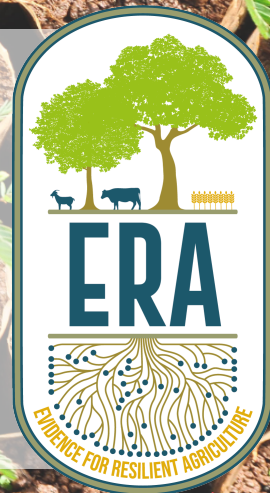


EVIDENCE FOR RESILIENT AGRICULTURE (ERA): WHO IS IT FOR?



Calliandra tree seedlings. Photo: D. Odhiambo/ICRAF

CONTEXT

Climate change impacts are expected to exceed the capacities of smallholder farmers to manage risks, in the absence of adaptations and transformations in the way the food is produced. Management practices and technologies are important building blocks of resilient agriculture. Local and national policies, climate-smart services and investments are built around how farms are managed. Access to robust information on which agricultural management options work where and at what costs enable program developers and implementers to unlock transformative solutions for the sector. Being able to understand expected shifts in production, livelihoods or environmental outcomes, farmers can adapt resource management strategies and be better prepared to manage risks.

ERA, THE GAME CHANGER

Scientists at the World Agroforestry (ICRAF) developed Evidence for Resilient Agriculture (ERA), a web app that gathers information on the performance of agricultural management practices and technologies. ERA contains the largest agricultural meta-analysis to

date; more than a hundred practices and agricultural products are assessed against outcomes of productivity, resilience and mitigation, including farm yields, net returns, soil health, soil carbon, etc. Delivering this information, ERA aims to close critical data gaps that have long impeded effective decision-making and channeling of resources to the sector.

A USER-TAILORED INFORMATION TOOL

The breadth of insights delivered by ERA allows users to interact with the information in many different ways, providing actionable insights for different uses:



INVESTMENT DESIGN

Public and private investors alike need reliable information on the costs, benefits and riskiness of different interventions, in order to be able to catalyze adoption of viable options by farmers. ERA provides critical input for planning multi-scale climate-resilient investments, including **place-specific data on agricultural product yield**, on **financial benefits** of management practices and **ex-ante assessments** of agricultural development projects and programmes.



Funded by the European Union



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



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

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ERA data are at the core of 5 Climate-Smart Agriculture Investment Plans in Burkina Faso, Cameroon, Ghana, Ivory Coast and Mali, commissioned by the World Bank and national governments and worth over USD 1 billion.

POLICY DEVELOPMENT

In agriculture policymaking, data gaps make it hard to rigorously identify bottlenecks to smallholder farming and to design adequate public incentives for scaling successful solutions. ERA delivers **agroecosystem-specific data on yields** and on **contributions of management practices to farm resilience goals**. With this data, governments (local, national) gain fast and informed insights into cost-effective, context-fit and scalable agricultural management options, as well as into key uptake barriers.

Governments in 4 counties in Kenya (Busia, Kajiado, Nyeri and Taita Taveta) leveraged ERA data to inform County-level Adaptation Plans, which operationalize resilient agriculture actions at local level.

FINANCIAL PRODUCT DESIGN & DELIVERY

Almost always, initial and sustained adoption of climate-resilient farm practices hinges on farmers' capacity to bear the costs and manage risks. ERA facilitates the design of customized products and services, such as index-based insurances and credit schemes targeted at protecting smallholder farmers against risks and increasing their resilience. ERA provides **yield data under varying environmental conditions and management options**, useful to design area yield indices and to refine risk models. It also delivers **farm economic data** (e.g., revenues, profits, losses) that help tailor credit schemes to the contextual realities and needs of farmers. Organizations such as ACRE Africa (insurance), F3Life and Stanbic Bank Kenya (agricultural credit) are now exploring ways to embed this information into the design of financial products for smallholder farmers.

ADVISORY SERVICE DELIVERY

Knowledge and information are another critical piece of the puzzle when it comes to farmers' resilience. ERA

can help strengthen public and private extension and advisory services, by providing insights into the **suitability of different management options** to varying environmental and socioeconomic contexts, as well as their relative impacts. Able to aggregate and disaggregate across variables and findings from ERA, service providers can develop and optimize on-demand advisory to increase their precision, thus making sure that farmers and communities receive the support they need in making decisions on what to plant and why, on cash flow and maximizing profit. Together with One Acre Fund, we are now exploring the use of ERA data in efforts to reach more farmers, faster and with greater value.

DEVELOPMENT PROGRAMMING & SCALING

Better data can help promote better development outcomes. By leveraging sets of data on smallholder farms made available through ERA, development practitioners and programmers can design and accelerate adoption of innovations that fit diverse needs. Data on **practices' outcomes** and the **benefits** derived from implementing combinations of practices help to identify new project/programme opportunities, while **socio-economic insights** may improve targeting of most vulnerable or risk-prone farmers. ERA data can also feed into baseline setting or development of situation analyses that are critical for initial stages of monitoring & evaluation processes.

RESEARCH DESIGN

There is also tremendous potential to effectively harness existing data for designing new research and filling critical information gaps. ERA combines **rich datasets** on practices performance on an **array of outcomes**, on **soils** and on **climate**. This allows researchers to generate deeper understandings of practices' impacts, risks, and adoption barriers and to explore new interactions and relationships between variables, among others. 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).