

Overview of the Ecosystem Management and Restoration Research Program

27 January 2022

Q&A Session

This webinar provided an overview of the [Engineering Research and Development Center \(ERDC\) Ecosystem Management and Restoration Research Program \(EMRRP\)](#), and how it can help address current and future environmental planning challenges. Presenter Dr. Brook Herman (EMRRP Research Ecologist and Program Manager) discussed EMRRP's design and how it acts as a flexible research program capable of addressing a wide range of issues associated with ecosystem restoration. Dr. Herman also discussed EMRRP-funded research, EMRRP-developed ecological planning models and tools, how EMRRP facilitates knowledge sharing, and the annual research Statement of Need (SoN) process.



EMRRP Resources:

- EMRRP Website Homepage: <https://emrrp.el.erdc.dren.mil/programs.html>
- EMRRP's Ecosystem Restoration Models & Applications: <https://emrrp.el.erdc.dren.mil/models.html>
- Environmental Research Area Review Group (ERAG): <https://emrrp.el.erdc.dren.mil/erarg.html>
- A Proposed Ecosystem Services Analysis Framework for the U.S. Army Corps of Engineers (ERDC/EL SR-20-2): <https://apps.dtic.mil/sti/pdfs/AD1105752.pdf>
- A Retrospective of Attempts to Incorporate Ecosystem Goods and Services into Corps Planning: Case Studies and Lessons Learned (ERDC/EL TR-21-X, in press): for a pre-publication summary of this document, see <https://emrrp.el.erdc.dren.mil/webinars/2021-08-17/EMRRP2021-08-17Webinar.pdf>

This summary of the Question / Answer session of the webinar is not a transcription; questions and responses have been edited and reordered for clarity.

ERDC's Ecosystem Management and Restoration Models & Applications

What is the first step planners should take to incorporate ecosystem management and restoration models and applications into their studies?

Planners should first determine the appropriate model for their study. For example, the ecorest model package will be most applicable for studies working to capture habitat units to address ecosystem restoration or mitigation. Note: ecorest does not have a decision tree feature. Planners need to know what they are looking to understand before they select a model.

A forthcoming EMRRP model selection toolkit is being developed to help planners refine their model needs and allow them to either choose an existing certified model or develop their own model and seek approval for use.

Are all of the models in ecorest approved for use by USACE?

All models in ecorest are approved for use by USACE. These bluebook models were developed by the U.S. Fish and Wildlife Service to quantitatively assess habitat suitability for specific species.

Can planners go straight to using ecorest to quantify project benefits when evaluating alternatives?

Yes, the tool is fairly flexible – ecorest can be loaded for specific measures or for specific alternatives. The tool can generate specific outputs, including acres, stream feet, and/or habitat units.

Can ecorest models be used for any project area or region?

The habitat suitability models compiled in ecorest were often developed for a specific domain or geographic region (e.g., the Pacific Northwest for salmonids). If a habitat suitability model is used outside of its intended geographic domain, planners will need to justify why the model is appropriate for use in the study in question.

Do the three years/\$3 million (3x3) thresholds for feasibility studies create any constraints on the development of new planning models?

For the most part, no. It is possible to create a new planning model and get it approved for use within the 3x3 requirements. However, the timeliness of approval depends on the model complexity and the study area. Planning teams should consider the use of regionally-approved models approved for more than one-time use that may apply to the geographic area being studied.

How are climate considerations being incorporated into EMRRP products?

There are several climate change specific work units underway and recently completed at ERDC. One work unit completed last year focused on using climate change models to map shifting habitats in project areas of concerns. These models provide a framework to predict where species are headed and how they will be distributed by mapping environmental drivers onto project areas. The results can help planners determine whether there is a need to adjust the restoration target and think about future conditions. Forthcoming modeling applications are looking at how to explicitly integrate climate change into different tools and applications via environmental drivers or by incorporating human activity.

Ecosystem Goods & Services and Project Recommendation

Are there any examples of USACE studies with signed Chief's Reports that used ERDC's proposed "ecosystem goods and services" analysis framework to justify the recommended project or identify the National Ecosystem Restoration (NER) project?

As of yet, there are no signed Chief's Report using ERDC's ecosystem goods and services framework to justify a recommended plan. However, there may be studies currently underway that are incorporating ecosystem goods and services into the plan recommendation.

EMRRP is developing two case studies of projects applying the ecosystem goods and services framework discussed by Dr. Herman that will help planners understand the process and level of effort required to use the framework: *A Retrospective of Attempts to Incorporate Ecosystem Goods and Services into Corps Planning: Case Studies and Lessons Learned* (ERDC/EL TR-21-X, in press).

Has there been a research Statement of Need (SoN) submitted for how planners can address the Assistant Secretary of the Army for Civil Works (ASA(CW)) January 2021 [Comprehensive Benefits Memorandum](#) across business lines?

There is no existing SoN for implementing the Comprehensive Benefits Memorandum that has come through the Civil Works environmental business line. If planners have specific research ideas for addressing this topic, they are encouraged to complete a SoN form. More information about SONs can be found [here](#).

Has the EMRRP ecosystem goods and services framework been approved for use by USACE Headquarters or the ASA(CW)?

The framework for considering ecosystem goods and services has been reviewed and approved as part of ERDC's report publications process. However, any specific application of the framework would be subject to the study's review and vertical chain approval process. The ERDC report describes how the ecosystem goods and services framework might be integrated into existing analytic approaches used in planning and modified to fit different levels of resource availability and the decision context.