Partner with Experts

Partner with a climate expert for on-the-ground wetland restoration projects

It can be hard for climate experts to know exactly what information will be useful or relevant for wetland restoration decisions, and for wetland restoration practitioners to know what to explain about their work or what to ask climate experts. More active partnerships on actual projects increases the likelihood that practitioners will get relevant and useful information that improves project effectiveness, and that climate scientists will understand enough of what practitioners do to provide useful support.

Ideally, climate experts should be brought in at the start of the process so that climate considerations are included in the site selection, design, implementation, monitoring and evaluation phases. Experts can provide not just quantitative data or climate vulnerability assessments, but insight into plausible climatic changes or effects that could affect project performance or sustainability. The expertise needed depends on project focus, but can include climate effects on such issues as hydrology, habitat or species viability (including species physiology), or other factors. In all cases, limited knowledge of other disciplines (e.g., climate scientists vs. restoration practitioners) is a potential problem, so open communication and information flow in both directions is essential to maximize effectiveness of the partnership.

The academic community has long engaged with on-the-ground environmental practitioners, including through state university extension programs and partnerships such as the Sea Grant Program. More recently, dedicated academic programs and other institutions have been developed to serve as "boundary organizations" that act as a conduit of scientific findings and other information from the research community to practitioners. One such example is the NOAA-funded Regional Integrated Sciences + Assessments centers, including the Great Lakes Integrated Sciences + Assessments center, a joint effort of the University of Michigan and Michigan State University.

Case Example | Habitat Restoration in the Maumee River Area of Concern

NOAA awarded funds to The Nature Conservancy (TNC) for a habitat restoration project in the Maumee Area of Concern, which covers 130 river miles from Ft. Wayne, Ind., to Lake Erie, and sits adjacent to Lake Erie and the Ottawa National Wildlife Refuge. It will ultimately restore about 600 acres of wetland, forest, rivers and sedge meadow. The area is currently fallow agricultural land, with significant nutrient and pesticide pollution. There are four tracts of land, each with different restoration goals and approaches, including restoring wetlands, re-forestation, hydrologic reconnection and restoration of wet woods.

As part of this award, TNC was required by NOAA to consult with climate experts at the National Wildlife Federation (NWF) on how the project could be improved with regard to climate change considerations. NWF reviewed existing scientific literature to assess the vulnerability of target species, habitats, and systems to climate changes and impacts. Although not an exhaustive vulnerability assessment, this process yielded information that enhanced and complimented information on existing baseline conditions as recorded in the project's quality assurance project plan. In particular, the review helped to inform tree species selection and water control or fish passage measures.

Ottawa National Wildlife Refuge, Ohio, United States

Project partners worked with NWF to assess how restoration design and management could be made more climate smart, and suggestions have been incorporated into design work. For example, results of a U.S. Forest Service tool were used to identify tree species more likely to be viable in future climate conditions in the area. In addition, given potentially greater water level fluctuations in the future, it was recommended that plans for the Kontz tract, in particular, include potential consideration of additional fish passage structures (e.g., fish ladders).

Challenges and Benefits

Wetland projects generally have tight timelines and budgets. With busy schedules, this can make it difficult to get all parties to put in the time needed for effective collaboration. While some climate experts may be willing to work pro bono, it may be difficult to get extensive expert engagement without targeted funding. Also, if projects are truly "shovel ready," which has been of increasing interest to policymakers and funders, there may be limits on which climate considerations can be included. Nonetheless, there is usually room for recommendations entailing less dramatic alterations of existing plans.

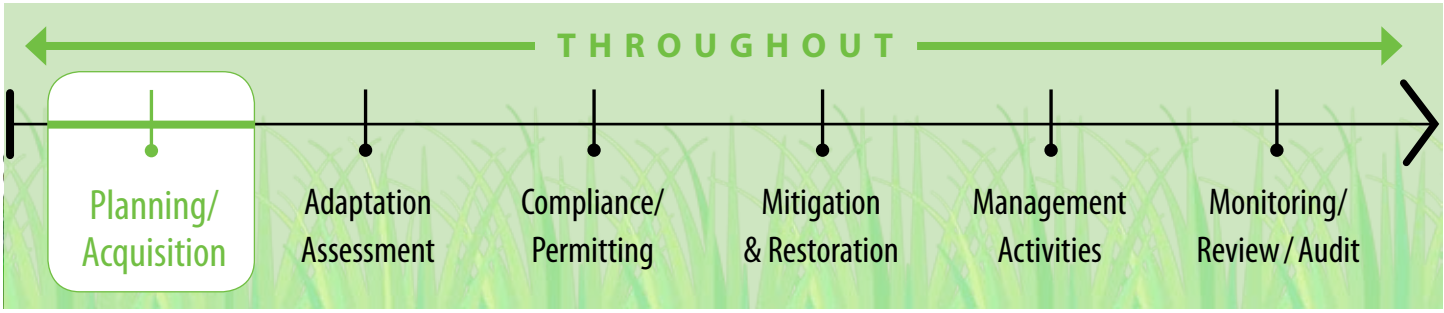
On the plus side, engaging climate experts in wetland restoration work can result in project outcomes that achieve adaptation-specific objectives (see Best Practice #16), as well as more traditional wetland restoration or conservation objectives. Overall, the collaboration between climate and wetland experts and practitioners increases the likelihood that projects will be more effective and more sustainable over the long run. By deepening connections between practitioners and scientists and increasing mutual understanding of each other's areas of expertise, partnerships are also more likely to have benefits well beyond individual projects.

Who should implement the practice?

All wetland conservation and restoration planners and practitioners, including those in government, non-profit and for-profit sectors.

When should this practice happen?

This practice should ideally begin during the Planning/Acquisition phase and continue throughout the project, but it can occur at any phase.



Tools and Resources

National Wildlife Federation and EcoAdapt – Restoring the Great Lakes' Coastal Future: Technical Guidance for the Design and Implementation of Climate-Smart Restoration Projects (2014) | This guidance document provides an overview of adaptation principles, guidance for climate-smart restoration projects in the Great Lakes, and reviews experience from seven case studies, including restoration in the Ottawa National Wildlife Refuge. | **www.nwf.org/~/media/PDFs/Global-Warming/Climate-Smart-Conservation/2014/Restoring-the-Great-Lakes-Coastal-Future-032114.pdf**

Great Lakes Integrated Sciences + Assessments Center (GLISA) | Brings together collaborators who are working to address specific problems related to climate change in the Great Lakes region. | **www.glisaclimate.org**

Landscape Conservation Cooperatives | Provides a forum for federal, state, tribal and nongovernmental stakeholders to work in partnership. | **www.fws.gov/landscape-conservation/lcc.html**

USDA Regional Climate Hubs | Provide information to farmers, ranchers and forest landowners to help them adapt to climate change and weather vulnerability. | **www.usda.gov/oce/climate_change/regional_hubs.htm**

Michigan Sea Grant | Includes a program on climate adaptation in the Great Lakes region. | **www.miseagrant.umich.edu**

Great Lakes Commission des Grands Lacs

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