

POLICY BRIEF

Climate Change and Agricultural Extension and Advisory Services

What's the issue?

Rising temperatures, longer droughts, more severe storms, warming oceans, and recurring floods are already threatening global agriculture and food security. Most smallholder farmers in middle- and low-income countries have limited abilities to respond and adapt to these climate risks. While highly vulnerable to climate change, agriculture is also a major source of greenhouse gas (GHG) emissions. To strengthen the resilience of agriculture to changing climate, a two-pronged approach that supports adaptation - adjusting to actual or expected future climate change - and promotes mitigation - reducing greenhouse gases or enhancing accumulation and storage of GHG - is needed. Promoting these strategies at scale involves changing the behavior, strategies, and agricultural practices of millions of agricultural producers.

This brief discusses policy-level changes to enhance and strengthen the role and functioning of extension and advisory services (EAS) in addressing climate change adaptation and mitigation.

Why is this important?

Around the world, EAS provided by public, private, and civil society organizations perform eight major roles in supporting climate change adaptation and mitigation (Figure 1). However, in part due to structural and policy gaps that affect the functioning of extension systems, EAS in most low- and middle-income countries are not effectively responding to the climate crisis. At the same time, national-level climate policies, plans, and strategies do not acknowledge or fully integrate the roles and functions of EAS.

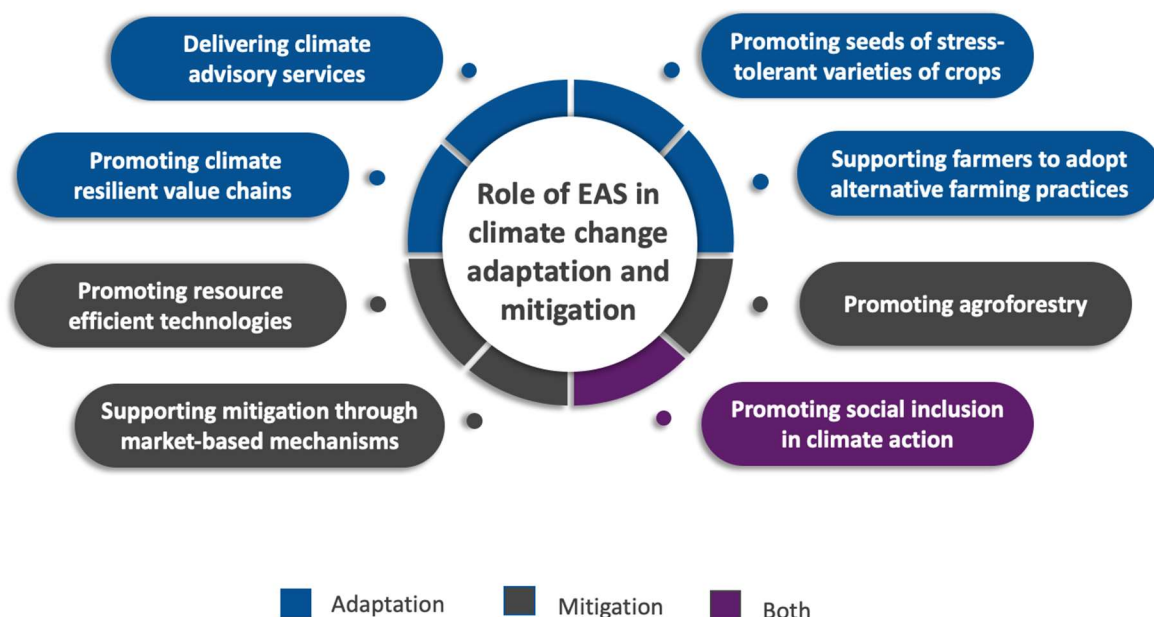


Figure 1: Roles played by EAS in promoting climate change adaptation and mitigation. Source: Sulaiman, 2024²

Developing Climate-Responsive EAS

Calls to reform agricultural extension and advisory services (EAS) that started in the late 1990s have become increasingly urgent in the wake of climate change¹. The following outlines some climate-related reforms and policy changes needed at the level of extension and advisory services and systems.

Include a climate focus in the goals of EAS:

EAS often do not include climate change in their mission and often lack an explicit climate focus. Explicit climate objectives are needed to draw attention to climate change adaptation and mitigation at both organizational- and individual-levels and to ensure that EAS providers and systems are fully accountable to achieving specific climate adaptation and mitigation targets. To support an increased climate focus, there is a need to generate a

more robust evidence-base on the contributions of EAS to climate change adaptation and mitigation, including agricultural practices that enhance climate resilience. Building evidence is critical for enhancing the recognition of EAS in this area.

Explore new roles and functions for EAS:

Generally, EAS providers need to shift away from a technology transfer model and take on other roles and functions in order to continue to meet needs in a changing climate. New roles include: involvement in disaster management and disaster prevention operations, searching for technological solutions that can generate good agricultural practices from historical experiences and lessons from other regions that are already affected by adverse climatic conditions, tracking and verifying the effectiveness of climate action, advocating for climate responsive interventions, and multi-stakeholder coordination. Many agribusinesses have started investing in EAS to climate-proof

the value chains they are engaged with and to comply with sustainability commitments and green market pressures³.

Strengthen the technical and functional capacities of EAS: To address the complexities of climate change and to take on new roles and functions, EAS providers from public, private and civil society organizations will need to upgrade their technical and functional capacities in different approaches to managing climate change (e.g. climate smart agriculture, agro-ecology, regenerative agriculture), in facilitating farmer experimentation and responding to the needs of women, youth, and other marginalized farmers, as well as in soft skills such as facilitation and brokerage. Additionally, EAS providers will need skills to improve coordination among stakeholders from multiple agencies and sectors related to climate, such as forestry, energy, water, biodiversity.

Increase sustainable funding for EAS: Promoting climate change adaptation and mitigation requires more direct engagements with farmers and their organizations, providing capacity building to address climate challenges and resources for investing in new advisory approaches. However, under-funding and an unwillingness to increase investments for public EAS systems remains a persistent constraint in most low-income countries⁴. Both public and private EAS providers need finances to hire more local-level staff and to cover the operational expenses associated with organizing farmer training and demonstrations, adopting new innovative, including digital, approaches, and providing tools and training for their staff.

Create extension policies that emphasize the role of EAS for climate action: Extension policies should explicitly outline the role of EAS

in a country's development strategy broadly and their role in national climate adaptation and mitigation plans. Many low- and middle-income countries do not have a national extension policy and EAS is only briefly mentioned in agricultural policy documents. Extension policies are critical for defining the role of different EAS providers in a pluralistic EAS system, improving coordination among advisory services and streamlining service provision across related sectors such as environment, forestry and energy.

Mainstreaming EAS in Climate Policies

In addition to changes to make EAS more climate responsive, reforms are also needed at the level of climate policies and interventions to mainstream EAS in climate action.

Recognize the contribution of EAS in national climate strategies and plans: In most countries, ministries of environment are in charge of the country's Nationally Determined Contributions and National Adaptation Plan implementation, while ministries of agriculture implement adaptation and mitigation strategies related to the agricultural sector. These strategies and plans generally do not mention the contributions of EAS in supporting climate change adaptation and mitigation and primarily focus on targets rather than on implementation. Explicit recognition of the contribution of EAS in achieving climate resilience and positioning these services as important actors that can support upscaling climate adaptation and mitigation technologies and strategies is critical for ensuring that EAS receive policy and financial support.

Direct climate funds to agriculture and EAS: As of 2021, agriculture was the most highly financed sector accounting for 39% of the

climate-related financial flows directed to agrifood systems⁵. However, smallholder farmers in low-income countries receive only 0.3% of total international climate finance⁶; the proportion of climate funds invested in EAS is not currently known. Although specialized financial mechanisms, such as Green Climate Funds, offer opportunities for low-income countries to access finances for climate action, long and rigorous proposal requirements and lack of capacity to meet the requirements limit access to these funds. To strengthen the resilience of the global agriculture sector to climate change, the sector needs more investments from multi-lateral and bilateral agencies, the private sector, and philanthropic organizations. Climate initiatives in agriculture should explicitly fund public and private EAS to strengthen their abilities to contribute to adaptation and mitigation. Policies that incentivize private investments in EAS and

promote public-private partnerships among EAS are also likely to boost funding for the sector.

References

1. FAO, 2021. Reforming and strengthening public agricultural extension and advisory service systems in smallholder farming. FAO, Rome. <https://www.fao.org/3/cb7908en/cb7908en.pdf>
2. Sulaiman V, 2024. Extension and advisory services in support of climate change adaptation and mitigation: an evidence review. Winrock International, Arlington, Virginia.
3. ISF 2020. Sustainable and climate-smart advisory services landscape: opportunities and needs. [PowerPoint slides]. ISF Advisors. https://isfadvisors.org/wp-content/uploads/2020/06/strategies_for_supporting_sustainable_and_climate-smart_advisory_services.pdf
4. Yang, P. & Ou, Y. 2022. Transforming public agricultural extension and advisory service systems in smallholder farming: Status quo, gaps, way forward. FAO, Rome. <https://doi.org/10.4060/cc2131en>
5. Galbiati, G.M., Yoshida, M., Benni, N. & Bernoux, M. 2023. Climate-related development finance to agrifood systems – Global and regional trends between 2000 and 2021. FAO, Rome. <https://doi.org/10.4060/cc9010en>
6. Climate Focus. 2023. Untapped Potential - An analysis of international public climate finance flows to sustainable agriculture and family farmers. Available at: https://www.ruralforum.org/wp-content/uploads/2023/11/GSCC_Family_Farmers_ENG-1.pdf

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