

## **Collaborative Problem Solving in the Colorado River Basin: An approach to co-developing solutions.**

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Over twenty years of drought, invasion of nonnative species, endangered species challenges, increased risk of fire, and the need to support multiple demands for water have pushed the Colorado River Basin to its sustainable limit. In 2020, the USGS initiated a new approach to enhance science co-production, interdisciplinary science connections, and technology integration. The Actionable and Strategic Integrated Science and Technology (ASIST) approach serves as a framework for convergent research by identifying interdisciplinary science connections. While this effort is being developed for the Colorado River Basin (CRB) the framework is transferrable to any location. To support the land and ecosystem managers and other partners, the USGS is engaging with them to determine what their science needs are for advancing restoration in the CRB. USGS is working with those partners to prioritize and conduct science, interpret outcomes, and design changes on the landscape. USGS is working with those partners to determine if restoration measures lead to desired outcomes. Assessment of the results of restoration or management decisions can lead to optimizing decision-support tools to efficiently achieve desired outcomes. This process helps to eliminate uncertainty in future restoration implementation by engaging all parties from defining the problem to assessing the effects of restoration on the ground. The approach that ASIST has developed is transferrable to any landscape. In addition to the specific activities for the CRB, ASIST is also documenting this approach to make it readily accessible to others conducting science and implementing restoration on any landscape.

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