GOALS	RECOMMENDATIONS	Action to Date	Future Action
1. Invest in Maine's Capacity to Monitor and Investigate the Effects of Ocean Acidification and Determine Impacts of Ocean Acidification on Commercially-Important Species and the Mechanisms Behind Those Impacts	*1.1. Enhance monitoring and create a database sufficient to support the development of regulatory and non-regulatory approaches to reduce and limit nutrients and organic carbon from sources that are contributing significantly to acidification of Maine's marine waters. Enhanced monitoring should begin in one or more pilot estuaries where impacts are presently occurring.*		
	1.2. Expand monitoring of ocean acidification to establish its natural variability and to detect trends in water chemistry and related biological responses.		

	1.3. Develop new tools with which to assess and understand acidification and its impacts in Maine waters.		
	1.4. Determine the causes and relative importance of acidification in the waters and sediments of Maine.		
	1.5. Identify the impacts of acidified waters and sediments on Maine's commercial species.		

2. Reduce Emissions of Carbon Dioxide	*2.1. Strengthen coordination and continue participation with existing national, state, and regional initiatives regarding the reduction of atmospheric CO_2 levels.*		
	2.2. Encourage key leaders and policymakers to synchronize in establishing a comprehensive and unified strategy to reduce carbon dioxide emissions.	Draft rules setting greenhouse gas emissions standards in Maine and petition Maine Department of Environmental Protection to adopt those regulations. Project undertaken with support of student research assistant. Rulemaking was initiated in 2018, but rules were ultimately not adopted.	Work with Maine DEP and Climate Change Council to adapt previously drafted rules, and draft new rules, for the purpose of implementing updated emission reduction goals in recently passed climate legislation.
	2.3. Expand actions at the state and local levels that may help in reducing CO_2 emissions.	Same as above. In addition, taught Climate Change Law and Policy at Maine Law, which included a final research project requiring students to draft and present a policy proposal addressing a problem related to climate change in Maine.	Same as above. Teach - with Ivy Frignoca, Sarah Schindler, and Jeff Thaler - an updated version of the Climate Change Law and Policy seminar in Spring 2020.

3. Identify and Reduce Local Land-Based Nutrient Loading and, Organic Carbon Contributions to Ocean Acidification and Freshwater Runoff by Strengthening and Augmenting Existing Pollution Reduction Efforts and Making Groundwater Recharge a Land Use Priority.	*3.1. Identify and reduce nutrient loading and organic carbon from point source and nonpoint discharges determined to cause or contribute to ocean acidification.*	Developed and co-taught (with Ivy Frignoca) a Water Law Practicum course that introduced students to the challenges facing urban watersheds (particularly Casco Bay). The course involved specific analysis and fieldwork on two issues currently facing the Portland area – Integrated Planning and Urban Impaired Streams.	Expand the Water Law Practicum course for Spring 2020.
	3.2. Assess the need for water quality criteria relevant to ocean acidification.		
	3.3. Ensure that state staff and other practitioners are working with the best information and most effective technology.		

	3.4. Investigate incentive programs for pollution and freshwater runoff reduction.		
	3.5. Support and reinforce current planning efforts and programs that address the impacts of nutrients and organic carbon and freshwater runoff into coastal waters.		
	3.6. Enhance education and outreach programs that provide landowners with information about best practices for reduction of nutrient pollution.		

4. Increase Maine's Capacity to Mitigate, Remediate and Adapt to the Impacts of Ocean Acidification	*4.1. Preserve, enhance and manage a sustainable harvest of kelp, rockweed and native algae in bivalve areas and adjacent shoreline, and preserve and enhance eelgrass beds.*		
	4.2. Encourage bivalve production to support healthy marine waters.		
	4.3. Spread shells or other forms of calcium carbonate ($CaCO_3$)in bivalve areas to remediate impacts of local acidification.		
	4.4. Increase the capacity of the fishing and aquaculture industries to adapt to ocean acidification.		

	4.5. Identify refuges and acidification hotspots to prioritize protection and remediation efforts.		
	4.6. Encourage the enhancement and creation of research hatcheries.		

5. Inform Stakeholders, the Public, and Decision-Makers about Ocean Acidification in Maine and Empower Them to Take Action.	*5.1. In addition to providing the commission's report, its key findings should be communicated to the Governor, Maine's legislative leaders, Maine's Congressional delegation, the press and the general public in a series of briefings by commission members.*		
	5.2. Continue efforts to increase the understanding of ocean acidification among key stakeholders, targeted audiences and local communities to help implement the commission's recommendations.	Taught the following related courses, in which ocean acidification is mentioned, at Maine Law: Environmental Law and Policy Natural Resources Climate Change law and Policy Water Law Practicum Bring students to the Gulf of Maine Research Institute to expose them to the scientific work that dictates policy.	Continue to teach the courses listed. Expand those courses to more directly address ocean acidification. Expand and formalize the Environmental Law Program at Maine Law, including to offer a certificate conveyed at graduation. Provide clinical offerings related to climate change adaptation and clean energy implementation.

	5.3. Enhance the existing communication network of engaged stakeholders, state agency representatives and the research community.		
	5.4. Develop, adapt and use curricula on ocean acidification in K-12 schools and institutes of higher education and increase interdisciplinary university programs to equip young leaders with the skills to find solutions to complex multidisciplinary problems such as ocean acidification.	See 5.2 above.	See 5.2 above. In addition, collaborate, through the Graduate and Professional Center, with the Muskie School and the Business School to offer joint degree programs that target climate change. Specifically, offer a joint J.D. (with an environmental law certificate) / M.P.P.M (with a focus on sustainability) and offer a joint J.D. (with an environmental law certificate) / M.B.A. (with a focus on the green economy).

6. Maintain a Sustainable and Coordinated Focus on Ocean Acidification.	*6.1. Create an on-going ocean acidification council.*		

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