



Research for Impact: Applying Scientific Research to Development Practice



OVERVIEW For over 70 years, CARE has worked in the world's poorest communities to ensure that rural farmers have the resources they need to feed their families and communities. CARE works in 94 countries with more than 80 million people worldwide through more than 1,000 projects, from emergency relief to early childhood education, to maternal and reproductive health. CARE's work spans from responding to emergencies to enabling small scale farmers, fishers, and pastoralists to sustainably increase productivity, access markets and build resilience to climate change. We emphasize the role that small-scale food producers play in ensuring the food and nutrition security of all – and particularly emphasize the role and rights of women as food producers and consumers.

Improving Climate Resilience

Around the world, CARE invests in a multitude of projects and programs to help build the resilience of vulnerable populations to climate change. CARE invests in finding the most innovative tools and technologies to adapt to the effects of climate change. Partnering with research institutions like IFPRI, CCAFS, Cornell and Galway Universities, CARE's research efforts are focused on developing and testing models and tools that can scale climate resilient agriculture interventions while also changing in (intra) household behavior, production systems, and value chain interactions.

Local communities are aware that their climate is changing, observing shifting rainfall patterns, increased incidences of drought and reduced soil fertility, and are eager to understand future risks and plan sustainable strategies. Empirical evidence suggests that Community Based Adaptation (CBA) is a wise investment: its environmental, social and economic benefits outweigh the costs in virtually all modelled scenarios; and CBA in the face of uncertainty suggests it is an economically-efficient and well-suited response to climate change.

CROP IMPROVEMENT, PROTECTION AND MANAGEMENT

CARE's Pathways to Secure and Resilient Livelihoods built the capacities of communities in Ghana, Bangladesh, and Malawi to address gender inequalities

FFBS— Fertile Ground for Scientific Discovery

Using the FFBS as a test plot, CARE Mozambique commissioned a study to evaluate the benefits and adoption of an early maturing variety of cowpeas, which are protein rich and widely consumed. The 60-day cowpeas mature sooner than other crops, ensuring the hunger season is cut short by almost a full month, and can help other crops grow better, even during severe drought. Because it is harvested earlier than other crops, nitrogen and other nutrients are absorbed almost immediately and once absorbed are largely protected from dry-season losses. In this way, the 60-day cowpea can provide a significant boost in production the very first season it is planted. CARE Mozambique is piloting the use of the early maturing cowpea to test both adoption and production among FFBS participants.



60-day cowpeas, thriving even in severe drought conditions

in agriculture and climate change. To improve the adaptive capacity, yield, and income of farmers through the adoption of sustainable agriculture, value addition, and market engagement practices, Pathways uses Farmer Field and Business School (FFBS) as a platform to experiment with and learn about participatory approaches to climate resilient agricultural production techniques, risk analysis, business management and market literacy, and gender equity. FFBS serve as a laboratory to test how interventions such as restoring degraded lands, introducing agro-forestry, and making use of meteorological and soil-fertility are adapted to local contexts and agro-ecological conditions. This allows farmers to observe and analyse how and why different outcomes are generated, and make informed decisions about farming techniques. FFBS also provides insights into individual adoption rates and challenges of adopting CA and water-smart agriculture practices that can inform practitioners about how communities are adopting, adapting and empowering themselves to make collective decisions on how to better adapt to climate change.

Research Partners

CARE works in 94 countries, implementing 619 food and nutrition security and climate change resilience projects, reaching 28.6 million people directly in 62 countries. We develop sustainable and just local food systems in the context of climate change for the millions of people who live in rural poverty and face food and nutrition insecurity. To do this, CARE partners with a multitude of research institutions to test, validate and scale innovations that can help small-scale farmers adapt to climate change. Merging CARE's reach and depth in agriculture development programming with cutting edge research enables us to identify critical points where interventions will do the most good and develop evidence-based solutions that can be applied at scale to achieve transformational impact

NATIONAL RESEARCH PARTNERS

CARE works closely with national research partners to embed scientific research within development projects, and in an effort to constantly test and refine interventions. In partnership with research institutions such as the National Agriculture Research Institutes (NARIs), CGIAR partners, and relevant government partners, CARE seeks to contextualize project interventions while also supporting their sustainability

beyond the life on any single project.

For example, the Pathway Program worked with the Savannah Agriculture Research Institute (SARI) in Ghana - the Government of Ghana's Council for Scientific and Industrial Research (CSIR), which is the host of the Climate change, Agriculture and Food Security (CCAFS) program in Ghana. With support from CCAFs, CSIR has replicated the national platform in three pilot districts in Northern Ghana to deepen interaction between district and national level stakeholders. CARE and CSIR established a district Climate Science Policy Platform in Lambussie District to disseminate the project's best practices, for adoption by other organisations. The platform is hosted by the District Department of Agriculture, which and will ensure continuity when the project exits.

IFPRI

In 2016, IFPRI and CARE International signed a partnership agreement to formalize and build on their already strong collaboration. Capitalizing on CARE's extensive on-the-ground experience and on IFPRI's high caliber research capabilities, CARE and IFPRI look for opportunities to apply IFPRI's research rigor to CARE's deep experience in food and nutrition security programming. One such initiative will be to develop a Knowledge and Innovation (K&I) hub as a platform for sharing cross-country lessons on food and nutrition security and health interventions, based on both research and practical experience. Included in these hubs will be a series of global-level meta-analyses and participatory in-country analyses of evidence gathered from current and past integrated, women-focused programs to assess their impact on the prevalence of malnutrition—specifically on stunting among children under five. Along with offering evidence-based advice to decision makers, the K&I hubs will provide a space to synthesize local experiences, experiment with new and

innovative multisector approaches to advance food and nutrition security.

WAGENINGEN UNIVERSITY

CARE is partnered with Wageningen University and Research (WUR), Sokoine University of Agriculture and CCAFS, to explore the connections between savings-led financial inclusion, farmer field and business schools and the adoption of climate smart agriculture practices. This project will provide practical (and conceptual) insight in the appropriate combinations of business training (through Farmer Field & Business Schools) and financial services (through Village Savings & Loans Associations) that support community-based adaptation (CBA) action plans. The research will engage into mutually beneficial sustainable, profitable, equitable and resilient (SuPER) strategies and arrangements that support female farmers' engagement into nitrogen recycling practices, nutrition-sensitive value chains, improved dietary diversity and effective risk sharing and portfolio management.



NUI GALWAY

CARE partners with the 3D4AgDev Program, which is run from the Plant & AgriBiosciences Research Centre

In FY16, CARE ran 157 projects that had a substantial focus on climate change resilience, reaching more than 740,000 people directly, and 3.2 million indirectly to improve their ability to respond to the impacts of climate change and reduce their vulnerability to future shifts in climate.

(PABC), National University of Ireland Galway. The 3D4AgDev approach is based on user-driven development of evidence-based labor saving and productivity enhancing innovations for women smallholder farmers in Africa. Challenges are compounded by the need to develop and disseminate climate smart agricultural (CSA) practices at scale so that smallholder farming systems can adapt to emerging climate change scenarios and impacts. Many smallholders are currently ill-equipped for such transitions towards new CSA practices, where there are gender and socio-economic barriers existing that drive low levels of adoption and high rates of dis-adoption of different CSA practices. Financed by the BMGF, GIZ and others, the 3D4AgDev Program is currently operational in Malawi, and plans to expand its user-driven innovation approach during 2016-2017 to other countries (e.g. Ghana, Ethiopia).

CORNELL UNIVERSITY

CARE and Cornell University have partnered together in nearly a dozen countries through the CARE-Cornell Collaboration to apply Cornell's research rigor to CARE's food and nutrition security and climate change programs. Most recently, CARE is working with a team of researchers at Cornell to investigate the most appropriate methods for measuring the resilience of households and individuals in shock-prone environments, as well as the contribution of different domains of empowerment on food and nutrition security and resilience. The CARE-Cornell Collaboration has also invested in designing, implementing, and evaluate new technologies and practices to [measure women's time use](#), pilot innovative methods like locally produced [bone-char fertilizer](#), and collaborated to develop coursework on [conservation agriculture practices](#).

CCAFS

CARE has a strategic partnership with the Climate Change, Agriculture and Food Security (CCAFS) research programme of the global network of CGIAR research

centres. CARE and CCAFS work on technical and policy initiatives to inform the climate-smart agriculture agenda and collaborate to support the upscaling of gender equitable CSA/[SuPER](#) approaches with small-scale women producers. A key area of interest is in understanding the potential roles of finance (credit, savings), the relevance and efficacy of business management support (training, FFBS), and the opportunities to engage with a range of value chain actors (trade contracts), in support of the ambitions of climate change resilience and food and nutrition security. CARE and CCAFS have collaborated in the UNFCCC arena for several years, addressing in particular the need for greater attention to social analysis in research and programming and hence for social equity and inclusion to be integrated more systematically in climate change and agriculture initiatives. CARE and CCAFS jointly developed the 'Gender and Inclusion toolbox - participatory research in climate change and agriculture' in 2015 for example and have been collaborating on this area for several years.

Utilizing Scientific Discovery to Influence Policy

CARE engages in the UN climate change negotiations on agriculture to influence the global policy framework for climate action in the agriculture sector, particularly to address the priorities of small-scale farmers and women in particular. At COP23, CARE was instrumental in informing negotiators and leading civil society, by leveraging analysis to directly influence the landmark outcome establishing the Koronivia Joint Work on Agriculture. This new body of work under the UNFCCC provides significant opportunity for discussion of scientific and technological issues, challenges and lessons in implementation of climate action, and development of guidance for implementation and scale up of climate-smart agriculture.

CARE Food and Nutrition Security

Juan Echanove, Senior Director

Juan.echanove@care.org

US: 404.784.3710

FR: 33.625.894.601

