

THE FOOD-ENERGY NEXUS: OPPORTUNITIES FOR CROSS SECTOR COLLABORATION

September 7, 2023 SAFSF Webinar

CONTEXT

Philanthropic strategies focused on food systems, climate & energy are siloed

United Arab Emirates, a petrostate, is hosting the UN Climate Conference this year (COP28)

- Food and agriculture is a top priority
- So is renewable energy but not the phase out of fossil fuels

Two GA & Dalberg reports on the interconnectedness of food and energy systems, especially the role of fossil fuels

 Objectives: Elevate awareness amongst philanthropy and the climate & energy community; identify the tradeoffs, synergies, gaps, and opportunities for collaboration

Timeline of plans:

- Sept Nov: Seek feedback on findings and assess interest in areas for further collaboration
- Late Oct early Nov: Public webinar and media launch
- Dec: Further promotion and socialization during COP28
- Jan 2024 onwards: Facilitate partnerships for collaborative action



DRAFT KEY MESSAGES

Food and energy systems are fundamentally intertwined

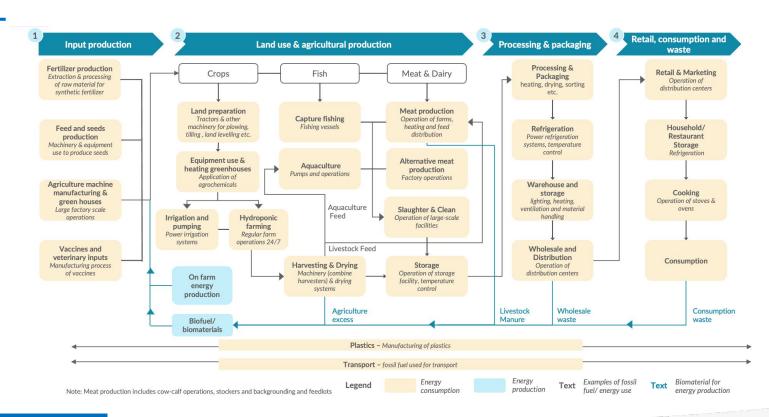
We cannot transform food systems without addressing fossil fuel consumption

We won't be able to phase out fossil fuel use without changing food systems

- Food systems contributes 33% of GHG and consume a third of the world's energy
- Industrial food systems are highly energy intensive and dependent on fossil fuels
- Energy intensity in food systems is growing
- Fiscal incentives for biofuel production has impacted emissions, natural resources and food prices
- Fossil fuel industry is investing heavily in petrochemicals to lock in the dependence of food systems
- We must shift towards agroecology and regenerative approaches, sustainable plant-rich minimally processed diets, and more localized value chains



FOOD & ENERGY SYSTEMS ARE FUNDAMENTALLY INTERTWINED





INDUSTRIAL FOOD SYSTEMS ARE HIGHLY ENERGY INTENSIVE AND DEPENDENT ON FOSSIL FUELS

- Energy intensity is growing
 - Increased mechanization
 - Growing use of fossil fuel based inputs
 - Globalized supply chains
 - Growing demand for meat and dairy
 - New food trends such as ultra processed foods and alternative meats
- Vested interests are barriers to fossil fuel phase out in food systems: i.e., petrochemicals for plastics and agrochemicals



POSITIVE AND NEGATIVE INTERACTIONS WITH IMPLICATIONS ACROSS THE ECONOMY, ENVIRONMENT AND SOCIETY

ENVIRONMENT

Example Use of agricultural lands for energy production

Positive:

- · Use of residual/inefficient crop lands for energy production
- · Diversified income for farmers
- · Reduced energy poverty
- · Clean energy transition

Negative:

- · Energy companies price out farmers
- · Infringement on Indigenous rights
- · Disrupt local food systems and food security

- · Climate mitigation and adaptation
- Environmental assets (biodiversity, soil health and fertility)
- Health (exposure to agrochemicals. cooking, nutrition, microplastics in food)
- Equity (access to food and energy)
- Rights (land, resource, labor, Indigenous rights)
- · Gender (gender gaps labor market participation, knowledge)
 - · Behavior (food and energy consumption)
 - · Culture (food, livelihoods)

SOCIAL

· Carbon sequestration

- · Carbon financing and markets
- Food and energy security
- Resilience (ecosystem, livelihood, climate)
- Governance
- Justice (food and energy sovereignty)

- - · Incentives for intensified production
 - Food and energy markets (bio-energy production)
 - Public and private funding

NON EXHAUSTIVE

Example

Biogas production from livestock manure

Positive:

- · Diversified income for farmers
- · Revenue stream for waste
- · Reduced GHG from livestock manure
- · Net zero livestock production

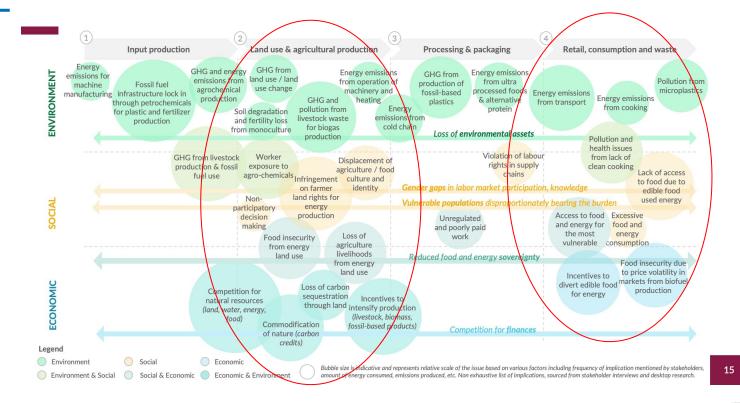
Negative:

- · Livestock waste systems
- · Incentivizes growth of industrial livestock production
- · Locks in current consumption patterns
- · Air and water pollution if livestock production method is unsustainable

ECONOMIC

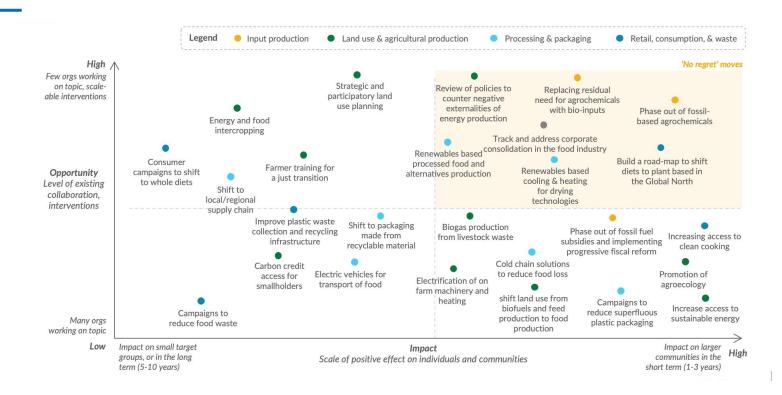


ACTORS INVOLVED AT PRODUCTION AND CONSUMPTION STAGES MOST IMPACTED





UNLOCKING TRANSFORMATION: HIGH-IMPACT, NO REGRET OPPORTUNITIES FOR COLLABORATION





DRAFT RECOMMENDATIONS FOR 'NO REGRET' MOVES

- Phase out fossil-fuel based agrochemicals
- Achieve healthy, sustainable and just food environments that support plant rich diets and minimally processed foods
- Shift to renewables-based cooling and heating for drying agricultural products
- Review fiscal policies of biogas and biofuel production
- Shift to renewable energy for food processing and transport
- Track and address corporate consolidation in the agrochemical and food industry



CONCLUSION

Food and energy systems are fundamentally intertwined – with interactions across the food value chain, and broad social, economic, and environmental implications.

Therefore collaboration across actors within these two systems is crucial.

- Which insights resonate with you?
- What near-term opportunities do you see for further discussion and collaboration?
- Who needs to be engaged?
- How do we get started?

