A STUDY OF:

Potential Impacts of the EU Green Deal / Farm to Fork Strategy on Africa's Climate Agenda and Food Sovereignty

Photo: Darren Baker

Final report

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Acronyms and abbreviations

ACCS	Draft African Climate Change Strategy
AfCFTA	African Continental Free Trade Area
ACP	Africa, Caribbean and Pacific group of countries
AFSA	Alliance for Food Sovereignty in Africa
AMR	Anti-Microbial Resistance
ASAL	Arid and Semi-arid Lands
AU	The African Union
AUC	African Union Commission
CAADP	Comprehensive Africa Agriculture Development Programme
CAP	Common Agricultural Policy of the European Union
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
CGRE	Climate Resilience Green Economy
CSA	Climate Smart Agriculture
CSO	Civil Society Organisation
DG INTPA	European Union Directorate General for International Partnerships
DG SANTE	European Union Directorate General for Health
EAC	East African Community
ECJ	European Court of Justice
EEA	European Environment Agency
EEAS	European Union External Action Service
EU	European Union
EUGD	European Union Green Deal
FAO	Food and Agriculture Organisation of the United Nations
FINGO	Finnish NGO Platform
F2F	Farm-to-Fork Strategy of the European Union
GDP	Gross Domestic Product
GHG	Greenhouse Gases
GoK	Government of Kenya
IGAD	Intergovernmental Authority on Development
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Management
INM	Integrated Nutrient Management
NAIPs	National Agricultural Investment Plans
NDIC	The Neighbourhood Development and International Cooperation policy of the EU
NGO	Non-Governmental Organisation
NOGAMU	National Organic Movement of Uganda
NPC	National Planning Commission of Ethiopia
NTBs	Non-Tariff Barriers to trade
PCD	Policy Coherence for Development
RAIPs	Regional Agricultural Investment Plans
RECs	Regional Economic Communities
SPS	Sanitary and Phyto-Sanitary measures
SUN	Scaling Up Nutrition

Executive summary

1. Introduction

This executive summary discusses the main findings and recommendations of an ex-ante policy assessment of the European Union Green Deal/Farm-to-Fork strategy and how it could affect eastern Africa's climate agenda for both mitigation and adaption in agriculture and land use sectors, as well as realisation of human rights. The report provides findings on the anticipated impact of policy coherences and incoherencies between the European Union Green Deal/Farm-to-Fork strategy and selected food systems related and climate change related policies of eastern Africa. It discusses potential negative impacts and risks imposed by, and opportunities emanating from, the implementation of the European Union Green Deal Farm-to-Fork strategy, on eastern Africa. It also highlights policy issues and gaps, and makes recommendations that can be taken up by various directorates of the European Commission, the EU delegations, the African Union, the Regional Economic Communities and national governments in eastern Africa. The Finnish NGO Platform for development (Fingo), with financing from the European Union, commissioned this study. The study commenced in April, 2021 and was completed in May 2021.

This study is based on key document analysis, including policies and media articles, as well as key informant interviews. Altogether, we interviewed ten people, two of them women, from the Directorate-General of the European Commission, the European External Action Service in Ethiopia and Kenya, the African Union Commission, the secretariats of the Regional Economic Communities in eastern Africa, the Food and Agriculture Organisation and NGOs in Ethiopia and Uganda. In addition, we also reviewed food related, climate adaptation and mitigation, rural transformation and trade policies at various levels. Our study was underpinned by a combination of climate justice and resilience, and sustainable food systems analytical approaches, which resonate with the Farm-to-Fork strategy, as well as key selected policies of eastern Africa.

2. Main findings

From analysis of the various policy documents, literature review, data from key informants and media articles, we have identified the following:

Areas of policy coherence

a. **Policy objectives across the reviewed spaces in the European Union and Africa converge** around addressing the impacts of climate change while ensuring socio-economic development and environmental sustainability. They suggest 'low carbon development pathways' and building climate resilient, carbon-neutral green economies, targeting mainly the agriculture, food and land use sectors.
b. **There is recognition that the current models** of agricultural and food production are unsustainable, are destroying the environment, hurting people and biodiversity. Moreover, agriculture, food and land use sectors though vulnerable to climate change effects, also have potential to provide solutions.
c. **Commonly targeted climate actions include promoting**: green technology and regenerative, climate-smart and agro-ecological practices; preservation and restoration of natural resources; conservation and sustainable management practices of forests; increased investments in renewable energy sources; waste management focusing on the principle of reduce, reuse and recycle, among others.

Areas of policy incoherence and gaps

a. **The challenge of reducing agro-chemical use**: The Farm-to-Fork strategy proposes reduced dependence on inorganic agro-chemical and increasing organic production. Eastern Africa on the contrary, has prioritised increased use of modern inorganic agro-chemicals in order to tackle pest and disease pressures, as well as address the food and nutrition needs.
b. **The use of forests and forest products** under the Farm-to-Fork strategy is expected to be free from deforestation and human rights violations. Yet in eastern Africa, agricultural production within forest reserves will continue because, forest reserves have been demarcated within communally owned land, traditionally used as farmland and as sources of food. Policies in eastern Africa expect such communities to vacate the forest reserves and yet, they do not have alternative areas for farming. This highlights policy inconsistency within eastern Africa itself, as well as between eastern African forest management policies and the Farm-to-Fork strategy and.
c. Under the Farm-to-Fork strategy the European Union is leading the way to **Sustainable consumption** by committing to shift towards less intake of energy, red meat, sugars, salt and fats and, higher consumption of fruits, vegetables, nuts and high fibre foods. Eastern Africa on the contrary aims to increase meat consumption per capita and diversify commercial livestock enterprises.
d. While the Farm-to-Fork strategy is clear about reducing **food loss** and preventing **food waste** as an action that is beneficial to food chain actors and the circular economy, eastern Africa policies acknowledge the problem but are unclear on what to do, indicating a policy gap.
e. The Farm-to-Fork strategy clearly commits to combatting food fraud along the supply chain because it deceives consumers, undermines food safety and fair commercial practices. Eastern Africa food policies are silent on the matter, indicating another policy gap.
f. While the Farm-to-Fork strategy is silent on the issue of **Women and youth integration in agri-business**, indicating a policy gap, the Africa-Europe agenda for rural transformation prioritises the integration of young rural women in agri-business because literature indicates that rural transformation does not close the gender gap.

Anticipated negative impact and risks posed by Farm-to-Fork strategy on eastern Africa

a. **Externalisation of polluting technology**: The binding goal of the European Union member states to reach net zero emissions across the bloc by 2050 is likely to witness the retiring of much of their current polluting technologies, which could be offloaded into eastern Africa.
b. **Unwelcome foreign direct investment**: If implementation of the Farm-to-Fork strategy makes it more difficult for eastern Africa producers to access European markets, they will heighten efforts to increase food exports to China and Asia. Such business relationships could lead to land grabbing, in the pretext of supplementing smallholder production.
c. **Risk of losing support for meat production**: Since the Farm-to-Fork strategy aims to reduce meat consumption, eastern Africa might lose support for future livestock development projects, including research on sustainable meat production, as a priority for Africa. This, especially because the intensive livestock production model used in Europe and Latin America is known to be a major cause of carbon dioxide emissions.
d. **Threats to eastern African food sovereignty**: Whether it is large scale investment in farming or loss of income due to difficulties in accessing export markets, arising from implementation of the Farm-to-Fork strategy, there is a danger posed to food sovereignty in eastern Africa. Both of these strategies could lead to a higher intensity of poverty among smallholder producers.
e. **Justice may not be evident during the Farm-to-Fork strategy roll out** especially since policy coherence we observe at goal level, still awaits common definitions, general principles and requirements for sustainable food systems.
f. **Spread of Private Sustainability Standards** will mostly likely increase, with farmers feeling more obliged to enter into certification contracts. This would result into higher certification costs and increased tendency towards multiple certification, with unclear trade-offs.

Anticipated opportunities from implementation of Farm-to-Fork strategy

a. **Better environmental performance** in Europe on farms and in other stages of the value chain, especially transportation and food processing due to a whole range of new options could spread to eastern Africa as spin-offs, through trade partnerships.
b. **Opportunity for higher incomes** for eastern Africa farmers who will continue exporting healthier and environment friendly food to Europe, benefiting from new green investments and consumer Willingness to Pay (WTP) for these foods.
c. **Increased demand for organic food products** in Europe will need to be supplied partly from outside the union because increased organic production in Europe is expected to result into lower volumes.
d. **Opportunity for European Union funding food system assessment** in Eastern African countries as Europe updates its programming strategies in developing countries, in order to take into account key issues important for EUGD/ Farm-to-Fork strategy implementation.
e. **Impact of the Farm-to-Fork strategy on land use** can be both an **opportunity** and a **risk**. Promoting agro-ecology implies that European- Eastern Africa cooperation can stimulate faster transition of eastern Africa to agro-ecological agricultural production. Potential **negative impact** however, is linked to the need that will arise to increase area for agricultural production through deforestation, since conversion to agro-ecological production may lower production volumes.

3. Recommendations

The following recommendations could be taken up under partnership negotiations and agreements between Europe and various institutional levels of eastern African countries:

DG INTPA - EU EXTERNAL ACTION SERVICE (EEAS):

The partnership could:

- Support investment in research and development to establish *energy innovation centres and hubs* that can promote transition to solar energy.
- Engage in Africa-Europe dialogue on "*What happens to African priorities under the rural transformation strategy?*" already agreed upon.
- Invest in technology and skills development that lightens and reduces the burdens imposed on young *rural women* by the triple gender roles and those that encourage youth employment in agriculture.

DG TRADE:

- Support eastern African countries **to switch to these ambitious climate actions** when targeting European food markets.
- Enhance *Negotiation capacity building* for eastern African countries attaining the middle income status in order for them to negotiate fair and just trade arrangements after losing the duty free and quota free Everything But Arms (EBA).
- Support *standards harmonisation* in order to reduce certification costs, confusion among Eastern African farmers. Also support *context specific research on multiple certification* in order to understand better the inherent trade-offs.
- Support capacity and institutional development in Eastern Africa countries to monitor and regulate *agro-chemical use*.

DG CLIMA - FINANCING TARGETS UNDER THE PARIS AGREEMENT:

- Support *Organic input market development* in Eastern Africa countries, to encourage reduced dependency on inorganic agro-inputs.
- Intensify support for policy development and interventions that promote community-based *forest management* and equitable access to local, regional and global markets
- Support dialogue to define appropriate support for smallholder farmers and young agripreneurs in Eastern Africa to engage better in *climate adaptation and mitigation*, aligned to the stringent standards under the Farm-to-Fork strategy.
- Stimulate development of *circular-based economy* in Eastern Africa through developing rural agro-processing facilities.

Regional Economic Communities and national governments in eastern Africa

- National governments in eastern Africa, under their respective regional economic communities should lead actions, underpinned by scientific analysis, on priorities already spelt out including; sustainable livestock system development, African food systems development, gender and youth integration, land use planning to enable zoning and specialised production, among others. These actions could then be integrated in all development partnerships.
- Eastern Africa should strike *a balance between agro-ecology and conventional production based on zoning above*, in order to tackle the challenges of food and nutrition insecurity, for a rapidly growing population, while responding to the climate challenges.
- Governments in the sub-region need to collaborate to develop institutional capacity for *food safety and standards development*, rooted in climate adaption and mitigation actions. They could use opportunity of collaborating with Europe under the Farm-to-Fork strategy to raise awareness of local consumers on the benefits of *food standards* in the local market.
- Support farmers in the sub-region who produce for European markets to benefit from the 'carbon market' payments.
- Governments and CSOs in eastern Africa should collaborate to ensure that principles of *fairness and justice is integrated* in all processes of implementation of the Farm-to-Fork strategy, especially those that impact on eastern Africa.

Section 1 Introduction

1.1 Study background and institutional arrangement

This is a report of a study commissioned by the Fingo, the Finnish development NGOs. Fingo is a platform of about 300 Finnish development Non-governmental Organisations (NGOs), strengthening people's capacity to seek knowledge based sustainable development solutions[1]. Cognisant of the recent vote by European members of parliament to support the European Union Green Deal (EUGD), Fingo and its members commissioned this study to assess the possible impact of these policies on eastern Africa. The EUGD which aims for a climate neutral Europe by 2050 has the Farm-to-Fork Strategy (F2F), basically domestic plans for agriculture, at its core. The F2F aims to make the European Union (EU) food system healthier and more sustainable. Specifically, the F2F aims to avail EU consumers with healthy, affordable and sustainable food, address climate change, preserve biodiversity, ensure fair returns from food chains and increase organic farming. It also includes a circular economy action plan, a biodiversity strategy and a review of key policy instruments from a climate perspective. Examples of other key policies to be reviewed as part of background documents for this study include: the EU strategy for partnership with Africa and, the Post-Cotonou Partnership Agreement which guides relations between countries in Africa, the Caribbean and the Pacific (ACP) and the EU, among others.

Furthermore, EU and member states are reviewing their climate finance targets under the Paris agreement. Review of different policy instruments in view of the EUGD, though still to be done, is expected to lead to structural changes which could affect relationship between Europe and others. In addition, members states such as Finland are developing own strategies for relationship with Africa in general, and eastern Africa in particular. It is against this background that this consultancy assignment was conducted as an ex-ante assessment of the potential impact of the EUGD/F2F on African partners. The assignment puts strong emphasis on policy coherence between F2F and selected African policies, particularly those in eastern Africa, negative impact and risks, as well as opportunities. This assessment focuses on mapping out potential impacts of the EU F2F on-eastern Africa, looking specifically at Kenya and Ethiopia as case countries.

1. This study has been co-financed by the European Union (EU) and FINGO, as part of a project entitled "Towards Open, Fair and Sustainable Europe in the World – European Union Presidency 2019-2021". FINGO is leading project implementation, in collaboration with: the Romanian platform (FOND), the Croatian platform (CROSOL) and the European NGO Confederation for Relief and Development (CONCORD).

1.2 Study rationale, objectives, questions

The study idea emerged out of a concern that the EUGD/F2F policy initiatives, which will lead to structural transformation of how EU does business in the agricultural and food sectors, will have impact beyond the EU. The study therefore, is inspired by the following assumptions and starting points: i) the understanding that structural transformation due to the EUGD/F2F will most probably affect interventions of EU elsewhere, including Eastern Africa; ii) the concern that while future EU-Africa partnership and the EUGD/F2F envisage a 'Green Transition and Energy Access' through formation of green alliances to drive sustainable food systems, specific actions in this regard are vague. The policy initiatives strive to tackle climate change while ensuring "a just transition" as a central cornerstone yet, the offer to Africa remains unspecified; iii) concerns over potential negative impact of EUGD/F2F in terms of higher environmental standards, possible shift of climate burden to eastern Africa and the risks of "leaking" agricultural pressures on land, including on forestland, from the EU to eastern Africa; iv) the fact that measures in the EU External Action Service (EEAS) under the "Green Deal diplomacy", derived from the EUGD could affect eastern Africa through international trade, development co-operation, neighbourhood policies and resource mobilisation; v) the need to identify areas in which eastern Africa, being one of the most vulnerable regions to risks from climate change, could benefit in terms of climate funding for strategies that link reduced GHG emissions with food security and rural development goals. This is particularly important as the EU and its member states are expected to renew their positions for a new post-2020 climate finance target to developing countries.

In addition to the above reasons, Fingo, its members, and partner network, in their civil society role, have identified the need for a baseline that will serve as a starting point for future policy analysis and advocacy work within both the EU and in Finland. Particularly, the need to identify key policy issues of concern, policy gaps and opportunities for policy influencing when the EUGD/F2F is rolled out.

1.2.1 Objectives of the study

The purpose of the assignment is to carry out an ex-ante policy assessment of the EUGD/F2F and how it could affect eastern Africa's Climate agenda for both mitigation and adaption in agriculture and land use sectors, as well as human rights.

	STUDY OBJECTIVE	ASSOCIATED QUESTIONS
1	To explore the **coherence** between the EUGD/F2F with eastern Africa's Climate and food sovereignty agenda - key climate and agriculture policies of the African Union (AU), Regional Economic Communities (RECs) and case countries – Ethiopia and Kenya.	• What are the areas of potential coherence or alignment – consider policy objectives, strategies, components, instruments for implementation, etc? • What are the areas of potential incoherence or misalignment? • What are your suggestions for alignment? • What policy gaps exist at continental, Regional Economic Communities (RECs – particularly IGAD and EAC) and member state levels – that need to be filled in anticipation of F2F implementation? Consider: Policies regarding use of hazardous agro-chemicals; Emissions reduction for agricultural activities; Carbon sequestration policies; Circular economy; Food standards and certification.
2	To analyse potential **negative impact** of the EUGD/F2F and the **risks** it poses on agriculture (food and nutrition security) and land use sectors in eastern Africa, as well as human rights, from the perspective of climate justice and resilience on the one hand, and food sovereignty perspectives on the other hand. Include media reactions and any research information that might be available	• What is the anticipated negative impact of EUDG/F2F - on eastern Africa land use and agricultural sectors? • What is the anticipated negative impact of EUDG/F2F - on food related trade with eastern Africa? • How do these foreseen impacts align with current eastern Africa domestic climate policies/agenda? • How do these foreseen impacts align with eastern Africa's sustainable development and agricultural policies and plans? • What are your suggestions/recommendations to prevent anticipated harmful effects of the EUGD/F2F on Eastern Africa? • What are the expected reactions to the EUGD/F2F among stakeholders and media in eastern Africa (case countries, RECs and AU levels)? • How does the implementation of F2F complement the Climate agenda in the case countries? • What are potential risks of F2F impacts on eastern Africa climate adaptation and mitigation efforts in the agriculture and land use sector? • What are potential risks of F2F impacts on food sovereignty in eastern Africa?
3	To explore potential opportunities that might arise from the implementation of the EUGD/F2F and the green deal diplomacy, for eastern Africa agriculture, land use and food sovereignty efforts.	• What are the anticipated opportunities for eastern Africa to address climate change challenges, for instance through engagement in climate smart agriculture models? • What are the anticipated opportunities for food system change for eastern Africa, for instance better environmental performance of producers who sell to the EU due to higher EU standards? • What are the anticipated opportunities for partnership and new investments in the Agricultural and land use sectors + food systems in eastern Africa? • What assessments have been planned on above issues? • Are you aware of any assessment planned, of the impact of the F2F? • If yes, do you think such impact assessments adequately take into account possible negative effects of the F2F outside the EU borders (and particularly eastern Africa)?
4	To explore potential opportunities for **policy advocacy** in order to contribute towards making the transition towards sustainability fair and just, especially for eastern Africa.	• What are the policy issues of importance for the transition that European and other Civil Society Organisation (CSOs) should address through advocacy work? • Examples of events, policy processes, campaigns, among others, that CSOs could use for policy influencing. • What is your opinion about the reality of implementation of the EUGD/F2F? Consider the following aspects: politics, diplomacy, potential tensions and power relations among actors involved, etc.

TABLE 1 Study objectives and associated detailed questions

1.2.2 The main study questions

We have based our interpretation of the main study questions on the understanding that Africa, particularly the eastern Africa region is not only highly vulnerable to climate change effects due to its geographical position but is also economically dependent on agriculture and land use sectors. The region is also grappling with hunger and malnutrition [1]. Although adaptation to climate change and addressing food and nutrition security are clear priorities for most African countries including those in eastern Africa, policies aimed at solving these problems are not one coherent agenda. Rather, they consist of a range of policies designed by different countries and their respective sector ministries. Moreover, following the establishment of the African Union (AU) in 2003, broad policy direction on key issues including climate change and food security is given at the AU, then domesticated at sub-regional level by the Regional Economic Communities (RECs), then by member states. Against this backdrop, the key study questions are formulated as follows:

1. Is the EUGD/F2F coherent with eastern Africa's Climate agenda and food sovereignty policies?

a. What are the areas of potential coherence?
b. What are the areas of potential incoherence?
c. What policy gaps exist?

2. What are potential negative impact of, and risks posed by, the EUGD/F2F on eastern Africa's climate and food sovereignty agenda?

a. What is the anticipated negative impact on eastern African land use and agricultural sectors?
b. What is the anticipated negative impact on food related trade with eastern Africa?
c. What is the anticipated negative impact on eastern Africa's domestic climate policies?

3. What are the potential opportunities for eastern Africa that could emerge from EU's implementation of F2F?

a. What opportunities does the F2F present for eastern Africa to address climate change and increase climate resilience?
b. What opportunities does F2F present for eastern Africa to address food system challenges?
c. What investment opportunities does F2F present for eastern Africa?
d. What policy influencing opportunities does the F2F present for civil society?

1.3 Conceptual framing of the assessment

The terms of reference stipulated that assessment of the potential impact of the EUGD/F2F on eastern Africa's climate agenda in the agriculture and land use sectors should adopt a climate justice and sustainable economy perspective. According to the Mary Robinson Foundation for Climate Justice [2]. "Climate justice links human rights and development to achieve a human-centred approach, safe guarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts equitably and fairly. Climate justice is informed by science, responds to science and acknowledges the need for equitable stewardship of the world's resources". This implies that climate justice is not only an environmental issue but is also an ethical, as well as a political issue. Drawing from the definitions of sustainability, a sustainable economy is one that is resilient (able to bounce back after shocks) and provides a good quality of life for all within it, while remaining within the limits of the planet and safe levels of global warming. Below we briefly explain key elements of climate justice and resilience and, sustainable food systems and food sovereignty

and their interaction. This is important for the assessment, especially because most economies in eastern Africa are agriculture dependent, are already suffering from the effects of climate change, and the continent as a whole is striving for food sovereignty for all, as a suitable concept to guide member states in tackling the challenge of food and nutrition insecurity.

1.3.1 Climate resilience and justice

There is an increasing recognition that climate change is not only an environmental issue but also a social one. Its impacts on peoples' health, livelihoods, energy sources and food production systems are neither borne nor distributed equally or fairly between the rich and the poor, women and men, younger and older generations, developed and developing countries [3]. The irony is that those that contribute less to emissions and have a small Greenhouse Gas (GHG) footprint, suffer the most from impacts due to their high level of vulnerability and low level of resilience, capacity to cope and potential to adapt. Take for example, Kenya with her economy mainly dependent on agriculture and tourism. Both sectors are highly vulnerable to effects of climate change and yet, are the primary sources of livelihoods for over 60% of the population, especially the marginalized and vulnerable rural poor [4]. On the one hand, droughts in the four-year period from 2008 to 2011, caused an estimated $12.1 billion in damage of agriculture fields and distribution infrastructures and led to severe food insecurity affecting approximately 3.4 million people. On the other hand the 2018 drought contributed to loss of access to water for domestic use and agricultural production for about half a million rural poor, mostly in subsistence agricultural based livelihoods [5]. The increasing climate variability and extreme weather conditions experienced in Kenya is estimated to result into an economic damage of about 2.6% of GDP per annum by 2030, unless the adaptive capacities of most vulnerable sectors and populations are enhanced [6]. It is clear that the marginalised and vulnerable population will disproportionately continue to be affected by climate change manifestation.

Any climate agenda therefore, should recognize the most vulnerable populations and integrate them in climate justice solutions that champion the principles of equity and fairness. Those who contribute most to the causes of climate change, should have a bigger share of responsibility and obligation to take action to mitigate the impacts. Efforts to advance climate actions, greening, and mitigation and adaptation agendas therefore, need to be screened through a human rights lens. Against this background, the EUGD/F2F will be screened to establish: how the proposed climate strategies enhance economic and social transformation for all (without leaving anyone behind, particularly those in eastern Africa partner countries), promote all-of-governance approach, uphold human rights including the right to food, affect individual freedoms (economic, political, social, and transparency guarantees), support the vulnerable and marginalised to equitably access and utilize natural resources, among others. The potential winners and losers, and what has been and can be foreseen for the losers should be established.

1.3.2 Sustainable food systems and food sovereignty

Development discourse has gradually moved away from focussing on food security and value chains towards a food systems thinking. Food systems comprise on the one hand, all value chain activities and processes associated with food, from production to food utilisation: growing, harvesting, storage, packaging, processing, transporting, distributing, marketing, consuming and disposing of food remains and waste. On the other hand, a food system needs several inputs to feed these activities and processes and result into products and/or services, as well as outcomes including - socio-economic impact such as income, livelihood and food security; political impacts – policies, institutions and modes of governance and; environmental impacts - contribution to GHG emissions. A food system operates in and is influenced by social (demographics), political (governance – policies and institutions), cultural, technological, economic (income, employment) and natural environments (the bio-diversity, climate, soils), [7] ; [8] ; [9] ; [10]. This implies that the food systems approach is a useful perspective in the literature on resilience (robustness), adaptability and transformability, of the food production system. Adaptations and transformation that enhance the system's resilience to external shocks may be technical, infrastructural, environmental, political, social or policy, such as the EUGD/F2F [11]; [5]; [5]; [12]; [13].

A food systems approach is closely linked to food sovereignty in that food sovereignty is not only rooted in the complex realities of food systems, but it also recognises that control over the food system needs to remain in the hands of farmers. The main reason being that most farmers, especially smallholder farmers practice farming both as a way of life (livelihood support) and as a means to producing food. This is important for Eastern Africa whose food systems are dominated by smallholder farmers, for whom agriculture is multi-functional. Food sovereignty encompasses a human rights connotation in that it is rooted in grassroots food movements and highlights the need for a democratic food system that works for all. During the assessment, we aimed to establish the level of alignment of various policies and identified opportunities and possible negative effects of the EUGD/F2F structural transformation results, on eastern Africa's climate agenda, as well as on food systems and food sovereignty.

1.4 Linking the climate justice and food sovereignty perspectives to F2F assessment

We combined the climate justice and food sovereignty perspectives in analysing the F2F because the approach helps us to take a rights-based approach to identifying the issues at stake and giving indications to transformative pathways towards a process for a fair and just transition towards sustainability, which includes Africa. This approach to the evaluation also enables us to consider eastern Africa specific issues including the geographical location in the tropics, the fact that the region contributes less to global warming but bears the brunt, the persistent challenge of food and nutrition security, the role of agriculture in poverty alleviation, among others. It also enables us to take into account the fact that EU remains a critical development and trade partner for eastern Africa. Consequently, as the EU agricultural policy framework and consumer preferences change, it affects eastern Africa through changes in trade agreements, demand, standards and probably development cooperation re-orientation.

Section 2 Background and direction of reviewed policies

In order to understand better the possible impact of the EUGD/F2F on selected eastern African policies at various levels, we describe in this section the characteristics of farming in the two continents, the background of food and climate change related policies, and general policy direction of the two categories of policies.

Each day humans depend on the diversity of life found on Earth and its natural resource base to keep alive and healthy. In addition, the development of many modern technologies use the raw materials, minerals and other resources (air, water etc.) of the Earth. Yet, the earth's biodiversity and natural resource base are under threat from the impacts of human actions-induced climate change through, for example; unsustainable food production and distribution practices, deforestation, pollution from inorganic chemical use, pollution from processing and manufacturing industries, GHG emissions, wetland drainage, among others.

For long, economies the world over, have prioritized 'growth' and technological development without accounting for the environmental consequences. They all followed a 'grow now, clean up later' approach, which may have increased incomes and supported economic. They ignored however, environmental values and in some instances delivered growth inequality, leaving many communities more vulnerable to the consequential impacts. 'Cleaning up later' also becomes more difficult or impossible, in cases where changes which already occurred are irreversible. Similarly, food production technology and innovation related to conventional agriculture, agro-processing and value addition, have enhanced productivity, but have exposed humans to increasing health risks, water and food insecurity risks, among others. Worse still, the rising population (estimated at about 9.8 billion globally and 1.52 billion in Eastern Africa, by 2050) and the increasing proportion of the world's urban population (about 66% in 2050), [14] are creating additional demands on the Earth's resources.

It is important to note however, that richer countries have a larger environmental footprint, while poorer ones, with smaller environmental foot print, for example developing countries in eastern Africa, bear the brunt of climate change. For example climate change risks and vulnerability analyses for Ethiopia [15], indicate rainfall patterns changes and increasing temperatures, with projected annual temperature increase between 0.9°C and 1.1°C by the year 2030 [16]. As a result of such climatic changes, there is an increasing frequency and intensity of drought, negatively affecting the livelihoods of over 80% of the population who live in rural less adaptive farming communities.

The Kenyan rift valley region which is the main agricultural production zone in the country, is experiencing frequent floods, landslides, seasonal changes in rainfall and outbreak of diseases and pests, for instance the most recent army worm and locusts invasions. Current projections suggest that the average temperature in Kenya will rise up to 2.50C between 2000 and 2050, while rainfall will become more intense and less predictable [17]. This implies that unless action is taken, Kenya's agriculture and land use sectors will be disproportionately negatively affected, with dire consequences on the vulnerable and marginalised poor who depend on them for a livelihood. To meet food demands and sustain household income generation, the affected rural poor may opt to expand agricultural land into marginal areas including natural forests and wetland, thereby degrading the environment further.

2.1 Policy direction of the European Union Green Deal

For decades, Europe has been practicing a type of agriculture which came to be known as the green revolution. This type of agriculture is characterised as fairly large scale (dependent on farmers whose farm size is 16.6 hectares on average), capital intensive, highly mechanised and using modern inputs (improved seed varieties / breeding stock) and mostly inorganic agro-chemicals to control weeds, pests and diseases. In addition, this type of agriculture promotes specialisation and intensification for the market. While this type of agriculture achieved great results in terms of increased productivity and production volumes in Europe, it also took a heavy toll on the environment and food systems, in terms of pollution in general, as well as deforestation, soil degradation, loss of biodiversity and GHG emissions, in particular. The environmental impact and carbon footprint has not only been in EU zone but also in other countries around the world. This situation is worsened by multinational companies in Asia and Africa that produce food and agriculture products like palm oil and soya beans, for export to the EU. In the past, the EU has not been able to impose sustainable agricultural production practices on those who produce for its market [18]. Capital intensive, high yielding agriculture in EU member states, combined with the farm income support to European farmers under the Common Agricultural Policies (CAP), although ended in 2015, negatively affected prices of those commodities marketed internationally. For agriculture dependent economies like those in eastern Africa, the resultant loss of income by and poverty among smallholder farmers have lasted for long, especially in terms of weak capacity to engage with markets of the EU. The green revolution type of farming, and the general policy direction of the EU CAP then, encouraged externalisation of EU's carbon and environmental footprint to developing countries.

The European Environment Agency (EEA) concluded in 2020 that Europe faces environmental challenges of unprecedented scale and urgency [19]. It underlined the urgent need for change of direction to face climate change challenges, reverse degradation of the natural world and ensure future prosperity. In response, the EU is proactively stepping up its climate actions, entailed in its ambitious package of measures, called the 'European Green Deal'. Through the EUGD/F2F, the EU has decided to start addressing some of the key issues currently faced by its food system and the harm it does to the environment. The EUGD provides a coherent framework that guides its climate adaptation and mitigation efforts, ranging from ambitiously cutting greenhouse gas emissions, to investing in cutting-edge research and innovation, to preserving Europe's natural environment. Cognisant of the role that agriculture and food systems play in climate change, the EU has decided to put the F2F at the centre of the transition towards sustainability and carbon neutrality.

With the EUGD/F2F, Europe aims to lead the world in moving towards sustainability, by implementing this ambitious plan, to address contemporary food system and climate change issues, according to the European Commission (EC) [20]. The F2F, with its concrete targets, aims to transform European economies, making them sustainable and turning environmental and climate challenges, especially those within the food system, into opportunities that benefit all. Furthermore, the F2F will also transform relations with eastern Africa, especially since the EU-partnership strategy 2015-2020 which is currently under review, already prioritised regional management of natural resources and economic integration, both of which are closely linked to food systems in the sub-region [21]. Concerning trade, which is an important instrument through which the EU interacts with other countries and regions, the EU has "prioritised reform of the World Trade Organization (WTO), including global commitments on trade and climate, new rules for digital trade, reinforced rules to tackle competition distortions, and restoring its system for binding dispute settlement" (EC, 2021). The expectation is that these issues will be key components in new trade agreement negotiations that will take place when both Ethiopia and Kenya attain middle income status. In addition, more issues will arise when the EUGD/F2F, approved in 2020, will be translated into legislation, from 2021 onwards.

2.2 Policy direction of selected African Climate and Food related policies

Africa, including the East African region, has always relied on smallholder farmers whose farms are between 0.5 to 2.5 hectares [21] on average. Most of these farmers practice subsistence agriculture, using rudimentary farm implements, with limited application of modern inputs and are dependent on nature, particularly land and rainfall. Even though this type of agriculture sometimes degrades the environment through deforestation and wetland degradation (for expansion of arable land) and nutrient depletion, it has less negative impact in terms of GHG emissions compared to industrial agricultural practices in Europe and other developed countries [22]. These farmers produce their own food and have traditionally relied on income from a few traditional cash crops, mostly produced for export to developed countries, especially in Europe. With closed market economies in the past, a quota system of export and negotiated margins for the traditional cash crops, sustained reasonable farm incomes [23]. The push for liberalisation of prices and markets in the late 1980s however, led to the decline in farm incomes - with consequent poverty and food insecurity among Eastern Africa smallholder farmers.

Eastern Africa is one of the most vulnerable sub-regions to the adverse impacts of climate change [24]. and food system challenges. From its geographical location in the tropics, to the demographic challenge of a rapidly growing population, followed by conflict situations in several countries in the past decade and limited investment in agriculture over a long period of time, Eastern Africa faces serious food system and climate related challenges. These issues include: food shortages, malnutrition, poverty and low adaptive capacity of food systems to the negative impacts of climate change. Much as the continent is not a significant source of GHG emissions, it is increasingly facing adverse climate change-induced social, physical, ecological and economic impacts. The dependence of most national economies on climate-sensitive natural resources, means that recurrent climate change effects will continue to negatively impact their economic growth and livelihoods of the rural and urban poor.

In eastern Africa therefore, most food related policies at continental, REC and national levels, prioritise food and nutrition security. We established that the Comprehensive Africa Agriculture Development Programme (CAADP), developed almost two decades ago, has formed a good reference point for these food-related policies. We observed that there is strong 'vertical coherence' between CAADP and the Regional Agricultural Investment Plans (RAIPs), and National Agricultural Investment Plans (NAIPs). CAADP has evolved to a more recent document called the Malabo Declaration, which commits African governments to promote smallholder family farming, resilience of vulnerable ecosystems and communities, and mutual accountability. While we observe vertical coherence of food system related policies at different levels in eastern Africa, these policies are rather detached from those related to climate change adaptation and mitigation in terms of starting point, the technical ministries hosting policy development, and even the process of policy development itself. Worse still, stakeholder and particularly grassroots involvement in policy processes is generally weak, resulting into vague policies. Climate change priorities on the continent focus on building resilience and reducing vulnerability through climate adaptation actions, mostly those with mitigation co-benefits. Also important to note, is that, most of the climate adaptation efforts at the African continental and sub-regional levels, for example eastern Africa, are often supply driven and donor funded, hence the concern on possible impacts of donor policies such as the EUGD/F2F.

Civil Society Organisations (CSOs) on the continent (eastern Africa inclusive), have worked hard to build consensus among key food system stakeholders, around a food sovereignty agenda. The main reason is that Africa faces a big challenge of food and nutrition insecurity, indicated by the high prevalence of under-nutrition, with a stunting rate at 29.1% in 2020 (higher than the global average of 21.3%) [25], and the double burden of malnutrition. All African food system related strategies at various levels, specify targets on all key indicators of malnutrition to be attained by 2025, in compliance with continental commitment. The strategies are linked to an annual peer monitoring obligation. The strategies take into account the fact that Africa is facing important challenges of highly degraded soils, partly due to climate change, low agricultural productivity and a demographic explosion. By 2050, the population of Eastern Africa will be 1.52 billion people, with 60% as urban inhabitants [26]. Inherent in these strategies therefore, are actions to raise agricultural productivity in an environmentally friendly manner and enhancing food trade among member states. Through the food sovereignty agenda therefore, the aspiration of African CSOs is that climate change issues will be fully integrated in food system policies, leading the continent towards food self-sufficiency on the one hand, and control of mechanisms through which food and nutrition security can be sustained for all, on the other.

Section 3 Methodology

3.1 Study design

The study, which is an ex-ante policy analysis of the impact of EUGD/F2F on Africa's climate agenda was designed to be (i) systematic in terms of categorizing available information based on themes tackled, methodology used and areas covered including: policy analysis considered climate change adaptation, climate change mitigation and sustainable food systems; (ii) iterative and reflexive to ensure rigour in collating comparative information from the various policies and sources; and (iii) underpinned by climate justice and sustainable food systems approaches. These approaches enable policy review for coherence across food systems and geographical regions, while taking into account adaptation and mitigation efforts at various levels. It was iterative and reflexive to ensure complementarity and triangulation of information from secondary and primary sources. This methodology enabled the generation of a wide variety of perspectives, from different vantage points, on policy coherence between EUGD/F2F and eastern African climate and food sovereignty agendas, potential negative impacts/risks of, as well as opportunities presented by the EUGD/F2F. The methodology also makes use of the experiences and knowledge of policy makers, given that the F2F is new (approved in 2020) and its strategies are yet to be translated into EU legislation and the on-going EU external action/development cooperation programming. Relevant policy documents, evaluation reports and views on media, were reviewed to facilitate evidence- based analysis of potential impact of F2F on selected Eastern African policies from climate resilience/justice and food sovereignty perspective.

Kenya was selected as a case study country because of its unique position as an economic hub in East Africa, with longstanding food trade relations with EU member states. Kenya is a leading exporter of mainly fresh fruits and vegetables, cut flowers, tea, coffee, fish and fisheries products, sugar, semi-processed tobacco, textile and clothing, coffee and handicrafts, among others. Kenyan exports, to the EU, account for over 90% of her total export value [27]. Yet, the agricultural sector in Kenya is highly vulnerable to climate variability and extreme weather conditions. While the rift valley region, considered to be Kenya's food basket, is prone to floods and landslides, the coastal areas often suffer from rising sea levels and associated floods and saltwater intrusion. Like Kenya, Ethiopia counts EU as its second most important trade partner for Ethiopia's agri-food products. Furthermore, the National Planning Commission (NPC) of Ethiopia, in its second growth and transformation plan, has prioritised the promotion of agricultural productivity as a key driver for inclusive growth [15]. In 2016, Ethiopia's exports to the EU represented 26% of its worldwide exports [28]. Ethiopia is also highly vulnerable to effects of climate change and is well known for experiencing frequent droughts. Such climate exposure and anticipated risks have led both case countries to implement strategies that focus on building food systems that are climate resilient, adaptive and sustainable. Furthermore, both case countries are set to become middle income economies in the next 5 years.

We also ensured that document analysis covered the AU, the two RECs of eastern Africa namely the East African Community (EAC) and the Inter-Governmental Authority on Development (IGAD), as well as the two case countries. These case studies were important for analysing how the potential impact of the EUGD/F2F would unfold at national level. The national level is critical because it is the place for implementing the commitments regarding the African climate and food sovereignty agendas, made by member states at AU and REC levels. It was also important for establishing the rationale behind specific recommendations. Preliminary document review guided the identification and organisation of priority documents into main categories and areas to be covered in the analysis, as well as clarifying the interview guide.

3.2 Sampling approach

We found a purposive stratified study approach essential given the: (i) vast size of the study site (EU, AU, IGAD, EAC, Kenya and Ethiopia), (ii) diversity of climate and food systems agendas – climate justice, climate resilience and sustainable food systems (iii) various levels of policy analysis and comparison – vertically within African regional structures, horizontally between EU and Africa. In terms of sampling for key informants, the assessment was selective in targeting mostly technical people involved in policy development related to the EUGD/F2F and African climate change and food related policies at continental, regional and case country national levels. The main reason is that the EUGD F2F is rather new, and not known yet to many stakeholders. In line with the selective approach, we used a purposive stratified sampling approach that took account of: i) relevant directorates of the European Commission (EC), ii) relevant department of the African Union Commission (AUC), iii) the Regional Economic Communities (RECs) to which case countries belong and case countries, (iv) a range of policies on food and agriculture, trade, development cooperation, as well as climate change policies at continental, REC and national levels, and (v) civil society actors interested in the potential impact of the EUGD/F2F. Interviewees comprised of policy experts from, relevant EC directorates, EU delegation in case countries, relevant AUC departments, RECs and NGOs. For a full list, see Annex 1.

3.3 Data generation methods

We utilised mainly two instruments/ tools for data collection namely: document review guide and semi-structured interview guide to conduct Key Informant Interviews (KII). The guides/protocols provided information on how to analyse documents and conduct the interviews. The views of FINGO on the data collection tools were sought to improve their relevance and quality, given the fact that we could not pre-test them. Due to the current Covid-19 pandemic, interviews were all administered on line, using Web-based meeting tools, mostly Zoom, Teams and Webex. The oral interviews were recorded, with prior informed consent of interviewees and used to complete the notes taken during interviews.

Key documents were reviewed at the preliminary stage to facilitate categorisation of findings, and structuring of the report in order to respond to key study questions. International, continental, sub-regional and national level policies related to climate adaptation and mitigation, food and nutrition security, agricultural transformation, rural development and trade, were reviewed. A list of all the documents reviewed is in annex 2. The documents for review were selected purposively based on the study questions. The documents were mostly retrieved from official websites of the respective institutions and countries, while others were provided by Fingo.

We interviewed a total of ten technical and policy experts, all of them knowledgeable about the EUGD/F2F, as well as climate and food/agricultural policies in eastern Africa. Four of the interviewees were from the EC; one from the Directorate-General for International Partnerships (DG INTPA), two from EEAS in Addis Ababa, Ethiopia and in Nairobi, Kenya, and one from the Directorate General of Health (DG SANTE). We interviewed three African policy experts; one from the AU Commission, one from IGAD Secretariat and the other from the EAC Secretariat. The remaining three interviewees came from FAO in Nigeria, two from the National Organisation for Organic Movement in Uganda (NOGAMU) in Kampala and one from a value chain project in Ethiopia.

3.4 Data analysis methods

We used a comparative approach to policy analysis by placing the policy summaries alongside each other in a table and comparing the various eastern Africa food related policy documents with the EUGD/F2F on the one hand. On the other hand, we compared various eastern African climate change related policies with the EUGD/F2F. We focussed on the key components of the policies namely: Objective, strategy, highlights of the main components and key instruments for policy implementation.

We applied inductive analysis to organise around the three main study questions on coherence/incoherence between EUGD/F2F and various eastern African food and climate change related policies, and opportunities both for moving faster towards sustainability and for policy influencing. In addition, we used a concept/theory-informed analysis (abductive) that is based on a combination of climate justice and a sustainable food systems approach. It helped us to analyse data in relation to potential negative impacts and risks posed by the EUGD/F2F on eastern Africa, especially as the sub-region strives to realise its climate adaptation and mitigation, as well as food sovereignty agenda. The analysis was also supported by the author's previous long experience and expertise in eastern Africa and European food, agricultural and climate adaptation policy review.

3.5 Methodological limitations

The main methodological limitation is that the time to carry out the study was short. The number of documents and interviews therefore, had to be selective. Secondly, we were unable to generate primary data through face-to-face interviews and meetings due to the travel restrictions related to the current COVID-19 pandemic. This meant that we had to conduct online interviews because most interviewees indicated that they are experiencing time pressure. These exceptional conditions posed by the Covid-19 pandemic, compelled us to shorten most interviews. We addressed this challenge by: i) including interviewees outside the cases countries, for instance Uganda and Nigeria and, contacting interviewees through other people who know them and; ii) sharpening the focus of each interview based on the experience of the individual.

Section 4 Findings

This section describes potential impact of the EUGD/F2F on (eastern) Africa's food related policy initiatives and climate agendas. The findings in this section are based on analysis and synthesis of primary data generated, and secondary data reviewed during the study, with a focus on answering the main evaluation questions per objective. As pointed out in the introductory section, the analysis that underpins potential impact of the EUGD/F2F on eastern Africa's food system related policies and climate agenda is informed by a combination of inclusive approaches: climate justice and resilience and, sustainable food systems and food sovereignty. In order to understand better the possible impact of the EUGD /F2F on selected eastern Africa policies at various levels, we have made a tabular comparison of the policies on selected criteria which form the key components in the policy documents (Tables 2 and 3). We established that while there are areas of policy incoherence, potential negative impacts and risks, there several areas of coherence, as well as opportunities.

TABLE 2 Comparison of Farm-to-Fork Strategy and selected Eastern African Food related Policies

Key components of the EU Green Deal: Farm to Fork Strategy	Africa Regional Nutrition Strategy [29]	The EAC Food and Nutrition Security Action Plan 2018-2022 [26] & The Malabo Declaration [30]	IGAD Food and Nutrition Security and Response Strategy [31]	Kenya Agricultural Sector Transformation and Growth Strategy: 2019-2029 [32]	Ethiopia Growth and Transformation Plan II, Vol 1 (2016-2020) [33]
Objective: As part of EU green deal towards climate-neutrality by 2030 F2F strategy targets to have a robust, sustainable and resilient food system; Position European food as a global standard for sustainability	**Objectives – By 2025 progress on all indicators of malnutrition**: 40% reduction of stunting in children < 5 years; 50% reduction of anaemia in women of child-bearing age; 30% reduction of low birth weight; No increase of overweight in children < 5 years of age; Increase exclusive breast-feeding rates in first six months by 50%; Reduce and maintain childhood wasting to < 5%.	**Objectives: To improve sustainable and inclusive agricultural production, and trade** of crops, animal resources, fisheries, aquaculture, apiculture and forest products; strengthen resilience among households, communities and livelihood systems; Improve utilisation of nutritious, diverse and safe foods – stunting + underweight children	**Objectives**: to significantly reduce food & nutrition insecurity and malnutrition; Provide humanitarian assistance and livelihood support for vulnerable populations; facilitate regional trade; safeguard pastoralists and pastoral assets; enhance Regional capacity for disaster preparedness and response; Improve Community-Based Climate Services for Agriculture	**Objectives** / Anchors: Increase small-scale farmer, pastoralist and fisher folk **incomes** (by 35%); Increase agricultural **output and value addition**; Boost household food **resilience** – reduce the number of Food insecure Kenyans in the Arid and Semi-Arid Lands (ASAL); Protect households against **environmental and fiscal shocks**.	To sustain the accelerated growth and establish a spring board for economic structural transformation: i) 11% GDP growth rate; ii) Develop the domestic engineering and fabrication capacity iii) solidify public mobilization for participation; iv) strengthening a stable democratic developmental state.
Strategy: Emitting less or absorbing more GHG – while addressing climate change challenges and growing the economy - better jobs and enhanced welfare. Investment in environmentally-friendly technologies, supporting innovation, developing cleaner forms of transport and energy, championing higher standards around the world.	**Strategy: i)** Pursuance of multi-sectoral policies and implementing programs that address the 3 necessary conditions of household **food security**, adequate primary **health** care and optimal care and support for women and children and; ii) ensuring good nutritional governance by garnering adequate human, economic and institutional resources, effectively accounted for.	**Strategy (from the Malabo declaration)**: (i) Countries increase annual funding of agriculture to 10%, sustain annual sector growth of 6% (ii) doubling agricultural productivity by 2025, (iii) increasing farms resilience to climate change and weather by 30%, (iv) reducing post-harvest loses by 50% by 2025, (v) triple intra-Eastern African agricultural trade by 2025	**Strategy**: supporting humanitarian and livelihoods interventions through revitalized and sustained food production and supply for majority of the population.	**Strategy**: Is based on the belief that food security requires a vibrant, commercial and modern agricultural sector that supports economic development, sustainably & commitments to regional and global growth.	**Strategy**: Sustain the rapid, and equitable economic growth and development of agriculture and manufacturing; transformation of domestic private sector; strengthen capacity for domestic construction i; manage the rapid urbanization; Accelerate technological capacity building; empower women and youth; Build climate resilient green economy.

Key components of the EU Green Deal: Farm to Fork Strategy	Africa Regional Nutrition Strategy [29]	The EAC Food and Nutrition Security Action Plan 2018-2022 [26] & The Malabo Declaration [30]	IGAD Food and Nutrition Security and Response Strategy [31]	Kenya Agricultural Sector Transformation and Growth Strategy: 2019-2029 [32]	Ethiopia Growth and Transformation Plan II, Vol 1 (2016-2020) [33]
Specifically: Building the **food chains** that work for consumers, producers, climate and the environment by ensuring- neutral or positive environmental impact on natural resources on which food systems depend; food and nutrition security for all citizens (availability, access and utilization); that sustainable food is most affordable.	Participating in **initiatives** such as the Scaling Up Nutrition (SUN) movement for: **Stakeholder mobilization and organization**; developing policy and regulatory frameworks; developing common results framework; resource mobilization; incorporating nutrition indicators in all agricultural program design and; making local context analyses in order to design appropriate interventions	REC & Partner States to strengthen and harmonize policies, institutions, and food and agriculture systems creating and expanding economic opportunities for agribusinesses, smallholder producers and MSMEs, while also promoting **environmental sustainability**; supporting value chains actors; boosting linkages to markets; leverage responsible private sector investments; and adoption of policies to support employment, entrepreneurship, and **climate-smart agriculture**.	It will include a **designed comprehensive, climate-responsive social protection strategies** to prevent, minimize and address the complex long-term impacts of extreme climatic events (floods), Desert Locust invasion and epidemics (COVID-19); a regional strategy with four key priority areas with a number of strategic objectives and activities is designed.	**i) Knowledge and skills**: Launch 3 knowledge and skills building programs focused on technical and management skills for 200 national and county government transformation leaders, 1000 farmer-facing SMEs, and 3000 extension agents: ii) **Research, innovation and data**: Strengthen research and innovation, and launch priority digital and data use cases for better decision making and performance management	
Component 1: Sustainable food production: Faster transition by all producers towards **sustainability**; Financial and human investments - **reward carbon sequestration**; Investment in **circular bio-based** economy; Promoting **IPM & precision agriculture**; Reducing nutrient loss (N & P) by 50%; supporting implementation of Integrated Nutrient Management (INM); Reduce **GHG** emission - sustainable livestock farming; Reducing **Anti-Microbial Resistance** (AMR); Promote **organic farming**; New **echo-schemes** expected to generate funding for sustainable practices - Key instruments: Laws to be adjusted and new rules and regulations to come into play	Maintain or improve the natural resource base; Facilitate production diversification, and increase production of nutrient-dense crops and small-scale livestock	Increasing access to **quality inputs**; Increasing awareness on Good Agricultural Practices (GAP); **Empowering women and youth** to participate; Facilitating - access to micro-credit; adoption of agricultural **mechanization** services; development and commercialisation of innovative agricultural technologies; development and implementation of CSA approaches; Promoting: climate change resilient crops, animals, and fisheries; planting of economic value trees to protect water bodies, wetlands and water catchment areas; integrated management of shared water resources and; raising awareness on the value of shared resources.	Initiating livelihoods recovery while promoting agricultural climate resilience interventions; Implementing risk transfer and risk financing schemes; Support member states to develop and institutionalize annual food balance sheets; Establish Regional Early warning systems for Desert Locust and Pests and Floods; Intensify COVID-19 ground surveillance; Promote use of new technologies such as drones for desert locust and other migratory pest surveillance; Develop online tools for capacity building for climate information management; Enhance fisheries production through improved technologies, innovations and inputs	Increase agricultural **output** by: Unlocking 50 new large-scale private farms >2,500 acres) with 150,000 acres under sustainable irrigation; Increase small-scale farmer incomes by: Targeting 1 million farmers, pastoralists and fisher folk in 40 zones served by 1000 farmer; Support 1.4 million high need farmers to access a range of inputs; Sustainability and crisis management through: Actively monitoring 2 key food system risks: i). **sustainable and climate smart natural resource management** including sustainable irrigation and water basin health, soil quality and land use; and ii) **crisis management** for pests diseases, climate and global price shocks	It is necessary to engage smallholder farmers, integrating educated youth farmers with private investors that are large enough to adopt new technologies and produce significant marketable surpluses; Public and private investments in road, electricity and telecommunications are also needed to reduce marketing costs with positive spill over effects on growth of rural market towns and secondary cities

Key components of the EU Green Deal: Farm to Fork Strategy	Africa Regional Nutrition Strategy [29]	The EAC Food and Nutrition Security Action Plan 2018-2022 [26] & The Malabo Declaration [30]	IGAD Food and Nutrition Security and Response Strategy [31]	Kenya Agricultural Sector Transformation and Growth Strategy: 2019-2029 [32]	Ethiopia Growth and Transformation Plan II, Vol 1 (2016-2020) [33]
Component 2: Sustainable food processing & distribution; Promote availability of healthy, affordable and sustainable food; develop a code of conduct for responsible business ; Improved corporate governance framework, food re-formulation, regulate better advertising; Promote circular business models in processing and marketing; Food packaging legislation review.	Improve processing, storage and preservation to retain nutritional value and food safety, to reduce seasonality of food insecurity and post-harvest losses, and to make healthy foods convenient to prepare; Expand market access for vulnerable groups, particularly for marketing nutritious foods; focus on nutrition sensitive trade and industry	Supporting the development of Farmer Based Institutions: farmer capacity building for market quality & safety requirements; ratification of EAC SPS protocol; harmonized bio safety laws, food standards, traceability; eliminating NTBs; enhance capacity for food market intelligence, regional food balance sheets, harmonizing commodity exchange, strengthening one stop border operations	Reduce barriers to cross border trade - restricted movement; Ensure the availability of food supplies, and manage shocks through increased regional trade; Undertake early national food balance analysis to inform regional and international export/ import	Increase agricultural value addition; Boost household food resilience - Restructuring the Strategic Food Reserve (SFR), better service of needy, competitive digital reserve stock and cost management; Boost food resilience of 1.3 million farming, pastoralist, and ASAL households	
Component 3: Sustainable consumption – facilitating shift to healthy sustainable diets; Reducing average intake of energy, red meat, sugars, salt and fats & increasing consumption of whole-grain cereals, fruit and vegetables, legumes and nuts is insufficient. **Key instruments**: EC - harmonised mandatory front-of-pack nutrition labelling; mandatory origin indications; harmonising voluntary green claims, environmental and social aspects; Tax incentives to drive transition	Incorporate nutrition promotion and education that builds on existing local knowledge, attitudes and practices; Promote community based approaches; Nutrition sensitive water and sanitation	Increasing investment in consumption of diversified and nutritious food; Implementing actions to address institutional capacity gaps on food safety, preservation facilities including cold chains and warehouses; Main focus is on reducing malnutrition of women and children nutrition, particularly during the critical 1,000-day window from pregnancy to a child's second birthday (to reduce child stunting).			
Component 4: Food loss and waste prevention: Reducing food loss and waste in order to recover nutrients, food safety, bio-diversity etc; **Key instruments**: EC to propose legally binding targets to reduce food waste across the EU; harmonise date marking among member states.		Enhanced post-harvest handling techniques and value addition.	Support smallholder farmers to address post-harvest losses including installation of communal storage facilities and other post-harvest loss management techniques at the household and community level.	Sustainable food processing & distribution	

TABLE 3 Comparison of Farm-to-Fork Strategy and selected Eastern African Climate Change related Policies

Key components of the EU Green Deal: Farm to Fork Strategy (EUGD/F2F)	Draft African Climate Change Strategy (ACCS) 2020-2030 [34]	EAC Climate Change Policy [35]	IGAD Regional Climate Change Strategy [36]	Kenya National Action Plan (NAP) [25]	Ethiopia Climate Resilience Green Economy (CRGE) for Land Use Sector [38]
Objective: As part of EU green deal towards climate-neutrality by 2030 F2F strategy targets to have a robust, sustainable and resilient food system; Position European food as a global standard for sustainability	**Objective**: Building the resilience of the African continent to the impacts of climate change and ensure environmental sustainability. **Strategic Objective** (SO): i) action - harmonised adaptation and mitigation responses; ii) result - resilience built, and vulnerability reduced; iii) Guiding philosophy - the African agenda 2063; iv) Recognition that Africa is the 'most vulnerable' and 'least prepared' to face climate change impacts	**Objective**: Collectively address Climate Change in the region while assuring sustainable social growth, economic development and environmental sustainability.	**Objective**: To develop and strengthen the resilience and adaptive capacity of IGAD region to climate change	**Objective**: enhance climate resilience towards Vision 2030. **Specific objectives**: i) Integrate climate change adaptation into national & county level development plans & budget; ii) Enhance the resilience of public and private sector investment in the national transformation; iii) Enhance synergies between adaptation and mitigation actions; iv) Enhance resilience of vulnerable populations through adaptation and disaster risk reduction strategies	**Objective**: achieve a middle-income climate resilient green economy by 2025; **Principle**: economic growth in agriculture and land use sectors is climate resilient and results into no net increase in GHG emissions from 2010 levels; **Focus**: address climate change vulnerability and food insecurity; Focus on Agriculture & forestry (43% of GDP in 2020, 75% of export commodity value) and livelihoods (80% employed in the sectors).
Strategy: Emitting less or absorbing more GHG, better jobs and enhanced welfare. Investment in environmentally-friendly technologies, supporting innovation, developing cleaner forms of transport and energy, championing higher standards around the world.	**Strategy**: i) Focus on sectors with the greatest potential for **post COVID-19 green recovery** and job creation; ii) Implementation of a continental **early warning** and response system; iii) Smart win-win partnerships of a resilient Eastern Africa we want, especially private sector investments in climate action; iv) Capacitate regional climate centres	**Strategy**: i) To promote Climate Change Adaptation (CCA)/ Climate Change Mitigation (CCM) actions that reduce vulnerability, enhance adaptive capacity and build socioeconomic resilience of vulnerable populations and ecosystems; ii) Take a sectoral approach and integrate adaptation responses into development planning	**Strategy**: i) Focus on adaptation, disaster risk reduction and resilience building; ii) Promote cleaner energy and low-carbon or carbon neutral development path	**Strategy**: i) Mainstream climate change adaptation national & county plans; ii) Enhance adaptive capacity and resilience of the informal sector; iii) Enhance the capacity to enforce and monitor compliance of adaptation actions; iv) Attracting international climate finance; v) Adaptation pillars include renewable energy, climate proofing of infrastructure	**Strategy**: i) Building resilience while ensuring collective responsibility of all stakeholders at different levels – local communities, private sector & international partners through technical assistance, capacity building and implementation support; ii) Build partnerships to deliver the strategy – especially for financing – establish a CRGE facility

Key components of the EU Green Deal: Farm to Fork Strategy (EUGD/F2F)	Draft African Climate Change Strategy (ACCS) 2020-2030 [34]	EAC Climate Change Policy [35]	IGAD Regional Climate Change Strategy [36]	Kenya National Action Plan (NAP) [25]	Ethiopia Climate Resilience Green Economy (CRGE) for Land Use Sector [38]
Component 1: Sustainable food production: Faster **transition** by all producers towards sustainability; Financial and human investments - reward carbon **sequestration**; Investment in circular bio-based economy; Promoting **IPM** & precision agriculture; Reducing nutrient loss (N & P) by 50%; supporting implementation of Integrated Nutrient Management (**INM**); **Reduce GHG** emission - sustainable livestock farming; Reducing Anti-Microbial Resistance (**AMR**); Promote organic farming; New echo-schemes expected to generate funding for sustainable practices. **Key instruments**: Laws to be adjusted and new rules and regulations to come into play; Framework for a sustainable food system – to be in place by 2023	Recognition that most Africans are facing **food insecurity** (e.g. 45M in southern countries) driven by climate change (WFP, 2020): i) Climate smart sustainable land and water use, agricultural practices and ecosystem management can turn Africa from a hungry continent into a net food exporter quickly; ii) Building healthy national and regional food systems and empowering rural communities through the Africa Climate Smart agriculture Vision 25x25 which aims to have 25 million Eastern African farmers adopting CSA, including organic farming by 2025: **Key instruments**: Eco Mark Eastern Africa (EMA) a recognition system for sustainability standards which functions as a quality assurance mechanism considering climate relevant indicators	**Prioritize the most vulnerable sectors (agriculture and food security), supporting livelihoods of most communities**: i) Reduce CO2 emissions from Deforestation and Forest Degradation; ii) Promote alternative livelihoods systems among vulnerable communities; iii) Promote sustainable land and natural resources management practices; iv) Strengthen agro-meteorological information generation; v) Improve land productivity and soil fertility: through integrated nutrient management; improving soil quality; enhancing soil and water conservation measures; vi) Promote reforestation, afforestation and agro-forestry practices; vii) Upscale carbon storage capacity. **Key instruments**: adaptation framework for agriculture	i) Promote inter-state and inter regional trade in agricultural commodities; ii) Enhancing capacity for the control of land degradation, desertification, soil conservation & better integrated soil management; Mobilize support for the sustainable management of forests, afforestation and reforestation; iii) Scale up conservation and climate smart measures. **Key instruments**: Adopt the REDD+ initiatives for carbon capture and storage; Adopt accounting rules for reduction of energy demand across development sectors; Negotiate for market access – inter-country, inter-regions and international; Scale up investment in renewable energy sources – solar wind, geothermal & urban waste – establish energy innovation centres and hubs.	**Adaptation and resilience building**: i) Integrate ecosystem and community based approaches to support of adaptation & reduce natural resource based conflicts; ii) Strengthen tree-planting and conservation initiatives; iii) Promote efficient irrigation systems and technologies; iv) promote climate resilient sustainable livelihoods for vulnerable groups; v) Develop and up-scale specific adaptation actions / climate smart practices; vi) Promote indigenous knowledge on crops and agronomy practices; vii) Support adaptation of agricultural value chain actors through capacity building efforts; viii) Restore degraded grazing lands; ix) Promote livelihood diversification and market access (camels, indigenous poultry, beekeeping, ostriches etc.)	**Improving crop and livestock production practices for higher food security and farmer income while reducing emissions and enhancing resources use efficiency**: i) Agricultural crops are a major source of GHG emissions through the use of fertilizer and through N2O emissions from crop residues, producing 12 MtCO2e a year in 2010: - combat this through avoiding deforestation and adopting higher yielding techniques; ii) Support consumption of lower-emitting sources of animal protein, e.g., poultry. **Key instruments**: Improve the forest cover of the country and its management; Adopt renewable sources of Energy; Payments for ecosystem services; Adopt agro ecological agricultural production; Improve market access at both local and international levels

4.1 Policy Coherence/ Incoherence analysis

To analyse policy coherence, we adopted the definition of Policy Coherence for Development (PCD) according to the agreement of development partners which emerged in the 1990s, following the concern that some policies of developed countries may be having negative impact on developing economies. Under the PCD, coherence refers to a situation where developed countries ensure that their development cooperation policies do not have any negative effects, do not contradict but rather complement economic and social development strategies of developing countries [7]. The reverse of policy coherence is considered policy incoherence.

Key Informant

Overall, the EUGD/F2F is coherent with the long term goals for the whole world – transitioning food systems into sustainable, carbon-neutral path, especially since the UN secretary General has now called for a UN food system summit this September this year.

Key Informant: EU Commission

4.1.1 Comparative analysis: Areas of coherence of the F2F and selected Eastern Africa policies

We observed an emerging consensus indicating a clear recognition that we are living in unprecedented times where climate change is real and is increasingly posing threats to human health, biodiversity, food and water security and socio-economic growth and development in both developed and developing countries. In addition, agriculture and the food sector being significant contributors to climate change related problems can provide good solutions. More so, developing countries, particularly in sub-Saharan African countries (including eastern Africa), are affected more due to their level of vulnerability and low adaptive capacities. There is also a clear understanding that ambitious and concrete mitigation and adaptation actions must be taken at all levels to accelerate transition towards a climate neutral world, possibly by 2050 as enshrined in the Paris Agreement [39]. There is general acceptance and political will as expressed in the reviewed policies (Tables 2 and 3) at continental level (EU and AU), sub-regional level (IGAD and EAC) and in the case study countries (Kenya and Ethiopia) that governments, institutions, private sector, Civil Society, Organizations (CSOs) and citizens have distinct roles to play in implementing climate actions, both mitigation and adaptation, to minimize their climate footprints.

We established that policy objectives across the reviewed spaces (continents, regions and countries) all indicate a common stand point. They aim at addressing the impacts of climate change while ensuring socio-economic development, as well as environmental sustainability. They all suggest an approach of 'low carbon development pathway' and building climate resilient (low carbon) carbon-neutral green economies. In so doing, the policies target all sectors of their economies with much emphasis on the most vulnerable sectors, commonly mentioned as, the agriculture, food and land use sectors. They are anchored on the principle of social justice, guided by inclusiveness and equity, and aiming to leave no one behind. The policies underline the need to pay particular attention to the most vulnerable and marginalized communities and social groups including women, the rural and urban poor, youth, the elderly, persons with disability, and the indigenous people, among others. At higher levels of policy objectives, the EU and AU are looking for the same thing, namely, transforming agriculture sustainably, while being

mindful of climate induced challenges and the many people whose livelihood depend on it. Concrete actions however, differ or are vague, and this may on the one hand, lead to results which counter each other and policy incoherencies, on the other hand.

Another area of coherence is the recognition that the current models of agricultural and food production are unsustainable, are destroying the environment and hurting people and biodiversity [40] ; [41]. On the one hand, the agriculture, food and land use sectors are among the most vulnerable sectors and are already disproportionately hit by climate variability and extremes. On the other hand, these sectors hold a great potential to contribute to reduction of GHG emission and responding adaptively, if targeted and put at the centre of climate action. To harness this potential, there is dedicated attention and focus at continental, regional and country levels towards building efficient and sustainable agricultural and food systems that are climate-adapted and resilient. We observed the following concrete and commonly targeted climate actions:

- Promoting/up-scaling green technology and regenerative, climate-smart and agro-ecological practices that enhance soil and biomass carbon sequestration and restoration, promote soil and water conservation and integrated soil management, reverse degradation and biodiversity loss, and ensure sustainable agriculture production and productivity.
- Reducing dependency on inorganic agro-inputs including pesticides, antimicrobials, herbicides and promoting integrated pests, disease and nutrient management practices in all agricultural subsectors of livestock, crops, fisheries and agro-forestry.
- Promoting precision agriculture techniques, increasing organic farming, as well as organic-inorganic fertiliser combinations.
- Promoting the use of efficient irrigation systems and technologies that enhance water use efficiency.
- Preserving and restoring natural resources such as natural forests, wetlands and other natural terrestrial ecosystems. Reducing GHG emissions from deforestation and forest degradation by adopting relevant conservation and sustainable management practices of forests, which enhance forest carbon stocks. Promote and invest in carbon farming.
- Promoting increased investments in renewable energy sources including solar energy, wind, geothermal, agricultural and urban waste management at all agriculture and food value chain nodes, for example – production, post-harvest handling, storage, processing, transportation and distribution, among others.
- Promoting waste management along agricultural and food value chains through the principle of "reduce, reuse and recycle"; specifically, investing in the generation of bio-energy, organic fertilizer, and other waste management by-products.
- Building win-win partnerships, with private sector actors, domestic or international partners for investments in climate actions through technical assistance, capacity building, technology development and transfer, and implementation support.

Key Informant

While policy coherence can be observed at higher level objectives, there incoherencies when it comes to concrete actions on the ground and the details of what will actually be done, questions arise. The questions include the starting point of the F2F, information that fed into the process and the stakeholders who participated.

Key Informant: AU, department of Agriculture and Food Security

Key Informant

Kenya is very positive on climate change, environmental and biodiversity issues. The government is dedicated to climate change goals and is serious about putting it into practice. Kenya stands for CSA and all the highlights of the F2F does not surprise them. There is already a lot of conservation agriculture going on in the country due to large tracts of Arid and Semi-Arid Lands (ASAL).

Key Informant: EU delegation in Nairobi, Kenya

4.1.2 Comparative analysis: Areas of potential incoherence of the F2F and selected Eastern Africa policies

On paper the F2F is coherent, in many aspects as outlined above, with the African continental, regional and country level climate and food agendas. Cognisant of the fact that the EU remains the most important market for food exports from eastern Africa (for example exports of the top 20 agricultural products to the EU was worth 11.1bn euros in 2019) [42], and given that the F2F contains an external dimension of "promoting the Global transition", deep reflection on some of its target action areas and interpretation of what these may imply for eastern Africa's food related and climate change policies, casts a few areas of incoherencies. Some of the incoherencies may also arise from policy gaps, regarding missing components among both the F2F and eastern African policies, which are crucial for the Green alliance.

Limited input by stakeholders: If the F2F pledges to leave no one behind, it would have been important to seek input from key policy making stakeholders outside the EU, especially African ones (personal communication of AU interviewee). A main reason is that the EU remains a critical and one of the most important trading partners of Africa. In addition, it was only recently, in 2019, when an AU-EU ministerial meeting resulted into a report entitled "An Africa-Europe agenda for rural transformation", as well as a political declaration on rural development in Africa. These two documents formed the foundation of the current AU-EU cooperation. If policy makers from AU, RECs, African governments and African CSOs were consulted, important input would have been made by considering possible consequences of F2F on the current EU-AU agri-cooperation agenda.

The challenge of reducing agro-chemical use in Eastern Africa: The eastern Africa sub-region lies within the intertropical zone with many different climate types in which pests and diseases thrive [43]. In addition, the pressure from plant pests (including weeds, pests and pathogens) is increasing due to effects of climate change and consequently increasing the demand for inputs to address the problem. Policy makers and implementers would question: How will the F2F targets impact on the support that Africa is receiving from Europe in the form of development aid and associated EU funded programmes in the agriculture sector? From its Abuja declaration, Africa is striving to reach the 50 Kg/ha use of fertilizer, up from the current 25 Kg/ha on average. This would imply that while reducing fertilizer use according to the direction laid out in the F2F is a welcome proposal, given that the EU is at 150Kg/ha of fertilizer use, EU partners should expect that Africa is likely to increase inorganic fertilizer use, especially to enable the continent address the food and nutrition challenges.

Key Informant

When it comes to crop protection in Eastern Africa –compromised use of pesticides would definitely result into huge economic loss from crop damage and losses: productivity cannot easily be increased without use of these synthetic chemicals: implication is that production would go low and the only way to step it up would be through frequent production cycles in a year or extensive production, adding more land and most likely marginal land..... also the period to adjust and align some specific commodity value chains –like coffee may require more than 10years to breed resistant varieties.

Key Informant: FAO, Food Security Analyst

It is important to note that some farmers in eastern Africa are eager to prevent dependency on inorganic fertilisers by applying organic-inorganic fertiliser combinations. Unfortunately, organic inputs availability is limited, and their markets hardly exist in most eastern African countries. Most farmers in eastern Africa who are currently using organic inputs use local farmer group mechanisms of production and sharing (Akoyi and Maertens, 2017). This means that even when smallholder farmers wish to reduce agro-chemical use, access to organic inputs will be a big constraint. The hope is that F2F will increase demands for organic agricultural products, which might then increase investments in organic

input market development. Even when investments in organic inputs are stimulated, the large quantities required, and high prices might be prohibitive initially. This situation, combined with the marginal profitability of smallholder farming implies that at the moment organic inputs may be less efficient than the synthetic ones.

There is consensus among eastern African countries, in particular EAC member states that commitments they already made to reduce malnutrition must be fulfilled urgently using inorganic inputs [30], which many technocrats view as being incompatible with organic agriculture. With this goal, a development partner such as the EU, interested in promoting organic agriculture may not be readily engaged in partnership for sustainability based on strategies which include the use of inorganic inputs. Much as the F2F allows optimal use of inorganic inputs, this requires a well-functioning agricultural extension service, technology for precision application, as well as institutional capacity to monitor and regulate quality and use. These conditions for success hardly exist in astern African countries. The use of agro-chemicals therefore, will persist among eastern African farmers under the current conditions, with consequent residues detected in most agricultural produce. This implies that with F2F induced stringent requirements and standards for imports of agricultural products into the European market, smallholder producers from Eastern Africa will find it increasingly difficult to supply EU food markets.

Forest products, deforestation free products and human rights: The F2F proposes that all products placed on the EU market are free from deforestation and human rights violations such as the right to access and use of land, cultural rights, as well as the right to a decent livelihood. This is a very positive step, especially since it could boost conservation efforts across the continent. There are two perspectives on this issue. Firstly, demarcation of forest reserves within communally owned land has remained a contentious issue for those living on the forest reserve frontiers. The reason is that such communities have traditionally used forests as agricultural land and forest products as sources of food. Such communities usually depend on agriculture for their livelihood, have always farmed in the forest reserve as part of their communal land, are faced with increasing population pressure and are usually locked out of the reserves without alternatives. Worse still, such communities also depend on the forest products (herbs, fruits and vegetables) as important sources of food. Locking them out of forest reserves in the name of conservation without alternatives, not only makes them food insecure but also endangers their livelihoods. Secondly, if implementation of the F2F is expected to encourage more imports from eastern Africa due to increased investments, it could lead to more deforestation as those on the frontiers expand area under production. By implication, some of these indigenous communities who are organised in cooperatives to produce for export could face a situation in which they would not be able to sell their products destined to the EU market. They would be unfairly denied an opportunity to improve their incomes and reduce poverty among their communities. This is another example of potential offshore environmental damage of the F2F.

Women and youth integration in agri-business: Review of literature has revealed that for most Eastern African countries, market-oriented agriculture (agri-business) is portrayed as the "magic bullet strategy" to solve problems among marginalised population groups, notably gender discrimination and youth un-employment [44]. This strategy is premised on the belief that women and the youth are key in moving eastern Africa agriculture forward. On the one hand, women already dominate most stages of the agricultural value chains but are mostly under-rewarded. On the other hand, the youth have low interest in agriculture due to the negative attitude they have about subsistence agriculture. Many of them have seen their parents depending on this type of agriculture, with very little or no remuneration and income generation. Many programs currently supporting women and youth in agribusiness are focussed on increasing incomes, without integrating environmental sustainability issues. The fact that women and youth are such key players in African agriculture, and that the F2F says nothing about gender, is a clear inconsistency and a gap at the same time.

We observe that both the F2F and the African strategy for rural transformation underline context specific technology development and digitalisation as key drivers for transformation of economies towards sustainability. In spite of these opportunities, gender issues continue to hamper the extent to which rural women can benefit, compared to their male counterparts [49]. For example, while the level of education is low in rural areas of developing countries, it is lower for women in rural Africa. In addition, rural young women may be able to access as much information from a smartphone as their male counterparts but barriers posed by social norms may prevent the young women from taking up life changing actions and opportunities. Furthermore, young rural women are less likely to own or have access to titled land, than their male counterparts. They are also more likely to be neither in school nor in a job. Rural transformation does not seem to close the gender gap, neither does it reduce the triple burden of young rural women [45]. The fact that the F2F is gender blind is an issue that should be redressed when translating it to the EU's external action, stricter trade related requirements and development assistance programmes.

Sustainable consumption: The EU states that the F2F is leading the way to sustainable food consumption by committing to facilitate a shift towards healthy sustainable diets comprised of less intake of energy, red meat, sugars, salt and fats and, higher consumption of fruits, vegetables, nuts and high fibre foods. This is intended to bring more health benefits and reduce pressure on environment. This is important for the demand side of the sustainable food equation. African policies at continental, regional and national levels, are all putting emphasis on the health aspects of food consumption, specifically tackling under-nutrition. The perspective of less pressure on the environment as part of sustainable consumption is mostly silent in eastern African policies. This gap in eastern African policies versus the F2F can undermine sustainability outcomes of collaborative projects in terms of empowering consumers to make informed, healthy and sustainable food choices.

Key Informant

... however, F2F has not yet resolved the problem of genetically modified soya in the pork industry in the EU. There is however, a strong move to increase food safety in general and the consumption of ecological products.

Key Informant: EU Delegation in Ethiopia

Consumption of livestock products: While the F2F is promoting a shift to more plant-based diets, reducing the consumption of red meat and investing in alternative plant protein products and meat substitutes, African food related policies target to increase meat consumption per capita and diversify livestock commercial enterprises to include camels, rabbits, small ruminants, emerging poultry such as quails, guinea fowls, ostriches, among others. This implies that more EU support funds are likely to be allocated to the research and production of alternative plant proteins and meat substitutes leading to less import demand for animal products from outside the EU including Eastern Africa. Livestock farmers in African countries (for example Botswana, Namibia, Swaziland, South Africa) which have been exporting beef to the EU will face a reduced market demand for livestock products.

Meat production: The F2F policy direction above on meat consumption is based on the analysis of the negative impact of the European livestock production system on climate change. A question arises - how does this work out for Africa?. According to AU policy expert (personal communication), this question arises because the literature that is currently used to assess this negative impact is biased because it speaks of livestock as if the livestock systems were uniform. The livestock system of Europe is used but not that of Africa. While carbon free livestock production could be achieved, the production of methane however, remains a challenge, since this is difficult to mitigate. What then are the consequences for eastern Africa, especially knowing how important livestock production and pastoralism is in the sub-region?. Not only is pastoralism a way of life for many in eastern Africa but also, meat is an important source of protein, needed to address

prevailing nutritional challenges. With this spirit of the F2F, will the EU support eastern Africa in Africa to develop its livestock system?

Food loss: The F2F is clear about reducing food loss and preventing food waste as an action that is beneficial to producers and food chain actors because it helps to promote the circular economy development through nutrient recovery, food safety, bio-diversity objectives, among others. Preventing food loss and waste can also contribute to efficiency in use of food production resources by limiting food production to only what can be utilised. On the contrary, eastern African food related policies at all levels acknowledge food loss, particularly post-harvest losses, as a serious food system problem. Main reasons for this include; lack of adequate storage facilities, poor transport and marketing infrastructure, and poor planning of investments. The policies on both sides acknowledge the same problem but there is a policy gap on the Eastern African side. Most rural areas in eastern African are starved of processing facilities that could nurture the development of a circular economy by recycling by-products from processing facilities directly to the farms. Most of these eastern African policies however, mention only vaguely, the need to address these losses without clear description and targets. Yet, it is reported that physical quantity of food loss in eastern Africa is about 120-170Kg per year per capita [46]. This is a policy gap in eastern Africa that may hinder eastern African countries from taking up opportunities presented by the F2F.

Food fraud: The F2F is clearly committed to combat food fraud along the supply chain because it deceives consumers, undermines food safety, fair commercial practices, the resilience of food markets and ultimately the European single market. Although none of the eastern African food policies mention food fraud, it is a well-known fact that food fraud is prevalent in eastern Africa, moreover, with similar consequences as stated in the F2F. There has been cases where food products which do not meet established food safety standards are traded in eastern Africa, causing serious disruptions in the market. Examples include: the recent ban by Kenya on maize imports from Uganda and Tanzania due to high aflatoxin levels. While aflatoxin levels allowable in food has been harmonised within East Eastern Africa, the government of Uganda admits the high prevalence of aflatoxins in maize, sorghum, millet, groundnuts and cassava. According to the Independent newspaper (9th March 9th, 2021), Uganda claims that it has put in place measures to control it (www.independent.co.ug/kenyas-ban-on-uganda-tanzania-maize-threatens-eac-treaty). Another example is a case, in 2019, when a private company in Kenya could not use Kenyan groundnuts due to high aflatoxin levels and instead imported groundnuts from Malawi and Uganda, in order to fulfil its production obligations as a company [47]. Another example is the case of an EU ban of fish imports a few years ago, from Lake Victoria due to the use of poison to catch fish. These examples show a very weak institutional capacity to ensure food safety, proper monitoring and control of standards in food chains and is tantamount to food fraud. They cause significant health risks and loss of trade opportunities.

In conclusion, the above analysis demonstrates that the general coherence between F2F and selected eastern African food related and climate change policies which exist at higher levels of policy direction, objectives and strategies, are not clear at lower levels. When it comes to actions to match the ambitions set, there are some incoherencies and gaps. If the EU F2F is to offer successful leadership in transitioning the global agriculture and food systems towards sustainability, climate-adaptive actions and carbon neutrality, then the EEAS, should come out clearly (not shy away), and offer long term structural support to stakeholders in the global food system, particularly the small-scale food producers and young agripreneurs in developing countries in Eastern Africa so that they too can make their contribution to the change.

4.2 Anticipated negative impact of and risks posed by EUDG / F2F on Eastern Africa

Externalisation of polluting technology: The African Union [34] observes that the binding goal of the EU member states to reach net zero emissions across the bloc by 2050 is likely to witness the retiring of much of their current polluting technologies. Some of these technologies could be offloaded into eastern Africa under the guise of the much needed foreign direct investment and technology transfer. This is highly probable, considering that most eastern African countries may not have regulations strict enough to prevent such importation of unstainable technologies and practices. This could be one way of externalising the cost of the transition to eastern Africa. In such a scenario, eastern Africa's environmental footprint of food systems could worsen, thereby countering eastern Africa's climate agenda.

Un welcome foreign direct investment: If implementation of the F2F makes it more difficult for eastern African smallholder producers to continue supplying EU food markets as explained above, there will be heightened efforts to increase food exports to alternative destinations such as China and other countries in Asia. Such business relationships in the past have led to foreign investors coming into eastern Africa to carry out the production by themselves in the pretext of transferring skills for higher quality and complementing smallholder out grower production for export. This could open up eastern Africa more for land grabbing by foreign investors with lower sustainability and human rights requirements. It can also open up eastern Africa for relocation of inorganic agro-inputs, including those that have been out-lawed. Such investments could endanger eastern Africa's move towards sustainability and will violate human rights. A few cases of land grabbing by European companies for agricultural production, specific cut flower and coffee production have been reported in some eastern African countries (Uganda). The situation however, is not widespread [48]. According DG SANTE of the EU (personal communication), most European farmers who who expand their production outside of the EU prefer destinations in Brazil and Asia but not Africa, so this is not a big worry.

Threats to eastern African food sovereignty: Whether it is large scale investment in farming or loss of income due to difficulties in accessing export markets, there is a danger posed to food sovereignty in eastern Africa. When foreign investors come into the country to invest in estate (large scale farming), they supplement production by recruiting farmers in the neighbourhood as out growers. This has happened in sugarcane production and coffee production schemes in Kenya and Uganda. The out-grower farmers then invest most or all of their resources in such out-grower production, eager to receive good income. Unfortunately, since the investor stands out as the only buyer in usually remote areas, the prices are very low. It is similar to the farmers participating in a captured value chain. These kinds of relationships only worsen the poverty situation of farmers and locks their limited resources, especially land. Smallholder farmers usually invest part of what comes from production of the previous season in that of the next season. In this kind of arrangement however, they are unable to invest and gradually become more and more insecure. Examples include acquisition of protected wetland areas in Uganda for rice production by Chinese companies for export to China.

Investment budget for the F2F: Implementation of the F2F by the EU, is currently estimated to be a staggering 260 billion euros and could go higher. Considering the importance of EU as a development partner for Eastern Africa, the F2F would be worthwhile for eastern Africa if some of this huge budget could be used to conduct impact analysis on eastern Africa, and that support programmes for Africa are rolled out along with instalment of proper safeguards against the risks. Examples of urgently needed investments for eastern African countries include: investments in - raising awareness of the need for the transition, farmer capacity building for adaptation, government institutional capacity to support transition it the whole food system, green and digital transformation of farms, in capacity for research and innovation appropriate for

Eastern African context, in agri-environmental measures and the obligation to respect minimum environmental standards as a condition for eligibility to export to EU, among others.

Spread of Private Sustainability Standards (PSS): With increasing consumer consciousness about ethical, economic and environmental injustices inherent in some Global Value Chains, PSS have spread rapidly in the food sector. They are important in international trade relations because they communicate specific sustainability attributes to consumers in developed countries [49]. Many of the PSS put emphasis on different aspects of sustainability. Fairtrade for instance stresses fair price to producers, organic is concerned with the health of people and the planet, while Utz emphasises sustainable agriculture practices. In coffee alone, five different main PSS namely: fair trade, organic, Rain forest alliance, Utz and 4C, have been operating alongside each other. Not only are they confusing to farmers but they are also very costly to farmer groups which implement them [50]. The expectation is that once regulations are reviewed in the EU to comply with the objectives of the F2F, farmers will feel more obliged to enter into certification contracts in order to capture specific markets. As a result, the tendency towards multiple certification will grow even more, with trade-off between socio-economic and environmental outcomes. Moreover, transaction costs of certification are also increasing [51]. The rising costs, as well as extra efforts that farmers have to exert in producing certified products, will put bigger burdens on smallholder farmers. Currently, certification costs are born mostly by development partners but this is not sustainable. So who will meet these costs? What is entailed in the F2F that could help reduce these burdens?

4.3 Anticipated opportunities the EUGD/F2F brings for Eastern Africa

Better environmental performance on farms: The F2F opens a whole range of options to enhance the environmental performance and the GHG mitigation efforts at farm level, mostly in Europe. Since EU trades in food products with the rest of the world, including Eastern Africa, its implementation will stimulate similar actions outside the EU. Examples include support for modernization of farms which can lead to energy-efficient equipment and farm buildings. It can also lead to more efficient use of fertilizer and alternative inputs, which have less or no negative impact on the environment. In addition, EUGD F2F aims to promote increased consumption of organically produced food products. This could consequently lead to increased adoption of innovative and greener production techniques and models that complement climate smart agriculture production practices such as agro-ecology, agroforestry etc. Through such practices, resilience and climate adaptability of the agricultural landscapes will be enhanced. Better still, practices like agroforestry are important for carbon sink and sequestration thereby reducing on carbon emissions. Such actions increase rural people's resilience and their chances to achieve food sovereignty.

Investments in better environmental performance across the value chain: Transportation and food processing is known to be big contributors to GHG emissions. The F2F presents an opportunity, both in Europe and outside to search for alternative techniques of food processing and distribution which are climate neutral. For instance: investments linked to processing equipment which runs on renewable energy rather than fossil fuel; food marketing that limits food miles in terms of shorter supply chains; the search for preservation products and bio-chemical processes which are environment friendly, among others. Once these technologies are developed in EU, there are higher chances of adapting them to enhance sustainability of food systems elsewhere including Eastern Africa. Investments in the search for environment friendly alternatives can also have a spin-off in terms of creating new green jobs and secondary micro-enterprises both on- and off-farm. For example, construction of renewable energy infrastructure and solar installations, would serve as alternative employment for the youth and agripreneurs.

Opportunity for higher incomes for smallholder farmers in eastern Africa: Once the F2F is implemented, the EU market will be open for fair, healthier and environment friendly food. In order to supply the EU food market, farmers will invest more in terms of following sustainable and environment friendly agricultural production practices. Ideally, this would mean higher production costs, however, these costs would be off-set at two levels. First from the proposed increase in on-farm investments under the F2F in order to support this transition. Secondly, from the consumer Willingness to Pay (WTP) for healthier and environment friendly food. This implies that eastern African farmers who ultimately meet the stringent EU food market requirements will benefit from higher prices. Moreover, spin-off on farms will benefit household food and nutrition security, contributing to food sovereignty.

Increased demand for organic food products: One of the targets in the F2F is to increase organic production in EU. This also means that associated actions to promote organic farming will also increase demand for organic products in the EU. Conversion from conventional to organic production however, is known to be associated with lower production volumes. The supply gap of organic products that might result in the EU food market will be an opportunity for certified organic producers in eastern Africa to export more to the EU. It will also attract organic farmers in Eastern Africa, who are currently certified under the Participatory Guarantee Systems (PGS) to quickly move into third party organic certification in order to access the EU market and increase their incomes. This increased demand would also absorb the surplus certified produce (for example coffee) which failed to be marketed as certified in the past because of limited global demand. Increased demand for organic products could also encourage government institutional support to organic farming. For example Uganda which needs to operationalise its organic policy and would take the opportunity presented by the F2F implementation, to prioritise investments in such a process, including financing the organic bill.

Opportunity for food system assessment and better information for policy making: Based on the ambitions outline in the F2F, the EU is currently updating its programming strategies in developing countries, in order to take into account key issues important for EUGD/ F2F implementation. As a result, the EU has made available funds from which about 40 African countries, including Kenya, are benefiting, to finance the assessment their food systems. Out of such assessments, those targeted eastern African countries will understand better the risks, challenges and opportunities related to transformation of their food systems towards sustainability and carbon neutrality. The generated evidence will inform both their policy making processes and the content of their partnership with the EU.

Land use: Potential impact of F2F on land use can be an opportunity but also a risk: according to some interviewees, there is a potential positive impact of F2F on land use in Eastern Africa. The mere fact that F2F is promoting agro-ecology implies that cooperation with EU can boost the efforts that farmer groups, cooperatives and NGOs are already doing to transition towards agro-ecological production on the continent. This may be an important opportunity to reduce land degradation, restore soil fertility and reduce the use of inorganic inputs in agricultural production. There is however, a potential negative impact of F2F on land use in eastern Africa. If EU-eastern Africa partnership under F2F pushes their common agenda of promoting agro-ecological production systems, it means lower production volumes. Lower production volumes may be accompanied by increased area under production by eastern African farmers in order to compensate for the lower production volumes. That is to say, it may lead to using more land to produce less. An important risk in expanding area under production is deforestation, to free more land for agricultural production. In addition, there are some production zones in different parts of eastern Africa where it is not efficient to invest in agro ecological production but rather, other ways of soil restoration, combined with intensification.

4.4 Key issues presenting opportunities for policy advocacy

The issues in this sub-sections are pointers to CSOs like Fingo but also those in Africa (for instance AFSA) to combine efforts and ensure that the potential negative impact and risks of the F2F are addressed and policy gaps are filled. Fingo and African CSOs should combine efforts in their watchdog role to target the cooperation of EU and eastern African at REC and case country levels.

- The on-going food systems assessment being financed by the EU in some Eastern African countries will raise food system and climate change issues that should be considered in supporting Eastern Africa to move faster toward sustainability. It will be an opportunity to influence EU policies to finance and support priorities coming out of those assessments. Specifically, those actions which help open up opportunities for Eastern African farmers.
- The hope is that the anticipated green alliances will promote inclusive, just and equitable partnerships that actually adapt to the reality on the continent and address the unique Eastern African challenges related to agriculture and food systems, particularly the vulnerability and low adaptive capacity to climate change. Advocacy can be directed towards addressing / mainstreaming gender and social inclusion aspects during climate actions, establishment of CSOs-Private sector-Public (at community level) partnerships, among others.
- Land grabbing is currently a big contentious issue in Eastern Africa. Any initiatives linked to agricultural production potentially raises concerns of possible land grabbing. More so if externalisation of environmental costs and delocalisation of production is anticipated.
- Harmonisation of several private sustainability standards to cover socio-economic, ethical and environmental attributes, with a view to lowering the costs and simplifying the certification process, while maintain its integrity.
- The green alliances that the EU hopes to form should be based on principles of equity and justice. Advocacy work would target the promotion of e the principles of climate justice, especially people-centred of climate actions.
- The disconnect between food systems related policies in Africa and those related to climate change adaptation and mitigation. Efforts could be directed towards highlighting the benefits of an integrated way of policy making with the hope for better results and policy outcomes.

4.5 Events and policy processes presenting opportunities for advocacy

There are a good number of events and policy processes that FINGO and its partners could use in order to target key actors and influence food system, as well as climate adaptation and mitigation policies of the EU and member states, in order that they are fair and just overall, and especially for the vulnerable groups in Eastern Africa. The events also present opportunities for FINGO to engage local CSOs in Eastern Africa to influence their own policy makers. Some examples are given below:

- The United Nations (UN), Food Systems Summit 2021, which has been convened by the UN Secretary-General, as part of the Decade of Action to achieve the Sustainable Development Goals (SDGs) by 2030. The Summit hopes to launch bold new actions to deliver progress on all 17 SDGs, each of which relies to some degree on healthier, more sustainable and equitable food systems. Key actors: EU legislative and technical policy makers from DG AGRI, DG CLIMA, DG INTPA and DG SANTE; like-minded CSOs in the EU working to influence EU positions; Researchers within European Universities working on key proposals at the summit, related to the F2F.
- The on-going food systems assessments selected African countries, financed by the EU and being done as part of partnership program reviews between EU and the respective countries. They are considered preparatory exercises to integrate EUGD/F2F in international partnerships and are expected to guide definition of actions and measures adapted to local context. The assessments will raise food system and climate change challenges that will shape investment priorities in Africa. *Key actors*: FINGO partners, Finnish development cooperation units and CSOs working in eastern Africa, eastern Africa CSOs, for instance the East African Farmers' Federation.
- The on-going three-year process led by the Alliance for Food Sovereignty in Africa (AFSA) in collaboration with the FAO and AU, to develop an Africa Food Policy with the intention to align the goal of delivering sustainable food systems with objectives to ensure healthy diets, resilient ecosystems and decent livelihoods for farmers and workers. *Key actors*: FINGO partners and CSOs working in Eastern Africa.
- National processes in case countries to Update key policy documents. For example: the Growth and transformation plan II of Ethiopia (2015/16-2019/2020), the IGAD food security and nutrition response strategy (2020-2022), the East African Food and Nutrition strategy (2018-2022), the Draft Africa climate change strategy (2020-2030),NDC update for Kenya and Ethiopia, Low emissions development . Key actors: FINGO and partners working Eastern Africa, legislative and technical policy makers in case countries, AFSA partners in Eastern Africa.

4.6 Media analysis of anticipated opportunities and threats of the farm to fork strategy

To broaden the analytical scope of this assessment and capture the opportunities and threats voiced by other stakeholders, we have reviewed media reports on the potential impacts posed by the EUDG F2F strategy generally. In table 4 we present personal and institutional views reflected in reactions in mostly European media, as well as some few voices from Africa.

TABLE 4 Examples of reactions on the EUGD/F2F in the media

SOURCE MEDIA	ISSUES RAISED
The Parliament: Politics, Policy and People Magazine **Date**: 8th June 2020 **Article tittle**: Does the Farm to Fork Strategy mean business as usual for EU food and farming?	• "Every year, more animals are reared for meat in the EU than there are humans alive on Earth. The environmental and social costs are staggering, but the Commission's plan is to keep the same broken model and look into **replacing imported feed with "innovative feed additives"** and to "inform consumers about their choices" by labelling meat and dairy products. A **new generation of GMOs are presented as an option to "improve sustainability along the food supply chain." This sounds vague**, but it is the consequence of concerted lobbying from the biotech industry to overturn a European Court of Justice (ECJ) ruling that ensures that their products must be subject to standard EU GMO safety laws". • We need a radical shift towards **agro ecology**, where farming works in harmony with nature, farmers and farmworkers are paid fairly and live well, and systems of production and consumption are localized. And what we have been given **is a package of vague, insubstantial policies** that have been designed to make sure nothing will fundamentally change.
Article tittle: Farm to Fork risks hurting the global south **The F2F is viewed as a thinly veiled attempt at agricultural protectionism**	• "The strategy ignores the suffering of smallholder farmers and could create economic catastrophe for the Global South: The negative impact for developing nations could be multiplied. The Commission has proposed **incorporating the Farm-to-Fork priorities into collaborations with third countries between 2021 and 2027. This is simply not enough time for nations in the Global South, still reeling from COVID-19, to make the seismic changes necessary to maintain trade with the EU**. It certainly seems that the EU's new strategy will advantage the 'forks' in Europe over the 'farms' in developing countries". • "The net result of this policy will be to force those nations to diversify their agricultural exports and reach new trading partners (instead of the EU) that possess lower environmental standards, thereby undermining the very trade-leverage the EU uses to incentivise more sustainable practices worldwide". • "In the case of my own country, Nigeria, F2F **will likely hamstring our government's plans to boost agricultural exports** under its Economic Recovery and Growth Plan; something Nigeria desperately needs given the harsh economic impact of COVID-19. In particular, **the short time frame** will negatively impact local producers, who will be unable **to meet the standards imposed, without consideration or consultation**, by the EU. And Nigeria is not alone in being **harmed by this EU protectionist strategy**. Among the 54 nations of the Commonwealth, many are significant exporters to Europe and have deep and complex trade relationships with the EU.
Food strategy: News and analysis for the global animal feed industry **Date**: 22nd May 2020 **Article title**: EU's Farm to Fork goals draw concern from Ag industry	• Ag industry groups in the EU expressed concern about the F2F, and they say that it sets forth conflicting goals that stand **to undermine supply chain resilience and increase dependency on imports"**. • "Farmers alone must not bear the brunt of the costs of further environmental and climate protection. If it happens, then it would result in more European **food production being outsourced to third countries** and, above all, a large number of agriculture holdings being abandoned in the European Union."

SOURCE MEDIA	ISSUES RAISED
EURACTIV **Date**: 1th March 2021 **Article title**: Eastern African farmers say they must be trained for Farm to Fork	• "African farmers fear being left alone in making sense of and applying environmental standards required by the European Union's new food policy, said the voice of Kenya's horticulture producers, who warned that without help, the new rules could jeopardise trade with Europe". "African farmers should be trained whenever the EU changes regulations within a short period, to ensure they are not shut out of the European Single Market" - Okisegere Ojepat - CEO of Kenya's Fresh Produce Consortium. • "Reciprocity is not one thing we refuse but European farmers **are getting subsidies directly from the EU**," Ojepat said, adding that African farmers are not getting any training to raise their capacity to fulfil the F2F requirements". • "The biggest concern for African farmers is that the EU regulatory framework could become unfair because of the **demands being imposed and the requirement to comply with no specific timelines** to catch up with European farmers".
Nature Journal **Date**: 26th October 2020 **Journal article title**: Europe's Green Deal offshores environmental damage to other nations	"The European Union's Green Deal risks becoming a bad deal for the planet. EU depends heavily on agricultural imports; only China imports more, Yet the imports come from countries with environmental laws that are less strict than those in Europe. And EU trade agreements do not require imports to be produced sustainably".

Most of the views expressed in the media indicate that while the EUGD F2F is good on paper for the EU, its role to shape and enhance global sustainability remains ambiguous even when the strategy will be implemented. For example the article in Natural Journal (table 4), mentions that unsustainable farming practices that have been restricted in Europe (also targeted in the F2F), are explicitly permitted in imports; for instance, GM organisms have been severely restricted in EU agriculture since 1999 and yet Europe imports GM soya beans and maize (corn) from Brazil, Argentina, USA and Canada. This issue of externalization therefore, is expected to continue unless parallel sustainability targets for agricultural imports are set and harmonised to govern external food trade.

Voices from (East) African countries in particular, are concerned about the fairness and the more stringent quality measures and standards set forth for food products. They fear that smallholder farmers who have been producing for EU market will not easily comply without any targeted financial aid to support investments in (green) smart production and supply chain infrastructures, certification processes, trainings, among others etc. The strategy is being looked at more as protectionist rather than just process to engage with the rest of the world.

4.7 Conclusions

From the above findings, we can conclude that on the one hand, there are many areas of coherence between the EUGD/F2F, especially at the higher level objectives. On the other hand, there are incoherencies and gaps in the two categories of policies; in key areas of inorganic agricultural input use, livestock production, integration of women and youth, among others. Overall, the F2F seems to emphasise more mitigation than adaptation actions, while the eastern African climate change policies focus more on adaptation actions. Climate change seems to come out as a vulnerability and "vulnerable groups" issue in the African policies, whereas vulnerability and fragile groups are not important issues in the F2F. Moreover, considering that the EUGD/F2F is rather new and the common definitions, general principles and requirements for sustainable food systems are not yet set by the EU for subsequent domestication by the member states, expected results from implementation of the strategy, as well as activities, are still vague. Translation of the EUGD/F2F into concrete policy actions and legislation by the EU, has just commenced.

Once all these policy adjustments by the EU have been made, it is not clear how the smallholder farmers in the global south will be affected, and especially those in eastern Africa, who target EU food market. There are concerns on how just and fair the process of establishing these concrete actions and implementation of the F2F will be. What level of consultations with producers in the south shall be made as the proposed EU framework for a sustainable food system is prepared? What support will there be from both EU and eastern African countries to build smallholder farmers' capacity to produce food at higher environmental standards and to trade in food with the EU. There are also concerns regarding potential negative impact and risks on eastern Africa regarding externalisation of environmental costs, quality of foreign investments, among others. The manner in which these questions and concerns shall be answered will determine how well the EU shall integrate the principles of climate justice and food sovereignty.

The public good nature of environmental goods and services, imply that in order for the EU to make a transition to sustainable food systems and lead the world in transition towards sustainability, it must ally with others in the rest of the world. The EU's suggestion to build win-win 'green alliances and partnerships' gives hope for potential opportunities for eastern Africa, emanating from the EUGD/F2F. Not only is the anticipated green alliances expected to promote inclusive, just and equitable partnerships but they are also expected to benefit eastern Africa in terms of spin-offs from green technological research, as well as better environmental performance by food system actors. Generally, the spin off effects could also emanate from the precedence set once EU successfully transits its food systems to carbon neutrality.

Section 5 Recommendations

In this section we present recommendations which should be taken up under partnership negotiations and agreements between the EU-Eastern African countries. We categorise them under the various directorates of the EU, as well as eastern African governments and their respective regional economic communities, in order to guide CSOs both in Europe and in Eastern Africa, that might wish to take any or a combination of the policy issues in their advocacy work.

5.1 Recommendations to EU-Eastern African Partnerships

DG INTPA - EU External Action Service (EEAS)

- *Energy innovations as part of sustainable development*: The EEAS could, within the policy direction of EUGD/F2F in general, and Africa-Europe agenda for rural transformation in particular, support various initiatives which promote sustainable development. For instance; support investment in research and development to establish energy innovation centres and hubs. This is especially important for Africa because development of energy sources should focus on a move away from fossil fuel and firewood in general, and particularly in agro-processing, manufacturing and at household level. Considering the abundance of sunshine on the continent, such investment could prioritise solar energy development for home and industrial use along food production, processing and distribution chains.
- *What happens to African priorities under the rural transformation strategy?* It will be important to have EU-AU dialogue on how the priorities already agreed upon will be impacted on by F2F and what can be done. According to AU, there is room for compromises though not on all issues .e.g. red meat production. Under F2F, EU should commit to support priorities of Eastern Africa which include: livestock production; improving and developing African food systems, land use planning to enable zoning according to agro-ecological zones and specialised production, depending on the comparative advantage of each zone; this then should be accompanied by institutional development for intra-Africa trade under the African Continental Free Trade Agreement (AfCTA). This means under the EU – Eastern Africa cooperation, agriculture can be used as powerful instrument for promoting regional integration. For instance, while Kenya and Uganda both produce maize, in terms of processing, Uganda has lower costs of energy, implying that maize processing would be more efficient in Uganda to the benefit of all in the sub-region. In such a case cooperation under F2F could support investment in agro-industry, in this case to process maize in Uganda but with raw material coming from all over the sub-region. Eastern Africa can also use the UN food system summit to raise concerns regarding own priorities under risk from F2F.
- *Gender and youth*: Considering the fact that rural transformation does not seem to close gender gaps in education, access to and/or ownership of resources (factors of production, e.g. land) and participation in institutional support to take up new opportunities in new rural economies, a clear priority for EU-Eastern Africa cooperation is investment in technology and skills development that lightens and reduces the burdens imposed on young rural women by the triple gender roles but also encourage youth employment in agriculture in general. For example; solar energy for household use including cooking, water both for agricultural production and for household use, apprenticeship that offers targeted support to young rural women to take up productive economic opportunities.

DG TRADE

- *Adjustment to more ambitious food standards*: The F2F stresses that "imported products must continue to comply with relevant EU regulations and standards". This means higher expectation from third countries on animal welfare, the use of pesticides, fight against antimicrobial resistance, reduction in fertilizer use, and increase in use of bio-chemicals. In order for Eastern African countries to switch to these ambitious climate actions when targeting EU food markets, there will be need for development assistance to support farmers from developing countries to meet those standards when they export to Europe. Eastern African smallholder food producers also deserve sustainable smart farming subsidies, similar to what has helped farmers in developed countries cope. Again, will farmers in the south who produce for EU market also benefit from the 'carbon market' payments?
- *Negotiation capacity building*: Eastern African countries attaining the middle income status lose the duty free and quota free Everything But Arms (EBA) trade arrangement under which they currently access EU markets. Such countries, for example Ethiopia, Kenya and Tanzania, will then need to negotiate new trade arrangements under the Economic partnership agreement: amidst the F2F stringent standard requirements, how just and equitable will the new food and agri-trade agreements be? Are these Eastern African countries well equipped for such negotiations?
- *Standards harmonisation*: Under the EUGD/F2F, sustainability standards in global food trade will become even more important because they transmit critical production and processing information from production sites outside the EU to consumers within the EU. The EU could invest in dialogue among public and private standards bodies in the EU and Africa, to work towards a more harmonised standard that combines socio-economic, ethical and environmental attributes and that can be administered at a lower cost. A harmonised food standard will reduce the confusion that many small farmers experience in choosing to participate in multiple certification where each standard puts an emphasis on a different aspect of sustainability, with sometimes conflicting outcomes and unclear trade-offs.
- *Context specific research on multiple certification*: Since multiple certification is known to reduce but not address trade-offs between socio-economic and environmental outcomes, EU financial support to Africa should prioritize financing innovative research in Eastern Africa to inform food system actors and policy makers on how to appropriately address and balance policy choices regarding these trade-offs. Also support research and design of private or public standards to compensate for existing trade-offs between socio-economic and environmental benefits, in addition to what works where.

Key Informant

Currently Ethiopia is using the opportunity of Everything But Arms (EBA) treaty. However, in less than 3 years, Ethiopia is projected to be a middle income country and will no longer benefit from EBA but instead will have to sign a trade agreement with EU. Ethiopia hopes to have big exports capacity, most of it being destined for the EU. At that time, the policy gaps will then be considered in terms of the trade system in order to have the country ready for change in status.

Key Informant: EU Delegation in Ethiopia

- *Agro-chemical regulation*: Support capacity and institutional development support to Eastern Africa countries to monitor and regulate agro-chemical use. As highlighted by the key respondents at EAC, the bloc lacks a harmonised regulatory protocol on agro-chemicals registration, distribution, use and disposal. Each member country has its own regulatory framework and approach, which are quite dysfunctional. Additionally, there are limited institutional infrastructures (such as testing laboratories) and capacities to regulate, enforce, monitor and control agro-chemical trade, proper use and disposal. This is a key area that needs support. EU would adopt an approach of working with regional blocs like the EAC, rather than having scattered individual country support programmes.

Key Informant

On-behalf of small holder organic farmers in Uganda and in the region, I would like to appeal to EU to specifically prioritize, through its bilateral co-operation programmes, and increase financial support to the Uganda organic agriculture bill, and also support establishment of organic agriculture production, post-harvest handling and distribution infrastructures: example could be direct support towards establishment of organic inputs industries, vegetables and fruits cold chain infrastructures etc..

Key Informant: NOGAMU Uganda

DG CLIMA - Financing targets under the Paris Agreement

- *Organic input market development*: In most Eastern Africa countries, many smallholder farmers are organic certified especially because of the low cost of conversion from conventional to organic farming. An important constraint they face however, is the lack of a market for organic inputs, from which they can easily obtain alternatives to inorganic inputs. The EU, under the F2F could support organic inputs development in Africa, in collaboration with the farmer groups and NGOs who are already engaged in organic inputs production and marketing. This support needs to be both financial and technical to facilitate transfer of organic innovations from elsewhere in the world.
- *Forest management*: Considering the fact that the rural poor in East Africa depend heavily on forests for food, energy, as well as land for agricultural expansion, it is important that EU under the F2F continues intensified support for policy development and interventions that promote community-based forest management and equitable access to local, regional and global markets by such small forest holders.
- *Resolve land conflict on forest frontiers*: A priority investment for Eastern Africa is acquisition of land that can be used to provide alternative farming areas for those communities living on the forest frontiers. This could be an incentive for such communities to leave already established forest conservation areas, which are within their communal lands. Other incentives include supporting communities on forest frontiers to develop remunerative tourist activities, from which revenue is shared with them, in return for their conservation efforts. Another option in the same vein is investing in other pieces of marginal lands and designating it for conservation purposes, then establishing new conservation areas.
- *Climate adaptation and mitigation*: It has been noted, and also highlighted in the press (table 4) by some representatives of farmers' fora in Eastern Africa that the F2F is silent (or shy) about what kind of support would be there specifically for smallholder farmers and young agripreneurs in developing countries to better align to the introduced stringent standards and quality requirements when F2F is implemented, so as to continue supplying the European food markets. The youth agripreneurs (agricultural entrepreneurs) should be supported to establish climate-adaptive and resilient agriculture value chains through adaptation to and mitigation of agribusiness risks and uncertainties, for example through climate proof

insurance schemes, as well as innovations and technologies to enhance green production, post-harvest handling, agro-processing and marketing. All these require substantial investments and innovative funding schemes. Therefore, the anticipated innovative funding initiative under EU INTPA,, which the EU hopes to use to stimulate funds mobilisation from other stakeholders in partner countries, can help in addressing this funding need highlighted by key informants at EAC and AU levels.

- *Stimulation of circular-based economy*: An important area of collaboration between EU and East Africa countries could be efforts to nurture an agriculture-based circular economy through developing rural agro-processing facilities. Both financial and technical support could go towards awareness raising among key stakeholders in East Africa about environmental benefits of sustainable production and consumption. (East) African countries could be supported (through funding, research and development innovations, technology transfer) to establish / strengthen regulations against importation of polluting technology and institutional capacity to regulate and enforce them.

5.2 Recommendations to African Union, RECs and eastern African governments

- National governments in eastern Africa, under their respective regional economic communities *should lead actions*, underpinned by scientific analysis, on priorities already spelt out including: *Land use planning*: Considering the ecological diversity in Africa in general and particular in East Africa, the Africa-EU partnership for rural transformation could support zoning of Agricultural land, based on the comparative advantage of specialising in the production of particular agricultural products which are best suited for specific agro-ecological zones. This support can be linked to technical support for structuring of agricultural markets and market institutions to facilitate both intra-Africa trade, as well as export. Eastern Africa should strike *a balance between agro-ecology and conventional production based on zoning above*, to enable tackling the challenges of food and nutrition insecurity, for a rapidly growing population, while responding to the climate challenges.
- Another important priority for eastern Africa is *Livestock development in Eastern Africa*: Livestock production is a priority for Eastern Africa and in fact most of the continent. Not just because of pastoralist livelihood systems but also because of the need to avail animal protein to address nutrition challenges. There is need for dialogue within EU-Africa cooperation, while taking into account scientific information on livestock production systems in Eastern Africa, in order to look for sustainable ways of supporting the Eastern Africa livestock system.
- There is need for Eastern Africa to strike a balance between *agro-ecology and conventional* production, so that governments in the sub-region can still address their main challenges of food and nutrition insecurity, for a rapidly growing population, while responding to the climate challenges. This is especially important for Eastern Africa since we know that in terms of Emissions, the sub-region is responsible for only a small percentage, and yet it bears the brunt of global warming.
- *Governments in the sub-region need to collaborate to develop institutional capacity for food safety and standards development*: Under the proposed green alliance and diplomacy, EU could support institutional capacity building for standards bodies to scale up food safety and the fight against food fraud. Particularly in East Africa, as mentioned by the key informant, the EAC and IGAD secretariats has prioritized implementation of its strategy on food safety as a food security issue rather than a health one. One of the key focal areas is to undertake policy review and establish harmonized stand-alone food safety policy, with clear guidelines on safety standards for agricultural food products. The EU could there-

fore support the EAC secretariat to undertake the necessary policy reviews, establish regulatory and inspection infrastructures (like testing laboratories, inspection protocols etc.), and build institutional capacity for inspection and certification. They could also support research and innovation in appropriate post-harvest and processing facilities in rural areas to curb the prevalence of food toxins, mostly the aflatoxins in cereals.

- *Farmer technical capacity building*: Considering the precarious situation of agricultural extension services in eastern Africa, governments need to take leadership in engaging food system stakeholders on how best to solve the current problems. Effective agricultural extension services to smallholder farmers will be key in meeting the higher standards the European markets will require. Effective extension service will also support farmers to fulfil conditions that might enable them to benefit from the 'carbon market' payments.
- *Farmer organisation capacity building*: There is need for support organisations which accompany farmers in contract farming negotiations with companies to ensure fairness and to advise farmers on the pre-conditions for success. This support could include farmer capacity development for compliance, as well as government institutional capacity development to vet agricultural land use investments coming in African countries.
- *Awareness raising on food standards*: Eastern Africa can could take this opportunity of cooperation with EU under the F2F implementation to raise awareness among local consumers on food standards. This will stimulate price incentives from consumers who are willing to pay for higher quality certified food in the local market, rather than the current situation where only food destined for export is certified.
- Ensure that principles of *fairness and justice is integrated* in all processes of establishing regulations around the implementation of the Farm-to-Fork strategy.

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Annex 1: Institutional interview list

POSITION	ORGANISATION	SEX	
EUROPEAN UNION		M	F
Deputy Head of Unit; Sustainable Agri-Food Systems and Fisheries	European Commission, Directorate-General for International Partnerships (INTPA)	x	
Head of the green deal department in Ethiopia. Responsible for food safety	European External Action Service (EEAS) Addis Ababa, Ethiopia	x	
Head of Section - Agriculture, Job Creation and Resilience	EEAS-NAIROBI, Kenya		x
Responsible for international bilateral relations on SPS - Africa, Gulf, Middle East, Afghanistan	European Commission, Directorate-General for Health (SANTE)	x	
INTERNATIONAL ORGANISATIONS			
Food Security Analyst	FAO Nigeria	x	
AFRICAN UNION			
Agriculture and food security department	African Union Commission (AUC) – Agriculture and rural development	x	
REGIONAL ECONOMIC COMMUNITIES OF THE AU			
Climate Change Specialist at IGAD; Lecturer, Climate Adaptation & Resilience	IGAD Secretariat, Addis Ababa, Ethiopia	x	
Principal Agricultural Economist	East African Community (EAC) Secretariat, Arusha, Tanzania	x	
CASE COUNTRIES			
Coordinator	Agrobig Value chain project in Ethiopia		x
GRASSROOTS LEVEL			
National Organic Movement of Uganda (NOGAMU)	Acting Executive Director, Kampala, Uganda	x	
National Organic Movement of Uganda (NOGAMU)	Agribusiness development specialist / policy advocacy	x	

Annex 2: The full list of documents reviewed

NUMBER	POLICY FRAMEWORK
International level policy documents and reports	
1.	Climate change and land. A Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Summary for policymakers. *IPCC*
2.	Food losses and waste in the context of sustainable food systems; *A report of the HLPE on Food Security and Nutrition of the Committee on World Food Security*
3.	Food Systems and Natural Resources. *A Report of the Working Group on Food Systems of the International Resource Panel*
4.	The future of food and agriculture – Trends and challenges. *FAO*
5.	Nutrition and food systems. *A report of the HLPE on Food Security and Nutrition of the Committee on World Food Security*
6.	Global panel on agriculture and food systems for nutrition: food systems and diets: facing the challenges of the 21st century: *a report of the Global Panel on Agriculture and Food Systems for Nutrition*
7.	Global Strategic Framework for Food Security and Nutrition. *A report of the HLPE on Food Security and Nutrition of the Committee on World Food Security*
8.	2020 Global nutrition report. *UNSDSN*.
9.	The state of food and agriculture: leveraging food systems for inclusive rural transformation. *FAO*
10.	Paris Agreement on climate change. *United Nations Framework Convention on Climate Change (UNFCCC)*
11.	Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways. *IPCC*
Continental level policy documents and reports	
12.	The European Environment – state and outlook 2020: Knowledge for transition to a sustainable Europe. *EU*
13.	The EU Green Deal / Farm to Fork Strategy. *EC*
14.	Farm-to-Fork Action Plan 2020 Strategy Information. *EC*
15.	The European Trade Policy. *EC*
16.	The draft African strategy on Climate change: 2020–2030. *AUC Secretariat*
17.	Comprehensive Africa Agriculture Development Program (CAADP). *NEPAD*
18.	The Malabo declaration on Accelerated Agricultural Growth and Transformation for Shared Prosperity and Improved Livelihoods. *AUC*
19.	The African Regional Nutrition Strategy (RNS) (2016-2025). *AUC Secretariat*
20.	An Africa-Europe agenda for Rural Transformation. A Report by the Task Force Rural Africa. *EC*

NUMBER	POLICY FRAMEWORK
Sub-regional level policy documents and reports	
21.	ACT Alliance Advocacy to the EU Submission to public consultation on EU Green Deal: Farm to Fork Strategy – Sustainable Food
22.	East African Food and Nutrition Security, 2018-2022. *EAC Secretariat*
23.	East African Community (EAC) Agriculture and Food Security harmonization framework. *EAC Secretariat*
24.	EAC Climate Change Policy – EACCCP. *EAC secretariat*
25.	The Fifth Assessment Report: what's in it for Eastern Africa?. *IPCC*
26.	IGAD Food Security and Nutrition Response Strategy 2020 -2022. *IGAD Secretariat*
27.	IGAD Environment and Natural Resources Strategy. *IGAD Secretariat*
28.	IGAD Regional Climate Change Strategy 2017 – 2030. *IGAD Secretariat*
29.	The EU-East Africa partnership strategy. *EC*
Case country policy documents and reports	
30.	Agricultural sector transformation and growth strategy 2019 – 2029. *Ministry of Agriculture, Livestock, Fisheries and Irrigation (MALFI), Kenya*
31.	Kenya National Adaptation Plan 2015-2030: Enhanced climate resilience towards the attainment of Vision 2030 and beyond. *Ministry of Environment and Natural Resources of Kenya*
32.	National Climate Change Action Plan 2018–2022 Volume II: Adaptation Technical Analysis Report. *Ministry of Environment and Forestry (MEF) of Kenya*
33.	Climate change and human development in Africa: Assessing the risks and vulnerability of climate change in Kenya, Malawi and Ethiopia. *IGAD, Climate Prediction and Applications Centre (ICPAC).*
34.	Growth and Transformation Plan II (GTP II) (2015/16-2019/20) Vol. I. *NPC Ethiopia*
35.	Ethiopia Climate Resilience Green Economy (CRGE) for Land Use Sector. *Ministry of Environment, Forest and Climate Change (MEFCC) of Ethiopia*