

# Health and Environmental Risk Assessment (HERA)

## Synopsis of the 2023 – 2026 Strategic Research Action Plan

**Vision:** The HERA Research Program will advance the science and practice of health and environmental risk assessment by developing a portfolio of fit-for-purpose assessment products and innovative research that meets the needs and priorities of EPA programs and regions, states, tribes, and other external stakeholders.

**Approach:** HERA will continue to develop and expand upon a portfolio of assessment products to meet EPA's wide-ranging statutory and regulatory needs. EPA and its diverse stakeholders must make decisions that span a large regulatory and non-regulatory landscape with each decision requiring varying degrees of information, such as broad or targeted technical support to customized or detailed assessment. The HERA program will continue to ensure health and environmental assessment products and translational support are appropriately tailored to a specific decision or application context.

Maintaining and advancing the efficiency, transparency, and scientific rigor of HERA assessment products and risk assessment decision-making throughout the Agency requires innovative assessment research and tool development. HERA will support research advancing the science and practice of assessment through methods development, case studies, models, and tools that are tethered to assessment needs. The Program will continue to focus on research that builds user confidence in the use of the full range of available data in risk assessment, including integration of new approach methods (NAMs) and data into workflows. HERA will continue as a leader in the application and innovation in systematic review, including evidence integration, and evidence mapping.

Additional focus will be placed on assessment research that supports the Administrator's priorities of environmental justice and climate change: (1) HERA will increase focus on research to advance the evaluation of chemical mixtures and improve cumulative risk assessment practices to better characterize and assess health disparities in state and tribal communities with environmental justice and equity concerns; (2) existing HERA assessments related to air pollutants help inform climate policy efforts; and (3) in partnership with ACE and the other National Research Programs, HERA will leverage its assessment expertise, approaches, tools, and technologies in support of climate change impacts assessments. Through brainstorming, workshops, and partner engagement, HERA may revise or update priorities to address emergent or evolving needs of the risk assessment community to ensure the protection of public and environmental health.

**Organization:** HERA will continue to be organized around two research topics that are subdivided into two research areas each. The outputs that comprise each area will focus on addressing specific stakeholder needs. The products will address the needs of the outputs and will be actual deliverables. Products will be determined in collaboration with Agency program and regional offices to reflect their timing and specific needs.

**Topic 1: Science Assessments and Translation.** This topic area focuses on the development of a portfolio of science assessment products tailored to a specific decision or application context, as well as the critical scientific and technical support from inception to implementation of assessment products.

- **Research Area 1: Science Assessment Development** – This research area supports the development of a portfolio of high quality, transparent, and scientifically defensible assessment products that are required to meet EPA's diverse statutory and policy needs. This includes both assessment products developed under well-established product lines (e.g., Integrated Science Assessments [ISAs], Integrated Risk Information System [IRIS] assessments, and Provisional Peer-Reviewed Toxicity Value [PPRTV] assessments), as well as emerging fit-for-purpose assessment products as prioritized by the Agency.
- **Research Area 2: Science Assessment Translation** – HERA will continue to emphasize scientific and technical support activities related to the development and application of human and environmental assessment products, throughout the lifecycle of the decision. In addition, the full range of customized support activities, training, and applications developed to address these requests for technical support and consultation will be considered. To support translation of HERA methods, models, and tools, training programs ensure proper application and increase the understanding of new information and approaches to stakeholders.

**Topic 2: Advancing the Science and Practice of Risk Assessment.** To continue to provide transparent, responsive, and scientifically defensible assessment products, this topic area supports efforts to incorporate scientific innovations in approaches and applications for assessments, as well as advance and maintain critical assessment infrastructure tools, databases, and models.

- **Research Area 3: Emerging and Innovative Assessment Methodologies** – This research area is aimed at incorporating new and innovative methodologies that can be applied across a variety of decision contexts and assessment products covered by HERA. Research on assessment methodologies and approaches must be anchored in assessment development and are expected to improve the accuracy, efficiency, flexibility, and utility of applications across the large landscape of assessment activities. The specific outputs will address the needs of the research area which will be identified during planning and scoping stages.
- **Research Area 4: Essential Assessment and Infrastructure Tools** – Models, software, and database tools are used to provide the necessary infrastructure to facilitate efficient and transparent assessment development. The infrastructure investment ensures that assessment products are relevant, state-of-the-science, well-maintained, and customized for consistent and efficient assessment development and implementation. This research area focuses on the innovation and maintenance of essential software and support tools for risk assessment.

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