Tentative Preliminary Reflection for consideration by the Standing Committee on Finance on suggested sub-themes identified for 2025 Forum on accelerating climate action and resilience through financing for sustainable food systems and agriculture

This is a rapid submission in response to the call by the Standing Committee on Finance (SCF) for input regarding the 2025 Forum on accelerating climate action and resilience through financing for sustainable food systems and agriculture, which will be held from 8 to 9 September 2025 at the FAO Headquarters, Rome, Italy. This submission is shared by The Borders Institute (TBI) and is not an official statement on behalf of any organization. It follows a discussion with a subset from amongst many colleagues from different institutions working on the Economics of Drought [see non-exhaustive listing in: ,1].

We have discussed how to respond directly to 3 questions that were included in the call for inputs published by the SCF and have shared the call for inputs with colleagues in relevant institutions in several drought-affected Least Developed Countries (Uganda, Mali and Senegal). A rapid translation of the call into French using DeepL facilitated this discussion. Mali succeeded to make a national submission ahead of the SCF meeting in February and Senegalese inputs have guided the improvement of this intended collective global perspective.

1. Evidence and information relevant to the possible sub-themes identified by the co-facilitators to further explore and develop the programme of the Forum;

In the formulation of National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs) and National Communications (NCs), new project proposals and Needs Assessments, countries reflect on information and evidence from their completed adaptation experiences. Many of these refer to accelerating climate action and resilience through financing sustainable food systems and agriculture. A recent review of agrifood systems in the NDCs [2] considers many of the intended sub-themes[i]. The 2024 Adaptation Gap Report (AGR) [3] also presents evidence and information of adaptation finance and achievements from evaluations of National Adaptation Plans and projects supported by the Climate Funds, including Adaptation Fund, Green Climate Fund (GCF), Least Developed Countries Fund and Special Climate Change Fund[ii].

Several reviews of effective finance [4,5] have previously explored information and evidence from these funds and others on how financing agriculture and food systems strengthens resilience to droughts in a manner which mutually supports sustainable development (Theme 1). The results systems and ongoing evaluation of multilaterally financed projects provide some relevant information. As of late 2024, 168 project evaluations had been published by the multilateral funds (including all support across different sectors)[3]. The largest number of these were from the LDCF, whereas the GCF had only completed and evaluated two projects by the time of the review. This is because the GCF began its work only more recently. Also: its project durations are generally longer and the size of funds involved tend to be larger.

Pending the completion of projects, significant information and evidence is already collated by the proponents in the project proposals and annual progress reporting. During February 2025, an independent evaluation of GCF work in its thematic area on Health and Well-being, and Food and Water Security' Result Area (HWFW2024) was discussed by the GCF B41[iii6]. The GEF Secretariat has also recently reviewed its portfolio of work on building resilience to droughts. This included consideration of projects under the LDCF, SCCF and other Trust Funds[iv].

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[i] https://knowledge4policy.ec.europa.eu/publication/agrifood-systems-nationally-determined-contributions-global-analysis_en

[ii] These represent the financial mechanism that serves the UNFCCC and the Paris Agreement. However, it is important to note that GEF accounts for just a small part of overall implementation funded by international public adaptation finance. The AGR noted this and estimated that just 5 per cent of the concessional international public finance commitments (US$1 billion out of US$20.1 billion) was through the multilateral climate funds in 2022

[iii] https://ieu.greenclimate.fund/evaluation/HWFW2024

[iv] https://www.thegef.org/sites/default/files/documents/2024-10/UNCCD_COP16_GEF_report_Council.pdf

The SCF could consider conducting a dedicated meta-review of the available body of information and evidence in line with the Forum theme and sub-themes. In case of considering impacts targeted and monitored by funded projects (as explored previously[4]), this might shed light on the area of land under agriculture targeted by the current multilateral climate funds and national adaptation investments (see also the food systems countdown initiative[v]), and the extent to which this mutually supports sustainable development (themes 1, 2 & 3). More detailed investigation of this body of available information and evidence could also interrogate some or all of themes 4, 5 & 6. Pending the availability of resources to conduct such a comprehensive global review, the case study approach considered by the SCF for its forum is pragmatic and likely to be informative.

Themes 7, 8 and 9 focus on analysis of different financing instruments and the financing landscape for climate action and resilience. Some information and evidence about access to finance, including public sources, national and international financing, as well as private sources, including from agribusinesses, private banks and impact investors (Theme 8) addressing land degradation and droughts is available in countries' national reporting under the UNCCD for 2022. This supplements information on flows of finance that is available through the OECD CRS database by adding further insight about public and private expenditures at the national and sub-national level – to the extent that this information is available and countries choose to report it. Parties to the UNCCD are now preparing for their 2026 national reporting, which will supplement the available information and evidence in due course. The SCF could decide to complement or accelerate this available ongoing evidence-generation and its associated review process.

Across all sectors, a reduction in grants-based funding for adaptation in 2023 showed as a decrease in the five-year moving average for the first time in the 2024 AGR. On the other hand, fiscal instruments, incentives and regulation and multisectoral policy coherence and coordination (Theme 7) are receiving increasing attention as promising means for governments to support, incentivize and enhance sustainable agricultural production. These are increasingly considered in national plans. For further discussion, please refer to recent reports by the Global Mechanism and Islamic Development Bank [7] and work on Sustainable Financing under the G20 [vi8,9].

Innovative financial instruments, particularly those which can be tailored for smallholder farmers and other small and medium-sized enterprises, including green bonds, climate-smart agricultural loans, insurance schemes and digital financial platforms (Theme 9) are discussed in the sources already cited. Non-grant instruments, such as concessional loans, equity and guarantees, account for an increasing share of climate finance [3]. Such funds are mostly not made directly available from multilateral funders such as the GCF to smallholders, but rather rely on a series of intermediary institutions. Live questions still concern the extent and proportion of adaptation funds actually reaching small farmers and other vulnerable people without access to land. Further significant concerns relating to aggravating national debt burdens have generated interest in debt- swapping solutions in some countries.

We would like to underline the above information as evidence regarding the needs for further work on Theme 11. Capacity-building and technical support for farmers, small and medium-sized enterprises and institutions involved in the agricultural and food sectors in developing countries is needed to prepare investment-ready projects and strengthen access to different financing sources and instruments. Financial needs assessment and assessing both Economic and Financial returns on investments are strategic areas for capacity building to institutions in developing countries. This reflects findings in available assessments [1–3]. Available assessments also agree that achieving adaptation objectives in agrifood systems requires a distribution of finance not only directed at strengthening the

[v] https://knowledge4policy.ec.europa.eu/publication/governance-resilience-entry-points-transforming-food-systems-countdown-2030_en

[vi] https://g20.org/track/sustainable-finance/

resilience of agricultural production, value chains and livelihoods, but also to sustain the interlinked ecosystems that provide essential ecosystem services and biodiversity for agrifood systems.

In most cases, the largest share of investments in resilience-building is made by the small farmers themselves [10]. Assessing the returns on all types of investments in building resilience is particularly important as a justification for financing sustainable food systems and agriculture, and a key to the effective design of financing interventions (themes 7, 8 & 9). With regard to this, we would like to highlight recent and ongoing work on the Economics of Resilience to Droughts [1] and further work soon to be published in the IPBES Nexus Report Chapter on Financing. This relates also to all of the previous themes, including Theme 6. (Integrating climate-resilient and science-based adaptation strategies into agricultural and food systems policies, national development strategies and national climate and investment plans) and Theme 5. (Experiences and lessons learned in designing and financing country-driven sustainable farming practices tailored to country-specific needs and priorities).

2. Examples and case studies related to financing sustainable food systems and agriculture;
We would suggest a global case study relating more specifically to financing resilience to droughts, noting that this is the number one climate hazard mentioned in the review of NDCs as of last year[2]. There is considerable scope to update and further explore case studies on the economics and financing of resilience to droughts already prepared for previous reviews [4,11].

The global case study could be accompanied by further presentation of regional cases that we have explored previously based on financed interventions. Please see: Appendix 1, for notes on a possible new discussion of case study focusing on financing resilience along the Great Green Wall across the Sahel. See also Appendix 3 for suggestion of a case from the Central American Dry Corridor.

We could also propose national and/or sub-national cases from LDCs to be included – e.g. such as the Great Green Wall in Senegal (see Appendix 1.1 or a national case from Mali (see their national submission sent separately). Other national cases that we would propose for consideration would include Kenya (based on the GCF-financed Twende Project – see Appendix 4), India (based on AF-funded project see notes in Appendix 2) and Australia (contact information at each could be provided upon request and following possible refinement of themes for the Forum).

Some economic and financial aspects of these cases have also been partially explored at more local scales through an EC and German-funded Economics of Drought Initiative, and/or others have previously been investigated with specific reference to resilience to droughts [11].

We would suggest that the SCF consider inviting resource person(s) from selected case study(ies) to present their cases - ideally in-person. Or, presentations could be made virtually if this is the only available option – depending on resources available.

3. Possible additional sub-themes for the co-facilitators to consider in the programme

There may be a missing theme regarding evidence and information on value chains and systems of Payments for Ecosystem Services (PES). The latest State of Finance for Nature Report[12] was not able to include either of these in its estimation of Restoration Finance. The explanation provided is that both of these finance avoiding degradation (rather than restoration) and the data available is not granular enough (Table). In 2023, the SFN report[13] attempted to more comprehensively explore and model investment needs for three NbS types: restoration NbS, protection NbS and sustainable land management NbS. In that analysis, private finance channelled via sustainable supply chains was estimated at US$8.6 billion.

Table 1: Categories of finance marked or not marked as finance for restoration [12]

Category	Marked for restoration	Justification and approach (Fully marked / Partially marked / Not marked)
Carbon markets / Forest and land use carbon finance	Partially marked	Include carbon credits directed to increasing soil carbon (agriculture category) only, forestry and land use (including REDD+) are not included as they are mostly directed at avoided deforestation or can include non-native commercial plantations which are not within ecosystem restoration .
Sustainable supply chains	Not marked	Not included because most certification financial flows are towards avoiding impact (especially in forestry which the largest financial flow). Data is not granular enough to extract activity specific financial flows
Biodiversity offsets	Fully marked	Fully included as offsets finance active restoration of ecosystems to compensate for degradation
Impact investing	Partially marked	Included impacts funds with main solutions tagged as "ecosystem restoration" or "regenerative agriculture" in the capital for climate database
Conservation NGOs	Fully marked	Fully included as most activities from the NGOs tracked directly participate to biodiversity restoration projects
Private finance mobilized by ODA	Not marked	Not included as the data is not granular enough to identify restoration activities and the overall category is large (general environmental protection)
Philanthropy	Fully marked	Included as the data is already filtered to the biodiversity sector which is mostly constituted of ecosystem restoration activities
PES	Not marked	Not included as the data is not granular enough to identify restoration activities and PES often finance avoided impact.
Farmer's investments into conservation agriculture	Fully marked	Fully included as regenerative agriculture, of which conservation agriculture is a subset, is considered an active restoration activity

Further details on methodology, data and limitations can be found in the SFN 2023 technical annex.

To some extent, PES and Sustainable Supply Chains may be covered in references to food systems, which should imply attention to the value chain and at least some product-based PES to reach the ground, even in the absence of other mechanisms requiring more attention to institutional set-ups and local ecological monitoring capabilities. Also, some of the more exciting areas would be picked up under Theme 10.: Essential role of international and multi-stakeholder cooperation, public and private partnerships, trade and trade policies, non-Party stakeholders and other actors in supporting climate action in the agricultural and food sectors. Nonetheless, this theme is very broad and contains many issues worthy of more detailed and in-depth attention. An additional suggestion to add AI as a theme was received from WOTR – see Appendix 2.

It may be relevant to note that the outcomes of the Brazilian G20 presidency, including decisions on the digitalisation of trade instruments; mapping global industrial, value and supply chains; accelerating their industrialisation and modernisation process; and committing to enhance national ownership and maximise the impact of investments. See: https://kippra.or.ke/14788-2/ https://t20southafrica.org/task-forces/trade-and-investment/

APPENDIX 1: Further Background on Great Green Wall Case (to be explored further with stakeholders)

Financing to accelerate resilience through sustainable food and agriculture on the Great Green Wall has received significant interest and support (see: https://www.greenclimate.fund/theme/great-green-wall). The time available before the deadline for submissions was insufficient to convene an expert dialogue including all Great Green Wall countries. However, we were able to share information about the Forum theme and the call for inputs with the UNFCCC National Focal Point to the UNFCCC in Mali. Mali would need some time during February to prepare a response to the call e.g. until 14th. This might not only focus on the Great Green Wall and the government would want to consult stakeholders before responding.

The creation of sustainable value chains is at the centre of the case for investment in the Great Green Wall. Several aspects of the case of the Great Green Wall have been explored discussed see: GCF FP 183 and Case Study 11 in: ,11,14. Some further information has already been published. [15–20]. See also : GCF FP256 for Mali [21]. The research carried out by ISRA could provide a better understanding of local dynamics.

Appendix 1.1.

ISRA have data and evidence that could be presented on themes 1,2 and 4 in particular. For theme 2 (The role for different actors across the financing landscape for agriculture and sustainable food systems, and how these actors can work together to enhance the scale and impact of investment in climate outcomes through these sectors, including to respond to the needs and priorities of developing countries and affected communities), ISRA have conducted experiments on platforms that could be shared with the Forum.

An experiment that has been in progress for 4 years will be able to provide information and evidence on Theme 1. Opportunities for financing agriculture and food systems to be positive drivers of climate action and strengthened climate resilience in a manner which mutually supports sustainable development. Also: on Theme 4. Gender-responsive financing in the agriculture and food sectors as a tool for enhancing climate action and resilience.

From an operational point of view, they can also be backed up by an experiment currently underway, based on the establishment of an organizational structure, local leadership and the implementation of direct financing arrangements for producers in partnership with the (Fonds national de Développement agrosylvopastoral (FNDASP), local authorities and administrative authorities. The “Resilience and Intensive Reforestation to Safeguard Territories and Ecosystems in Senegal” project is implemented by the FAO in support of the GMV initiative.

To achieve these objectives, the project plans to finance, by 2026, sustainable land management (SLM) sub-projects at local level, as well as micro-enterprises to develop value chains for non-timber forest products (NTFPs) and create sustainable jobs using European Union (EU) resources (dollars). A grant, allocated to the beneficiaries, mainly Economic Interest Groups, will enable the implementation of activities to restore soil fertility, vegetation cover and water and soil conservation (CES/DRS), promote sustainable employment for young people and women, agro-ecological farms, etc., with a focus on initiatives to mitigate environmental risks, preserve natural resources and scale up sustainable land management (SLM) best practices.

Local Coordination Committees and Sub-project Review and Approval Committees have been set up in each of the 13 communes covered in the Groundnut Basin and in the sylvopastoral zone by the administrative authorities. A procedure manual has been drawn up and approved by the FAO. In the final stage, the project will select the groups and draw up a written agreement with each of them, setting out their roles and commitments, the exact amount of the project subsidy, and the amount of the

financial contribution. In the final stage, the project will select the groups and draw up a written agreement with each of them, setting out their roles and commitments, the exact amount of the project subsidy, and the amount of the financial contribution provided by the group. To monitor and supervise the sub-projects, the RIPOSTES project will work in close collaboration with a technical implementation partner specializing in supervising and monitoring the financing of producer groups.

All beneficiaries with a bank account and legal recognition will be selected on a competitive basis, in accordance with the procedures described above and in the procedures manual.

Pending further discussion with stakeholders, we could tentatively suggest a presentation by ISRA/CNRF, Senegal on one or more of the following themes (tbc – please contact: Prof. Diaminatou Sanogo, CT DG ISRA, Dr Marone Diatta and Dr Mame Sarr at ISRA/CNRF):

1) Sustainable value chains and opportunities for investment in Non-Timber Forest Products from the Great Green Wall
2) Preliminary findings from using the Toolbox for Ecosystem Service Site-based Assessment (TESSA) to assess ecosystem services from the Great Green Wall
3) Raising awareness among young people and women to boost the green economy in Great Green Wall sites (surveys and focus groups already carried out by ISRA and data available)

APPENDIX 2: WOTR Case Study for India

Watershed Organisation Trust (WOTR) is collaborating with a diverse range of stakeholders in India, including research institutions, government agencies, private sector actors, and international organizations, to finance sustainable food systems. For instance, our partnership with the National Bank for Agriculture and Rural Development (NABARD) has facilitated implementing climate change adaptation projects emphasizing the importance of integrated approaches that involve collaboration with multiple stakeholders. WOTR is an Executing Agency for an Adaptation Fund Project Implemented by NABARD[vii]. In India access to credit has significantly enhanced smallholders' capacity to invest in necessary technologies and inputs, which is vital for improving their productivity and resilient agri-food systems[viii].

Farmer Producer Organizations (FPOs) play a crucial role in empowering smallholder farmers and promoting sustainable food systems in India. By bringing together small-scale farmers into collectives, FPOs strengthen their bargaining power, improve access to markets, and enable the adoption of climate-resilient and sustainable agricultural practices. FPOs also help farmers access financing, high-quality inputs, and technical assistance, which are essential for building climate resilience and ensuring long-term sustainability. In WOTR's experience FPOs have been instrumental in promoting the use of innovative technologies, such as digital platforms for precision farming, climate-smart inputs, and sustainable pest and nutrient management practices. They also facilitate water management practices and SLEM activities, further enhancing resilience. By connecting farmers with value chains and markets, FPOs have increased incomes and reduced vulnerability to climate shocks, creating a more inclusive and sustainable food system[ix]

SCF should consider FPOs as a key mechanism for scaling up sustainable agricultural practices and climate resilience in developing countries. Support for FPOs through capacity-building initiatives, financial incentives, and access to innovative financial instruments will help strengthen their role in firming smallholder farmers and promoting sustainable food systems[x]

Background

WOTR has implemented several projects in semi-arid areas of India that demonstrate how sustainable agricultural practices with innovative financing can drive climate action and enhance resilience. For example, Climate-Resilient Agriculture (CRA) initiatives in Maharashtra have helped smallholder farmers adopt practices such as agroforestry, conservation agriculture, and integrated pest management. Crops managed with integrated nutrient practices and organic manures showed a higher BC ratio, comparatively higher yield, and lower GHG emission. In comparison with conventional nutrient practices, the fertilizer-induced GHG intensity was reduced considerably when the crops were treated with organic manure alone (60.17%) and integrated nutrient management (52.21%). When compared with conventional farmers' practice, an average of 55% increase in the yield was observed for integrated nutrient management and organic manures while about 33% increase in yield was observed in plots treated with chemical fertilizers. The highest increase in the yield was observed in the farms treated with organic manures alone or in a combination of the chemical fertilizers[22].

In addition to these agricultural practices, effective water management and Sustainable Land and Ecosystem Management (SLEM) activities are essential to achieving sustainable food systems. WOTR has implemented integrated watershed management and SLEM approaches to improve water availability,

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[vii] https://www.adaptation-fund.org/project/building-adaptive-capacities-communities-livelihoods-ecological-security-kanha-pench-corridor-madhya-pradesh/

[viii] https://www.nabard.org/auth/writereaddata/tender/0903222313nrs-20-mid-term-evaluation-of-climate-change-adaptation-projects.pdf

[ix] https://wotr.org/2021/04/26/how-farmer-produce-companies-are-empowering-the-agricultural-market-in-india/

[x] https://wotr.org/2022/12/05/successful-farmer-producer-organisations-look-beyond-the-objective-of-profits/

soil health, and ecosystem resilience. Soil and Water Conservation techniques such as rainwater harvesting, contour bunding, and the construction of farm ponds have significantly increased water retention in the soil, reduced soil erosion, and enhanced groundwater recharge. For example, water budgeting and micro-irrigation systems, such as drip and sprinkler irrigation, have optimized water use, allowing smallholder farmers to irrigate more crops with less water, contributing to both food security and climate resilience[xi],[xii].

By integrating water management and SLEM with Climate-Resilient Agriculture, WOTR's projects have shown that achieving sustainable food systems requires a holistic approach that addresses not only agricultural practices but also water and land resource management. These combined efforts have resulted in improved yields, greater climate resilience, and a more sustainable and equitable food system for smallholder farmers[1].

RECOMMENDATION FOR FURTHER CONSIDERATION OF AI

Based on the learnings from Watershed Organisation Trust's work in India, they suggest that leveraging digital technologies for Climate-Resilient Agriculture could be considered as a possible sub-theme. The potential of digital technologies, in developing the locale specific dynamic crop and weather advisory by leveraging artificial intelligence (AI) and the Internet of Things (IoT) for sustainable agriculture is immense. AI-powered platforms can help smallholders access customized advisories for their farm which help them reduce the input cost and increase the net profit[23]. Up scaling such tools and technology will enable small holder farmers take data driven decisions, and accelerating the climate action and resilience by sustaining the agri-food systems.

Contact : Marcella D'Souza, Director, W-CReS

[xi] https://wotr-website-publications.s3.ap-south-1.amazonaws.com/Water_Budgeting_Brochure_English.pdf

[xii] https://wotr.org/2018/03/31/water-budgeting-in-telangana-the-need-and-the-objective-of-the-campaign/

APPENDIX 3:

A Case study 7: Community Contingency Funds in the Dry Corridor of Central America was published by the Integrated Drought Management PRogramme [in 11] . See also https://www.fao.org/hand-in-hand/news/en and the IPBES Nexus Report[xiii] for a further case study from the Central American Dry Corridor on Financing the Biodiversity-Water-Food-Health and Climate Nexus.

[xiii] Note that a new regional scale Case Study of financing for the food-energy-water-climate biodiversity nexus from this region is also expected to be published by IPBES in its forthcoming Nexus Assessment early in 2025

APPENDIX 4: Further Background on Financing Resilience in Kenya and the GCF-funded project TWENDE (Towards Ending Drought Emergencies: Ecosystem Based Adaptation in Kenya's Arid and Semi-Arid Rangelands)

The National Drought Management Authority (NDMA) of Kenya is a public body with a mandate and mission to lead and coordinate drought risk management and climate change adaptation towards achieving resilient communities in Kenya. It shares knowledge and maps investments in resilience: https://knowledgeweb.ndma.go.ke/?_gl=1*1nt8atk*_ga*MTQ1MjYzMzY4LjE3MzI3ODE5MzM.*_ga_RVYWZRJTGS*MTczODQ3ODgwNi41LjEuMTczODQ3ODgxOC4wLjAuMA. Amongst these, information about the GCF-funded Twende project is available from: https://ndma.go.ke/twende/

The objective of the TWENDE project is to reduce the cost of climate change induced drought on Kenya's national economy by increasing resilience of the livestock and other land use sectors in restored and effectively governed rangeland ecosystems. The project will contribute to improved adaptation to climate change of Kenya's national policy of "Ending Drought Emergencies", as outlined in "Kenya Vision 2030". The project will strengthen climate change adaptation in Kenya's arid and semi-arid lands (ASALs). ASALs occupy 89% of the country and are home to about 36% of the population and 70% of the national livestock herd. Livestock contributions account for 80% of household incomes in arid lands and 65% in semi-arid lands. Drought has been shown to reduce economic growth in Kenya by 2.8 percentage points per year for three years (from 5.2% to 2.4%), with 72% of the losses concentrated in the livestock sector. Frequency and intensity of drought is increasing as a result of climate change.

The project has completed a Mid-Term Review of its implementation in 11 counties, which have devolved powers under Kenya's new constitution. The project continues to publish annual reports on progress toward the objectives to benefit 620,000 people in 104,000 households and protect or restore 500,000 hectares of rangelands in a landscape of 2.5 million hectares. The target landscapes are dry season grazing areas: critical resource zones that provide refuge during periods of drought. Their existence depends on availability of permanent water, which makes them hotspots for resource competition and land use change. They are used seasonally by large numbers of livestock keepers, often from multiple ethnic groups, following customary governance practices. Customary institutions have become weakened, leading to break down in natural resource governance, degradation of resources, and escalating conflict.

The target landscapes face challenges of weak capacities for landscape planning, poor access to climate data and analysis, and low access to markets and financial services. The project addresses this through three components:

- Component 1: Climate change adapted planning for drought resilience
- Component 2: Restoration of rangeland landscapes for ecosystem-based adaptation
- Component 3: Climate change resilient ecosystem management for investments

Enhancing the ability of community-based cottage industries to access markets and financial services is an important part of the project. For further information, please see: https://iucn.org/our-work/projects/twende-towards-ending-drought-emergencies-ecosystem-based-adaptation-kenyas-arid#projectGlance and https://www.greenclimate.fund/project/fp113 NDMA and IUCN are collaborating with experts to review and update the Economic and Financial business case through the Drought Resilience initiative with support from EC and the German Government.

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