

# New Ways to Look at PFAS and Climate Issues: Innovative Best Practice Frameworks for Lawyers and Other Practitioners

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## Summary

- Provides an overview of Best Practice Approach Frameworks
- Discusses the six-step process to evaluate potential impacts of climate change on natural resource damage (NRD) liability, assessment, and restoration.
- Explores the six-step process on the evaluation of the potential impacts of PFAS on natural resource liability, assessment, and restoration.

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How do lawyers wend their way through the terrific complexities of issues like forever chemicals and climate change in the context of site-specific situations (versus broad policy)? The answer may be in unique Best Practice Approach Frameworks developed by an expert team of lawyers, scientists, and economists and vetted at a major conference held at The George Washington University Law School.

The topics of PFAS and climate change are part of our news every day, not just in the United States but also worldwide. The amount of information (and viewpoints) can be overwhelming at times and cutting through the chatter to get to the heart of the issue—what matters in site-specific situations—can be daunting. Practical considerations dictate that a commonsense approach can be helpful and that is what this article shares.

## Overview of Best Practice Approach Frameworks

Recent global, domestic, and local events have brought natural resources into the forefront of government, industrial, and societal activities and decisions alike. The complexities of natural resource management and policy—sustainability, biodiversity, climate change, emerging contaminants, energy security—require vital collaboration between the public and private sectors and innovative, cutting-edge, and flexible approaches.

Three never-before-published Best Practice Frameworks were presented at the Ad-Hoc Industry Natural Resource Management Group's 12th Natural Resources Symposium, "Natural Resources at a Crossroads: How Recent Events Have Affected Natural Resources Law and Policy and Highlighted the Importance of Public/Private Collaborations to Advance Shared Objectives," held in collaboration with The George Washington University Law School, Environmental Law Institute; The George Washington University Environmental & Energy Management Institute; and others. The Frameworks, 1. Climate Change and Natural Resource Damages (Climate Change/NRD); 2. PFAS and Natural Resource Damages (PFAS/NRD); and 3. Coordination of Remediation and Restoration (Remediation/Restoration), represent a fresh way of thinking, offering a suggested stepwise process to encourage consistency across stakeholder groups and nationwide sites as to how each of these issues can be considered in the context of natural resource damage assessments (NRDA) and related restoration practices.

In addition to defining each of the topic areas and providing background, the Frameworks lay out a specific protocol to serve as a decision-making tool to rapid settlement that can be used by both potentially responsible parties (PRPs) and the regulators (Trustees) at a particular site.

The Frameworks are intended to identify early opportunities to consider these often-challenging issues and how they can be managed through the NRDA process; help parties align objectives and desired endpoints; provide a structure to consider incident-specific issues and attributes; expedite remediation, assessment, and restoration; increase efficiency; promote fairness; and provide practical, simplified ways to breakdown the complexity and provide clarity.

Each of the Frameworks is briefly described below. They are intended to be used by the different parties at a given site, including PRPs, response agencies, natural resource trustees, and others.

## Some Details: Climate

The Climate Change/NRD Framework focuses on a six-step process to evaluate potential impacts of climate change on natural resource damage (NRD) liability, assessment and

restoration: 1. "Incident Analysis" to consider the nature and complexity of the release, the potentially affected habitats and services they provide, and their vulnerability to climate change and extreme weather event (EWE) factors; 2. "Determination of Climate Change Factors" that are relevant to the specific incident; 3. "Determination of Investigation Intensity" to determine to what extent the climate change and EWE factors should be analyzed for their influence on baseline and injury; 4. "Injury Evaluation" to determine how each material climate change or EWE will impact each alleged injury; 5. "Scaling" to evaluate impacts on scaling of service losses; and 6. "Restoration Project Selection" to evaluate impacts on selection and implementation of proposed restoration projects. Optimally, this multistep process is undertaken as part of a cooperative assessment wherein scientific and economic experts representing both responsible parties (RP) and trustee entities and interests evaluate the details, the merits, and the practicality of considering climate change (CC) and EWE factors in the NRDA. The result of the application of this multistep framework then should be an incident-specific plan to conduct such an evaluation.

As changes in climate and extreme weather events may result in observable and measurable changes in habitats and natural resources and are increasingly becoming a factor in the NRDA process, the Framework offers attorneys and their clients a suggested pathway to consider these influences when assessing potential liability. Key questions center on deciding when, and to what extent, climate change and EWE factors need to be assessed in an NRDA including: (a) to what extent non-release factors (described below) should be considered or investigated in specific incidents; and (b) what methods should be used to conduct such investigations.

Climate Change affects the natural environment in two basic ways and attorneys need to be cognizant of these influences. First, changes in climate introduce elements such as sea level rise and increasing ocean and land mass temperatures, on global, regional, and local scales, which, in turn, impart observable and measurable long-term changes to the environment and the habitats and natural resources therein. Moreover, such changes can alter human uses of resources and the relative values of various services these resources provide. Second, the increasing frequency and severity of EWE attributable to changes in climate (e.g., tropical cyclones, wildfires, extreme precipitation, flooding, storm surges, etc.) cause large episodic and in some cases permanent disturbances in those habitats and natural resources that may impact liability determination. While changes in climate can result in permanent shifts in physical and biological resources, EWEs result in regional, and more often, local large-scale upsets, which may or may not permanently change natural resources. Both changes in climate and EWEs may result in observable and measurable changes in habitats and natural resources considered under the NRDA process—whether Oil Pollution Act (OPA) or CERCLA (Superfund) driven.

The level of effort devoted to evaluation of CC and EWE factors on NRDA components—baseline, injury, restoration—will be determined by the level of Investigation Intensity (Step 3 above) considered appropriate in each specific case. The Framework process represents a balance between the goal of accurate delineation of climate-related effects and the need for cost-effective and timely resolution of NRD claims.

## Some Details: PFAS

The PFAS/NRD Framework focuses on the evaluation of the potential impacts of PFAS on natural resource liability, assessment and restoration through six steps: 1. “Frame the Problem” to define PFAS in the current instance; 2. “Understand PFAS Usage” to determine what extent PFAS were used at the site; 3. “Establish Discharge Pathways” specific for PFAS to the environment; 4. “Identify Receptors” to assess the potential for PFAS to have reached both human and environmental receptors; 5. “Evaluate Service Loss” due to PFAS contamination; and 6. “Determine Restoration Alternative” to identify possible alternatives for natural resource restoration of the lost services.

Given the complex nature of PFAS, there are unique issues and challenges when determining potential liability for natural resource damages that attorneys and their clients need to be aware of when developing site-specific case strategies. For example, the term PFAS includes precursor compounds, which tend to break down in the environment to certain terminal compounds, as well as the terminal compounds themselves. Furthermore, there are differences in what constitutes a PFAS compound across different states and regulatory agencies, leading to confusion over how to define them. In addition, only selected PFAS compounds have regulatory thresholds or are of interest to regulators and/or natural resource trustees at this time. The Best Practice Approach Framework provides a structure to work through some of these thorny considerations.

Utilizing the suggested Best Practice Approach Framework can offer a better understanding of potential liability at a particular site, including the appropriate level of remediation and natural resource restoration. In particular, offering a way to establish baseline levels of PFAS, as well as natural resource services at a site, may allow for a better assessment of any future changes in services related to PFAS. Separation of baseline services from potential impacts of PFAS ensures proper causation links are met to allege liability. In addition, a clear understanding of pathways of potential contamination as well as natural resource receptors may allow steps to be taken that can reduce or prevent the loss in natural resource services that may occur. All of these can better position PRP clients relative to potential liability.

## Some Details: Remediation/Restoration Nexus

The Remediation/Restoration Framework outlines how restoration, both primary and compensatory, can be considered throughout site investigation and remedial design and implemented concurrent with remediation actions. The Framework describes a process that integrates NRDA and compensatory restoration for injury through all phases of site characterization, remedial design (RD), and implementation of remedial actions (RA) for contaminated sites. Actions include those that can be undertaken by EPA, PRPs and trustees, and are also intended to highlight junctures in the processes where there are potential opportunities for settlement. The changes from current practice illustrated here include: engaging ecologists and natural resource damage practitioners earlier in the remedial process; identifying potential restoration projects before remediation is complete; and simultaneous collection of data for site characterization, RD, NRDA purposes, and others—all of which can render the processes more efficient and cost-effective for the parties involved.

Using the Superfund process as a model, the Best Practice Framework outlines how restoration, both primary and compensatory, can be considered throughout site investigation and remedial design and implemented concurrent with remediation actions. As coordination of remediation and restoration activities may not be suitable at all sites, the Framework provides specific factors that often favor coordination versus the bifurcation of remedial and restoration activity, which can be a useful evaluative tool for attorneys and their clients.

The Framework offers attorneys and their clients a suggested pathway to consider how remediation and restoration can be considered together—offering a potential solution for liability that is efficient and cost-effective. Experience has shown that joint consideration of the two processes can save further time and money, including opportunities for coordination of data collection and analysis, and accelerate the restoration of injured natural resources, enabling their uses to be returned more quickly to the affected communities.

The Framework offers several decision points during the remediation and restoration process that can provide opportunities for attorneys and their clients to coordinate the two processes more efficiently. For example, in the early stages of a site investigation, coordinating field sampling may yield significant cost savings. Adding some additional samples and lines of evidence to the Remedial Investigation (RI) field program to address trustees' concerns can be done earlier and often easily. Having an eye toward both cleanup and potential restoration during the RI can provide information essential for assessing whether the site itself or nearby habitats are suitable for restoration. More importantly, some aspects of cleanup (excavation, capping, backfilling, planting covers on landfills, etc.) can be better understood early in the remedial process and combined with on-site restoration. In sum, this can yield a faster and more cost-effective restoration of

injured natural resources, and potentially smaller natural resource damage claim and/or settlement and the resources can be brought back into use sooner to baseline (but for the release) conditions.

## Summary and More Activities Planned

The Frameworks zero in on the important considerations related to climate change, PFAS, remediation, and emergency response at the intersection of natural resource damages. They also set the stage for earlier and more cost-effective case settlements—all leading to earlier restoration of natural resources affected by hazardous waste releases or oil spills. The interest in the Best Practice Approach Frameworks has been encouraging and as of this writing, a fourth Best Practice Approach Framework is being finalized on the nexus between Emergency Response and Restoration. Guided by a suite of four multi-stakeholder working groups established in early 2023, the Frameworks may be refined or expanded, and other activities may be undertaken in 2023–24 as warranted as well. One activity already planned will occur in November of this year at The George Washington University Law School in a one-day program that will examine influences, perspectives, and needs since the Frameworks were initially developed. The Frameworks and further information on the fall 2023 program can be found on the [www.nrdonline.org](http://www.nrdonline.org) or [www.naturalresourcesymposium.com](http://www.naturalresourcesymposium.com).

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