

Evidences

Study #3162

Contributing Projects:

- P1593 - Partnership for scaling up gender and nutrition-sensitive CSA

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: On-going

Year: 2020

Title: Evidence for Resilient Agriculture informs more than USD 1 billion in investment plans and guides evidence-based policy, programming and capacity building in Africa

Short outcome/impact statement:

Synthesized data and analyses from the Evidence for Resilient Agriculture (ERA) meta-dataset were used to (i) develop multi-million-dollar climate-smart investment plans in Mali, Cote d'Ivoire, Ghana, Burkina Faso, (ii) inform the adaptation portfolio of the Gates Foundation, (iii) design three county adaptation plans in Kenya, (iv) inform the design of a Green Climate Fund (GCF) project led by the International Union for the Conservation of Nature (IUCN) and Government of Tanzania and (v) build capacity for NDC implementation across Africa.

Outcome story for communications use:

Evidence for Resilient Agriculture (ERA, 1) is a meta-dataset and analytical engine developed by ICRAF&CCAFS scientists that uses 50 years of agricultural research in Sub-Saharan Africa to identify the effects of shifting from one farm practice to another on productivity, climate resilience and mitigation outcomes. Between 2019-2020, ERA was used to improve evidence-based policy development and implementation capacity, programming, research. and value for money of public and private investments (2).

ERA's contributions to evidence-based policy-design and capacity building are evident in two noteworthy situations. First, the FAO, CIAT and ICRAF supported the Government of Kenya (GoK) to deliver trainings on developing County-level adaptation plans, which downscale the Kenya Climate-Smart Agriculture (CSA) Policy and provide the basis for mobilizing GoK and World Bank CSA Project (> 250 M USD) funds for county implementation. The trainings focused on evidence-based policy development and used ERA analyses (3) to identify viable subnational adaptation options. Because of the trainings' success (4-5), the GoK expanded the work to additional counties with funding from the United States Department of Agriculture-Foreign Agriculture Service (USDA-FAS) (6) and potentially FAO. Second, as part of an initiative of GIZ with support from CCAFS, AGNES and NEPAD, ERA analyses were featured in training materials (7, 8) and a webinar (9) targeted to improving NDC implementation capacity across Africa.

In addition, ERA data were the center-piece of the cost-benefit analyses for the Climate-Smart Agriculture Investment Plans (CSAIPs) in Mali, Cote d'Ivoire (released 2019) and Burkina Faso and Ghana (released 2021) (10). Investments were selected and validated through multi-stakeholder processes led by the Ministries of Agriculture and the World Bank. Each national investment is valued at approximately 250 million USD and contains 8-10 projects that range from climate information to on-farm practices.

ERA has also been used in programming initiatives. It informed the African Adaptation Atlas (released 2021), an interactive web portal that identifies adaptation options across Africa, contributing to the Global Commission on Adaptation Year of Action and the adaptation portfolio of the Bill & Melinda Gates Foundation (BMGF) (11). Moreover, IUCN and the Government of Tanzania used ERA-based analyses to inform a Green Climate Fund proposal which has been accepted for the concept development stage (anticipated ~100 M USD).

New collaborations are being developed to expand ERA's use cases to service delivery to farmers (exploratory discussions with GreenFi, One Acre Fund) and refine semantic standards for research (AgrO/CGIAR's Big Data Platform initiative).

Links to any communications materials relating to this outcome:

- NDC training webinar documentation with 50+ participants:
https://drive.google.com/file/d/1rxA70iZCWCwuXbx4H_G7e3HQkpsttU7z/view?usp=sharing
- <https://tinyurl.com/qqo8ehb>
- ICRAF presentation to a 8-hours long webinar with the BMGF (80+ participants), on potential analyses to include in the Adaptation Atlas:
<https://drive.google.com/file/d/16yWHqPEqfJY7kN2QPCg0FxZGnOcgbd02/view?usp=sharing>
- CCAFS blog on ERA launch:
<https://ccafs.cgiar.org/research-highlight/new-web-app-allows-you-investigate-performance-agricultural-technologies#.XIPTeRNKgWo>
- NDC training material (Module 2 featuring ERA):
<https://ccafs.cgiar.org/events/implementing-ndcs-agriculture-sector-across-africa-what-directions-capacity-building#.X5fgIYgzaUk>
- Letter of acknowledgement and appreciation from USDA-FAS:
https://drive.google.com/file/d/1VinKYoz5KoWRZcU01mwORZc_u6vh_JDm/view?usp=sharing
- <https://tinyurl.com/uvu9mkg>
- ERA-based Data Atlas for Kenya: <https://hdl.handle.net/10568/109070>
- World Bank repository for the CSAIP developed:
<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>
- Graphical illustration of ERA's impact pathways (use cases): <https://hdl.handle.net/10568/110894>
- CCAFS blog on ERA launch: <https://tinyurl.com/5y9bjp95>
- Policy brief for the Kenyan Government featuring ERA:
<https://drive.google.com/file/d/1AHaw82J0UHs8LszUXUvNWWQOt-OwtOTN/view?usp=sharing>
- <https://drive.google.com/open?id=1N1QtzKoqkaWoQaj0NC6TFpxZlu3FZSMp>
- <https://drive.google.com/open?id=1BGOeBQOSCqhCesfOa34P2I3TsT5yEonj>
- Kenya Training evaluation - responses (Nyeri):
https://drive.google.com/file/d/1VFlxfU_4YWal-KMMm9rSDLCKKzxGR1cP/view
- <https://tinyurl.com/tnp6xcv>
- Kenya Training evaluation - responses (Kajiado):
<https://drive.google.com/file/d/1N1QtzKoqkaWoQaj0NC6TFpxZlu3FZSMp/view>
- NDC training material (Module 2 featuring ERA): <https://tinyurl.com/4std5m35>
- <https://tinyurl.com/uakj2zr>
- <https://drive.google.com/open?id=1NtMozUwnd4WyWuAXEy1EVjfs6eYvEqoy>
- World Bank repository for the CSAIP developed: <https://tinyurl.com/25masftu>
- <https://tinyurl.com/wduowyyq>
- ICRAF presentation to the BMGF Ag Development Team (80+ participants), on evidence for adaptation options:
<https://drive.google.com/file/d/16yWHqPEqfJY7kN2QPCg0FxZGnOcgbd02/view?usp=sharing>

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : No

Stage of maturity of change reported: Stage 2

Links to the Strategic Results Framework:

Sub-IDOs:

- Improved access to financial and other services
- Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research
- Conducive agricultural policy environment

Is this OICR linked to some SRF 2022/2030 target?: Yes

SRF 2022/2030 targets:

- Reduce agriculturally related greenhouse gas emissions compared to business-as-usual scenario 2022
- # of people, of which 50% are women, assisted to exit poverty

Description of activity / study: <Not Defined>

Geographic scope:

- Regional

Region(s):

- Sub-Saharan Africa

Comments: Kenya, Tanzania, Cote d'Ivoire, Mali, Burkina Faso, Ghana

Key Contributors:

Contributing CRPs/Platforms:

- CCAFS - Climate Change, Agriculture and Food Security

Contributing Flagships:

- FP2: Climate-Smart Technologies and Practices

Contributing Regional programs: <Not Defined>

Contributing external partners:

- Ministry of Agriculture (Côte d'Ivoire)
- AAA - Adaptation of African Agriculture Initiative
- AGNES - African Group of Negotiators Expert Support
- IUCN - International Union for Conservation of Nature
- Ministry of Agriculture Livestock and Fisheries (United Republic of Tanzania)
- Government of Burkina Faso
- GIZ - Deutsche Gesellschaft für Internationale Zusammenarbeit / German Society for

International Cooperation

- GoK - Government of the Republic of Kenya
- Government of Ghana
- The World Bank
- Government of Mali

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

ICRAF's innovation is the development of "Evidence for Resilient Agriculture" (ERA) (formerly known as The CSA Compendium), a meta-dataset and analytical engine that was developed by scientists at ICRAF and CCAFS. ERA currently includes more than 200,000 observations collected from over 2,000+ peer-reviewed scientific studies conducted across Africa, which describe the impacts of 100+ agricultural technologies on more than 50 indicators of agricultural productivity and resilience (e.g., net returns, yield stability, soil carbon, resource use efficiency, among others). A study was included in the resulting database if it contained primary, quantitative data and if the following criteria were met: (1) it contained data on both a conventional technology (a control) and an 'improved' agricultural technology, (2) it took place in a developing country and (3) it contained information on at least one of the selected performance indicators. Abstracts and titles were reviewed to see if they matched the inclusion criteria and, if so, we conducted a more in-depth analysis of methods. Applying these inclusion criteria resulted in nearly 7,000 articles with relevant data across the entire dataset and over 2,000 studies that took place in Africa. Through three innovations, ERA makes data and tools on the performance of agricultural technologies under climate change available on demand. First, through hierarchical mapping, ERA provides information at different levels of aggregation, to suit different needs of users. This hierarchical structure for management practices, outcomes and products, when combined with meta-analysis, allows research results to be aggregated and disaggregated to any level demanded. These hierarchical structures are in the process of being mapped to major agricultural ontologies to increase interoperability with other datasets and efforts. Second, by providing meta-analysis on demand, ERA 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. This way, users are able to analyze and discover the relationships that are useful to them. Third, by making the information readily-available users and creating the functionality for users, team members and the community to input new data, ERA disrupts the data-decision paradigm. In the future, new data will be immediately integrated into the database and analysis, 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). Moreover, these pieces of information together provide the necessary targets and investment needs to include CSA practices and technologies in project/programme design and prioritization, revision of Nationally Determined Contributions, or other national or local-level policies and strategies. The beta version of ERA was launched officially within the ambit of the 5th Global Science Conference on Climate-Smart Agriculture in Bali, Indonesia (2019), where more than 50 next-users including researchers, NGOs and private sector representatives participated in interactive sessions to navigate through the web-based tool and get familiarized with its functionalities. Between October and December 2019, the ERA web tool had already registered 601 users (75% of whom were new users), 1090 sessions (the majority of which were focused on the analysis and query app tools) and an average of session duration of four minutes (which is above the industry average levels of 2-3 minutes). In 2020, apart from the work carried out to increase the uptake of data and information from ERA in decision-making tools and processes, we also carried out a range of back-end activities, such as increasing the number of studies (and datapoints in the dataset) and developing new analytical routines for analyzing data. These will provide the basis for engagements with new partners that will help expand data use cases in 2021 and beyond.

Innovations:

- 1099 - Evidence for Resilient Agriculture (ERA): a meta-data based tool for technology-shift decision in Agriculture in Sub-Saharan Africa (<https://tinyurl.com/2krblsgj>)
- 1138 - Climate-Smart Agriculture Investment Cost-Benefit Model (<https://tinyurl.com/2qgf3hyx>)

Elaboration of Outcome/Impact Statement:

This case study is an update from the 2019 submission. In this version, we illustrate new partnerships and use cases that complement or build on previous ones, adding to the number of policy processes and beneficiaries reported previously.

Information and knowledge generated through “Evidence for Resilient Agriculture” (ERA) has insofar been used in the creation of three subnational/ County Adaptation Plans in Kenya, four national-level investment plans in Western Africa (2 developed in 2019 and released in 2020, and 2 developed in 2021 and pending to be released in 2021), and one Green Climate Fund (GCF) proposal. All three these three outcomes were the results of in-depth consultations with the stakeholders, which involved national governments (Kenya, Mali, Ghana and Burkina Faso), local-level governmental authorities (Kenya), and multi-lateral development partners (The World Bank) involved. In the case of the subnational adaptation plans, ICRAF, through a collaboration funded by USDA-FAS, supported the government in the operationalization of the Kenya CSA Strategy (2017-2026) and the Kenya National Adaptation Plan (2015-2030) at the county level by increasing access to data and analyses on CSA and improving the capacity of national and local government staff to incorporate evidence into planning processes and implement CSA practices at scale. Along the lines of capacity building, ERA analyses were featured in training materials and a webinar targeted to improving NDC implementation capacity across Africa, as part of an initiative of GIZ with support from CCAFS, AGNES and NEPAD,

ERA is all about decision-useful information. In all the situations (use cases) described above, ERA provided users (national and local governments) with the tools to navigate through menus of agricultural practices and analyze their performance, allowing to determine what works where, based on pre-select filters.

The engagement activities for the three different sets of outcomes were continuous over the course of 2019-2020 and some even as far back as 2018. In the case of the Kenyan County Adaptation Plans, ICRAF has been and continues to be involved in the national multi-stakeholder platform. This platform meets regularly to discuss climate change issues and provided the entry points for the selection of the counties and to work with the counties. Then a week-long training/workshop in each county was held (after initial consultations) to develop the plans (which included an introduction to ERA). Roughly 60 local-level representatives participated in trainings in each county, including County executive Committee members (CECMs) and technical officers.

References cited:

1. ERA. 2019. Evidence for Resilient Agriculture. <http://era.ccafs.cgiar.org>. Accessed 20 February 2019.
2. Rosenstock T, Nowak A, Steward P, Lamanna C, Kamau H. 2020. Evidence for Resilient Agriculture (ERA): graphical abstract. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
3. Lamanna C, Steward P, Kamau HN, Nowak A, Rosenstock TS. 2020. Data Atlas for Climate-Smart Agriculture in Africa. Copenhagen, Denmark: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).
4. Kenya Training evaluation - responses (Nyeri):
https://drive.google.com/file/d/1VFlxfU_4YWal-KMMm9rSDLCKKzxGR1cP/view
5. Kenya Training evaluation - responses (Kajiado):
<https://drive.google.com/file/d/1N1QtzKqokaWoQaj0NC6TFpxZlu3FZSMp/view>
6. USDA. 2019. Support letter acknowledging uptake and outcomes of Evidence for Resilient Agriculture (ERA) in Kenya. Available at:
https://drive.google.com/open?id=1VinKYoz5KoWRZcU01mwORZc_u6vh_JDm. Accessed 20 February 2019.
7. CCAFS. 2020. NDC training material - Module 2 featuring ERA. Available at:
<https://tinyurl.com/4std5m35>
8. Kenya Climate Smart Agriculture Multi Stakeholder Platform. 2020. Climate-Smart Agriculture (CSA) in Kenya:
Opportunities and Recommendations for County Governments. Policy brief. Available at:
<https://drive.google.com/file/d/1AHaw82J0UHs8LszUXUvNWWQOt-OwtOTN/view>
9. NDC training webinar documentation with 50+ participants:
https://drive.google.com/file/d/1rxA70iZCWCwuXbx4H_G7e3HQkpsttU7z/view
10. World Bank. 2019. "Climate Smart Agriculture Investment Plans: Bringing CSA to Life". World Bank blog, 4 December 2019. Available at:
<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>. Accessed 20 February 2019.
11. Rosenstock T and Lamanna C. 2020. Evidence for the Efficacy of Climate Change Adaptation Options. Presentation to the BMGF Ag Development Team on ERA. Available at:
<https://drive.google.com/file/d/16yWHqPEqfJY7kN2QPCg0FxZGnOcgbd02/view>

Quantification:

Type of quantification: b) Extrapolated estimates

Number: 120.00

Unit: people

Comments: Roughly 60 local-level representatives participated in trainings in each county (120 staff in total), including County executive Committee members (CECMs) and technical officers.

Type of quantification: b) Extrapolated estimates

Number: 2200000.00

Unit: agricultural workers/farmers in Cote d'Ivoire reached by the CSA Investment Plan

Comments: Côte d'Ivoire's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for more than 2.2 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 4). Beneficiaries per investment include: 1) Soil fertility: 87,000 agricultural workers; 2) Agricultural financial services: 980,000 agricultural workers; 3) Agrometeorological system: 312,000 agricultural workers; 4) Agricultural extension services: 235,800 agricultural workers; 5) Cassava value chain: 90,000 producers; 6) Abidjan food system: 66,000 peri-urban agricultural workers; 7) Cocoa value chain: 88,000 rural agricultural workers; 8) Livestock: 80,100 smallholders; 9) Mango value chain: 5,000+ mango producers; 10) Maize value chain: 138,000 female farmers; 11) Rice value chain: 68,640 rainfed rice producers; 12) Yam value chain: 70,000 rural agricultural workers. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: b) Extrapolated estimates

Number: 1800000.00

Unit: agricultural workers/farmers in Mali reached by the CSA Investment Plan

Comments: Mali's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for over 1.8 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 5). Beneficiaries per investment include: 1) Remote sensing and applied geomatics: 200,000 agricultural workers; 2) Extension system: 186,048 agricultural workers; 3) Agroclimatic information system: 400,000 agricultural workers; 4) Soil fertility monitoring: 103,360 agricultural workers; 5) Non-timber forest product (NTFP) value chains: 122,400 women producers and processors; 6) Flood recession agriculture: 224,000 smallholders; 7) Livestock: 97,000 smallholders; 8) Millet-sorghum-legume integration: 199,495 women farmers; 9) Vegetables: 52,747 women and youth; 10) Restoring degraded lands: 106,461 agricultural producers; 11) Rice intensification (SRI): 72,480 producers in unflooded rice production zone; 12) Wheat: 71,856 smallholders. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: b) Extrapolated estimates

Number: 1700000.00

Unit: agricultural workers/farmers in Ghana reached by the CSA Investment Plan

Comments: Ghana's national CSA Investment Plan prioritized a set of nine investments and actions needed to boost crop resilience and enhance yields for nearly 1.7 million beneficiaries and their families, helping them adapt to climate change. There are substantial differences between the investments that target the most people, across the different projects. The Knowledge and Advisory Investment targets the greatest number of people, (500,000), but with the least intensity. Both the cereal-legume integration and the root-tuber-livestock investments target a projected 200,000 farmers, and both are large projects trying to leverage major changes in existing production systems to enhance climate smartness. Poultry, small ruminant, poultry, and water management for rice production are four projects targeting 140,000 to 160,000 small farmers. Tree crop production reaches 120,000 farmers, while the fisheries and aquaculture project are the smallest, aiming to reach 70,000 farmers. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: b) Extrapolated estimates

Number: 2327000.00

Unit: agricultural workers/farmers in Burkina Faso reached by the CSA Investment Plan

Comments: The final CSA Investment Plan portfolio for Burkina Faso portfolio of 10 investments will support overall food production and food security improvements for over 2,327,000 beneficiaries, assuming all investments target different beneficiaries. Beneficiaries per investment include: Capacity Development: 746387; Livestock: 150000; Non-Timber Forest Products: 510,400 Finance and Insurance: 155126; Oil Protein Crops: 240975; Soil Conservation 240975; Integrated water management: 76829; Organic Farming 155126; Residues and biogas 51400. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: b) Extrapolated estimates

Number: 2200000.00

Unit: agricultural workers/farmers in Cote d'Ivoire reached by the CSA Investment Plan

Comments: Côte d'Ivoire's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for more than 2.2 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 4). Beneficiaries per investment include: 1) Soil fertility: 87,000 agricultural workers; 2) Agricultural financial services: 980,000 agricultural workers; 3) Agrometeorological system: 312,000 agricultural workers; 4) Agricultural extension services: 235,800 agricultural workers; 5) Cassava value chain: 90,000 producers; 6) Abidjan food system: 66,000 peri-urban agricultural workers; 7) Cocoa value chain: 88,000 rural agricultural workers; 8) Livestock: 80,100 smallholders; 9) Mango value chain: 5,000+ mango producers; 10) Maize value chain: 138,000 female farmers; 11) Rice value chain: 68,640 rainfed rice producers; 12) Yam value chain: 70,000 rural agricultural workers. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>).

Type of quantification: b) Extrapolated estimates

Number: 1800000.00

Unit: agricultural workers/farmers in Mali reached by the CSA Investment Plan

Comments: Mali's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for over 1.8 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 5). Beneficiaries per investment include: 1) Remote sensing and applied geomatics: 200,000 agricultural workers; 2) Extension system: 186,048 agricultural workers; 3) Agroclimatic information system: 400,000 agricultural workers; 4) Soil fertility monitoring: 103,360 agricultural workers; 5) Non-timber forest product (NTFP) value chains: 122,400 women producers and processors; 6) Flood recession agriculture: 224,000 smallholders; 7) Livestock: 97,000 smallholders; 8) Millet-sorghum-legume integration: 199,495 women farmers; 9) Vegetables: 52,747 women and youth; 10) Restoring degraded lands: 106,461 agricultural producers; 11) Rice intensification (SRI): 72,480 producers in unflooded rice production zone; 12) Wheat: 71,856 smallholders. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>).

Type of quantification: b) Extrapolated estimates

Number: 1700000.00

Unit: agricultural workers/farmers in Ghana reached by the CSA Investment Plan

Comments: Ghana's national CSA Investment Plan prioritized a set of nine investments and actions needed to boost crop resilience and enhance yields for nearly 1.7 million beneficiaries and their families, helping them adapt to climate change. There are substantial differences between the investments that target the most people, across the different projects. The Knowledge and Advisory Investment targets the greatest number of people, (500,000), but with the least intensity. Both the cereal-legume integration and the root-tuber-livestock investments target a projected 200,000 farmers, and both are large projects trying to leverage major changes in existing production systems to enhance climate smartness. Poultry, small ruminant, poultry, and water management for rice production are four projects targeting 140,000 to 160,000 small farmers. Tree crop production reaches 120,000 farmers, while the fisheries and aquaculture project are the smallest, aiming to reach 70,000 farmers. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: b) Extrapolated estimates

Number: 2327000.00

Unit: agricultural workers/farmers in Burkina Faso reached by the CSA Investment Plan

Comments: The final CSA Investment Plan portfolio for Burkina Faso portfolio of 10 investments will support overall food production and food security improvements for over 2,327,000 beneficiaries, assuming all investments target different beneficiaries. Beneficiaries per investment include: Capacity Development: 746387; Livestock: 150000; Non-Timber Forest Products: 510,400 Finance and Insurance: 155126; Oil Protein Crops: 240975; Soil Conservation 240975; Integrated water management: 76829; Organic Farming 155126; Residues and biogas 51400. The methodology for the calculation is available in the CSAIP report (<https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life>)

Type of quantification: a) Actual counts or estimates from a particular study (please provide reference)

Number: 120.00

Unit: people

Comments: Roughly 60 local-level representatives participated in trainings in each county (120 staff in total), including County executive Committee members (CECMs) and technical officers.

Type of quantification: b) Extrapolated estimates

Number: 2200000.00

Unit: agricultural workers/farmers in Cote d'Ivoire reached by the CSA Investment Plan

Comments: Côte d'Ivoire's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for more than 2.2 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 4). Beneficiaries per investment include: 1) Soil fertility: 87,000 agricultural workers; 2) Agricultural financial services: 980,000 agricultural workers; 3) Agrometeorological system: 312,000 agricultural workers; 4) Agricultural extension services: 235,800 agricultural workers; 5) Cassava value chain: 90,000 producers; 6) Abidjan food system: 66,000 peri-urban agricultural workers; 7) Cocoa value chain: 88,000 rural agricultural workers; 8) Livestock: 80,100 smallholders; 9) Mango value chain: 5,000+ mango producers; 10) Maize value chain: 138,000 female farmers; 11) Rice value chain: 68,640 rainfed rice producers; 12) Yam value chain: 70,000 rural agricultural workers. The methodology for the calculation is available in the CSAIP report (<https://tinyurl.com/uakj2zr>).

Type of quantification: b) Extrapolated estimates

Number: 1800000.00

Unit: agricultural workers/farmers in Mali reached by the CSA Investment Plan

Comments: Mali's national CSA Investment Plan prioritized a set of 12 investments and actions needed to boost crop resilience and enhance yields for over 1.8 million beneficiaries and their families (assuming all 12 investments are made and with no beneficiary overlap), helping them adapt to climate change (ref. 5). Beneficiaries per investment include: 1) Remote sensing and applied geomatics: 200,000 agricultural workers; 2) Extension system: 186,048 agricultural workers; 3) Agroclimatic information system: 400,000 agricultural workers; 4) Soil fertility monitoring: 103,360 agricultural workers; 5) Non-timber forest product (NTFP) value chains: 122,400 women producers and processors; 6) Flood recession agriculture: 224,000 smallholders; 7) Livestock: 97,000 smallholders; 8) Millet-sorghum-legume integration: 199,495 women farmers; 9) Vegetables: 52,747 women and youth; 10) Restoring degraded lands: 106,461 agricultural producers; 11) Rice intensification (SRI): 72,480 producers in unflooded rice production zone; 12) Wheat: 71,856 smallholders. The methodology for the calculation is available in the CSAIP report (<https://tinyurl.com/uakj2zr>).

Type of quantification: b) Extrapolated estimates

Number: 1700000.00

Unit: agricultural workers/farmers in Ghana reached by the CSA Investment Plan

Comments: Ghana's national CSA Investment Plan prioritized a set of nine investments and actions needed to boost crop resilience and enhance yields for nearly 1.7 million beneficiaries and their families, helping them adapt to climate change. There are substantial differences between the investments that target the most people, across the different projects. The Knowledge and Advisory Investment targets the greatest number of people, (500,000), but with the least intensity. Both the cereal-legume integration and the root-tuber-livestock investments target a projected 200,000 farmers, and both are large projects trying to leverage major changes in existing production systems to enhance climate smartness. Poultry, small ruminant, poultry, and water management for rice production are four projects targeting 140,000 to 160,000 small farmers. Tree crop production reaches 120,000 farmers, while the fisheries and aquaculture project are the smallest, aiming to reach 70,000 farmers. The methodology for the calculation is available in the CSAIP report (<https://tinyurl.com/uakj2zr>)

Type of quantification: b) Extrapolated estimates

Number: 2327000.00

Unit: agricultural workers/farmers in Burkina Faso reached by the CSA Investment Plan

Comments: The final CSA Investment Plan portfolio for Burkina Faso portfolio of 10 investments will support overall food production and food security improvements for over 2,327,000 beneficiaries, assuming all investments target different beneficiaries. Beneficiaries per investment include: Capacity Development: 746387; Livestock: 150000; Non-Timber Forest Products: 510,400 Finance and Insurance: 155126; Oil Protein Crops: 240975; Soil Conservation 240975; Integrated water management: 76829; Organic Farming 155126; Residues and biogas 51400. The methodology for the calculation is available in the CSAIP report (<https://tinyurl.com/uakj2zr>)

Type of quantification: a) Actual counts or estimates from a particular study (please provide reference)

Number: 50.00

Unit: people receiving training on NDC implementation

Comments: participants to NDC training webinar, were ERA was featured (along other tools). Link to participants sheet: https://drive.google.com/file/d/1rxA70iZCWCwuXbx4H_G7e3HQkpsttU7z/view?usp=sharing

Gender, Youth, Capacity Development and Climate Change:

Gender relevance: 0 - Not Targeted

Youth relevance: 0 - Not Targeted

CapDev relevance: 1 - Significant

Main achievements with specific **CapDev** relevance: Drawing on information delivered through ERA, the trainings with Kenya county staff and Africa-wide stakeholders helped increase knowledge, awareness and understanding of county-level government staff of the evidence base for CSA and of how to use this information in identification and prioritization of context-specific low emission and resilience interventions.

Climate Change relevance: 2 - Principal

Describe main achievements with specific **Climate Change** relevance: ERA is primarily focused on supporting decision-making in agriculture with a climate lens. ERA users were able to determine what agricultural management technologies work where and under which climate, biophysical and socioeconomic conditions and choose best-bet options according to the objectives sought (resilience building, mitigation, sustainable productivity increase).

Other cross-cutting dimensions: NA

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: [Study #3162](#)

Contact person:

Todd Rosenstock, Senior Scientist, World Agroforestry, Climate Change, Agriculture and Food Security (CCAFS), t.rosenstock@cgiar.org