Department of the Interior
Departmental Manual

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Chapter 1: Adaptive Management Implementation Policy

Originating Office: Office of Environmental Policy and Compliance

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1.1   **Purpose**.   This chapter establishes Department of the Interior (Department) policy on implementation of adaptive management (AM). This policy is intended to increase the effectiveness of resource management under uncertainty by implementing AM, where applicable. AM acknowledges uncertainty and facilitates management changes to ensure that desired outcomes are met or re-evaluated.

1.2   **Scope**.

        A.   The policy in this chapter applies to the Department and its component Bureaus and Offices.

        B.   This chapter does not apply to the Office of the Inspector General.

1.3   **Definition**.   Building on the definition developed by the National Research Council, adaptive management is operationally defined in *Adaptive Management: The U.S. Department of the Interior Technical Guide* as follows:

        A.   Adaptive Management (AM). AM is a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an iterative learning process. AM also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasizes learning while doing. AM does not represent an end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals; increases scientific knowledge; and reduces tensions among stakeholders.

        B.   High-Quality Information. For the purposes of this chapter, high-quality information is information that promotes reasoned, fact-based agency decisions. Information that meets the standards for objectivity, utility, and integrity as set forth in the Department's Information Quality Guidelines would qualify as high-quality information.

C.   Indigenous Knowledge (IK). A body of observations, oral and written knowledge, innovations, practices, and beliefs developed by Indigenous Peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems. IK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as extensive observations, lessons, and skills passed from generation to generation. IK is owned by Indigenous Peoples and is often intrinsic within customary or traditional governance structures and decision-making processes. Other terms such as Traditional Knowledge(s), Traditional Ecological Knowledge, Tribal Ecological Knowledge, Native Science, Indigenous Science, and others, are sometimes used to describe this knowledge system. This chapter uses the term Indigenous Knowledge (IK) throughout.

D.   Indigenous Peoples. Native Americans, Alaska Natives, Native Hawaiians, Pacific Islanders, and others whose ancestors have occupied what is now known as the United States and its territories since time immemorial, including members of Tribal Nations.

E.   Tribal Nation or Tribe. An Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges as a Federally recognized Tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. § 5130.

1.4   **Background**. Resource managers face large-scale and complex challenges to conserve biological diversity, restore and rehabilitate damaged ecosystems, and resolve conflicts in resource allocation, while assessing changing conditions and adapting to climate change. To achieve desired outcomes, managers require decision processes that are flexible, able to adjust to uncertainty over the long run without delaying current management actions, and designed for efficient learning. AM aims to improve outcomes by balancing achievement of near-term management goals with monitoring and adjustment to increase the system understanding required for more effective long-term management. AM guides resource managers in acquiring and using information to achieve their goals more effectively through regular re-assessment of objectives and assumptions in light of outcomes. AM is most effective when the effects of management actions are uncertain. The uncertainty could be due to environmental variability, including changes in climate, or other factors, such as habitat fragmentation, changing biological diversity, or the consequences of invasive species. When applied at multiple scales, AM can help managers improve the resilience of managed systems, as feasible, or, if necessary, navigate the increased uncertainties arising from major changes in system state, such as from climate-driven ecological transformation.

1.5   **Policy**. It is the policy of the Department to implement AM when appropriate, incorporating AM into policies, plans, guidance documents, agreements, and other instruments for the management or co-stewardship of resources under the Department's jurisdiction.

A.   AM should be implemented when action is warranted despite uncertainty. Conditions required for AM to be appropriate are detailed in *Adaptive Management: The U.S. Department of the Interior Technical Guide* and other Departmental guidance identified in section 1.8 Guidance below.

B.   AM may not be appropriate where:

(1)   Resource management decisions cannot be revisited and modified over time.

(2)   Monitoring cannot provide useful information for decision making.

(3)   Irresolvable conflicts exist in defining explicit and measurable management objectives or alternatives.

(4)   The agency has limited discretion over resource systems and outcomes.

(5)   Risks associated with learning-based decision making are too high.

C.   The Department is committed to providing technical assistance as appropriate for the successful implementation of AM, including decision making, management actions, monitoring, and learning phases. Consideration of AM implementation may be used by the Department to prioritize management activities and funding, and to inform the Department, Bureau, and Office work processes, such as development and approval of plans, issuance of permits and authorizations, production and delivery of science and data, and budget allocation.

D.   The Department will account for both changes in environmental conditions, such as habitat fragmentation, changing biological diversity, impacts from invasive species and climate change, and changes in assumptions underlying AM implementation. This includes, as feasible, quantifying historical and projected future changes in climate as AM is implemented.

1.6   **Implementation**. *Adaptive Management: The U.S. Department of the Interior's Technical Guide* is the technical basis of the Departmental AM implementation. Due to finite resources, Bureaus and Offices should prioritize projects to ensure that the greatest benefit is achieved and that all the following requirements are met when AM is implemented.

A.   Integrate core principles of AM implementation including:

(1)   Meaningful, strategic, and deliberate engagement with relevant authorities, subject experts, and other stakeholders.

(2)   The use of high-quality information.

(3)   Flexibility, as many aspects of AM implementation will vary with specific application contexts.

(4)   Iteration of the AM cycle, as appropriate, which might include periodic revision of planning documents and iterative reporting.

B.   Conduct each of the fundamental components of AM:

(1)   Decision making, including problem definition, objective setting,

alternatives listing, consequence modeling, and trade-offs analysis.

   (2) Action, including resource management activities.

   (3) Monitoring, which might include targeted monitoring of the effects of management actions, surveillance monitoring of resource conditions, and monitoring across multiple scales. Monitoring and evaluation frameworks should use standard, quantitative indicators where feasible to consistently report on resource condition and trends at relevant scales.

   (4) Learning, including assessing monitoring results by comparing observed resource status in response to management actions, and ensuring results are used to adjust management actions and/or improve subsequent iterations of the AM decision process.

  C. Address each of the fundamental components of AM in planning document(s), such as management plans and monitoring plans.

  D. Implement AM in compliance with applicable laws and other authorities.

  E. Communicate results of AM implementation, including successes, failures, and other lessons learned, within and across the Department's Bureaus and Offices and with Indigenous Peoples and other collaborators.

1.7 **Responsibilities**.

  A. <u>The Assistant Secretary - Policy, Management, and Budget</u>.

   (1) Oversee the Department's compliance with this policy, and provide staff support to monitor implementation of the policy and coordinate budgets and practices that support AM.

   (2) Establish an Adaptive Management Working Group (AMWG) and designate a chair for the AMWG.

  B. <u>Assistant Secretaries</u>. Ensure that their subordinate Bureaus and Offices comply with the policy in this chapter.

  C. <u>The Office of Environmental Policy and Compliance (OEPC)</u>.

   (1) Serve as the lead Office for revising this policy where warranted by changes in technical information, federal statutes, regulations, Department policy, or other conditions. Any Bureau or Office can initiate changes by contacting the OEPC.

   (2) Solicit and consider the views of all interested Departmental Bureaus and Offices when the Department contemplates changes to this policy. In recommending revisions to this chapter, Bureaus and Offices will provide the OEPC with appropriate supporting information.

(3)   When requested, provide technical assistance and guidance to Departmental Bureaus and Offices for understanding and implementing this policy.

D.   Heads of Bureaus and Offices.

(1)   Ensure that their organizations comply with this policy; report on a regular basis the progress made in implementing this policy to their respective Assistant Secretaries and the AMWG; and communicate the requirements of this policy effectively to partners.

(2)   Develop appropriate Bureau or Office policy and guidance to address AM as it relates to Bureau or Office-specific mission and legislation. The policy and guidance should be consistent with the conditions for use identified in the Departmental technical guidance document(s).

(3)   Review and update existing decision-making processes and management plans to allow for integration of the principles and values identified in this policy.

(4)   Provide technical support for Departmental reviews of AM activities and associated policies when requested.

(5)   Designate a staff lead responsible (with such duties reflected in their performance plan) for prioritizing AM requirements outlined in Section 1.6 Implementation above and promoting the goals of this chapter. In addition, the staff lead will be responsible for providing help in supporting various Bureaus and Offices in implementing AM by establishing an internal AM network of practitioners within the Bureau or Office.

(6)   Ensure that persons conducting AM activities have the appropriate training necessary to ensure a successful implementation of this policy.

(7)   Appoint staff with appropriate technical expertise to represent the Bureau or Office on the AMWG, with such duties reflected in their performance plan. The AMWG must include representatives of the following Bureaus and Offices: Bureau of Indian Affairs, Bureau of Land Management, Bureau of Ocean Energy Management, Bureau of Reclamation, Bureau of Safety and Environmental Enforcement, National Park Service, Office of Environmental Policy and Compliance, Office of Policy Analysis, Office of Surface Mining Reclamation and Enforcement, U.S. Fish and Wildlife Service, and U.S. Geological Survey. Heads of other Bureaus and Offices are encouraged, but not required, to appoint a representative to the AMWG.

E.   The Adaptive Management Working Group.

(1)   Update the charter, as needed, to direct the operations of the AMWG.

(2)   Provide communication, coordination, and oversight of AM activities across the Department, including updating technical guidance, coordinating training and technical assistance, and supporting capacity building by:

(a)   Synthesizing and integrating new AM research, best practices, case studies on AM, decision science, and climate adaptation into AM guidance and trainings.

(b)   Developing AM reporting metrics for Bureaus and Offices, collecting reporting data, and sharing reporting and lessons learned within and across Bureaus and among partners, Indigenous Peoples, and other collaborators.

(c)   Preparing a biennial report on the application of this policy as it relates to Bureau or Office-specific missions and authorities, consistent with existing Departmental performance metrics.

(d)   Developing strategies to promote Bureau engagement and investment in the implementation of AM.

1.8   **Guidance**.   Departmental AM technical guides are available and are a key component of the Department's AM training program and web site. These documents indicate when AM might be warranted, when it is not applicable, and how to apply AM to resource management decisions. The Environmental Statement Memorandum 13-11 entitled *Coordinating Adaptive Management (AM) and National Environmental Policy Act (NEPA) Processes* dated 9/24/2018 also should be referenced and utilized as guidance.

1.9   **Legal Effect**. This policy is intended to improve the internal management of the Department. It does not create any right or benefit, substantive or procedural, enforceable at law or in equity by any person against the United States, its agencies, its officers or employees, or any other person.