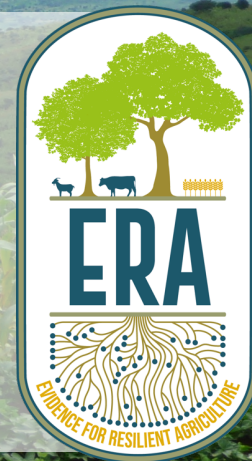


EVIDENCE FOR RESILIENT AGRICULTURE (ERA): WHAT IS IT?



Agroforestry in Malawi. Photo: ICRAF

CONTEXT

The livelihoods of hundreds of millions of rural families depend on farming. In many cases, farmers manage their crops, livestock and trees in ways that have not changed for decades. Under new climate conditions, the practices—particularly in sub-Saharan Africa—often result in low yields, which jeopardize food security, nutrition, health and economic development. With so much riding on agriculture, transforming how agriculture is practiced and how food is produced is critical to future rural livelihoods.

The vast number of agricultural management options available and the equally rich set of possible results from using them create challenges in identifying what will work where and at what costs. Such insights are critical for unlocking transformative solutions for smallholder farmers, who need to adapt resource management strategies and be better prepared to manage risks. To close information loopholes, scientists at World Agroforestry (ICRAF) developed “Evidence for Resilience Agriculture” (ERA), a meta-dataset and analytical engine built to explore questions on the performance and effects of agricultural practices on productivity, resilience and climate change mitigation outcomes.

WHAT IS ERA?

ERA is a science-based decision-making web app built around the largest agricultural meta-analysis to date. It compiles data from peer-reviewed scientific studies which describe the impacts of hundreds of agricultural technologies on indicators of agricultural productivity, resilience, and mitigation (See dashboard on pg.2). This core is supplemented with datasets on climate, soil and social information, that help to build context for practices’ performance, thus supporting the identification of locally adapted but scalable options.

ERA makes data on the performance of agricultural practices and technologies accessible for development decisions.

WHAT CAN ERA DO FOR YOU?

ERA aims to be a game changer in agricultural development. Information that would have otherwise remained in silos or scattered in scientific outlets is now unearthed to deliver actionable insights for different investors, from program developers to policy makers and finance actors.



Funded by the European Union



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



[HTTPS://ERA.CCAFS.CGIAR.ORG](https://era.ccafs.cgiar.org)



ICRAF-ERA@CGIAR.ORG



Navigating through the web tool, users can:



Examine and compare productivity, resilience and mitigation outcomes of improved and conventional practices.



Assess climate-smartness of practices implemented solo or in combinations, and compare this with conventional practices.



Identify interactions between practices, under given environmental conditions and subsets of products, to maximize outcomes.



Discover synergies and trade-offs when selecting various management practices, products and agroecological zones.

WHY IS ERA GROUNDBREAKING?

There are many reasons why ERA is revolutionary. Here we outline three of these reasons.

Bespoke solutions. We developed a hierarchical structure for practices, outcomes and products. This allows research results to be aggregated and disaggregated to any level demanded and then used for designing context-specific solutions. For example, policymakers can rapidly access information on management practices (e.g. agroforestry) and their performance on key outcomes (e.g., productivity). But ERA can also deliver detailed information on sub-

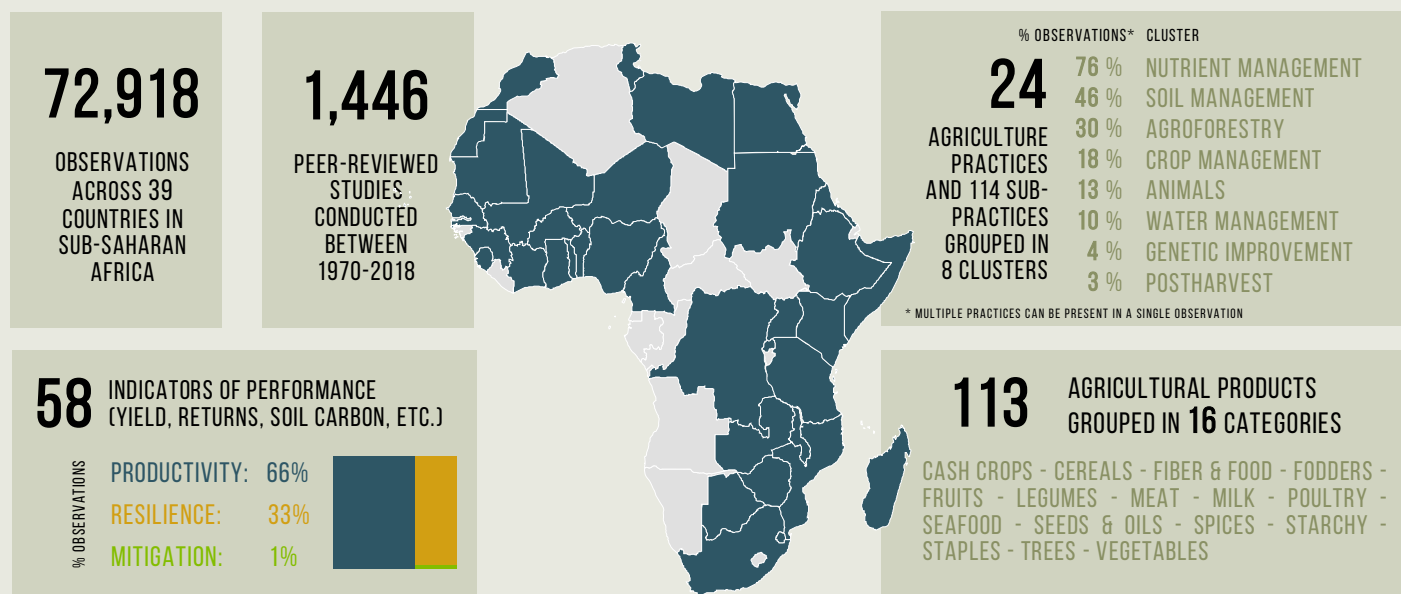
practices (e.g., agroforestry with specific tree varieties) or outcomes (yields, gross economic returns, etc.), which is especially valuable in extension work.

On-demand metanalysis. We pick up scientific information that investors and scaling partners would use to make agricultural decisions. They are in the driving seat, as they analyze and discover the relationships that matter most for them. ERA then compiles the available information and delivers it in digestible, decision-ready packets of information, complete with links to original sources for further reading and context.

A living database. New data become available every day. Yet scientific research can take years to publish and then gets filed away, unavailable for use. Only in limited cases are the lessons applied to decision-making. ERA aims to disrupt this routine. We are creating the functionality for users, team members and the community to input new data. This will be immediately integrated into the database, ensuring that information is based on the most recent data and reducing the time between data and decision.

With these innovations, and when combined with state-of-the-art analytics and the extensive and transparent search, ERA helps the research community meet **FAIR data standards**: findable, accessible, interoperable, and reusable.

ERA BY THE NUMBERS



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