



INITIATIVE ON  
Climate Resilience



# CGIAR Initiative on Climate Resilience

ANNUAL TECHNICAL REPORT 2022



# CGIAR Technical Reporting 2022

CGIAR Technical Reporting has been developed in alignment with the [CGIAR Technical Reporting Arrangement](#).

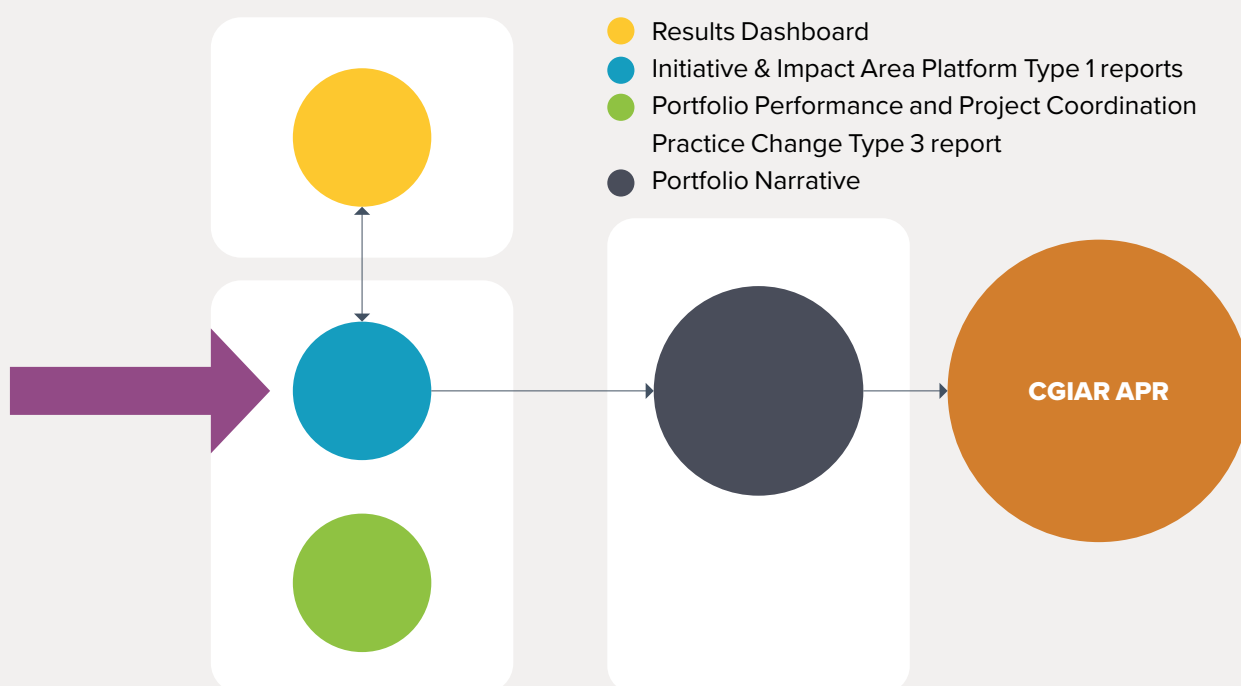
This Initiative report is a Type 1 report and constitutes part of the broader CGIAR Technical Report. Each CGIAR Initiative submits an annual Type 1 report, which provides assurance on Initiative-level progress towards End of Initiative outcomes.

The CGIAR Technical Report comprises:

- Type 1 Initiative and Impact Area Platform reports, with quality assured results reported by Initiatives and Platforms available on the CGIAR Results Dashboard.

- The Type 3 Portfolio Performance and Project Coordination Practice Change report, which focuses on internal practice change.
- The Portfolio Narrative, which draws on the Type 1 and Type 3 reports, and the CGIAR Results Dashboard, to provide a broader view on portfolio coherence, including results, partnerships, country and regional engagement, and synergies among the portfolio's constituent parts.

The CGIAR Technical Report constitutes a key component of the CGIAR Annual Performance Report (APR).



US\$	2022	2023	2024
Proposal Budget from initial submission	US\$14,980,758	US\$14,980,758	US\$15,038,485
Approved 2022 Budget	US\$9,482,547 <sup>1</sup>		

<sup>1</sup> \*This amount includes US\$1,512,810 from the Belgian Government to continue activities in the Sahel region that were initially funded through the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS). This funding was channeled through ClimBeR in 2022 as directed by the CGIAR System Management Office.

# Section 1 Fact sheet

Initiative name	ClimBeR: Building Systemic Resilience Against Climate Variability and Extremes
Initiative short name	Climate Resilience (ClimBeR)
Action Area	Systems Transformation
Geographic scope	<p><b>Regions targeted in the proposal:</b> Central and West Asia and North Africa; East and Southern Africa; Latin America and the Caribbean; Southeast Asia and the Pacific; West and Central Africa</p> <p><b>Countries targeted in the proposal:</b> Guatemala, Kenya, Morocco, the Philippines, Senegal, Zambia</p>
Start date	Jan. 1, 2022
End date	Dec. 31, 2024
Initiative Lead	Ana María Loboguerrero – <a href="mailto:a.m.loboguerrero@cgiar.org">a.m.loboguerrero@cgiar.org</a>
Initiative Deputy	Jon Hellin – <a href="mailto:j.hellin@irri.org">j.hellin@irri.org</a>
Measurable three-year End of Initiative outcomes (EOI-Os)	<p><b>EOI-O 1: Bundled climate services</b> Bundled ClimBeR climate services will reach at least 300,000 vulnerable farmers, at least 30% of whom are women, in six focal countries by 2024.</p> <p><b>EOI-O 2: Shape policies or investments</b> By 2024, international agencies and policymakers will use ClimBeR products to shape at least nine policies or investments to strengthen agricultural resilience, including at least three aimed at reducing agriculture-related climate security risk.</p> <p><b>EOI-O 3: Investments</b> At least US\$30 million in new investments made through ClimBeR's partnerships by 2024, focusing on disadvantaged groups, women, youth, and vulnerable smallholder farmers, that are contributing to building systemic resilience.</p>
OECD DAC Climate marker adaptation score*	<b>Score 2:</b> Principal: The activity is principally about meeting any of the three CGIAR climate-related strategy objectives – namely, climate mitigation, climate adaptation, and climate policy, and would not have been undertaken without this objective.
OECD DAC Climate marker mitigation score*	<b>Score 1:</b> Significant: The activity contributes in a significant way to any of the three CGIAR climate-related strategy objectives – namely, climate mitigation, climate adaptation, and climate policy, even though it is not the principal focus of the activity.
OECD DAC Gender equity marker score*	<b>Score 1B:</b> Gender responsive: On top of the minimum requirements for 1A, the Initiative/project includes at least one explicit gender equality outcome and the Initiative/project team has resident gender expertise or capacity. The Initiative/project includes gender equality indicators and monitors the participation of and differential benefits for diverse women and men.
Website link	<a href="https://www.cgiar.org/initiative/climate-resilience/">https://www.cgiar.org/initiative/climate-resilience/</a>
<p>*The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) markers refer to the OECD DAC <a href="#">Rio Markers for Climate</a> and the <a href="#">gender equality policy marker</a>. For climate adaptation and mitigation, scores are: 0 = Not targeted; 1 = Significant; and 2 = Principal. The CGIAR GENDER Impact Platform has adapted the OECD gender marker, splitting the 1 score into 1A and 1B. For gender equality, scores are: 0 = Not targeted; 1A = Gender accommodative/aware; 1B = Gender responsive; and 2 = Principal. These scores are derived from <a href="#">Initiative proposals</a>, and refer to the score given to the Initiative overall based on their proposal.</p>	



## Section 2 Initiative progress on science and towards End of Initiative outcomes



### Overall summary of progress against the theory of change

The CGIAR Initiative on Climate Resilience, ClimBeR, aims to transform the climate adaptation capacity of food, land, and water systems in six countries – Guatemala, Kenya, Morocco, the Philippines, Senegal, and Zambia. With our partners, we research transformative adaptation to address the root causes of vulnerability. In the first year of implementation, ClimBeR made progress toward three End of Initiative (EOI) outcomes by pursuing diverse partnerships, co-designing innovations, and coordinating with other projects, including those in the CGIAR portfolio, for greater impact.

We made strong progress on all of ClimBeR's four Work Packages: 1) De-RISK, 2) Climate Security, 3) Policy Pathways, and 4) Governance4Resilience. We also began integrating cross-cutting themes, Climate Finance and Social Equity, throughout the Initiative.

Elder woman in Thiel, Senegal, where Fulani Pastoralists are facing decreased availability of water and pasture. Photo credit: Leonardo Medina, ZALF and CGIAR FOCUS Climate Security

ClimBeR delivered 185 results in collaboration with 150 partners in 2022. We partnered with a diverse range of actors in the Global South, including microfinance institutions, civil society organizations, commercial banks, academia, agricultural research institutes, and the public sector.

The majority of our results in the first year of implementation were obtained in Kenya (33 results), where most teams began implementation, followed by Senegal (31 results). In 2022, we also achieved regional results including in East Africa (Ethiopia, Kenya, South Sudan, and Uganda) as well as in the Sahel (Sudan and Mali). The regional results in East Africa are due to ClimBeR scientists and partners developing a regional proposal to the Green Climate Fund (GCF). In addition, evidence to inform Great Green Wall implementation, and the

Abandoned boat remains in Diogué Island, Ziguinchor, Senegal. Community members highlighted that the boat is now almost under water due to coastal erosion. Photo credit: Leonardo Medina, ZALF and CGIAR FOCUS Climate Security



establishment of a public–private partnership for climate information services in Mali among other results in the Sahel, are due to contributions from the Belgian Government to continue specific activities from the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS) in the Sahel region in 2022.

We made significant progress toward co-designing 27 innovations in 2022. In partnership with University of Greenwich (UK), APA Insurance Limited, Equity Bank, Kenya Commercial Bank, and other partners, we improved a risk-contingent credit product to offset loan payments under climate extremes (*EOI-1*). We co-designed the Climate Security Observatory, a decision-support tool to manage climate security risks (*EOI-2*). We also developed the first modules of the Early Warning, Early Action, and Early Finance (AWARE) platform for policymakers to accurately identify and address climate hazards at scale. We held several consultations with partners to develop AWARE in the Philippines, Senegal, and Zambia (*EOI-3*).

We emphasized the importance of collaborating with other Initiatives in the CGIAR portfolio to enhance synergies. Fifty percent of ClimBeR's results were developed with other Initiatives in the CGIAR portfolio and bilateral projects. For example, in northern Senegal, we partnered with the Livestock and Climate Initiative to conduct a needs assessment on the types of climate information that farmers and pastoralists need most in the region (*EOI-1*).

ClimBeR research and engagement informed nine outcomes in 2022, the majority supported by ClimBeR research on climate security and climate information services. Through close engagement with the Ministry of Agriculture and the Meteorological Agency in Guatemala (INSIVUMEH), we improved coordination among actors involved in climate risk management to strengthen climate information services. This success builds on the legacy of CCAFS and is sustained through collaboration with the regional CGIAR Initiative in


Latin America, AgriLAC Resiliente, as well as Livestock and Climate (*EOI-1*).

We trained 318 women and men from 42 organizations in a variety of topics ranging from water-efficient olive production in Morocco to flood forecasting in Zambia. We designed a training to provide an overview of climate security as part of the African Group of Negotiators Expert Support (AGNES) Leadership Academy (*EOI-2*). In Zambia, in collaboration with Accelerating the Impact of CGIAR Climate Research for Africa (AICCRA), we conducted trainings to develop early warning indicators with 60 experts from the Zambia Meteorological Department (ZMD), Water Resources Management Authority (WARMA), and other partners (*EOI-3*).

ClimBeR researchers and partners developed 115 knowledge products. This includes a foundational paper developed by ClimBeR's leadership team on the Initiative's approach to research for transformative adaptation. Our paper on transformative adaptation marked ClimBeR's aim to move beyond conventional research methodologies on adaptation toward research that truly promotes systems change (see <http://bit.ly/TransformativeAdaptation>).

We also engaged in policy processes under the United Nations Framework Convention on Climate Change. ClimBeR research on climate security informed African negotiators' position during COP27 (*EOI-2*). Furthermore, ClimBeR contributed





Maize crops (milpa) failed right before harvest in Chiquimula, Guatemala, due to the strong rains brought about by the Julia tropical storm.  
Photo credit: Leonardo Medina, ZALF and CGIAR  
FOCUS Climate Security



to shaping the global discourse on transformative adaptation in over 25 events across 12 pavilions during COP27. We organized and participated in events on climate security, social equity and justice in agricultural transformation, climate finance, as well as climate and water-smart adaptation in Morocco (*EOI-2*). We will continue to build on our foundation of strong partnerships and transformative adaptation in the next stages of ClimBeR implementation.

### **Climate Finance**

The Climate Finance cross-cutting theme made good progress on EOI outcomes by advancing microfinance for farmers, investment planning, and GCF readiness support. Climate Finance contributed to progress in Work Package 1, De-RISK, by developing a partnership with Financial Access Consulting Services (Kenya) and initiating work to develop a microcredit product that accounts for climate risks for dairy farmers in Kenya, potentially bundled with risk-contingent credit (*EOI-1*). Through Work Package 2, we developed the Climate Security Investment Plan (CSIP) methodology. We initiated the first CSIP development process in Kenya in collaboration with the Frontier Counties Development Council and partners (*EOI-2*). Through Work Package 3, Policy Pathways, we initiated progress on GCF proposal development (*EOI-3*). We supported a capacity-building event for a pan-African GCF regional readiness program to support African countries' adaptation in the agriculture sector. The Moroccan Adaptation of African Agriculture Initiative hosted the event, and National Designated Authorities to the GCF from over 20 African countries attended. We also initiated a process to develop a GCF concept note (estimated at US\$50 million) through CGIAR's accreditation to the GCF in partnership with the Global Green Growth Institute (GGGI) and AGNES' Nationally Determined Contribution (NDC) Delivery Lab. ClimBeR hosted a side event at COP27 with the Ugandan Minister for Karamoja Affairs in

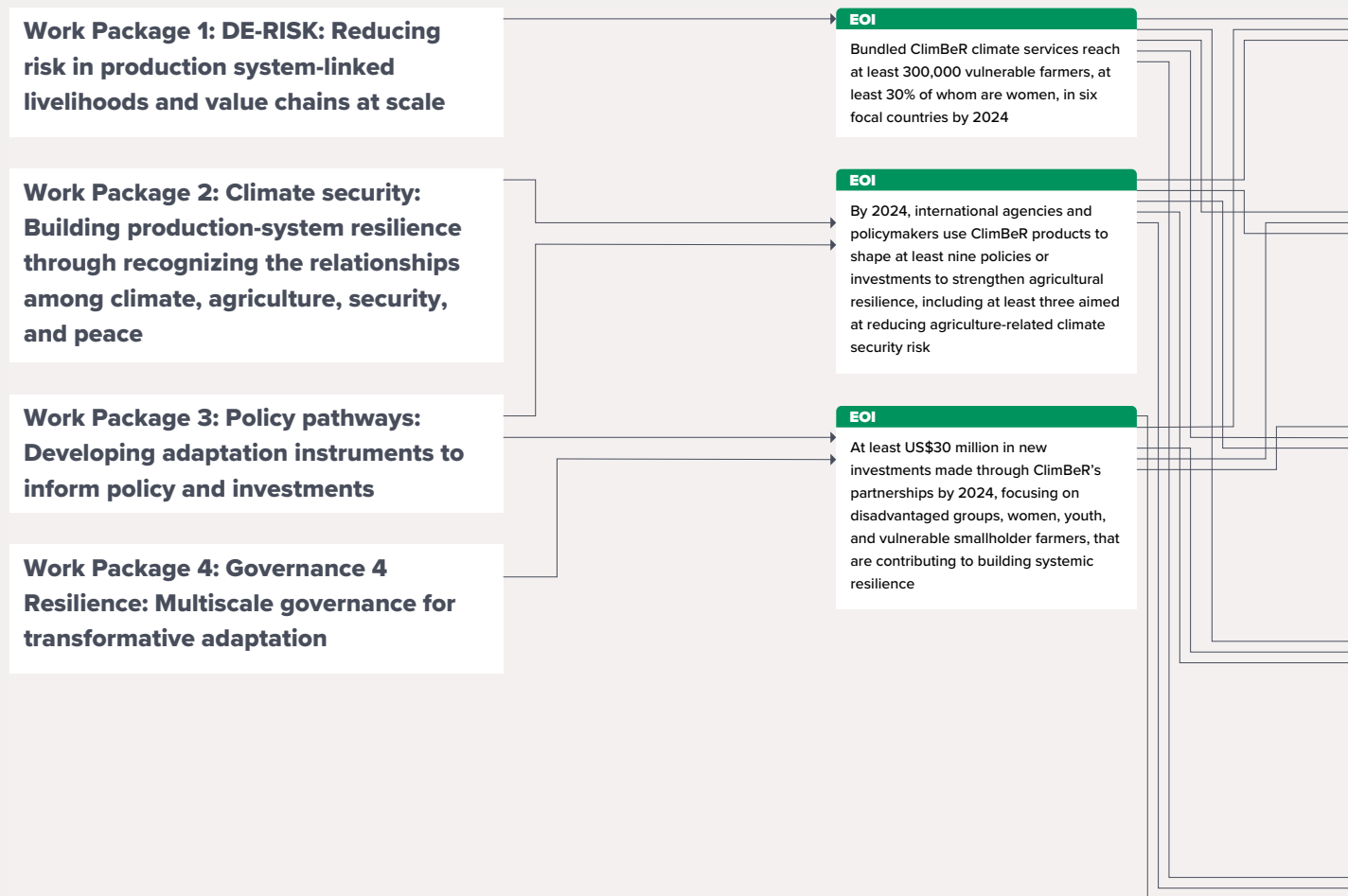
collaboration with AGNES, GGGI, and partners to discuss potential investment opportunities. As a result of this event and other engagements, the GCF concept note will focus on investment opportunities for climate adaptation and climate security in the Karamoja-Turkana/Pokot-Eastern Equatoria cluster in the Horn of Africa (*EOI-3*).

### **Social Equity**

The Intergovernmental Panel on Climate Change (IPCC) advocates transformative adaptation to tackle the root causes of vulnerability. Poor and vulnerable people disproportionately experience the worst climate impacts. Fair distribution of the benefits of climate-resilient agriculture matters. Lack of attention to social equity undermines the building of just and sustainable agricultural systems. A challenge is how best to factor in social equity and ensure a climate response does not lead to maladaptation. ClimBeR developed a **social equity framework** to guide the Initiative's research and enhance the scope to generate equitable and sustainable transformative change. The social equity team engaged with Work Package leaders and external partners to co-develop the framework and demonstrate how it can be operationalized. Furthermore, the importance of social equity as a component of transformative adaptation was captured in a **ClimBeR-authored publication**. This publication addresses our theory of change that assumes that an understanding of the importance of social equity is critical to its use by ClimBeR and partners. The social equity team also started a pilot in Kenya to test how best to operationalize the framework across all Work Packages. This is a first step to developing metrics/markers and the eventual production of a social equity toolkit. Social equity includes gender, youth, and social inclusion but treats these as part of a broader contextual intersectionality framing. In this context, ClimBeR contributed to the first **report** of the CGIAR Community of Practice on gender-transformative research methodologies.

# Initiative-level theory of change diagram

This is a simple, linear, and static representation of a complex, non-linear, and dynamic reality. Feedback loops and connections between this Initiative and other Initiatives' theories of change are excluded for clarity.










EOI — End of Initiative outcome

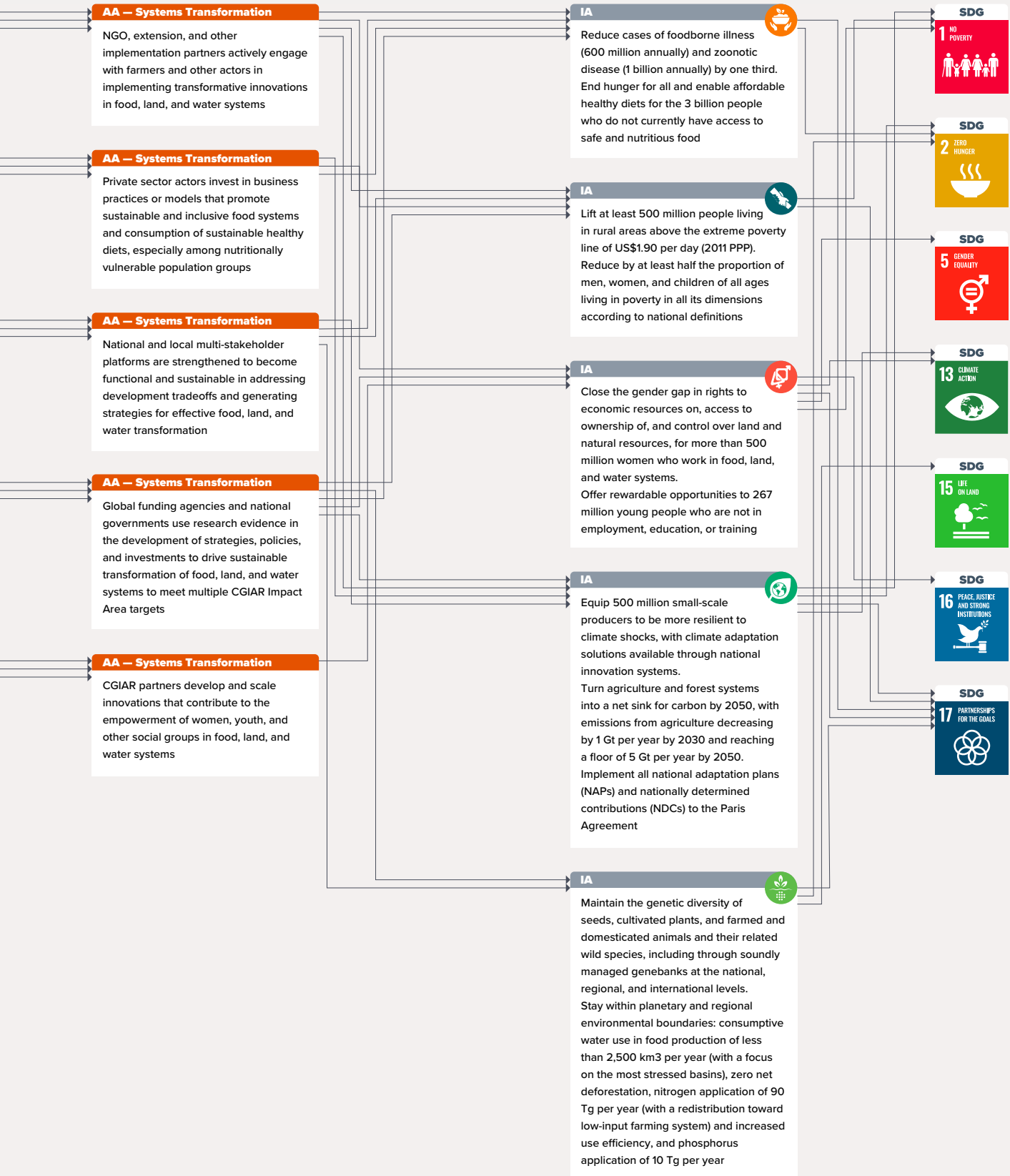
AA — Action Area

IA — Impact Area

SDG — Sustainable Development Goal

-  Nutrition, Health, and Food Security
-  Poverty Reduction, Livelihoods, and Jobs
-  Gender Equality, Youth, and Social Inclusion
-  Climate Adaptation and Mitigation
-  Environmental Health and Biodiversity

Teams from CGIAR's three Action Areas — System Transformation, Resilient Agrifood Systems and Genetic Innovation — worked to develop an improved set of Action Area outcomes in October 2022. Since this was near the end of the reporting cycle for 2022, it was decided not to update the theories of change based on these new Action Area outcomes. The exception to this is Genetic Innovation — for this Action Area, as the new outcomes had already been widely discussed among the relevant Initiatives, and with its advisory group of funders and other stakeholders, the decision was made to update their outcomes in time for the 2022 reporting cycle.



# Progress by End of Initiative outcome

<p><b>EOI-O 1:</b> Bundled ClimBeR climate services reach at least 300,000 vulnerable farmers, at least 30% of whom are women, in six focal countries by 2024.</p>	<p>In Kenya, Guatemala, and Senegal, we significantly progressed on delivering bundled climate information services to farmers with our partners. De-RISK and social equity researchers began collaborating to design gender-sensitive trainings to help farmers use risk-contingent credit. We also developed a dashboard on diverse farming system typologies using Rural Household Multi-Indicator Survey (RHoMIS) data to better understand farmers' vulnerabilities. This allows innovators to tailor bundled services to farmers' specific needs and vulnerabilities.</p>
<p><b>EOI-O 2:</b> By 2024, international agencies and policymakers use ClimBeR products to shape at least nine policies or investments to strengthen agricultural resilience, including at least three aimed at reducing agriculture-related climate security risk.</p>	<p>A critical learning from CCAFS was how to connect science to policy for impact through effective engagement with policymakers. We partnered with the Kenya Climate-Smart Agriculture Multistakeholder Platform (CSA-MSP) and other platforms in Morocco and Senegal to position ClimBeR research for impact. We delivered five policy-change outcomes, mostly related to climate security. We also partnered with the Agricultural Consultative Forum in Zambia to establish a policy working group with representatives from farmer and youth organizations, the Ministry of Agriculture, and others to inform modeling of Zambia's agriculture sector under future climate extremes.</p>
<p><b>EOI-O 3:</b> At least US\$30 million in new investments made through ClimBeR's partnerships by 2024, focusing on disadvantaged groups, women, youth, and vulnerable smallholder farmers, that are contributing to building systemic resilience.</p>	<p>We initiated proposal development to the GCF in the Horn of Africa in collaboration with AGNES, GGGI, and ministries in Ethiopia, Kenya, South Sudan, and Uganda. We also partnered with the Adaptation of African Agriculture Initiative in Morocco to support National Designated Authorities in accessing climate finance. In addition, we partnered with financial institutions in Kenya and Zambia to co-develop bundled insurance products.</p>





Yaaku woman in Laikipia, Kenya, at the edge of Mukogodo forest, where productivity and ecosystem service provision are threatened by increasing droughts.

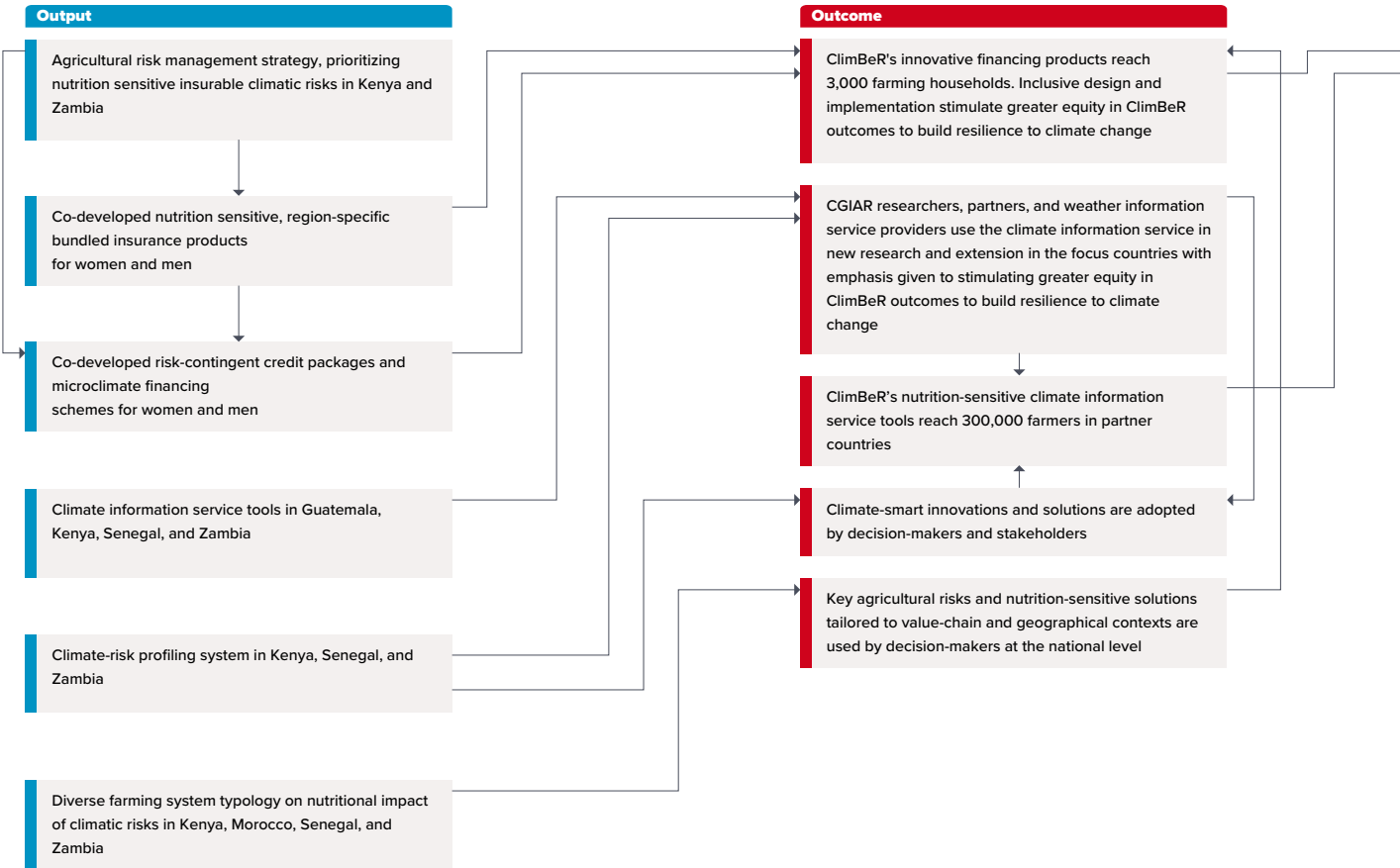
Photo credit: Leonardo Medina, ZALF and CGIAR FOCUS Climate Security



# Section 3 Work Package-specific progress

## Work Package 1:

### DE-RISK: Reducing risk in production system-linked livelihoods and value chains at scale





## EOI

Bundled ClimBeR climate services reach at least 300,000 vulnerable farmers, at least 30% of whom are women, in six focal countries by 2024

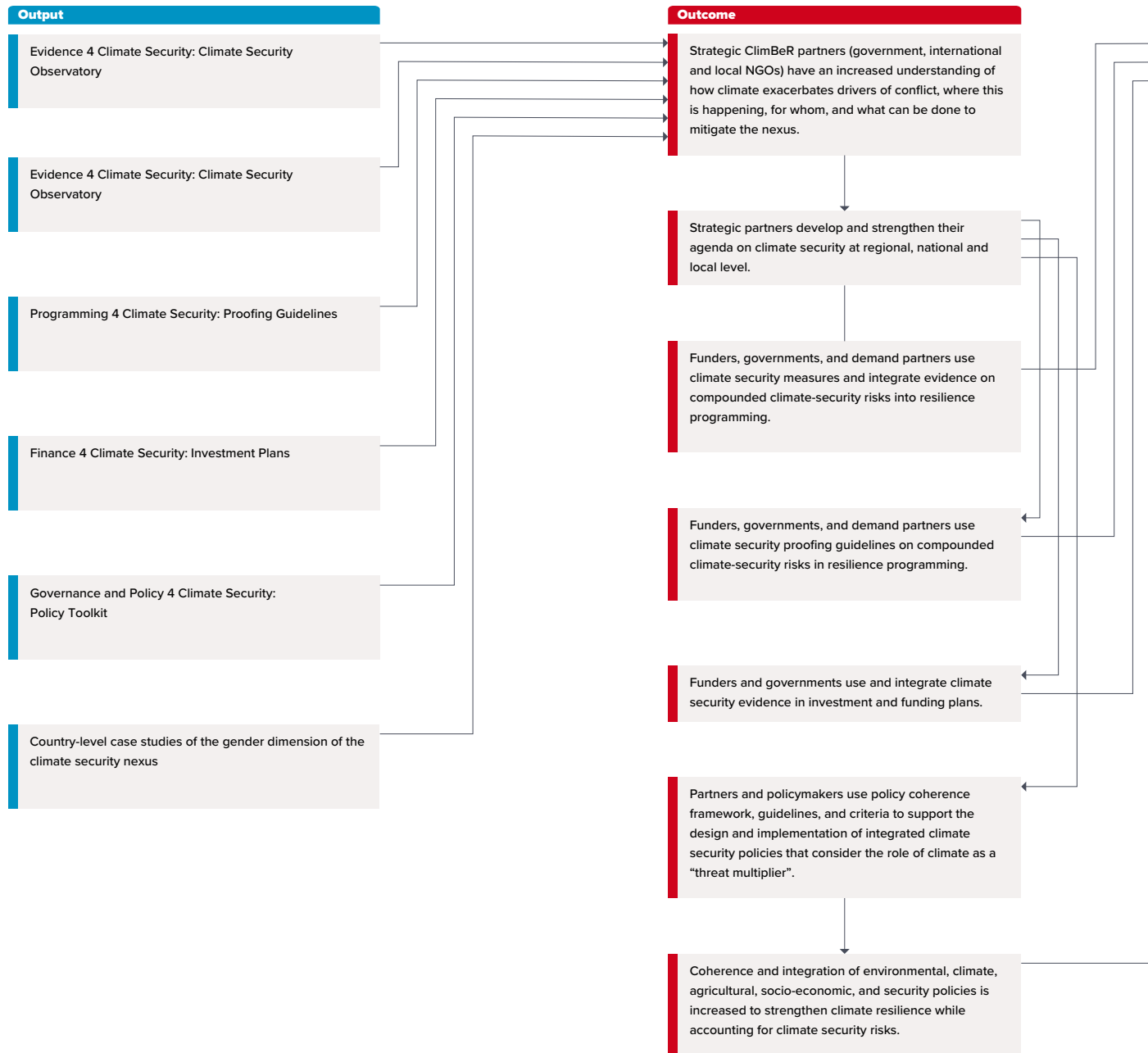
## Work Package 1 progress against the theory of change

In 2022, we led a consortium of international and national public and private sector partners to re-design risk-contingent credit and include a dynamic trigger to offset loan payments. We also co-developed financial literacy and agronomic training modules with our partners and supported them in conducting trainings in pilot sites in Kenya. In Guatemala, through ClimBeR, we helped improve coordination between the Ministry of Agriculture, Livestock, and Food (MAGA) and other public and private sector actors to strengthen and scale Local Technical Agroclimatic Committees for climate information services. In Senegal, in the bid to improve the productivity of irrigated agriculture during the dry season and to build the resilience of pastoralists, we assessed climate information needs and evaluated existing dissemination platforms through stakeholder consultation meetings and interviews.

With international, regional, and national partners, we developed an analytical framework for climate risk profiles to characterize farmers' risks to climate extremes. The framework includes three components: risk mapping, exposure, and adaptation. We updated the International Food Policy Research Institute's (IFPRI's) Spatial Production Allocation Model to make plausible estimates of crop distributions of 40+ crops globally at high resolutions, which provides spatially explicit data for risk mapping.

## Work Package 2:

### Climate security: Building production-system resilience through recognizing the relationships among climate, agriculture, security, and peace





## EOI

By 2024, international agencies and policymakers use ClimBeR products to shape at least nine policies or investments to strengthen agricultural resilience, including at least three aimed at reducing agriculture-related climate security risk.

## Work Package 2 progress against the theory of change

In 2022, our focus was on co-designing the research agenda with partners in Kenya and Senegal through consultations, workshops, and community fieldwork. We jointly developed a “common vision” of the climate-security nexus in agriculture and co-identified solutions that could mitigate the indirect impact of climate on peace and security, as well as the impact of conflict on climate action in agriculture, emphasizing social equity. Our main outputs include:

- **Evidence:** (i) Co-designed the decision support tool – Climate Security Observatory – to be launched in April 2023. (ii) Co-developed country profiles for Kenya and Senegal summarizing climate security risks. (iii) Conducted fieldwork to understand gender dimensions of climate security risks in Guatemala, Kenya, and Senegal.
- **Programming:** Co-designed the Climate Security Sensitivity Tool to assess the peace potential of climate-adaptation practices. This tool was piloted in Kenya.
- **Policy:** Assessed policy coherence of regional, national, and local policies in Kenya and Senegal

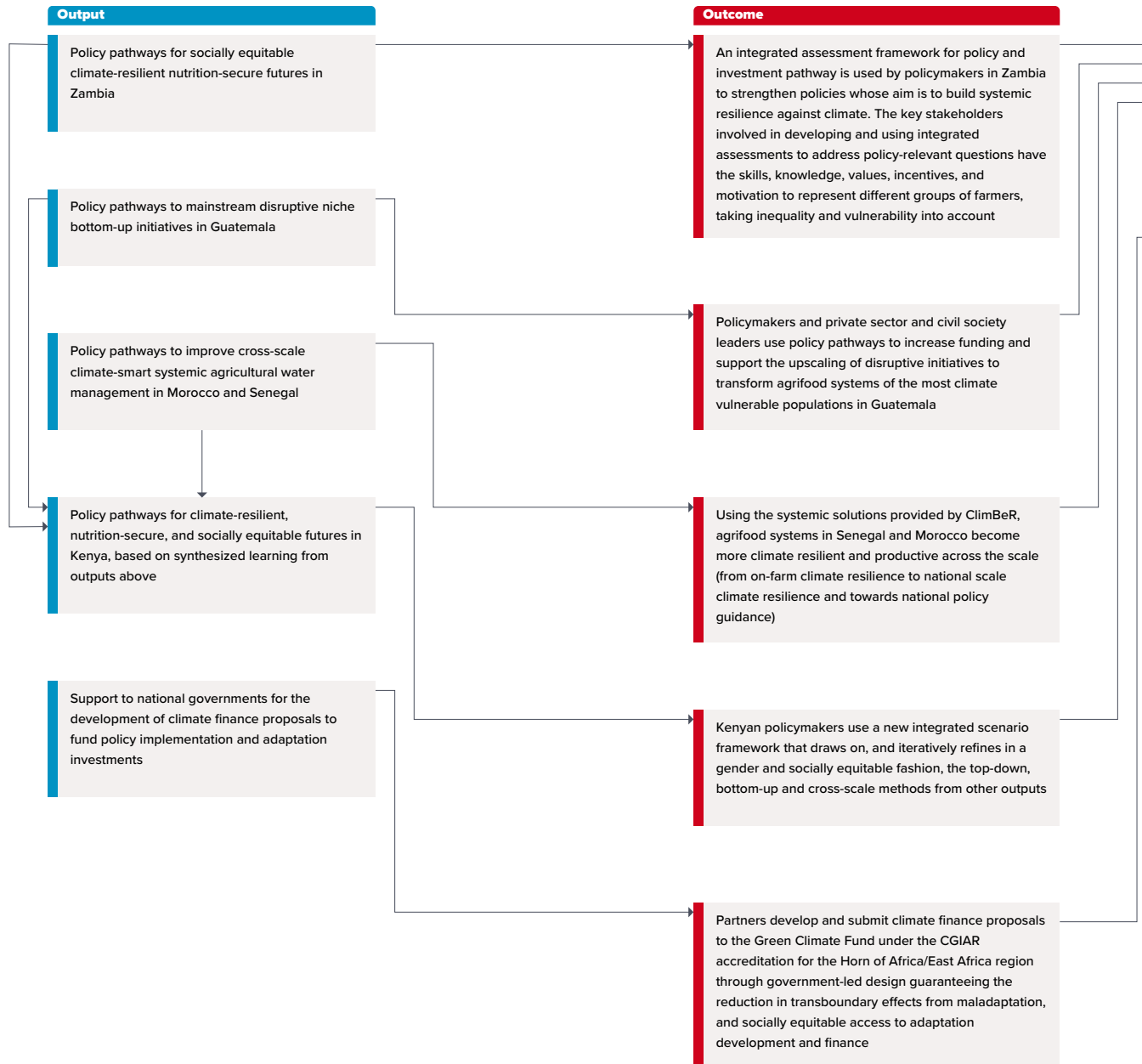
to evaluate whether policies acknowledge interconnectivity between climate, agriculture, conflict, and security.

- **Finance4Peace:** Co-developed the CSIP methodology to co-design investments for “Climate-Resilient Peace.”

Examples of outcomes include AGNES using our research to inform their position at COP27, and the Intergovernmental Authority on Development using our workshop methodology to identify climate security drivers in its [regional workshop](#). In Kenya, we established a secondment with World Food Programme and influenced the integration of climate security in the Kenya CSA-MSP. In Senegal, ClimBeR’s consultations and capacity-building activities led to the Department of Environment and Listed Establishments proposing to integrate the Climate Security Observatory in the National Committee on Climate Change (COMNACC).

### Work Package 3:

## Policy pathways: Developing adaptation instruments to inform policy and investments



## EOI

By 2024, international agencies and policymakers use ClimBeR products to shape at least nine policies or investments to strengthen agricultural resilience, including at least three aimed at reducing agriculture-related climate security risk

At least US\$30 million in new investments made through ClimBeR's partnerships by 2024, focusing on disadvantaged groups, women, youth, and vulnerable smallholder farmers, that are contributing to building systemic resilience

### Work Package 3 progress against the theory of change

Zambia work began with, and improved upon, established partnerships and methods, now adapted and formalized through ClimBeR. Progress in 2022 focused on modeling, with increased focus on climate extremes and resilience, and formation of a multi-stakeholder group to define policy priorities and validate model results.

Guatemala work is taking a civil society perspective while promoting social equity, with a focus on bottom-up initiatives with potential for transformative change. The focus was on participatory and mixed-disciplinary perspectives to establish new forms of scenario thinking that create imaginative transformation pathways while attending to the roles that power shifts play in transformations. This builds on the “Seeds of Good Anthropocenes” approach. Approximately 50 imaginative transformation pathways were identified.

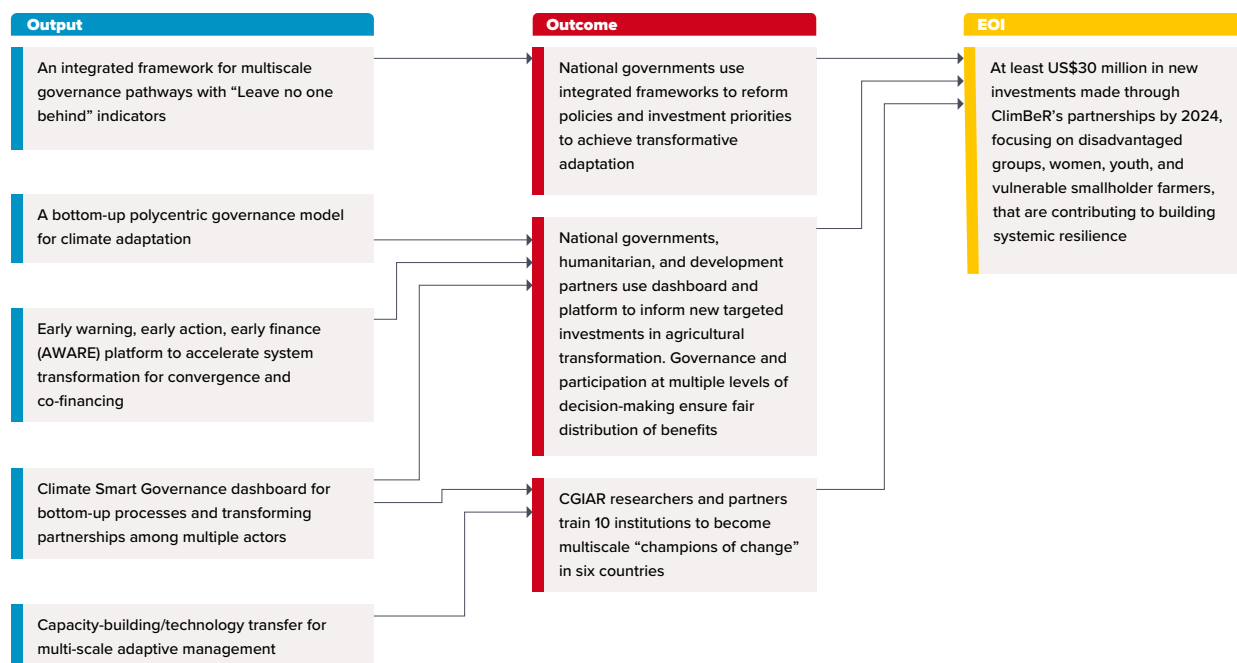
Morocco work focused on providing guidance to local, provincial/basin-level, and national stakeholders on conservation agriculture and climate-smart water management. Both priorities are highlighted under Morocco’s Green Generation Plan. ICARDA, Institut National de la Recherche Agronomique (INRA) Maroc, the **BRIDGE consortium**, and their partners began testing impacts of interventions, including intercropping and irrigation options, on water efficiency of olive farms and orchard farms at subnational levels, using inter alia a Water-Energy-Food-Environment nexus approach.

Senegal work applies similar methods to those in Morocco. We partnered with organizations like Senegal’s Meteorological Agency (ANACIM), Institut Sénégalais de Recherches Agricoles (ISRA), and others to conduct crop-diversification case studies for key staple crops, such as dryland cereals and upland rice. We are also examining the impact and replicability of ANACIM’s multi-disciplinary working group approach at local and national levels.



## Work Package 4:

### Governance4Resilience: Multiscale governance for transformative adaptation



### Work Package 4 progress against the theory of change

In 2022, Work Package 4’s main focus involved co-design and needs assessments on the AWARE platform for improved early warning and response. We conducted AWARE needs assessment workshops in the Philippines, Senegal, and Zambia in collaboration with several partners. In Zambia, we established partnerships on the AWARE platform to facilitate multi-institutional coordination for anticipatory disaster mitigation responses through the Ministry of Agriculture, WARMA, ZMD, and the Disaster Management and Mitigation Unit. We successfully completed early warning indicators for all ClimBeR countries.





In Zambia, ClimBeR partnered with the Zambia Ministry of Green Economy and Environment to develop a facilitation planning dashboard, “Climate Smart Governance.” More than 70 projects with investments of over US\$2 billion are incorporated into the dashboard, which facilitates coordination

across projects and, importantly, targets interventions across relevant institutions. We developed a local-led adaptation framework to identify local adaptation initiatives with potential for scaling, referred to as “champions of change.” Lastly, in Kenya and Zambia, we conducted fieldwork to understand how governance through community-based water tenure can inform adaptation practices.




In Senegal, ClimBeR and key stakeholders in the agriculture and water sectors selected four multi-million-dollar adaptation programs as case studies to evaluate challenges to governance for transformative adaptation using survey instruments and institutional mapping. We also consulted with the Ministry of Environment to lead the development of the Climate Smart Governance dashboard.

In Morocco, we conducted institutional mapping and developed survey instruments to assess climate change’s impact on social welfare. This analysis informed ClimBeR’s multi-scale polycentric governance tool guide to support future adaptation interventions.

# Work Package progress rating

WORK PACKAGE	TRAFFIC LIGHT / RATIONALE
1	 <p>We progressed on all four outputs in the annual workplan and theory of change, with some delays in the timing for climate-risk profiling due to coordination on farming system typology work with other Initiatives.</p>
2	 <p>We progressed on all elements of the annual workplan and theory of change in line with the budget.</p>
3	 <p>We progressed on all outputs in the annual workplan and theory of change with minor deviations in the timing of the Zambia modeling and subsequent report, and similar delays in the Guatemala workshops. These were largely due to the later-than-envisaged start.</p>
4	 <p>We progressed on outputs in the Work Package 4 annual workplan and theory of change in five of ClimBeR's six countries. In Guatemala, the work is slightly delayed due to time and resource constraints which will be addressed in 2023.</p>

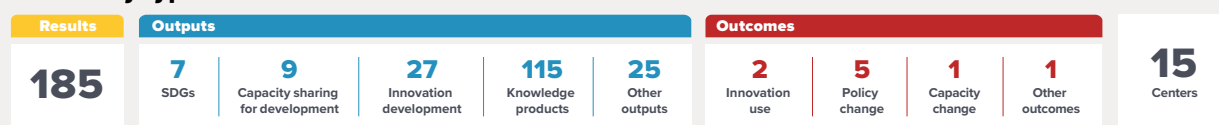
## KEY

<b>On track</b>	 <ul style="list-style-type: none"> <li>• Annual progress largely aligns with Plan of Results and Budget and Work Package theory of change</li> <li>• Can include small deviations/issues/ delays/risks that do not jeopardise success of Work Package</li> </ul>
<b>Delayed</b>	 <ul style="list-style-type: none"> <li>• Annual progress slightly falls behind Plan of Results and Budget and Work Package theory of change in key areas</li> <li>• Deviations/issues/delays/risks could jeopardise success of Work Package if not managed appropriately</li> </ul>
<b>Off track</b>	 <ul style="list-style-type: none"> <li>• Annual progress clearly falls behind Plan of Results and Budget and Work Package theory of change in most/all areas</li> <li>• Deviations/issues/delays/risks do jeopardise success of Work Package</li> </ul>

# Section 4 Initiative key results

This section provides an overview of 2022 results reported by CGIAR Initiative on Climate Resilience, ClimBeR. These results align with the CGIAR Results Framework and Climate Resilience’s theory of change. Further information on these results is available through the [CGIAR Results Dashboard](#).

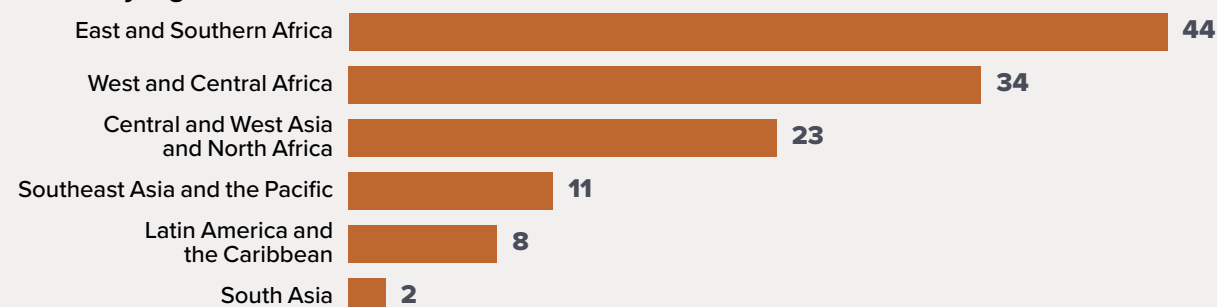
## Results by type



## Results by country

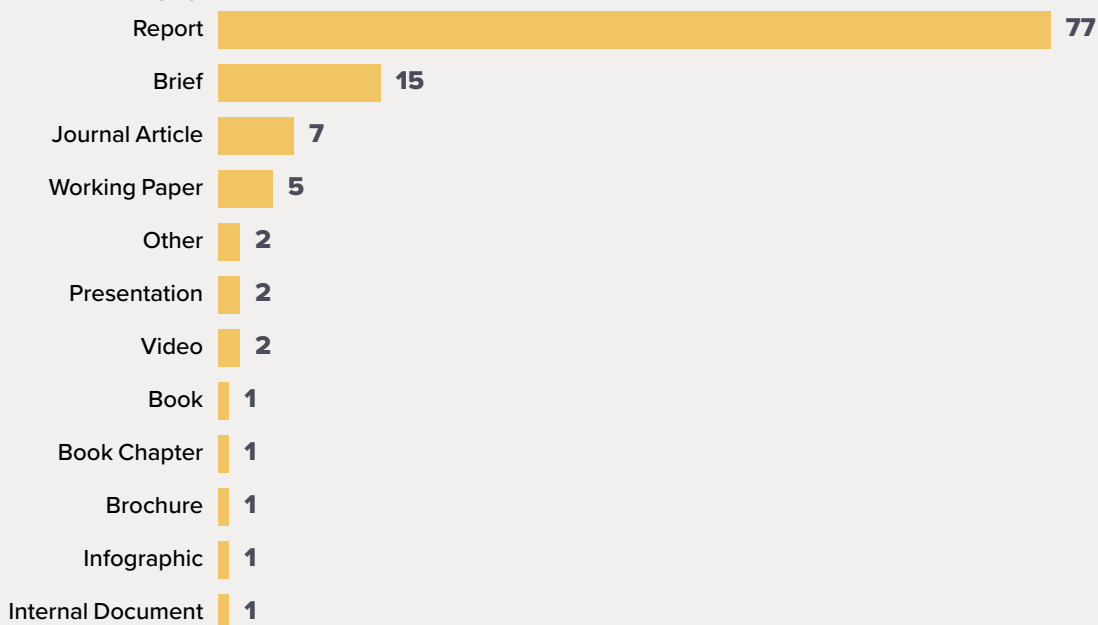


## Results by region

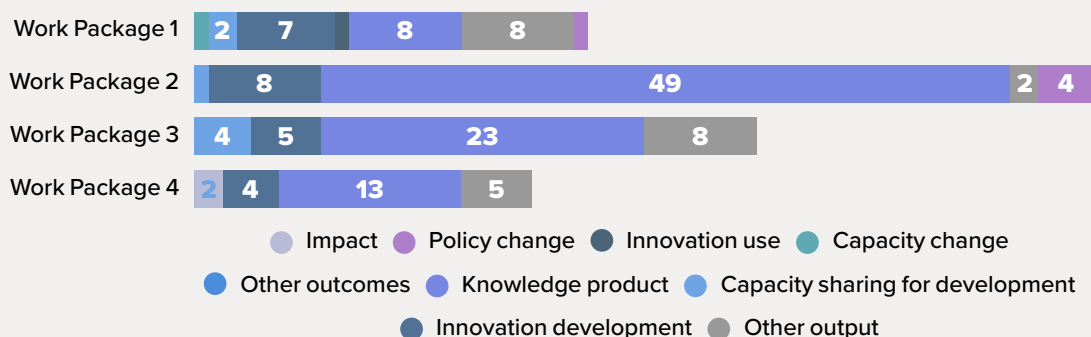




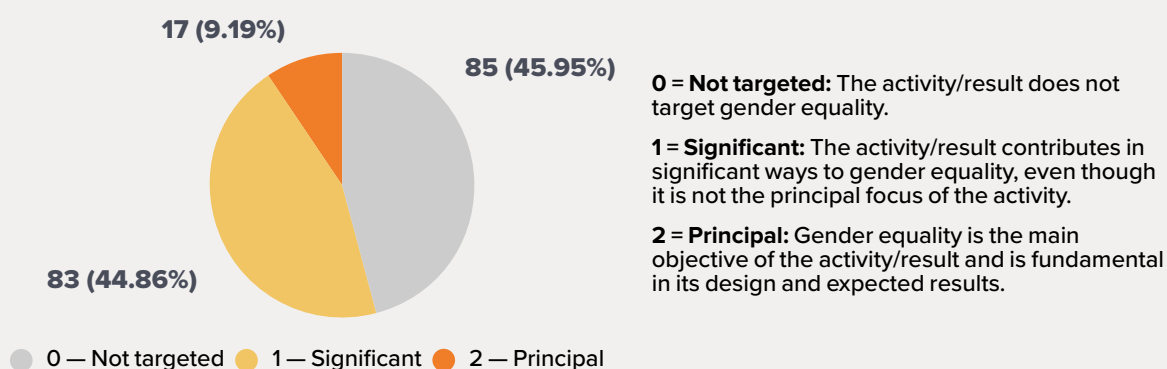
### Knowledge products by type



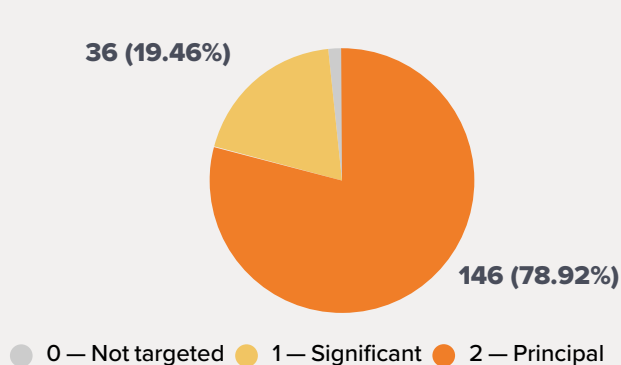
### Results by Work Package



### Results by gender tag



## Results by climate change tag

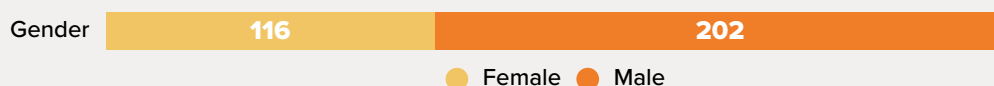


**0 = Not targeted:** The activity does not target climate mitigation, adaptation, and climate policy goals of the CGIAR as put forward in its strategy.

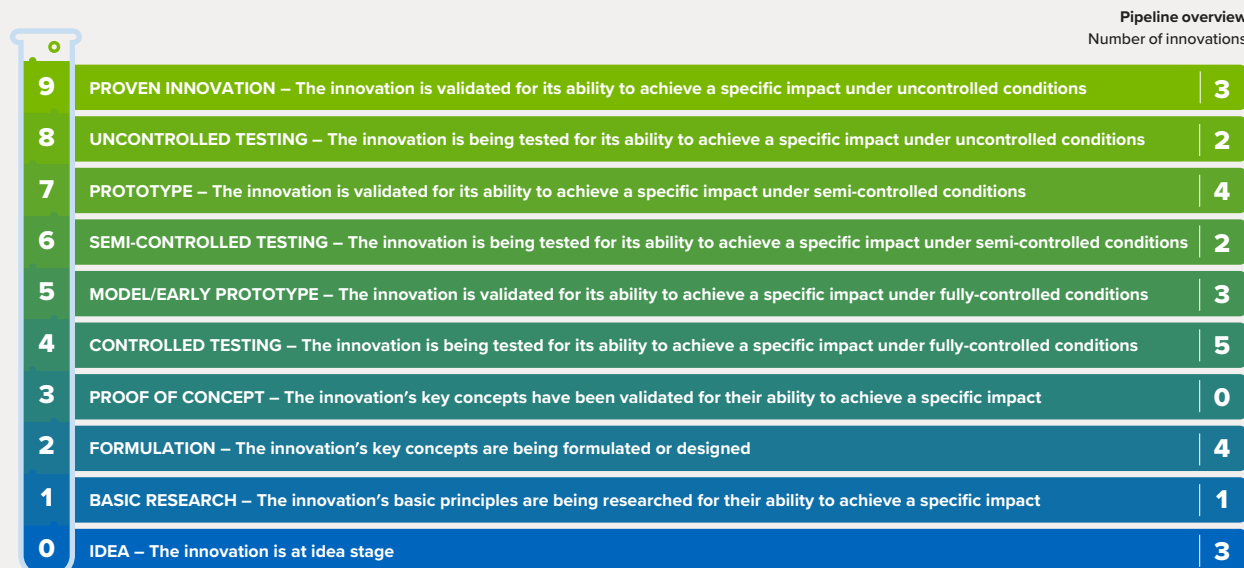
**1 = Significant:** The activity contributes in significant ways to either one of the three CGIAR climate-related strategy objectives -- namely, climate mitigation, climate adaptation, and climate policy, even though it is not the principal focus of the activity.

**2 = Principal:** The activity is principally about meeting either one of the three CGIAR climate-related strategy objectives -- namely, climate mitigation, climate adaptation, and climate policy, and would not have been undertaken without these objectives.

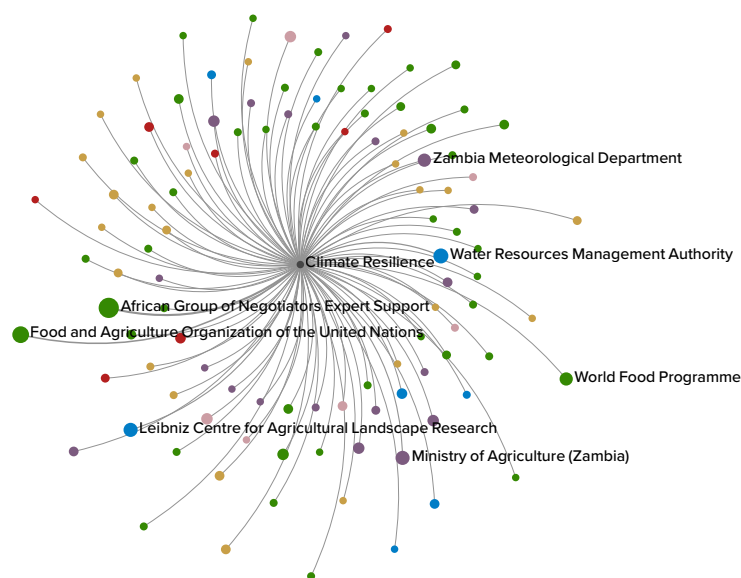
## Short-term trainees



## Innovations by readiness level



## Section 5 Impact pathway integration – External partners



### Top five institution types

- All other categories
- Government (National)
- NGO International (General)
- NGO National (General)
- Not applicable
- Research organizations and universities (NARS)
- Research O&U (National) (Universities)

Note: CGIAR Centres are excluded from the analysis. Partners and edges are sized by the number of results. Labels are shown for the partners involved in the most results.

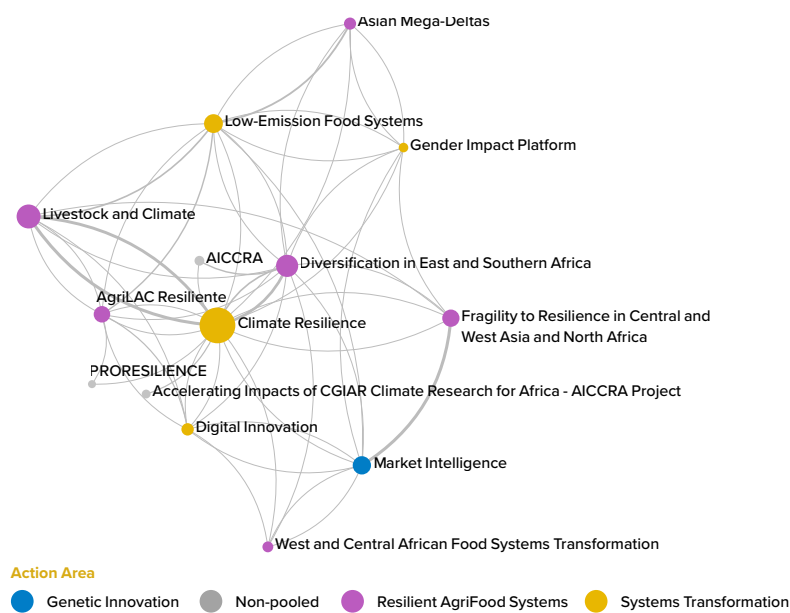
### Partnerships and ClimBeR's impact pathways

ClimBeR promoted the involvement of local, national, and regional partners in the validation and co-production of the workplans where the Initiative will have a presence. As a result, the activities are tailored to the needs and opportunities for impact in each country. We began with a series of national workshops in 2022 for the focus countries: Morocco (May), Guatemala and Kenya (June), Senegal (July), Zambia (August), and the Philippines (December). The objective was to present, validate, and co-design the workplans to be implemented during the following years. Some of these workshops were co-hosted with agriculture and environment ministries and involved 50+ partners. We also held workshops with key partners in different regions to align our activities with their agendas (MAGA, Philippine Space Agency, AGNES, and Initiative prospective agricole et rurale [Ipar]).

As a result of these approaches, ClimBeR currently has a diverse portfolio of partners,

including ministries, national and regional agencies, financial institutions and other private sector organizations, farmer organizations, NGOs, and research centers. We reported a total of 185 results in 2022 involving 150 partners. We also established agreements in 2022 with key partners in the focus countries and regions (e.g., Ipar; AGNES; Centre du Suivi Ecologique; Food, Agriculture and Natural Resources Policy Analysis Network; International Institute of Rural Reconstruction). These agreements have been key to achieving the EOI outcomes as well as our partners' objectives in a faster and more tailored way. For example, we co-developed the Zambia Drought Management System, a reliable end-to-end integrated drought management tool, with the Ministry of Agriculture in Zambia at their request. Another example is in the Philippines, where the Department of Agriculture specifically requested ClimBeR to forecast and map disaster-prone areas in order to reduce damage via alerts and changes to cropping calendars during destructive typhoon seasons.

# Section 6 Impact pathway integration – CGIAR portfolio linkages



Note: Initiatives, non-pooled projects, and the connections are sized by the number of results. The table includes the given initiative's top connections and is sorted by Total Results. The network and summary table include all connections for the given initiative, as well as the connections between the given initiative's connections (i.e. the ego network)

## Portfolio linkages and ClimBeR's impact pathways

As part of the integration strategy within the CGIAR research portfolio, ClimBeR held workshops in the prioritized countries for 2022 with climate-focused Initiatives and bilateral projects. We aimed to map our activities with complementary research areas and to capture synergies in Initiative outcomes to allow greater coordination, maximize CGIAR impact, and optimize use of resources (avoiding duplication). We co-hosted workshops with Livestock and Climate in Kenya and Senegal, and Ukama Ustawi in Zambia to identify 20 joint activities to pursue across climate-focused Initiatives and bilateral projects in CGIAR, including AICCRA. Since then, ClimBeR Country Coordinators have regularly monitored our activities on the ground to ensure they align with broader CGIAR efforts and promote impact.

Some of the most significant advances in terms of this collaboration with other Initiatives include the coordination of farming systems' analysis research to better tailor solutions to farmers' needs along with Mixed Farming Systems, Ukama Ustawi,

Excellence in Agronomy, Nature-Positive Solutions, Sustainable Animal Productivity, and Livestock and Climate. We are also collaborating with AgriLAC Resiliente and Livestock and Climate to reach more farmers and pastoralists with improved climate information services in Guatemala and Senegal.

Jointly with NEXUS Gains, ClimBeR promoted South–South learning between agriculture experts in Zambia and India on agriculture contingency plans to manage climate extremes as part of the Zambia Drought Management System. ClimBeR also influenced the scaling of the AWARE platform in Nigeria, Ghana, Rwanda, and Mozambique through the West and Central African Food Systems Transformation Initiative. ClimBeR social equity researchers helped launch CGIAR's Community of Practice on Gender-Transformative Research Methodologies (GTRM-CoP) led by the CGIAR GENDER Impact Platform. We coordinated partner engagement with over 35 national partners in Zambia for ClimBeR's national inception workshop working together with Ukama Ustawi. As a result of these approaches, we have managed to achieve greater progress.



## Section 7 Adaptive management

RECOMMENDATION	SUPPORTING RATIONALE
Reprioritize workplan for bundled insurance products to maximize impact related to our insurance activities.	We need to be more strategic when prioritizing which bundled insurance products to develop and where, considering budget constraints.
Analyze country workplans for 2023 and identify opportunities to improve coordination with partners.	To improve partner coordination across Work Packages, we need to reinforce main focal points between ClimBeR and key partners and assign new focal points where there are gaps in coordination.
Develop a policy-level theory of change for each of the policies ClimBeR is targeting, and revisit assumptions.	We need to clarify which policies to influence, and which theory of change assumptions still hold true. We should continuously test these assumptions to ensure they are still valid. This will allow us to develop more effective plans to achieve EOI outcomes.
Country leads and scaling lead to monitor the policy landscape and provide updates during country coordination meetings.	As the policy landscape continues to evolve, it is essential to monitor and inform the ClimBeR team on a regular basis about these trends. This will allow Work Packages to adapt their workplans to ensure alignment with the EOI outcomes.
Establish learning series across Work Packages to share lessons learned from engagement with policy partners. Document these learnings in a report. Researchers will use these learnings as they begin to work in new contexts in 2023.	As some teams began implementation earlier than others in specific countries, establish cross-learning mechanisms to share lessons learned from engagement with policy partners. This could be greatly beneficial to optimize use of resources.
Establish internal “reach” targets that are above our required goals to check if we are on track, and improve mechanisms to track progress in ClimBeR’s monitoring, evaluation, learning, and impact assessment (MELIA) system.	Setting internal targets above what we are required to achieve, leaving leeway for setbacks, and planning for at least three times more than the expected outcomes can be a good strategy for risk management.
Revise EOI 3 to include the <u>underlined</u> text: “At least US\$30 million in investments <u>enabled or supported</u> through ClimBeR’s partnerships and <u>technical assistance</u> by 2024 focusing on disadvantaged groups, women, youth, and vulnerable smallholder farmers that are contributing to building systemic resilience.”	After the first year of implementation, we learned our main impact pathway was through the GCF among other institutions. We prioritized this pathway due to CGIAR’s recent accreditation to the GCF aligning with demand from partners to develop a regional proposal. Three years is not enough time to guarantee new investments given this approach. The revised outcome reflects this and articulates our technical support to partners to enable them to access climate finance.
Develop a tracker that lists each of the finance opportunities being explored for EOI-3 on investments and their likelihood of success.	A fundraising tracker will help us to better track and prioritize progress towards EOI 3 on investments.
Co-develop a workplan for climate finance and WP4 activities on microfinance.	Seeking to create more impact through microfinance products, ClimBeR will integrate activities under Climate Finance and Governance4Resilience.

## Section 8 Key result story



### Implementation of climate services promotes behavior changes in the public sector in Guatemala

**In Guatemala, Local Technical Agroclimatic Committees (MTAs) build inclusive dialogue between farmers, extension services, public and private sector representatives, and scientists. The CGIAR Initiative on Climate Resilience helped improve coordination among the Ministry of Agriculture, Livestock, and Food (MAGA) and other actors involved in climate risk management to strengthen and scale up the MTAs in the country (19 MTAs covering 100% of the national geography), enhancing proactive climate risk management from local to national levels.**

As one of the Central American countries most affected by climate variability, Guatemala suffers large agricultural losses annually. Those hardest hit are the small-scale producers who can annually lose up to 70% of their crops, especially during the mid-summer drought season. Drought coupled with vulnerable socioeconomic conditions significantly impacts families' livelihood and food security.

This situation has been exacerbated by coordination challenges within Guatemala's public

First national workshop for Local Technical Agroclimatic Committees (MTAs) supported by CGIAR, MAGA, and other key stakeholders in Guatemala (July 2022). Photo credit: Guatemala Ministry of Agriculture, Livestock, and Food (MAGA) 2022

sector (e.g., the Ministry of Agriculture, Livestock, and Food [MAGA]) and between stakeholders in the public and private sector, which often operated in silos. A coordinated working group needed to be established to create tailored, accessible climate-risk management information useful for the end beneficiaries – the farmers.

To help address this problem, CGIAR has been promoting the implementation of Climate Information Services (CIS). Climate information had to be adapted to the needs of users to support decision-making in the field and avoid local-level losses. Local Technical Agroclimatic Committees (MTAs) were designed to meet these needs. Public and private sector representatives participating in the MTAs seek to understand climate variability in their communities and generate recommendations to reduce the associated risks.

Started by the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS), MTAs have been strengthened under

ClimBeR's De-RISK research area, together with AgriLAC Resiliente, Digital Innovation, and Livestock and Climate. There are now 19 active MTAs in Guatemala spread throughout the country. About 37,000 farmers receive climate information through the MTAs.

**As a result of ClimBeR interventions, MAGA is operating in a more coordinated way to strengthen and scale MTAs in Guatemala to help farmers manage climate risks.**

For example, MAGA acquired new skills to improve climate information generated for the agriculture sector through the very first national workshop to enhance MAGA's coordination of the MTAs. With about 50 participants, the workshop

sought to support the governance framework development of the MTAs at the national level. Having this framework helps MAGA to ensure that implementation of climate information services is well-coordinated.

In addition, ClimBeR supported knowledge exchanges between MAGA and other agricultural ministries in Central America, including through the Central American Climate Outlook Forum (CACOF), promoted by the World Meteorological Organization. This forum brings together ministries across agriculture, water, and other sectors to review and discuss regional climate predictions and their implications for vulnerable sectors in Central America and at the national level.

**“ CGIAR Centers, especially CIAT, have been working in Guatemala to mainstream agroclimatic information so people can understand the importance of climate variability and adaptation strategies — for example, promoting Climate-Smart Agriculture practices that address the needs of male and female farmers.”**

**Cándida Tacam, Director, MAGA Climate Change Unit**

Now, MAGA is increasingly collaborating with stakeholders and farmers' communities through the MTAs, helping to produce and disseminate recommendations to farmers, who are being empowered to make decisions on their agricultural production based on these recommendations. In addition to building MAGA's capacity to produce climate information, CGIAR scientists also helped facilitate a letter of understanding between MAGA and the National Institute for Seismology, Vulcanology, Meteorology, and Hydrology (INSIVUMEH), to co-produce new climate information products tailored to farmers' needs. These joint efforts are contributing to the

development of the National Framework of Climate Services, endorsed by the World Meteorological Organization – a pioneer effort in the Central American region.

The improvement of MAGA's skills, attitude, and management of climate information, through support from ClimBeR and other CGIAR scientists, has led to better coordination within MAGA and with other institutions working to enhance climate services in Guatemala. This success with MAGA demonstrates that innovative climate services alone are not sufficient to build systemic resilience; strong coordination and partnerships are necessary too.

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## LINKS TO IMPACT AREAS

**Primary Impact Area:** Climate Adaption and Mitigation



**Other relevant Impact Area(s):** Environmental Health and Biodiversity; Gender Equality, Youth and Social Inclusion; Nutrition, Health and Food Security; Poverty Reduction, Livelihoods and Jobs



Which collective global targets for the relevant Impact Area(s) from the CGIAR 2030 Research and Innovation Strategy does the key result contribute to?

- Equip 500 million small-scale producers to be more resilient to climate shocks, with climate adaptation solutions available through national innovation systems

## GEOGRAPHIC SCOPE

**Country/ies:** Guatemala

## KEY CONTRIBUTORS

**Contributing Initiative(s):** AgriLAC Resiliente; Digital Innovation; Livestock and Climate

**Contributing Center(s):** Primary: Alliance of Bioersity International and CIAT — CIAT Regional Hub

**Contributing external partner(s):**

- **CAC** – Consejo Agropecuario Centroamericano
- **CRRH** – Comité Regional de Recursos Hidráulicos
- **INSIVUMEH** – Instituto Nacional de Sismología, Vulcanología, Meteorología e Hidrología
- **IRI** – International Research Institute for Climate and Society
- **MAGA** – Ministerio de Agricultura, Ganadería y Alimentación (Guatemala)
- **WFP** – World Food Programme

## LINK TO CGIAR RESEARCH PROGRAMS

CCAFS: list of links below.

- <https://hdl.handle.net/10568/121217>
- <https://hdl.handle.net/10568/121808>
- <https://hdl.handle.net/10568/121445>



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**COVER PHOTO:** Rice production in Jawhar, Maharastra, India. Photo credit: N. Palmer/Alliance of Bioersity International and CIAT, CCAFS.