



Evaluation of the National Water Program Climate Change Adaptation Strategy

July 2013

Fact Sheet

Introduction

The *National Water Program Strategy: Response to Climate Change* was first published in 2008. OW created one of the first climate change adaptation strategies in the Agency, and is considered a model for other emerging efforts within the federal government. The 2008 Strategy describes the likely effects that climate change will have on water resources and implications for EPA's Office of Water (OW) and the National Water Program (NWP). In 2012, OW developed an updated strategy that describes NWP's long-term goals for sustainably managing water resources in light of climate change. It is intended as a roadmap to guide future program work and inform the Agency's annual planning process. In late 2012, OW's Immediate Office (IO), which is responsible for coordinating OW climate change work, requested support from EPA's Evaluation Support Division (ESD) to conduct a retrospective evaluation of lessons from the 2008 Strategy, and to develop a prospective measurement framework to track the progress on the 2012 Strategy.

Evaluation Questions

The evaluation was framed by the following questions:

Evaluating the implementation of the 2008 Strategy:

- ▲ How well is climate mainstreamed into OW programs? What are the barriers to mainstreaming and how might this be better accomplished?
- ▲ What goals, implementation experience, or lessons from the 2008 Strategy could be useful to guide implementation of the 2012 Strategy?
- ▲ What goals and strategic actions in the 2012 Strategy should EPA headquarters (HQ) and regional programs prioritize?

Developing a prospective measurement approach for the 2012 Strategy:

- ▲ What is the measurement approach that can be used to measure adaptation progress in five areas: infrastructure, watersheds and wetlands, ocean and coastal waters, water quality, and working with tribes?
- ▲ What specific elements need to be applied to the phased approach to tracking progress outlined in the 2012 Strategy, to make it a robust measurement framework?
- ▲ What, if, any, revisions should EPA make to its baseline data collection process to ensure that data collected are meaningful and objective?
- ▲ How can lessons learned from the evaluation of OW's measurement approach inform measuring progress in the EPA-wide Adaptation Plan, and inform development of the next Agency Strategic Plan?

<http://www.epa.gov/evaluate>

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Evaluation Methods

This study draws on multiple data sources to inform the lessons learned related to our research questions. Key sources of information include:

- ▲ Interviews with EPA representatives from IO and from all four OW program offices and several regional offices, as well as external organizations. In total the evaluators interviewed 26 EPA staff and 4 non-EPA staff. An EPA focus group to discuss lessons from the 2008 Strategy and recommendations for implementation of the 2012 Strategy. Most focus group participants are also among the interviewees discussed above.
- ▲ Review of documents related to the NWP climate change strategies and their implementation, including EPA memoranda and other policy documents.
- ▲ Review of baseline data collected by IO to assess progress towards the strategic actions included in the 2012 Strategy.
- ▲ Review of existing literature and online publications that address climate change adaptation strategies and activities.

Key Findings

Implementation of the 2008 Strategy

- ▲ **How well is climate mainstreamed into OW programs?** Overall, evaluation participants felt that the degree of integration of climate change into the NWP is low but improving. There are a few NWP programs in which substantial integration progress has been made, but most divisions, offices, and programs are in the early stages.
- ▲ **What are the barriers to mainstreaming and how might this be better accomplished?** The evaluators found a range of barriers preventing the integration of climate change considerations into OW's daily operations. Key barriers include competing priorities, lack of resources, characteristics of climate change as an issue, organizational and structural aspects of OW, and external influences.
- ▲ **What goals, implementation experience, or lessons from the 2008 Strategy could be useful to guide implementation of the 2012 Strategy?** The evaluation team distilled several findings and associated lessons on the overall effectiveness of the 2008 Strategy, as both a document and a process, for affecting change in and through the NWP. These include findings related to strategy use, influence, and value; communications and outreach; management support; staffing and resources; training and capacity building; and measurement.
- ▲ **What goals and strategic actions in the 2012 Strategy should EPA headquarters (HQ) and regional programs prioritize?** IO is currently developing prioritization criteria in order to effectively allocate resources toward climate related activities. Key criteria under consideration include: urgency, risk, geographic scale, programmatic scale, and probability of occurrence. The evaluators encountered a broad range of perspectives on prioritization of the strategic actions described in the 2012 Strategy. Interviewees did not advocate for prioritization of particular strategic actions; instead, they provided a suite of prioritization schemes for OW consideration.

Prospective Measurement Approach for the 2012 Strategy

- ▲ **What is the measurement approach that can be used to measure adaptation progress in five areas: infrastructure, watersheds and wetlands, ocean and coastal waters, water quality, and working with tribes?** The 2012 Strategy contains 53 strategic actions in the five vision areas and cross-cutting areas of program support. In the 2012 Strategy, OW adopted a seven-phased approach to adaptive management to measure progress towards achieving stated goals and strategic actions, which the evaluators agree is a reasonable framework. At this stage of climate change adaptation, the evaluators suggest that OW programs should be accountable for outputs, and learn from outcomes. Thus, we suggest that OW apply the seven phases to track progress towards goals articulated the 2012 Strategy by measuring both outputs and priority outcomes.
- ▲ **What specific elements need to be applied to the phased approach to tracking progress outlined in the 2012 Strategy, to make it a robust measurement framework?** IO needs to develop objective criteria for each phase of adaptive management to facilitate consistent measurement. IO should identify priority outcomes using a logic model approach. For each priority outcome, IO will need to identify if the phase of adaptive management has been met, based on the specific criteria defined. The evaluation team recommends piloting a measurement approach with a few priority goals.
- ▲ **What, if any, revisions should EPA make to its baseline data collection process to ensure that data collected are meaningful and objective?** The evaluation team documented several data quality and consistency

challenges with baseline data report. Moving forward, we recommend that IO take steps to adhere to key tenets of data quality and consistency. Core among these, IO will need to develop data reporting templates, clear instructions for reporting, and institute a quality control plan.

- ▲ **How can lessons learned from the evaluation of OW's measurement approach inform measuring progress in the EPA-wide Adaptation Plan, and to inform development of the next Agency Strategic Plan?** Other EPA offices could go through a similar process of using logic models to select priority outcomes, and developing measures, criteria, and data collection strategies relevant to those priority outcomes. Alternatively, offices could continue to use existing measures, and track progress on them in light of climate change. Whatever approach other offices choose to take in measuring progress on climate change adaptation, they will need to weigh the merits of measuring outputs vs. outcomes; be transparent about assumptions and weighting; and ensure data quality. Given the priority actions identified in the Adaptation Plan, and EPA's key strengths and institutional capabilities, three key areas of EPA expertise may include providing data, decision-support tools, and training to partners related to climate change adaptation. Further work is needed to define a few specific measures that are relevant across the agency, plan for data collection associated with these measures, and determine the degree of EPA's contribution to outcomes achieved.

Recommendations Summary

Reinvigorate NWP management and staff commitment to the Climate Change Strategy.

1. Clarify the purpose of the 2012 Strategy.
2. Clarify commitments and roles associated with the 2012 Strategy.
3. Seek buy-in for the 2012 Strategy among OW management and staff.

Create management practices that keep climate change integration front and center.

4. Schedule regular management-level strategic discussions adaptation and Strategy implementation.
5. Ask key climate change questions relentlessly up and down the management chain.
6. Shift the balance of implementation focus toward "customer service" and learning.
7. Recognize and reward climate change integration progress.

Empower EPA staff and state, tribal, and local partners.

8. Focus education and training support on connecting climate change to practical work.
9. Expand engagement on the strategy with State, Tribal, and local partners.
10. Attract and plan for resources.

Clarify the purpose of measurement and pilot a measurement approach that includes outcomes.

11. Seek buy-in for measuring progress on Strategy implementation.
12. Consider adopting an outputs plus priority outcomes measurement approach.
13. Within the measurement approach selected, acknowledge the iterative and evolving nature of this work.
14. Ensure data quality and consistency in collecting measurement data.

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Report Link: <http://www.epa.gov/evaluate/pdf/water/eval-water-climate-change-adapt-strategy.pdf>

Date Completed: July 2013