

BRIEFING NOTE No. 164

Climate change and food systems adaptation: Building roads through Rome

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Summary

The Rome-based Agencies (RBAs) play a vital role in supporting food systems transformations and providing governments, institutions and communities with assistance in food system adaptation. To strengthen the RBAs' integration into the food-climate nexus, this brief presents three possibilities at the country and global level:

- 1) The RBAs can play a stronger role in capacity sharing and providing technical support for country-level adaptation plans and implementation;
- 2) The RBAs should create a unified narrative around the food-climate nexus and advance this narrative during the global policy milestones in the coming year; and
- 3) European and African member states can push the RBAs to create a joint work programme on the food-climate nexus.

In addition, this brief provides ideas on collaboration, governance and strategies that can strengthen the coordination between Africa and Europe with the RBAs and discuss how the food-climate nexus and the role of the RBAs can be advanced at upcoming high-level policy events.

Introduction

The food-climate nexus

Food systems cause global warming while being heavily impacted by climate change.

The food-climate nexus refers to this intricate relationship between food production, consumption, and climate change. Food systems are a leading cause of climate change as they emit up to 37% of anthropogenic greenhouse gas emissions, of which livestock alone accounts for 12–19 % of the total (Crippa et al. 2021). The combination of global population growth and dietary changes is likely to drive up the demand for food by 56% between 2010 and 2050 (van Dijk et al. 2021). As especially resource-intensive meat and dairy consumption is expected to grow, the GHG emissions of food systems can rise by almost 90% in that period without mitigation efforts (Springmann et al. 2018; Adelle and Dekeyser 2022). Global food consumption by itself could add nearly 1 °C to warming by 2100 (Ivanovich et al. 2023), thus without transforming food systems, the Paris Agreement goals are unattainable, even if fossil fuel emissions were immediately halted (Dekeyser et al. 2019; Clark et al. 2020).

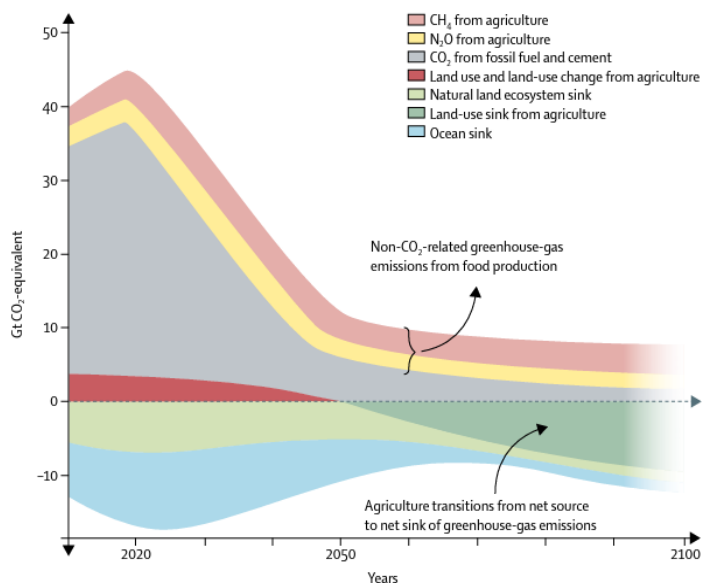


Figure 1.

Projections of global emissions to keep global warming to well below 2 °C, aiming for 1.5 °C. Source: Willett et al. 2018.

As Figure 1 shows, the challenge for food systems and agriculture is not only to drastically lower their emissions but also to transition its land use and land use change sector to a net sink for greenhouse gases through, for example, afforestation. Although total food system emissions have remained relatively stable since 1990, with a growth rate of less than 1% per year, changing land use and land use change from a net emitter to a net sink will be a huge endeavour against a background of increased food demand. Even if this is to be achieved, the impact of food systems looms large: only keeping methane and nitrous oxide emissions from food production stable will consume half of the allowable global emission from *all* sources in 2050 (Willett et al. 2018). In short, a huge 'mitigation gap' exists between projected food system-related emissions and their emissions targets for 2050 (Searchinger et al. 2019). Mitigation initiatives in food systems, such as

afforestation and other land use for mitigation and carbon taxation, can tradeoff with food security and achieving SDG2 (Fujimori et al. 2022). Stringent mitigation implementation could even lead to more hunger in 2050 than the direct impacts of climate change, especially in sub-Saharan Africa (Hasegawa et al. 2018). However, different from the energy sector, mitigation is only half of the huge challenge of transitioning food systems under climate change. The other half is adaptation.

Why focus on climate adaptation in food systems?

Climate change is impacting food systems worldwide. The recent AR6 Summary is an alarm bell sounding the need for urgent climate adaptation (IPCC 2021). While the landmark Paris Agreement strives to limit warming to 1.5 °C, current policies will produce a 2.7 °C warming (Climate Action Tracker 2022). Climate change has already hit food production and availability, particularly for the world's poorest, exposing millions to acute food insecurity. Heat extremes are causing mass animal and plant deaths and widespread deterioration of ecosystems. Unfettered climate change risks pushing one-third of global food production outside the safe climatic space that supports agricultural production (Kummu et al. 2021). The severe effects of climate change reach both Africa and Europe. In 2022, Europe experienced its worst drought in 500 years, which could have lowered some crop harvests by 16% during turmoil in the international grain markets (Toreti et al. 2022).

Yet, Africa is much more exposed as climate change-induced extreme weather hits especially hard around the equator (IPCC 2019). A record drought pushed millions towards starvation in the Horn of Africa alone (FEWS NET 2022). Global averages of agricultural productivity can hide important regional changes (Jägermeyr et al. 2021): Agricultural productivity growth in Africa has been reduced by 34% since 1961 due to climate change, more than any other region (IPCC 2022). Therefore, the time for adaptation is now: adaptation options that are feasible and effective today will become constrained and less effective with increasing global warming. But with little adaptation capacity in Africa, international cooperation – including mobilising and enhancing access to finance – remains a critical enabler for achieving ambitious climate change adaptation and climate-resilient development, particularly for developing countries (IPCC 2021). Climate change intensifies intersectionality by disproportionately affecting already-vulnerable groups, like women who often have lower wealth or children, as they will experience the worst impacts of global warming during their lifetimes. Yet even with a temperature increase of 2°C by 2050, adaptation costs per year could reach approximately USD 36 billion (median) per year by 2030 for Sub-Saharan Africa. Current global financial flows for adaptation are insufficient and do not reach vulnerable countries enough. More international cooperation is needed, not only to become more resilient to the impacts already felt but also to future-proofing the food systems.

While the energy sector is the main focus of current mitigation efforts, food systems are arguably the most important and difficult systems for adaptation, needing especially international R&I and catalytical investments and programmes. Although the UNFCCC's Koronivia Joint Work on Agriculture has shown some progress and placed greater emphasis on adaptation and loss and damage, the linking of food systems and the

climate agenda at COP27 was disappointing (D'Alessandro and Rampa 2022). More emphasis on the food-climate nexus did not result in political commitments, strong actions or financial contributions, especially towards sufficient support for the adaptation of African farmers.

Does food system adaptation lead us to Rome?

The Rome-based Agencies (RBAs)¹ have a vital role in advancing the climate adaptation agenda. The RBAs are the most important conveners in the global agrifood governance system and support adaptation through numerous programmes (Rampa et al. 2019). They are the go-to for technical assistance and programme implementation, including food system transformation (EC et al. 2022). However, given their mandate, expertise and experience, the RBAs could be more strongly integrated into global efforts to address the challenges of climate change. While they are already engaged in this area, various ways exist to strengthen further their contributions to the climate policy and programme processes. Such strengthening includes identifying opportunities for collaboration and partnership while leveraging their resources and knowledge to achieve greater impact.

This integration of food systems and the climate agenda greatly relies on support from European and African partners for three main reasons. First, the European Union (EU) and its Member States are the largest funders of the RBAs and global climate adaptation finance (EC et al. 2022; Knaepen and Dekeyser 2023). Second, African countries are the largest recipients of climate finance. They are disproportionately affected by climate change impacts, but their governments are also crucial to design, implement and monitor adaptation strategies and projects. Finally, the EU and Africa have already established a track record of collaboration on climate adaptation initiatives, providing a foundation for further cooperation in addressing the food-climate nexus.

Box 1: Examples of RBAs support for climate adaptation

The RBAs already have various projects building climate adaptation. At a roundtable,² participants from the RBAs shared a few projects with different approaches to climate adaptation, including SCALA³ (FAO), the climate risk programme (WFP in collaboration with IFAD), and AICCRA⁴ (CGIAR). SCALA supports twelve countries worldwide in strengthening their adaptive capacity and reducing greenhouse gas emissions to meet targets outlined in their National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs). The project works closely with countries to identify bankable projects and enhance their attractiveness to the private sector, with the ultimate goal of mobilising financing for implementation. Now that these countries have developed their climate plans, the focus is on translating these plans into action and securing the necessary funding to support their implementation. WFP's climate risk programme adopts proactive rather than reactive measures to address climate shocks. The organisation leverages private-sector climate insurance, complemented by early warning systems and resilience-building efforts, to support countries in minimising the impacts of climate shocks and facilitating swift recovery. However, given the increasing

demand for such interventions, the current capacity of the project is insufficient to meet the growing needs. As such, WFP collaborates with other organisations, such as IFAD and FAO, to scale up efforts and expand the reach of their initiatives. AICCRA seeks to enhance the access and adoption of CGIAR innovations by millions of smallholder farmers in Africa by integrating various technologies and improving their uptake. While technology development is crucial to adapt food systems, the primary challenge lies in bridging critical gaps beyond technology, such as investment and integrating different technologies. Addressing this challenge requires capacity sharing at various levels in Africa, including continental, regional, and country-level efforts.

How to strengthen the food-climate nexus and the involvement of the RBAs?

At country and global levels, there are possibilities to involve the RBAs stronger in climate adaptation. The RBAs can play a greater role in country support, build a shared narrative around the food-climate nexus, and create a joint work program on climate adaptation. A unified Africa-Europe support could strongly benefit the RBAs to capitalise on these opportunities: With several imminent high-level events this year, including the fifth AU-EU Agriculture Ministerial in June 2023, there are ample opportunities to explore and discuss potential avenues for fostering such support. Possibilities for stronger RBA involvement in climate adaptation include:

- 1) The RBAs can **play a stronger role in capacity sharing and providing technical support for country-level adaptation plans and implementation.** A lack of local capacity is often identified as a stumbling block to realising adaptation plans. RBAs have the experience and evidence base to improve implementation through capacity sharing and technical support and coordinate among the many available financial instruments while accelerating the uptake of climate-resilient innovations.
- 2) The RBAs should **create a unified narrative around the food-climate nexus** and advance this narrative during the global policy milestones in the coming year. With several upcoming international policy processes and events featuring food systems and climate change, these opportunities could be used as a stocktake on the current state of the food-climate nexus and as platforms to discuss the design and implementation of food-climate strategies. Section 'The way forward' discusses these opportunities.
- 3) Member States can advocate creating **an outcome-based joint work program of the RBAs on the food-climate nexus**, including RBA collaboration, based on respective mandates, added value and upscaled implementation of food system adaptation initiatives. Additionally, consideration could be given to establishing a joint Trust Fund to provide financial resources for the work program. Member States advocacy is needed as the particular institutional set-up of the RBAs does not foster easy joint planning and programming.

How can Africa and Europe work better together on the food–climate nexus?

The African–Europe–RBA dynamic could be strengthened by improving collaboration and governance and strategy. While Africa and Europe work together on climate adaptation, climate diplomatic relations are weakened by the state of the general AU–EU partnership, the potentially negative repercussions for Africa of Europe’s Green Deal strategies like the Farm to Fork strategy, inadequate climate financing both in terms of quantity and quality, and skewed focus on climate mitigation when Africa, like much of the developing world, needs support for adaptation and resilience (Knaepen and Dekeyser 2023). Working together at the RBAs and focusing on the shared goal of adaptation could provide a setting to build trust in each other’s intentions and commitments.

But the RBAs also face their own set of challenges. Box [1] highlights the diverse range of adaptation initiatives being undertaken by the RBAs and showcases how these institutions are collaborating at both the project and country levels. However, coordination challenges persist beyond the project level. While there is a constant dialogue around the need for coordination, there is often reluctance among stakeholders to be coordinated. The donor-funded nature of the RBA system creates a challenge in ensuring that everyone receives due credit for joint work, and differing programming cycles pose further difficulties in establishing joint work programs. Although NDCs provide a framework for climate action, securing the necessary funding remains a significant obstacle. Moreover, creating an enabling environment for private sector engagement requires aligning risk and returns, a difficult task.

Hence, Table 1 provides ideas to strengthen the African–Europe–RBA dynamic and address some of these challenges. The ‘Collaborate’ theme suggests the need for stronger coordination on common AU–EU topics at the RBAs. Currently, there is space for greater interaction between European and African Delegations at the RBAs, with currently ad-hoc meetings only taking place during relevant summits and conferences. Stronger AU and AU MS coordination is already underway but could be strengthened by FAO’s recognition of an AU Ambassador. Conversely, EU MS coordination seems already well established. By providing more spaces for open and frank dialogues, the areas of agreement and tension can be better fleshed out. The RBAs could participate in these dialogues as the global standards setter and could do more to push for implementing higher standards within countries. Additionally, while coordination at the leadership level within the RBAs has improved (FAO, IFAD and WFP 2021), many opportunities remain to coordinate strategies and approaches within and outside the RBAs.

Although each RBAs has its own climate strategy with an implementation plan, there is no common position on several contention points within the RBA system. Therefore, it is important to intensify networking, experimenting, and learning to improve collaboration

between the African Union (AU), the EU, and the RBAs. The RBAs could take a more proactive role in organising meetings, workshops, and other events where AU and EU delegations can come together to share experiences, discuss challenges, and explore opportunities for collaboration. In addition, the AU and EU could improve the visibility of the RBAs within their respective organisations, so more of the RBAs’ expertise can trickle down into policy making.

Table 1. Ideas for better coordination of African and European countries at the Rome-based Agencies (RBAs).

<i>Collaborate</i>	
1	Coordination stronger on common AU-EU topics at the RBAs
2	Internal coordination within AU and EU Member States Delegations
3	Provide space for open and frank dialogues
4	Work on coordinating between strategies and approaches within and outside the RBAs
<i>Governance and strategy</i>	
5	Create strategic framework between the AU and the RBAs
6	Create strategic framework for AU-EU-RBA coordination
7	Link action at the RBAs into long-term AU and EU partnership agendas
8	Involve Rome-based delegations more into their countries’ RBAs and global food security policies

The ‘Governance and strategy’ theme outlines ideas for a more structured and powerful approach to coordination between the AU-EU-RBAs. Aligning AU Member States’ positions at the RBAs and enhancing the voice of African countries in Rome could be facilitated by a strategic framework between the AU and the RBAs. In its recent Council conclusions, the EU highlighted its relationship with the FAO, but a comparable strong connection between the AU and the RBAs appears to be missing. A strategic framework could also contribute to better aligning the priorities of the AU with those of the RBAs, and identifying areas of mutual interest and possible cooperation.

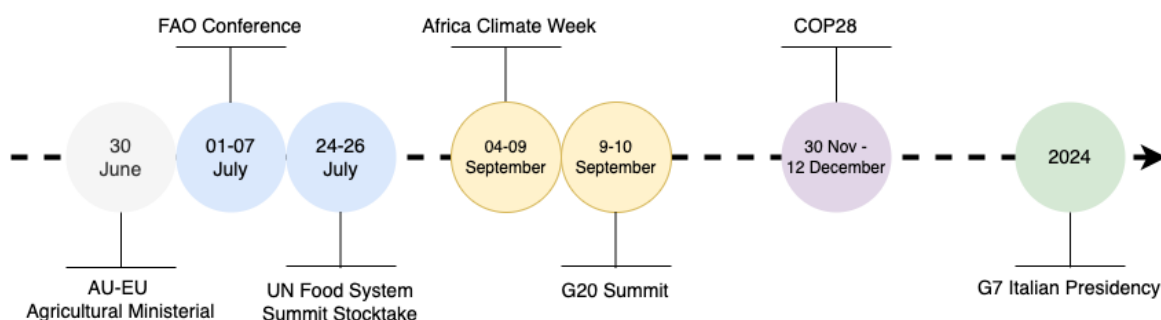
Over time, the enhanced coordination between AU-EU and AU-RBAs could potentially result in a more strategic approach to AU-EU-RBAs coordination, where joint AU-EU positions are formulated and executed with the support of the RBAs. The food system support aspect of the AU-EU Partnership could benefit from stronger integration of the RBAs, drawing on their wealth of expertise and experience. Finally, many countries formulate their RBA policies without sufficient input from their delegations to the RBAs. By involving the Rome-based delegations more actively in their countries’ RBAs and global food security policies, the delegation’s positions can be strengthened, and more meaningful dialogues can be held in Rome, while the respective capitals can benefit more from insights from the RBAs into their policies.

2023 as the year of the food-climate nexus: what's on the menu?

The year 2023 presents several opportunities to strengthen the food-climate nexus and the role of RBAs in climate adaptation at country and global levels (figure 2). This year, from the fifth AU-EU Agriculture Ministerial to COP28, can be an opportunity to assess the progress made in food-climate action. The **AU-EU Agricultural Ministerial** is a meeting of all EU MS and African agriculture ministers and focused in 2023 on sustainable investments, R&I, climate resilience and trade, all of which should be deeply integrated with the food-climate nexus. This Ministerial meeting was an opportune moment to discuss Africa-Europe collaboration within the food-climate nexus, and its objectives included a joint assessment of the interdependencies of African and European food systems and how green policies and investments in the two continents can support each other's food system transitions. These discussions, however, did not deliver concrete common AU-EU diplomatic positions from the FAO Conference to COP28 and beyond. Nevertheless, continued discussions within the FAO organs and to prepare for the next AU-EU Agriculture Ministerial could feature a mandate for a joint food-climate work program at the RBAs, focused on Africa's adaptation, given its need for international support in that area.

The **UN Food Systems Summit Stocktaking Moment** will review the progress of the 2021 UN Food Systems Summit and share stories of success and early signs of transformation. It will be interesting to look at the UN Food Systems Coordination Hub, which connects the RBA ecosystems with countries aiming to implement their national pathways on food system transformation, and which can also contribute to stronger RBA coordination. With the AU-EU Agriculture Ministerial and Stocktaking Moment happening in Rome, it is an opportune moment for the RBAs to bridge the different events and facilitate greater coherence on the food-climate nexus.

Figure 2. When are the opportunities? Timeline of selected upcoming food-climate relevant events for 2023.



After a slow start, food systems are becoming rapidly more important in the UNFCCC process. According to early indications by its Presidency, **COP28** will feature food systems more heavily than COP27, particularly the need for adaptation in food systems. Climate change is at the top of many agendas, and making compelling linkages between food security and climate action at COP28 helps to highlight the impacts that mitigation policies can have on food security and the need to adapt food systems already now to global warming. Lastly, Italy will assume the Presidency of the **G7** in 2024, when the Multilateral Development Banks reform process, also seeking to make climate financing work better for vulnerable countries, is supposed to show concrete progress. Traditionally, the Italian Presidency has given food security a high priority.

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Endnotes

1. Meaning the World Food Programme (WFP), Food and Agricultural Organization (FAO), and International Fund for Agricultural Development (IFAD). Although the Consultative Group on International Agricultural Research (CGIAR) is not typically classified as an RBA, we have included it to reflect its increasing profile in Rome.
2. Titled *“Informal roundtable discussion: Investments, policies and innovations for the adaptation of agrifood systems to climate change: improving cooperation towards the Fifth AU–EU Agriculture Ministerial Conference”*, 4th of April 2023, Rome, organised by ECDPM (ECDPM 2023).
3. Scaling up Climate Ambition on Land Use and Agriculture through Nationally Determined Contributions and National Adaptation Plans.
4. Accelerating Impacts of CGIAR Climate Research for Africa.