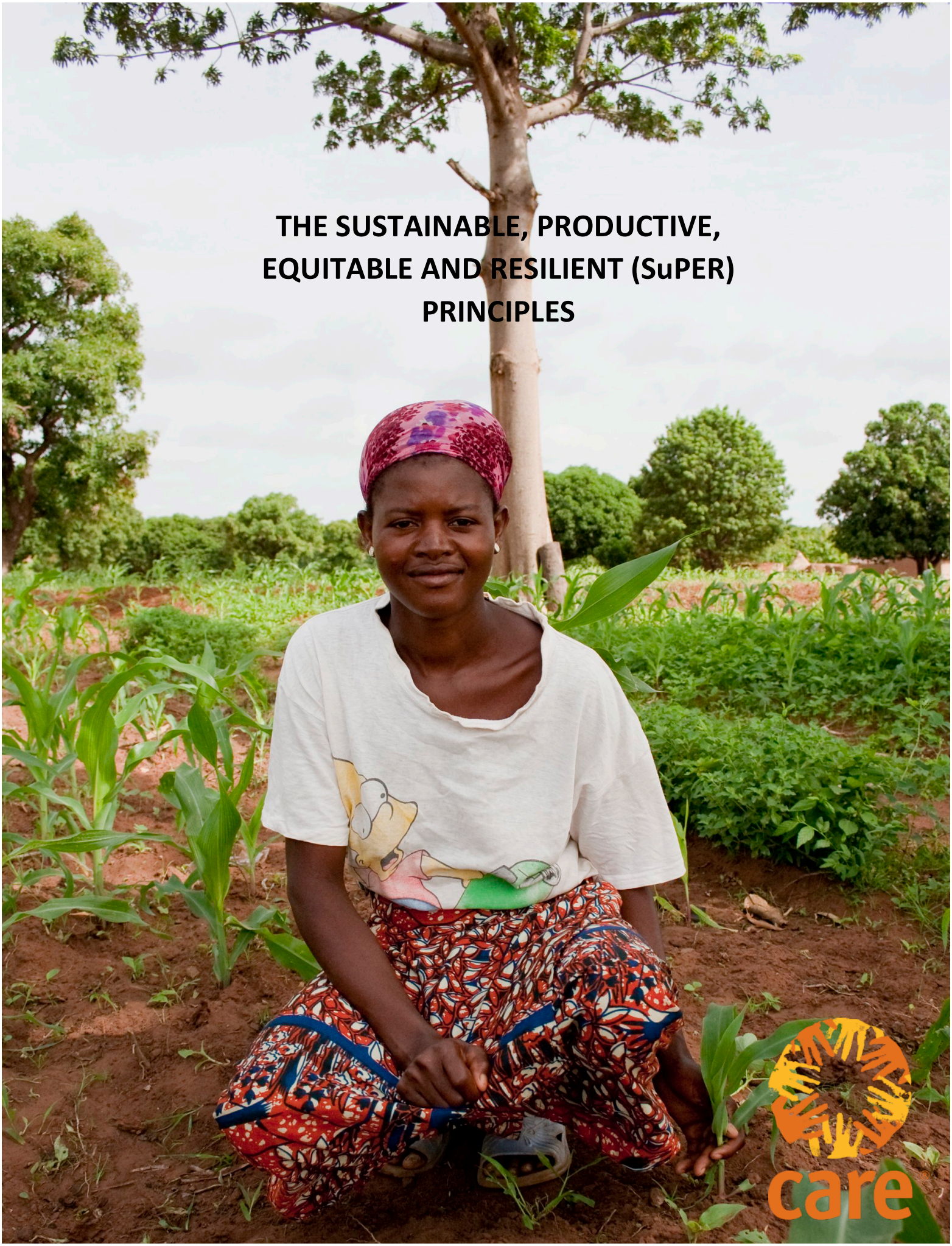
THE SUSTAINABLE, PRODUCTIVE, EQUITABLE AND RESILIENT (SuPER) PRINCIPLES



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CARE INTERNATIONAL

Background: Smallholder agriculture, has suffered from extreme neglect and inadequate investment in recent decades, and during that time many of the limitations and negative consequences of the 'Green Revolution' have been acknowledged.[2] A new paradigm, backed by sustained investment, is thus required to achieve the increases in agricultural production required to provide an adequate and nutritious diet for 9 billion people by 2050 in a sustainable manner. CARE's approach, in both programme and policy work, will be guided by four pathways, described below. Our primary target population is poor households engaged in crop and livestock production, either as smallholders or landless agricultural labourers, with a particular focus on women and marginalised communities.

Goal: CARE's goal, as articulated in its Food and Nutrition Security Strategy, is to strengthen sustainable smallholder agricultural systems to improve food and nutrition security for farmers, workers and consumers. The pathways by which we work to meet this goal are SuPER (Sustainable, Productive, Equitable and Resilient).[3]

1. Promote sustainable agriculture systems that address climate and environmental impacts and which are: grounded in healthy ecosystems; driven by stable, accountable and enduring institutions and policies; and based on sustainable social and economic policies and investments that prioritise the redress of gender inequality in agriculture.

Sustainable agriculture is an often-misused concept. CARE is clear about those practices it considers environmentally sustainable and those that it will not promote. The characteristics at the core of our definition of sustainable agriculture are that it: 1) is grounded in healthy ecosystem management practices; 2) is supported by stable, accountable and durable institutions; and 3) provides access to financial services on equitable terms to promote smallholder income and profitability. This broad definition of sustainability implies the promotion of a set of farming practices[4] that includes, but is not limited to: diversified cropping systems (not monoculture); crop rotation, including grasses to improve soil structure; use of cover crops; integrated pest management; use of manure to increase soil organic matter; use of legumes to boost soil nitrogen; improved storage of crops and seeds; soil and water conservation practices to minimise erosion; and minimum or no-till agriculture. Many of these

[1] This paper is subject to revision and is an accompanying document to the *CARE and Agriculture Approach Paper* 2015. It is based on an iterative learning process and on the ACRES Discussion Paper (2013), other internal learning and evidence papers, and a technical workshop.

[2] International Fund for Agricultural Development OP 3. 'Climate-Smart Agriculture: What's Different?' lists the shortcomings: "Its focus on mono-cropping and often-excessive use of agricultural inputs such as pesticides and fertilizers has resulted in poor soil quality, reduction of biodiversity, pest resistance and fertilizer pollution in the environment (soil and groundwater) and human health risks."

[3] This goal statement is *Domain One* of the CARE International Food and Nutrition Security Strategy.

[4] Mainstreaming Environment and Climate Change, International Institute for Environment and Development (IIED), 2011.

practices fall under the broad headings of agro-forestry, community-managed natural regeneration and conservation agriculture – where CARE has significant experience. Research has shown that such approaches can raise the income of poor farmers and more than double yields.[5]

Further to the imperative of environmental sustainability in agriculture, CARE's approach also prioritises the importance of the socio-economic sustainability of smallholder agriculture. If smallholders have no access to inputs, or can only access them on unfavourable terms and become highly indebted,[6] or if they are unable to find markets[7] or forced to sell their crops at low prices post harvest, then agriculture, for them, is unsustainable. Women engaged in agriculture experience significant additional constraints through discriminatory practice and social norms. Social networks and community safety net structures come under strain and often break down. Interventions to enhance access by smallholders to markets on favourable terms, or work on village enterprise groups, are thus among critical approaches to protect and enhance socio-economic capital. Since farmers lack market power, group formation is critical, such as through farmers' cooperatives, self-help groups, water groups or village savings and loan associations (VSLAs).

2. Promote productive (including profitable and nutrition-sensitive) intensification that specifically addresses the needs of women producers; increases returns on investment, including of labour, by farmers; and is climate smart.

CARE's concept of productivity includes both quantitative and qualitative dimensions, requiring attention to closing yield gaps, ensuring a diverse and nutritious food basket and generating income. Sustainable productivity increase is often possible, but reducing post-harvest loss is also essential to sustainably increase the availability of food. Key to achieving gains will be ongoing investment to close the yield gap between what is currently produced and what is achievable at only slightly higher resource-use intensity, particularly among smallholder farmers in low-income countries.[8] As noted, CARE's approach to increased productivity takes a low-external input approach to increasing yields and resilience. However, in the face of enormous yields gaps, particularly in Africa, some use of external inputs will be essential.
Malnutrition is widespread, so efforts to increase productivity must explicitly address the quality of food produced in terms of calories, protein and micronutrients. Cereals, pulses, fruits and vegetables, and animal protein[9] are all required for a diverse food basket. It is important to

[5] Pretty, J. et al. 2006. Resource-conserving agriculture increases yields in developing countries. While agro-ecological practices are at the core of CARE's approach to environmental sustainability, in some contexts, there is scope for expansion of sustainably irrigated agriculture, which can be developed in ways that make the most efficient use of scarce water resources. Micro-dosing of chemical fertilisers may be required to boost yields in degraded soils in the short term. Quality planting material is also critical to increasing productivity. This requires the preservation of genetic diversity and the re-introduction/expansion of indigenous varieties. While genetically modified organisms (GMOs) will not be promoted by CARE, approaches such as marker assistance can expedite breeding processes to develop drought tolerance, resistance to disease and pests, and other characteristics that will be critical to increasing the climate-resilience of smallholder agriculture.
[6] Indebtedness can have tragic consequences and has been linked to an epidemic of farmer suicides in India, for example.
[7] Productivity emphasises the necessity of increasing yields, but increasing smallholder incomes also requires access to input and output markets on favourable terms, and interventions in this area are an essential element of a comprehensive strategy.
[8] Vermeulen, Campbell, and Ingram. CCAFS. 'Climate Change and Food Systems'. 2012.
[9] HLPE, 'Food Security and Climate Change'. 2012. This report by the High Level Panel of Experts on Food Security and Nutrition summarises the livestock production trade-offs: "Producing animal products from vegetal and feed input involves biological

consider the impact of climate change on diet, particularly in relation to the world's primary staple crops – wheat, rice and maize – but also its impact on animal and vegetable sources of protein.[10] Climate change is requiring humanity to consider new foods to meet its nutritional needs – among the crops identified as having particular potential to achieve positive nutritional outcomes in a warming world are cassava, bananas, barley, cowpeas, lentils and millet.[11] Home gardens, including the cultivation of micronutrient-rich vegetables like orange-fleshed sweet potatoes, and the keeping of small livestock are examples of agricultural interventions particularly accessible to women and likely to enhance household nutritional outcomes.

Nutrition-sensitive interventions and programmes in agriculture have enormous potential to enhance the scale and effectiveness of nutrition-specific interventions and behaviour change related to specific nutrition practices, crop and breeding choices, postharvest choices (factoring nutrition in storage, processing, and preservation) and food safety practices should all be considered in efforts to improve dietary diversity and household diet quality. Finally inclusive market systems play a critical role in the transformation of rural livelihoods, as they empower producers to effectively generate income. Engaging poor and marginalised groups in roles ranging from producer, service provider and entrepreneur to employee with a job that provides a living in a dignified way, will benefit those who are often excluded from the benefits of agricultural market systems. The productivity and efficiency of inclusive market systems, (including sustainable value chains) are thus essential for the success of rural economies and to the incomes of the poorest.

3. Promote equitable outcomes in smallholder agriculture by: supporting the realisation of the Right to Food and other rights for the most vulnerable; enabling equal access to opportunities, resources, services and rewards for women farmers as well as men; and promoting access to affordable nutritious food by farm labourers and rural and urban consumers.

Inequality and injustice are the primary drivers of poverty and food insecurity in our world. Gender inequality is particularly pervasive in agriculture and women are generally not recognised as farmers by those around them, by governments or donors, or by many NGOs. Patriarchy, stereotypes about men and women's rights and roles, traditional values and cultures, and prevailing economic models combine to reinforce an impression that women are not equals on the farm. This is compounded by policies, legislation and practice – among the consequences of which are that women are denied secure and adequate land, basic tools and inputs, credit, and appropriate infrastructure and technology.[12] Agricultural extension and

processes and associated energy requirements and losses, meaning that 1 calorie of animal product requires the production upstream of more than 1 calorie of plant origin to feed the animal…. [T]he proportion of livestock products in a diet is one of the key drivers of emissions. However, many livelihoods depend on livestock, and ….where indigenous diets include animal protein, high quality protein from livestock products (milk, meat, eggs) will help improve nutrition."

[10] Thornton, P. Recalibrating Food Production in the Developing world: Global Warming Will Change More Than Just the Climate. 2012

[11] idem

[12] The Synthesis Report of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) stated that, "there is a world of asymmetric development, unsustainable natural resource use, and continued rural and urban poverty. Generally the adverse consequences of global changes have the most significant effects on the poorest and most vulnerable, who historically have had limited entitlements and opportunities for growth." Security of tenure is a critical motivator for farmer investment in sustainable land management practices. CARE thus supports the 'Voluntary Guidelines on the Responsible

advisory (and climate information) systems are overwhelmingly gender-blind and inequitable access to and control of productive inputs is a persistent problem stifling adaptive capacity.

CARE wants changes at multiple levels that improve the food security and adaptive capacity of poor households engaged in agricultural production as smallholders or landless labourers, because equity for these groups implies systemic changes. Addressing gender inequalities requires an approach that works toward gender-transformative outcomes. This goes beyond gender relations among individuals or households, and critically examines institutions and structures in agriculture and the ways in which they determine disadvantage and privilege and mediate strategies for progress. A transformative approach recognises that focusing on women alone "is unlikely to result in a sustainable increase in their (or society's) adaptive capacity in the face of climate change." Crucially, the approach considers social diversity and the multiple social roles and power relationships, which, together with gender, shape the climate vulnerability of smallholders. [13] Addressing such gender inequality is a question of social justice and requires sustained efforts to give priority to women's access to education, information, science and technology, and extension services to enable improving women's access, ownership and control of economic and natural resources.[14] Beyond redressing social injustice, empowering women in agriculture leads to improved nutritional outcomes – central to achieving our goal of food and nutrition security.[15] CARE will thus continue to promote thorough social analysis in its fight against inequality and poverty.

4. Build resilience for communities and systems to be able to withstand and recover from climate-induced shocks and stresses and other risks by supporting community-based adaptation in agriculture communities, connecting institutions and collectives for better governance, and using market, technical and climate information to support farmer-led analysis, planning and risk management.

Enhancing the resilience[16] of agriculture and global food systems to climate change requires new approaches to building the adaptive capacity[17] of farmers to ensure that long-term stresses and discrete shocks do not lead to downturns in socio-economic progress. Some of the characteristics of a resilient system include: a high level of diversity; connectivity between

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Governance of Tenure of Land, Fisheries and Forest in the Context of National Food Security' (CFS 2012). Paragraph 23.1: "States should ensure that the legitimate tenure rights to land, fisheries and forests of all individuals, communities or peoples likely to be affected, with an emphasis on farmers, small-scale food producers, and vulnerable and marginalized people, are respected and protected by laws, policies, strategies and actions with the aim to prevent and respond to the effects of climate change consistent with their respective obligations, as applicable, in terms of relevant climate change framework agreements."

[13] Okali and Naess, 2013. Making Sense of Gender, Climate Change and Agriculture. Creating Gender-resposive Climate Adaptation Policy.

[14] IAASTD op. cit. p11. "To ensure such access, ownership and control, legal measures, appropriate credit schemes, support for women's income generating activities and the reinforcement of women's organizations and networks are needed."

[15] Wiggins and Keats/ODI. Agriculture's Contribution to Better Nutrition. Report to the Hunger Alliance. 2012: "The key lessons are that agricultural interventions are most likely to affect nutrition outcomes when they involve diverse and complementary processes and strategies that redirect the focus beyond agriculture for food production and toward broader consideration of livelihoods, women's empowerment, and optimal intra-household uses of resources. Successful projects invest in improving human capital, sustain and increase the livelihood assets of the poor, and focus on gender equality."

[16] Resilience for the IPCC is "the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including preservation, restoration, or improvement of its essential basic structures and functions." Intergovernmental Panel on Climate Change, 2001

[17] Adaptive capacity defined by the IPCC is "the ability or potential of a system to respond successfully to climate variability and change, and includes adjustments in both behaviour and in resources and technologies."

institutions and organisations at different scales; the blending of different forms of knowledge; redundancy within the system; equality and inclusiveness; and high social cohesion and capital.[18]

CARE's approach to resilience in its smallholder agriculture in a changing climate work will therefore 1) be informed by market, technical and climate information (including long-term climate projections and shorter-term weather information[19]); 2) employ analysis, planning and risk management strategies (particularly focusing on gender and power analysis); 3) be embedded in systems for disaster risk management and productive safety nets; and 4) be supported by learning, flexibility, diversity and innovation.[20] Building the analytical and decision-making capability of farmers and their organisations is critical, since the challenges they face will vary and evolve over time as the impacts of climate change intensify. CARE builds the capacity of farmers and governments to manage variability, change and increasing shocks to their livelihoods and systems by offering a range of options together with the tools needed to choose among them.[21] This work recognises that effective adaptation to climate change is dependent on access to climate information. Developing scenarios of how livelihoods would be affected by probable climate futures contributes to increased resilience and can contribute towards reducing the effects of climate-related disasters on communities. Farmer Field Schools can also help to build local adaptive capacity by encouraging and strengthening farmers' awareness of the value of their own knowledge, and by enhancing confidence in decision-making, willingness to innovate and ability to organise to access resources and services. In crisis-prone areas, CARE continues to develop and promote innovative approaches to increasing or sustaining smallholder production while at the same time improving asset bases and buffers to protect against shocks. CARE's agriculture work in climate-vulnerable communities aims to connect more deliberately with its humanitarian preparedness planning and will be designed to ensure that positive nutrition outcomes are prioritised in all contexts, so that community resilience can be built. In this regard, and across all the principles above, the agency of farmers, farmer collectives and national civil society is central.

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[18] Mitchell, T. and Harris, K. ODI Background Note, 'Resilience: A Risk Management Approach'. 2012.
[19] There are various initiatives to translate and interpret climate information into usable advice for decision-making. Applying innovative approaches to climate communication systems for long-term, seasonal and short-range forecasts to enable well-informed farmer decision-making, as well as innovative approaches to risk management (e.g. insurance), will be essential.
[20] The ACCRA Local Adaptive Capacity Framework defines adaptive capacity in terms of: asset base; institutions and entitlements; knowledge and information; innovation; and flexible, forward-looking decision-making and governance.
[21] Participatory scenario planning (PSP) has been carried out extensively under CARE's Adaptation Learning Programme (ALP).

Cover image: *Annan Kalusa Babayadam is a member of the Climate Adaptation Committee and a CARE-support village savings and loan group in the village of Yaroyiri (Northern Region, East Mamprusi District, Ghana). The group was trained by CARE to mitigate risks associated with climate change and is learning conservation agriculture practices. By using minimum tillage/plowing and eliminating bush burning practices they are seeing increased soil fertility and larger crop yields. The group meets regularly to discuss climate trends and methods for mitigating the negative effects of climate change, such as flooding and drought. By practising conservation agriculture Annan and her husband Babayagidea Kolichira are increasing their crop yields and improving their food security. In addition to increasing their crop yield, thus food and income, they are also learning to save through Annan's participation in a CARE-supported village savings and loans (VSL) group. As a result of increased crop yields, through conservation agriculture, and diversified livelihood activities, through the VSL, they are able to feed their children twice a day during the hungry season when before they could only afford one meal a day. Credit: CARE*