



**GREEN  
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# **AGRICULTURE AND FOOD SECURITY**

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**GCF Regional Session for Direct Access Entities in Africa 15 March 2022**

# INTRODUCTION

## Today's presentation

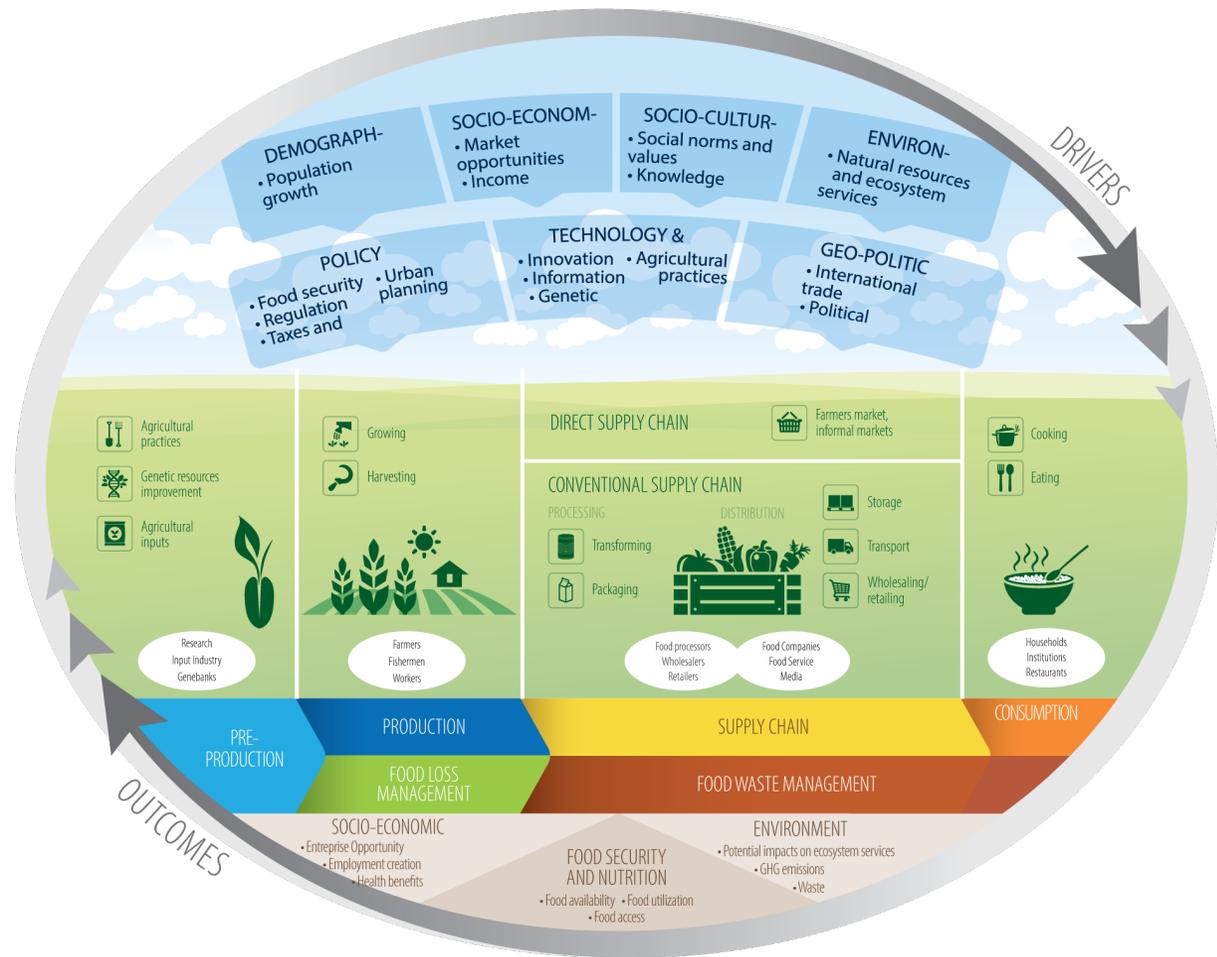
- Overview of the GCF agriculture and food security sector guide
- Emerging priority topics and approaches for GCF-1 and GCF-2
- The role of DAEs in programming and implementation
- Q&A and discussion



# CURRENT CHALLENGES IN OUR FOOD SYSTEMS



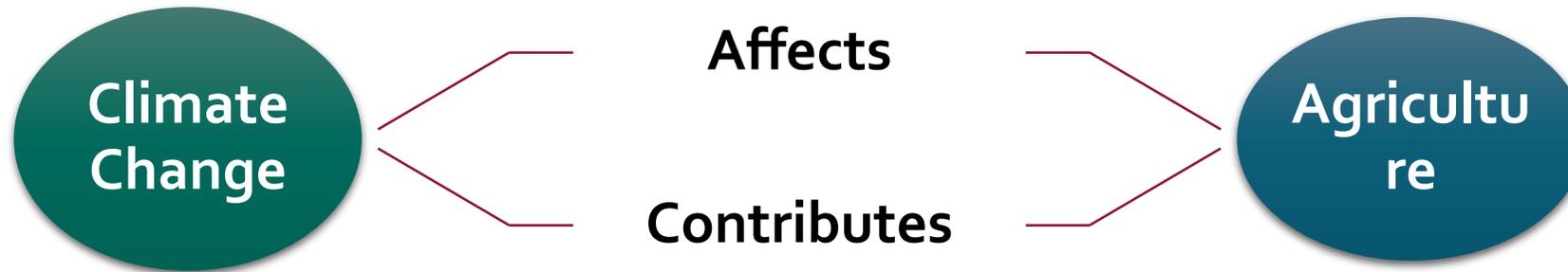
- Agriculture is central to food security, livelihoods, and supports livelihoods for 86% of the world's rural population.
- Agriculture and food security sector is facing the challenges of increasing quality and quantity of food production while reducing the sector's environmental footprint
- Since most agriculture is rainfed in developing countries, climate change directly impacts agriculture by increasing temperatures, rainfall variability and extreme weather-events
- Beyond production, climate change is expected to impact supply chains, agro-processing and marketing of food and other agricultural products



# AGRICULTURE AND CLIMATE CHANGE



- The agriculture sector has two-way linkages with climate change:



- Crop yields are predicted to decrease by **10-50% by 2030** while total food production must increase by **30-60% by 2050**
- Agriculture sector is responsible for **19% of global GHG emissions**, with food losses accounting for **another 8% - Total 27%**
- Dire need for **farming as well as food systems** to be transformed to build climate resilience and meet the increasing global food demand – **Paradigm Shift**

# Agriculture and Food Security: Drivers of change across paradigm shifting pathways



		Four drivers of paradigm-shift				
		Transformational Planning & Programming	Catalyzing Climate Innovation	Mobilization of Finance at Scale	Coalitions & Knowledge to scale up success	
Paradigm - Shifting Pathways	Promoting Resilient Agroecology	<ul style="list-style-type: none"> <li>Integrated agricultural development planning that mitigates the risks of maladaptation &amp; maximizes joint adaptation-mitigation synergies &amp; co-benefits</li> <li>Enabling community-responsive policies, frameworks &amp; practices</li> <li>Investment pipeline development</li> </ul>	<ul style="list-style-type: none"> <li>Promoting new business &amp; financing models for reaching scale that incentivize low-emissions resilient inputs, practices &amp; technologies</li> <li>Integration of novel climate-responsive technologies, services &amp; programs</li> <li>Promote landscape level NRM for hazard prevention</li> </ul>	<ul style="list-style-type: none"> <li>Guarantees &amp; concessional finance for input suppliers, SMEs &amp; cooperatives</li> <li>Financial services for SMEs</li> <li>Incentivizing via PES</li> <li>Bundling services &amp; interventions together</li> </ul>	<ul style="list-style-type: none"> <li>Knowledge platforms for sharing what technologies, management practices &amp; business models are most suited for different agro-ecological &amp; socio-economic contexts</li> <li>Promoting successful business models for scaling resilient agriculture</li> </ul>	
	Facilitating Climate Informed Advisory & Risk Management Services	<ul style="list-style-type: none"> <li>Understanding needs &amp; identifying gaps for information, advisory, &amp; extension systems</li> <li>Co-designing delivery systems to meet users' needs</li> </ul>	<ul style="list-style-type: none"> <li>Developing &amp; testing new business models &amp; financing instruments for agricultural insurance &amp; social safety net program</li> <li>Leveraging emerging digital technologies supports reaching scale</li> <li>Supporting incubation &amp; acceleration of startups &amp; SMEs</li> </ul>	<ul style="list-style-type: none"> <li>Engaging private sector ICT service providers, maximizing synergies with PPPs, supporting start-up service providers</li> <li>Blended finance mechanisms with proven risk management business models</li> </ul>	<ul style="list-style-type: none"> <li>Blended finance to engage private finance</li> <li>Technical investment assistance</li> <li>ESG impact measurement</li> <li>Mobilization of national &amp; global funds through capital markets</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring, evaluation, &amp; learning to inform scaling based on contextual relevancy &amp; priority issues</li> <li>Promoting Public awareness &amp; capacity building for scale</li> </ul>
	Reconfiguring Food Systems	<ul style="list-style-type: none"> <li>Identifying key leverage points for catalyzing high-impact adaptation &amp; mitigation in sustainably productive food systems</li> <li>Behavior economics evaluation of demand for nutritious low-emissions food</li> <li>Strengthening policy coherence &amp; cross-institutional coordination</li> </ul>	<ul style="list-style-type: none"> <li>Enabling NRM, market, trade, &amp; transport infrastructure</li> <li>Quality &amp; sustainability certification &amp; regulation</li> <li>Providing challenge grants for SMEs</li> </ul>	<ul style="list-style-type: none"> <li>Supporting PPPs to stimulate resilient supply chains</li> <li>Capitalization of climate &amp; food security funds</li> <li>Providing low-emissions resilient companies with guarantees, concessional debt &amp; equity investments</li> </ul>	<ul style="list-style-type: none"> <li>Engaging regional/global platforms to promote learning</li> <li>Replicating successful information &amp; advisory system business models</li> </ul>	<ul style="list-style-type: none"> <li>Supporting private sector actors mainstreaming climate risk in business model, internal policies &amp; investments</li> <li>Engaging Food system platforms &amp; industry alliances/groups</li> </ul>

# PATHWAY 1: PROMOTING RESILIENT AGROECOLOGY



- Resilient agroecology supports adaptation and mitigation efforts while seeking to promote the agroecological conditions that reduce climate shocks on agricultural productivity
- **Improved seeds, crop varieties, and breeds** (e.g. drought-tolerant maize, etc.)
- **Diversifying crops, aquaculture and livestock** (e.g. crop rotation, intercropping, etc.)
- **Sustainable practices and technologies** (e.g. landscape approaches, water and soil management, IPM, agroforestry, solar irrigation, micro-pumps, minimum tillage, residue management, etc.)

# PATHWAY 2: FACILITATING CLIMATE INFORMED ADVISORY AND RISK MANAGEMENT SERVICES



- **Climate information and early warning systems**
- **Digital agricultural advisory and extension**
  - **Overcoming existing gaps**
  - **Effective delivery mechanisms** that facilitate personal relationships and multi-way communication at low or no cost
- **Financial literacy training, access to finance** (e.g. mobile money) helps ensure financial services reach women, youth, impoverished
- **Index Insurance** increase resilience by linking insurance payouts to predetermined index e.g., rainfall, temperature, yield



# PATHWAY 3: RECONFIGURING FOOD SYSTEMS

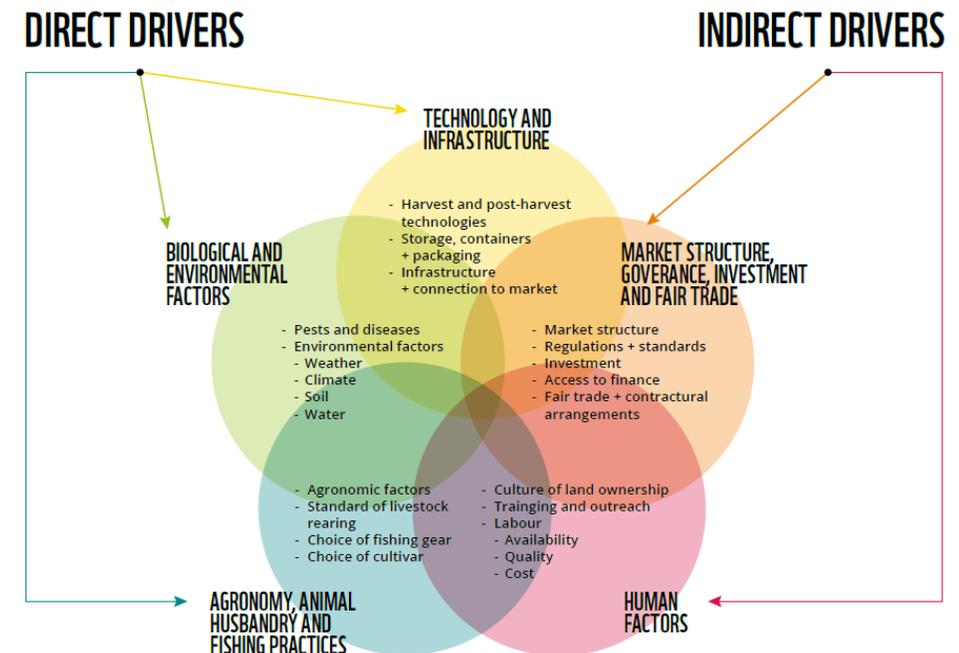


## Changing how food is produced, stored, transported, sold and consumed

- reshaping supply chains, food processing, storage, marketing, and procurement;
- reducing food loss and waste;
- shifting consumers to demand safer, healthier and more environmentally sustainable diets;

**Must be** environmentally sustainable, deforestation-free, inclusive, and enhancing rural employment opportunities

**Low-emissions goals for food systems** include reducing food loss and waste, improving energy efficiency, finding alternative energy sources



# EMERGING PRIORITY TOPICS AND APPROACHES (I)



- Follow-up to the 2021 UN Food Systems Summit (UNFSS)
  - *Action Track 1: Ensure access to safe and nutritious food for all*
  - *Action Track 2: Shift to sustainable consumption patterns*
  - *Action Track 3: Boost nature-positive production*
  - *Action Track 4: Advance equitable livelihoods*
  - *Action Track 5: Build resilience to vulnerabilities, shocks and stress*
- FS Hub being set-up by FAO, WFP and IFAD to provide technical and investment support to priority topics



**Food Systems Summit 2021**

- COP26 Pledges
  - Global Methane Pledge
    - over 100 countries committed to at least 30% reduction by 2030
    - For agriculture, linkages with livestock and irrigated rice production
  - Ending deforestation by 2030
    - Over 141 countries pledging to halt and reverse forest loss and land degradation by 2030
    - Increasing market regulations and demand for deforestation-free agricultural commodities
- IPCC 6<sup>th</sup> Assessment Report: Impacts, Adaptation and Vulnerability



**UN CLIMATE  
CHANGE  
CONFERENCE  
UK 2021**

IN PARTNERSHIP WITH ITALY

# EMERGING PRIORITY TOPICS AND APPROACHES (II)



- Scaling up climate investment beyond crop agriculture
  - Investing in the livestock sector to build the resilience of pastoralists and agro-pastoralists and to promote methane abatement
  - Supporting fisheries and aquaculture and climate-proofing infrastructure
  - Promoting diversification and integrated agricultural production
- Promoting technologies and practices to avoid food waste and losses (FWLs)
  - Investing in reducing FWLs across the stages of the food value chains
  - Better monitoring FWLs and assessing GHG mitigation from avoided additional production
- Diversifying diets and protein transition
- Programmatic approaches and regional initiatives
- Stronger private sector involvement,
  - including blended finance programmes and closer collaboration with local financial institutions to move from grant-based approaches to de-risking and promoting private sector investment in adaptation
- Payment-for-adaptation approaches

# THE ROLE OF DAES IN PROGRAMMING AND IMPLEMENTATION



- DAEs and bottom-up identification of emerging national or regional priorities and opportunities
  - Collaboration with NDAs for prioritization
  - Enabling environment, policy and regulatory reforms to enable CC adaptation and mitigation
  - Scaling-up successful experiences
  - Engagement with the local private sector
- DAEs and collaboration with IAEs
  - Learning from the IAEs' experience in GCF project origination
  - Capitalizing on the technical knowledge of IAEs in the field of agriculture and food security
  - DAEs as Executing Entities – for additional subsequent implementation readiness
- National development banks/agricultural banks as providers of green finance
  - Exploring opportunities for national financial institutions to on-lend or de-risk investments in adaptation – as part of upcoming GCF projects or as standalone initiatives
  - Options for capacity development for transitioning to or setting-up Green Banks

# Thank you for your attention

<https://www.greenclimate.fund/document/sectoral-guide-agriculture-and-food-security>

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