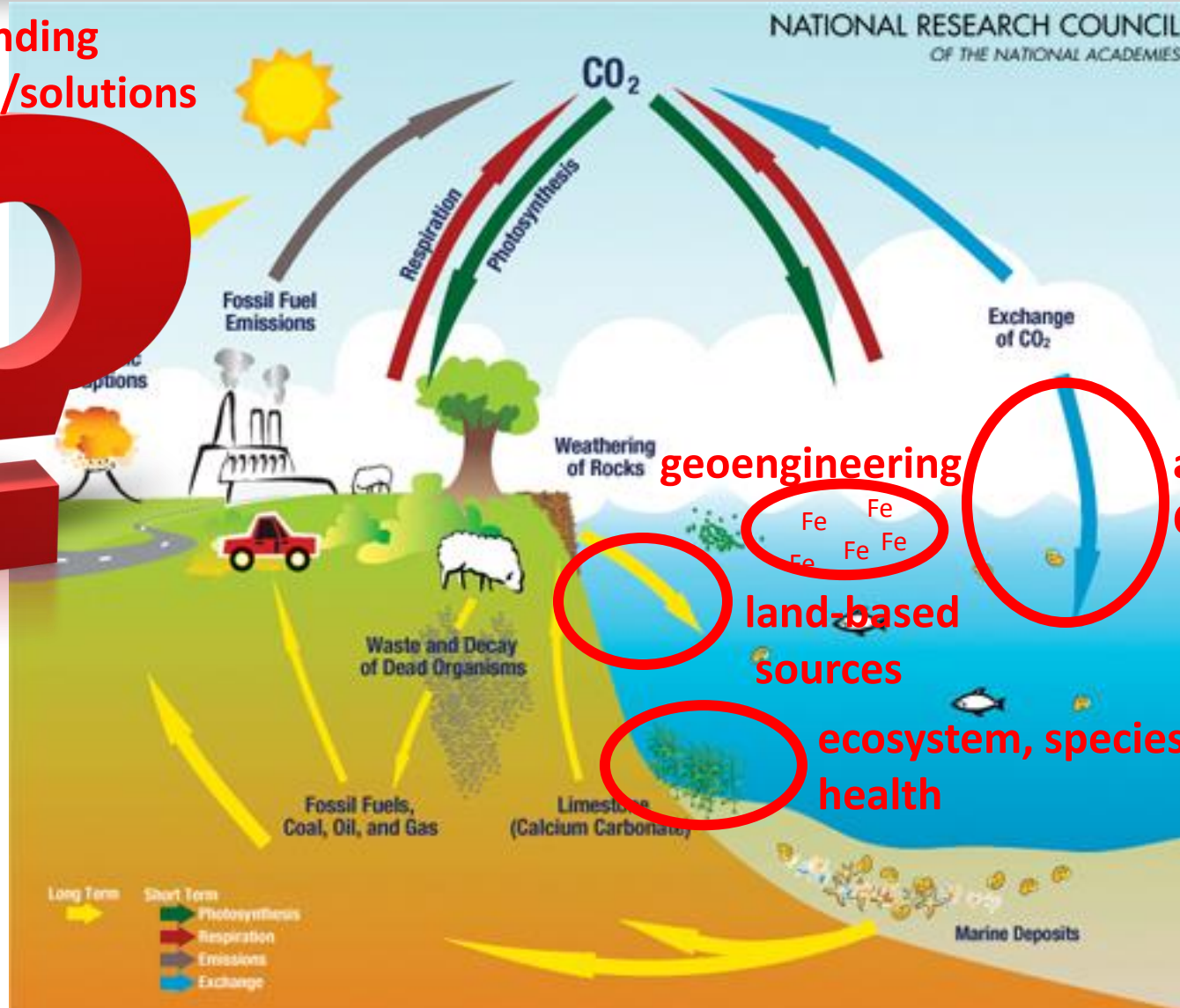
## DOMESTIC & INTERNATIONAL



- Domestic, foreign, and international projects
- Offices in Washington, DC & California

# What are the law and policy targets?

understanding  
problems/solutions



geoengineering

atmospheric  
CO<sub>2</sub>

land-based  
sources

ecosystem, species  
health

# A Few Legal Observations

- Most legal tools were not developed with ocean acidification in mind. However, many provide legal language that authorize or in some instances mandate action.
- Many existing OA-specific legal tools focus on research, monitoring, planning, and developing action agendas
- The closer to shore, the more legal tools available for action.



# Exploring the Non-OA Legal Tools

- Tools to address climate change, marine pollution, habitat protection, etc, pre-date the ocean acidification challenge.
- This is good news.
- This is not-so-good news.



# Non-OA Tools & the International Framework

Agreements	Pro/Con	Attributes
UN Framework Convention on Climate Change (UNFCCC) & Kyoto Protocol (1992, 1997)	Pros	<ul style="list-style-type: none"> <li>• Designed to address global carbon emissions</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>• All parties shall: “...promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs...”</li> </ul>
UN Convention on the Law of the Sea (UNCLOS) (1982)	Pros	<ul style="list-style-type: none"> <li>• CO2 = “pollution”</li> <li>• Duty to protect &amp; preserve the marine environment</li> <li>• states to “adopt laws &amp; regulations to prevent, reduce and control pollution of the marine environment” (§212)</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>• Umbrella agreement lacking many details</li> </ul>
Convention on Biological Diversity	Pros	<ul style="list-style-type: none"> <li>• Aim to conserve biological diversity, sustainable use, &amp; equitable sharing of genetic resources benefits</li> <li>• Precautionary approach</li> <li>• Notification, consultation and exchange of information for activities likely to significantly adversely affect biological diversity of other states</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>• Lack of clear obligation to take action.</li> </ul>

# Non-OA Tools & the International Framework

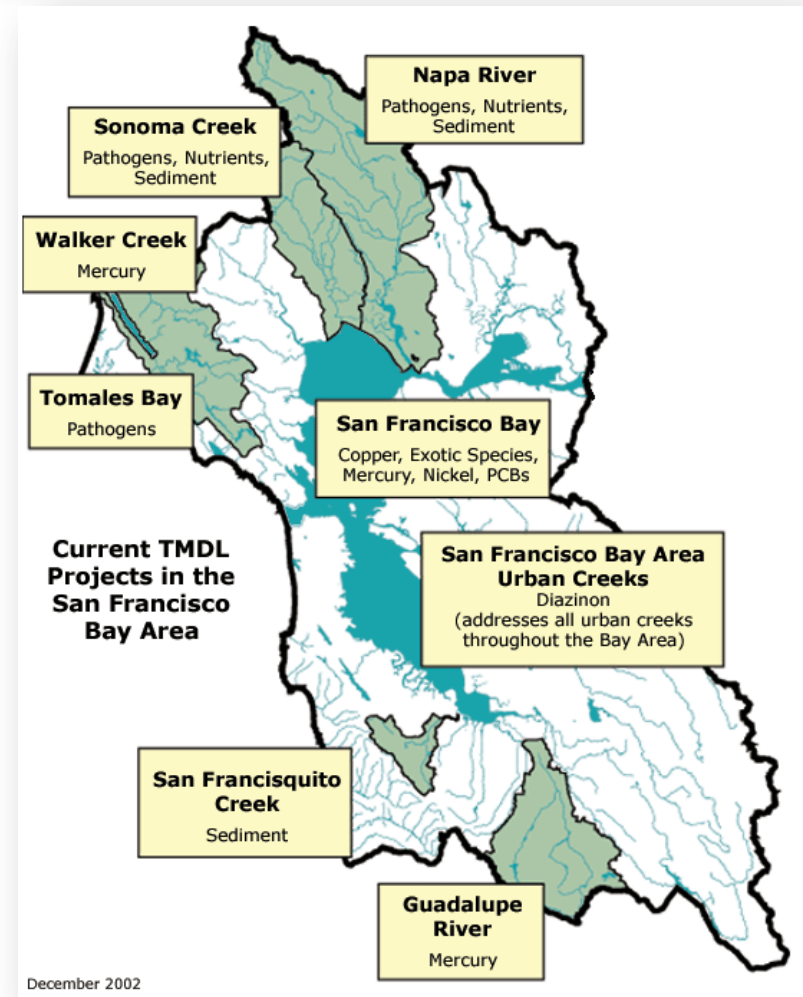
Agreements	Pro/Con	Attributes
London Convention and London Protocol	Pros	<ul style="list-style-type: none"> <li>• Prohibit dumping waste into ocean</li> <li>• CO2 storage only in sub-seabed formations (amendment)</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>• Only addresses intentional dumping, not deposition</li> </ul>
Global Programme of Action to Address Land-Based Sources of Marine Pollution	Pros	<ul style="list-style-type: none"> <li>• States called to establish national programs to prevent impacts from land-based sources of marine pollution</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>• Soft-law agreement, not legally binding</li> <li>• Target sources = “sewage, [POPs], radioactive substances, heavy metals, oils, nutrients, sediment mobilization, litter and physical alterations.”</li> </ul>

# Non-OA Tools & the U.S. Framework

Agreements	Pro/Con	Attributes
Clean Air Act	Pros	<ul style="list-style-type: none"> <li>EPA tasked with regulating pollutants which cause or contribute to air pollution and endanger public health or welfare</li> <li>Legal cause of action (e.g., Massachusetts v EPA)</li> <li>EPA has taken several regulatory steps to address GHGs under existing authority</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>Some limits on the extent of regulation</li> </ul>
Clean Water Act	Pros	<ul style="list-style-type: none"> <li>EPA tasked with “restor[ing] and maintain[ing] the chemical, physical and biological integrity of the Nation’s waters”</li> <li>EPA achieves goal by regulating discharge of pollutants</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>Key challenge = nonpoint source pollution (NPS)</li> <li>Few regulatory measures available to address NPS</li> </ul>
Coastal Zone Management Act	Pros	<ul style="list-style-type: none"> <li>Federal program to support states’ coastal zone programs, including provisions requiring states to address coastal NPS</li> <li>Provides funding and federal consistency as carrots</li> </ul>
	Cons	<ul style="list-style-type: none"> <li>Incentive-based program with no specific OA requirements</li> <li>NPS requirements poorly implemented</li> </ul>
AND MORE!		

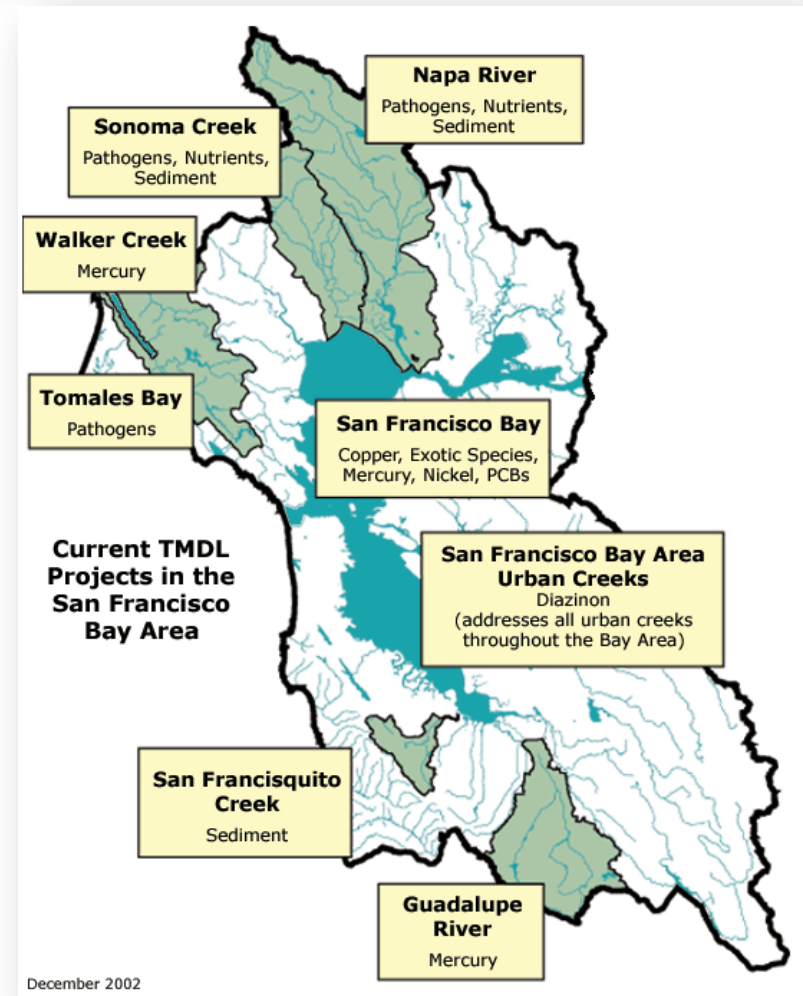
# Example: Clean Water Act

- CWA = multi-prong approach
  - Permit system for point source discharge (e.g. end of pipe)
  - Address water body impacts by:
    - (1) establishing water quality standards (use/criteria)
    - (2) evaluate water bodies to develop impairment list
    - (3) develop TMDLs for impaired waters



# Example: Clean Water Act

- pH = pollution and waters can be listed as impaired based on pH.
- EPA Recommended Criterion for marine pH is : "PH range of 6.5 to 8.5 for marine aquatic life (but not varying more than 0.2 units outside of the normally occurring range) . This criterion applies to open-ocean waters within 3 miles of a State or Territory's shoreline where the depth is substantially greater than the euphotic zone " .



# Litigation Testing the Legal Framework

- **Status of Litigation:** 7 federal cases & 0 state cases; In contrast, 439 state and federal cases that mention “climate change”
- **CBD v EPA (2009)**
  - CBD seeks to compel EPA to add ocean waters impaired by OA to WA list of impaired waters in accordance with CWA.
  - Case about API motion to intervene (denied)
- **CBD v Lubchenco (2010)**
  - CBD alleges NOAA failed to appropriately forecast OA predictions beyond 2050 in ribbon seal listing decision under ESA
  - Court finds NOAAs decision is okay
- **Center for Biological Diversity (CBD) v EPA (2014)**
  - CBD alleges Washington and Oregon have water quality standards relevant to OA. Therefore 303(d) list should include OA-impaired waters

# Litigation Testing the Legal Framework

- **Alaska Oil and Gas Association v Pritzker (2014)**
  - AK Oil & Gas Assn seeks remand of NOAA decision to list bearded seal DPS as threatened.
  - Court includes OA excerpt from NOAA decision as part of evidence that the decision to list was arbitrary and capricious
- **Humane Society v Pritzker (2014)**
  - Humane Society sues NOAA for failing to move forward with petition to list porbeagle under ESA because of threats from pollution, mercury, warming and OA.
  - Court agrees with Humane Society
- **2 additional 2014 cases mention OA in passing**



# OA Legal and Policy Tools

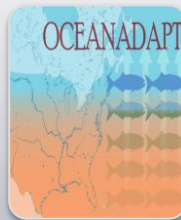
- International, regional, national and subnational legal and policy tools are expanding to address OA challenge.



Mitigate



Assess



Adapt

# International Approaches



## MITIGATE



## ASSESS



## ADAPT



UN General Assembly  
Resolution 68/70

- “address levels of ocean acidity and negative impact” (¶ 153)
- “urges states to make significant efforts to tackle” climate change and OA (¶ 155)

- Pursue further research (¶ 153)
- Technical contribution and voluntary info-sharing to address coral reef and mangrove conservation (¶ 217)

- Enhance resilience (¶ 154)

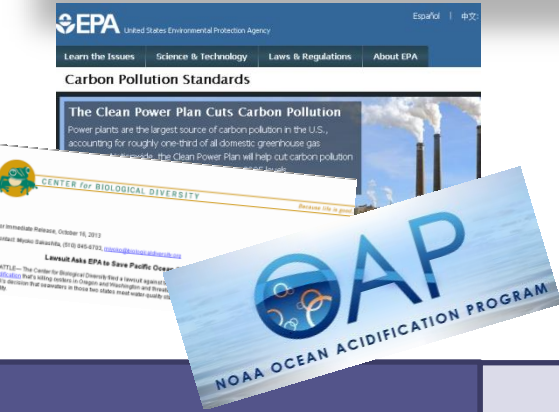
Convention on  
Biological Diversity,  
Decision X/29

- “address climate-change adaptation and mitigation issues” (para 8)
- Address OA (para 13)

- Established series of technical review processes to monitor and assess OA impacts

- “address climate-change adaptation and mitigation issues” (para 8)

# U.S. Federal Approaches



## MITIGATE



## ASSESS



## ADAPT



Federal Ocean Acidification Research and Monitoring Act (FOARAM)

- Duty to oversee development of adaptation and mitigation strategies

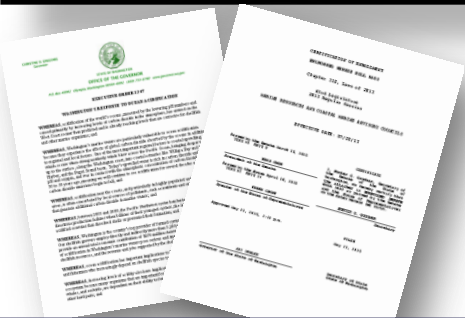
- Working Group
- NOAA Research Program
- NSF Research Program

- Duty to oversee development of adaptation and mitigation strategies

Magnuson Stevens Fishery Conservation and Management Act Reauthorization (2007)

- Directs Commerce to request that the National Academy of Sciences conduct OA study

# State of Washington Approaches



## MITIGATE



## ASSESS



## ADAPT



Governor Executive Order: Washington's Response to Ocean Acidification (2012)

- Advocate emissions reductions
- Advance local source reduction
- Request EPA begin WQC assessment
- Collaborate with stakeholders on education/outreach

- Advance science-decision-maker interaction
- Information-sharing (data-sharing MOU)
- Technical analysis
- Public education

- Collaborate with agencies & stakeholders to develop & implement local solutions

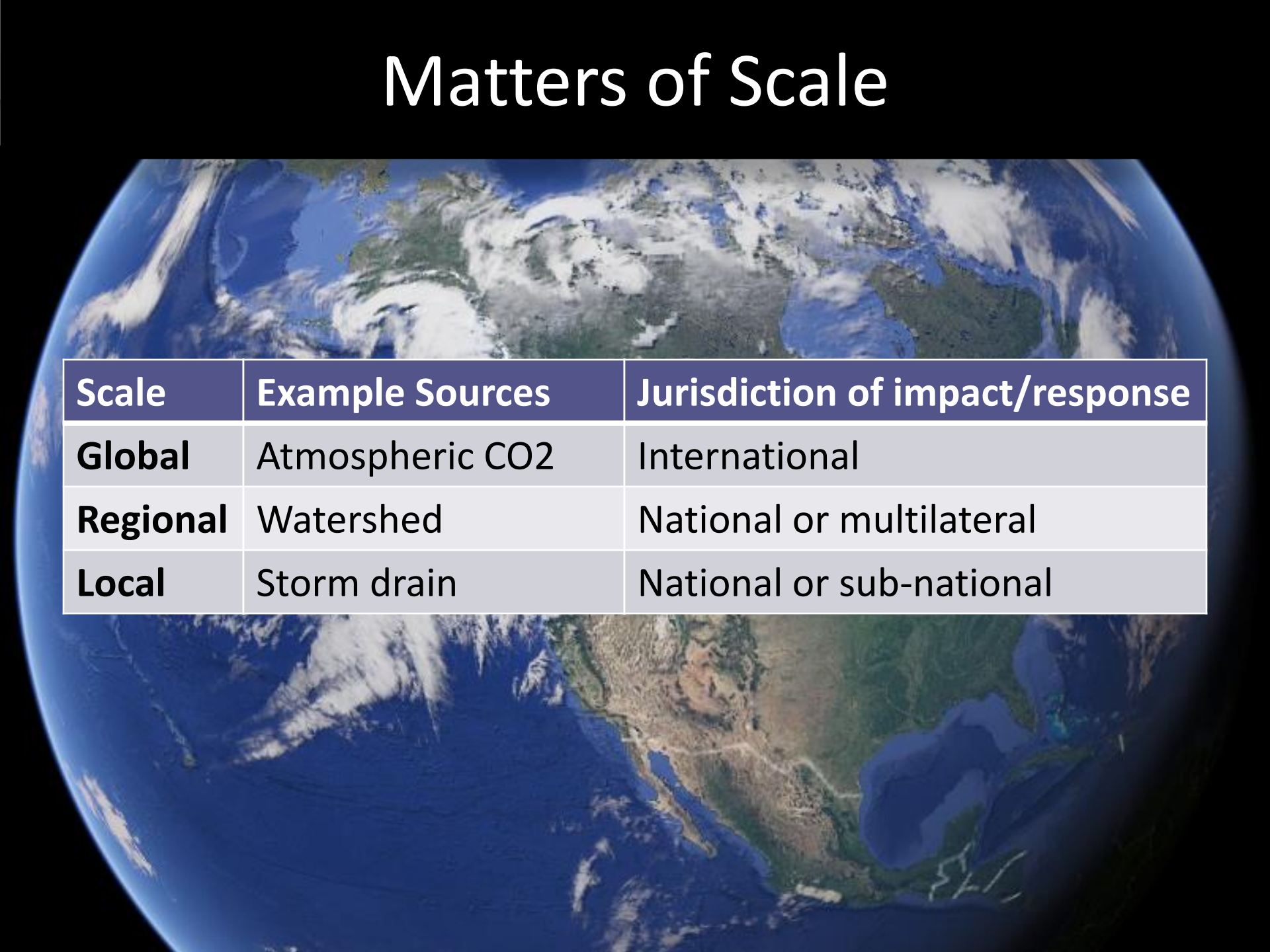
WA statute creating Marine Resources Advisory Council (2013-2017)

- Recommendations to WA govt

- Work with UW on technical analysis
- Recommendations to WA govt
- Public education

- Recommendations to WA govt

# Matters of Scale



Scale	Example Sources	Jurisdiction of impact/response
<b>Global</b>	Atmospheric CO2	International
<b>Regional</b>	Watershed	National or multilateral
<b>Local</b>	Storm drain	National or sub-national

# Ideas for Advancing OA Law and Policy

- **Legal and policy research can help overcome barriers.** Through understanding laws on the books and laws in action, new solutions can be developed.
- **Scale matters.** Choose the right jurisdictional scale to address the problem.
- **Old laws can do new tricks.** Existing legal frameworks may provide much of the legal authority needed to support addressing OA (however, remember their limitations).

# Thank you!



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