

The food-climate-finance nexus Why does it matter?

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Climate-Food-Finance

- 1. General background: not new but rapidly expanding
- 2. Key areas where this nexus may raise concerns and would require attention
 - 1. Financing unsustainable food chains
 - 2. Financing unsustainable agri-food-climate projects
 - 3. Financialization of farmers and agriculture
 - 4. Speculation
- 3. Right to Food based approach to food, agrifood and finance/climate



The food-climate nexus is gaining traction: global goverance agendas are converging

- The Food and climate convergence is nothing new
- COP27 being the first one with a dedicate day to food and agriculture
- The latest IPCC report being particularly attentive to the way which food systems are affected by climate change but are also contributing to it
- UN Food Systems Summit having a strong component on climate change mitigation and adaptation (Ferrando, 2023)
- However, a significant part of the climate mitigation and to a certain extent adaptation measures adopted in the last decades have a direct or indirect impact on food and agricultural systems



Role of finance in agri-food is growing

- 'We need to finance the transition' billions if not trillions.
- Narrative that 'there's not enough public funds for climate change adaptation and mitigation', public actors have been looking for ways of attracting private finance, and private actors themselves
- Since beginning of the century, surge in the role of private capital, including from financial actors like private equity funds
- Investing in the climate/food nexus can be a win-win-win for the planet, for the agri-food system and for the financial return of the investors

More private finance = financialization Financialization of the food-climate nexus. Profits increasingly accrue through <u>financial instruments</u> (like debt and equity) or <u>speculative channels</u> (like derivatives and insurance) rather than production and distribution (Krippner 2011)

Not all kinds of climate-food finance are the same. Not all financial actors are motivated by the same <u>objectives</u>. Not all flows of resources have the same <u>repercussions</u> in terms of food security, right to food, climate adaptation and mitigation.

Financialization of climate agenda is not new

Bracking, 2019: since 1980s four phases of creation of **new assets and income streams**

- Kyoto Protocol and subsequent experiments in <u>carbon accounting, carbon markets and certified</u> <u>emissions reductions</u> (CERs) from the 1990s–2000s, with CERs hitting their highest prices in the mid-2000s (Phase I);
- <u>financialisation by ecosystem services, REDD+ forest conservation and biodiversity offsets</u> from the late 1990s (Phase II);
- interventions by capital markets proper, through green bonds, derivatives, indexes and synthetics from the 2000s onward (Phase III);
- index insurance, risk-based multi-trigger products, and insurance-linked securities from 2010s onward, indicating a reinsurance regime of tradable derivatives (Phase IV).

If we look closely, all these phases have a climate-food connection.



Financialization of food-agri is not new

Massey and Catalano (1978): institutional capital had transformed landownership in Great Britain. In 1973 institutions accounted for 28% of all agricultural land sold (approximately 30,000 acres).

New Zealand agriculture was one of the prime frontiers of the financialization of farmland. For instance, superannuation funds from Australia had purchased 34 farming properties through the New Zealand Property Trust by the late 1980s (Le Heron 1991: 1664).

2009-2011 rush to land and expansion of agri-food portfolios (Christopher, 2023; Ferrando, 2022; Visser, 2017)

Financialization of value chains, concentration and distribution (Clapp and Isakson, forthcoming; Clapp and Isakson, 2018)

Speculation on food commodities (Van Hullen, 2018; Ghosh, 2017; Cheng et al 2014; Russi, 2013)



Finance for food systems transition – why should Global Environmental Strategy pay attention?

Although not new, the convergence is increasingly visible and streamlined. 'Sustainable' food systems transition as an expanding space for financial capital. Which capital and where it goes will define global strategies of food-climate

What paying attention to?

- How is **private/public finance** defining the global and local climate/food agenda
- What are <u>the implications of financialization</u> of climate change adaptation and mitigation in terms of <u>livelihood and agri-food systems</u>
- what is the **role of the public** in this surge of private finance and financialization?
- what are the broader implications in terms of unaddressed questions and silenced alternatives

Finance defining food-climate nexus

- Keeps investing in **unsustainable agri-food chains**, in particular intense animal factories, pesticides and fertilizers producers, and deforestation-linked activities
 - It would be a mistake to only focus on 'green' or 'sustainable' finance
- Indebting the climate transition of food and agricultural systems (e.g. green and blue bonds Arinç Kiliç Onat)
- Speculation
- Large-scale **offsetting projects** with agri-food impact (i.e. REDD+)
- Farmers as carbon capturers
- Financing new genomic technologies
- Financial inclusion of farmers
 - Financializing 'smart-agriculture'
 - Insurance, derivatives and climate-food nexus



Speculation has a climate/food impact

- Uncertainty, dependency, low prices and fragility
- in March 2011, for example, <u>cocoa</u> futures fell 12 per cent in less than one minute; similarly, as <u>sugar</u> prices began to fall in late 2010, "sell" orders were automatically triggered, causing prices to crash by 11 per cent in one day.
- Unequal access to financial tools and consolidation of unequal distribution of power -> the same climate events have already uneven effects depending on the socioeconomic. when finance enters into the picture, the situation is compounded
- Climate derivatives and rural 1%







Large climate-agri and biodiversity projects and extract financial return via trading emissions

- Conservation Finance 30x30 CDM REDD+ (Reduces Emissions from Deforestation and forest Degradation)
- Since 2008, USD 5.6 billion has been pledged to multilateral climate funds for REDD+.
- Climate Market Watch: inherent high risk that forest offset credits do not represent real emission reductions due to leakage, the impermanence of forest carbon, inflated baselines, problematic additionality testing and difficult MRV (Measured, Reported and Verified)
- Impact on food systems: Humbo example, Dagim Malese in Ethiopia and right to food of local communities, change in agricultural practices, for very limited return
- **Broader impacts**: Windey and van Hecken (2021), Julia Dehm (2021)





Financing farmers as carbon capturers

- The carbon credits market becomes terrain of investments and financial flows
- Fertilizer producers Nutrien Ltd (NTR.TO) and Yara (YAR.OL), agribusiness giant Cargill Inc (CARG.UL), and seed and chemical dealers Corteva Inc (CTVA.N) and Bayer AG (BAYGn.DE) are **paying** growers for every acre of land dedicated to trapping carbon underground.
- Cargill offers **one-crop-year contracts to producer** <u>customers</u> in eligible USA states to sequester carbon through implementation of new or expanded regenerative agriculture
- **Bayer is an early leader with around 1.5 million acres** enrolled in sustainable agriculture programs globally, mostly in the United States
- Canada's National Farmers Union The programs' principle is "essentially unworkable," because carbon sequestration is not permanent, especially in a warming climate
- The scheme also triggers data flows and a financial market for data



Financializing the shift to 'smart-tech' agriculture

- Investing in New Genomic Technologies in the hope of a return → states required to provide the enabling environment. But what about consequences
- Debt/Financial inclusion/democratic?
 - Providing `better climate/sustainability tech to farmers'
 → Tend to require substantial upfront investments
 by farmers
 - Insistence that the technologies simply 'support' farmer decisions to improve farm profitability and 'sustainability', but may create 'decision paralysis' and de-skill farmers
 - Private equity funds supporting start-ups and favoring the scaling-up of their 'innovation'
- Financing climate sustainability but binding to specific value chains
 - Ex: Fairtrade Access Fund, eco.business Fund: providing climate finance to small-scale farmers that have certifications -> creating dependency on international trade and GVCs. Local food security? Right to food?
- Loans-seeds-input packages





Derivatives, insurances and AI for agri-food climate adaptation

Climate/weather derivatives: If the temperature exceeds (or climate events don't take place) the strike value at maturity, then no payout to the investor. If the temperature, remains below the strike value at maturity, then the writer would be required to make a payout to the investor.

Index-based agri insurance: Farmers receive pay-outs <u>only</u> when environmental measures <u>meet or exceed specified</u> <u>thresholds</u>; actual agricultural performance is irrelevant.

Isakson (2019): the purpose of IBAI is to **integrate smallholder farmers into agri-food value chains where debt and dependence** upon commercial inputs reorient agricultural production and the associated distribution of value. IMF Global Index Insurance Facility's has more **than 10.5 million contracts, covering over 50 million beneficiaries, with approx. \$2 billion in sums insured**

Supported by the Global Index Insurance Facility (GIIF) and agribusiness partners such as Syngenta East Africa Limited and the fertilizer company MEA, the short message service-based insurance scheme has been scaled up across Kenya Simply scanning the barcode affixed to a product can set up a contract between a farmer and UAP. Smallholders pay only half the premium; Kilimo Salama's agribusiness partners pay the other half

IFC: using machine learning to create a picture of a farmer's true creditworthiness. Emata is a licensed Ugandan microfinance institution seeks to offer simple, available and affordable farmer financing. Lenddo, which operates in the Philippines, Colombia, Mexico, and India and uses *social media activity, networks, and social reputation to assess the creditworthiness of costumers*





When climate finance meets food systems

- The private sector financiers, insurers, etc. —has not to wait for public endorsement of food-climate measures and measurement.
- Change or intensification of production patterns, local relationships, reduction in biodiversity, more dependency on value chains (often the cost of the tech or insurance is paid by contractors in contract-farming)
- New forms of dependency as at the time of the Green Revolution
- Insurance and derivatives
 - Individualization of insurance undermines solidarity and collective food systems
 - Who defines the basis risk -> not enough to trigger, but still suffered damage
 - No actual reduction of crop failure because it's not about adaptability



Broader considerations

- Prioritizing conservation/offsetting over social complexity of food systems?
- **Re-Defining farmers practices**, relational components and autonomy
- Redistributive implications: who wins and who is losing
- Financing agricultural deskilling
- Using **public funds to de-risk private accumulation** (Daniela Gabor)
- Financing more debt in an indebted world?
- Fragility and vulnerability of global commodity markets
- Addressing symptoms rather than root causes of climate change and food insecurity
- Private capital deciding the priorities for agri-climate futures?
 - Limited focus on climate adaptation, which is what small-scale farmers, indigenous communities and other people living in rural areas are mostly looking at

A different approach?

- Invest in the strengthening of or conversion to sustainable practices, such as agroecology, that are capable of addressing climate change and ecosystem degradation, while at the same time reducing the dependency on chemical inputs and patented technologies
- Talk about **patents**, accessibility, socio-economic implications and technology transfer with regards to new technologies, both genomic and technological
- Climate justice and food justice must go hand in hand, starting from Common but Differentiated Responsibilities, land reforms and socio-economic implications → methane pledge and forest agreement
- Linking climate finance and debt forgiving, as main enabler of national policies in support of climate transition and food security
- Recognizing that **biodiversity is both social and ecological**, and that global value chains are source of fragility rather than autonomy
- Take the limits of international trade seriously (Michael Fakhri, 2020)
- **Reconsider the role of the public** not as de-risking private capital



Thanks and looking for your Q&A

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