

Codex Planetarius

Traders and Commodity Exchanges

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About *Codex Planetarius*

Codex Planetarius is a proposed system of minimum environmental performance standards for producing globally traded food. It is modeled on the *Codex Alimentarius*, a set of minimum mandatory health and safety standards for globally traded food. The goal of *Codex Planetarius* is to measure and manage the key environmental impacts of food production, acknowledging that while some resources may be renewable, they may be consumed at a faster rate than the planet can renew them.

The global production of food has had the largest impact of any human activity on the planet. Continuing increases in population and per capita income, accompanied by dietary shifts, are putting even more pressure on the planet and its ability to regenerate renewable resources. We need to reduce food production's key impacts.

The impacts of food production are not spread evenly among producers. Data across commodities suggest that the bottom 10-20% of producers account for 60-80% of the impacts associated globally with producing any commodity, even though they produce only 5-10% of the product. We need to focus on the bottom.

Once approved, *Codex Planetarius* will provide governments and trade authorities with a baseline for environmental performance in the global trade of food and soft commodities. It won't replace what governments already do. Rather, it will help build consensus about key impacts, how to measure them, and what minimum acceptable performance should be for global trade. We need a common escalator of continuous improvement.

These papers are part of a multiyear proof of concept to answer questions and explore issues, launch an informed discussion, and help create a pathway to assess the overall viability of *Codex Planetarius*. We believe *Codex Planetarius* would improve food production and reduce its environmental impact on the planet.

This proof-of-concept research and analysis is funded by the Gordon and Betty Moore Foundation and led by World Wildlife Fund in collaboration with a number of global organizations and experts. For more information, visit www.codexplanetarius.org

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Abstract

This paper outlines how commodity traders and exchanges view and respond to environmental compliance as input to the development of *Codex Planetarius*. It focuses on the ABCCD companies that dominate the global trade in agriculture and exchanges such as CME, ICE and Dalian that facilitate an efficient trading system. Increasingly, regulation such as the EUDR is raising the complexity and cost of environmental compliance for all parties, disrupting traditional business models based on commodity interchangeability or 'fungibility'. This represents a huge opportunity for *Codex Planetarius* to simplify and provide consistency for environmental standards across multiple geographies and jurisdictions, creating a new, fungible category of environmental commodity that can be readily traded, securitised, and financed. It is also potentially attractive to both traders and exchanges as an efficient minimum standard that focuses on the worst rather than the best producers, creating a higher return on environmental investment than traditional voluntary certification.

This is key because these farms make up 60-80% of impacts but only 5-10% of production and an even smaller portion of world trade. This minimises the direct commercial impact of *Codex* on global traders but maximises its overall potential effectiveness at enhancing the sustainability of agriculture. Given that most large companies in the sector have already budgeted for the relatively high-compliance and traceability costs of a range of environmental regulations including the EU Deforestation Regulation (EUDR), *Codex* has the potential to provide a base-

line that is already priced into operations. Other related trends include the long-term 'financialisation' of the commodity sector and its increasing reliance on futures and financial markets for profitability. These markets have the potential to fund the costs of *Codex* by providing low-cost green bonds and de-risking investments in the worst-performing producers through products such as derivatives.

Finally, this paper looks at how *Codex* could be applied through both public and private sector institutions. *Codex Alimentarius*, which regulates food safety in international trade through the WTO, is the model for *Codex Planetarius*. However, as standards have become indirect and more complex (e.g. MRL's for pesticides), its structures have become less effective due to capacity constraints. Exchanges such as the Chicago Mercantile group, with a turnover of \$1 quadrillion (US) annually, have the potential to create rapid, global application of standards in parallel to multilateral institutions such as WTO. Building *Codex* standards into contracts and physical Certificates of Analysis for exchanges in particular has worked well in other sectors such as metals. This has implications for how *Codex* pilot studies are established and positioned as a means of simplifying and reducing the cost, and increasing the net benefit, of global environmental compliance.

Introduction

Traders are at the heart of the global food system. Traditionally, they buy physical commodities from producers and sell to manufacturers, either for immediate delivery on the 'spot' market or for later

delivery as 'futures,' and create value by transforming how commodities are financed, transported, stored, blended, processed, and sold. They profit from the difference between purchase and sales prices, using the financial markets to fund their operations and limit their exposure to commercial risks, and they increasingly invest in physical logistics, storage, and processing to create value. How these companies work is critical to global agriculture and the implementation of *Codex* in a rapidly changing trading system, which is becoming much more complex through several related trends: Concentration of power across supply chains, the increasing participation of financial institutions in commodity markets, the need for traders to comply with a growing set of social and environmental regulations, and the related 'de-commoditisation' of products and information flows that threatens their traditional business models. The last of these is where *Codex* has a potentially central role in reorienting agriculture towards a positive environmental baseline that sets the minimum standard for trade.

1. The ABCCD of agricultural commodity trading

The 'ABCCD' companies – ADM, Bunge, Cargill, COFCO and Louis Dreyfus – control around 70% of the trade in grains and oilseeds, representing 550m tonnes of the 750m tonnes traded and over half of all soy exports worldwide. In 2022, they traded 682m tonnes of agricultural commodities between them with an estimated collective turnover of \$502 billion (US) and net profits of over \$17 billion.¹ (see **Figure #1, page 7**)

Whilst there are a range of other large traders such as Wilmar, ETG, ED&F Man, Ecom Trading, Olam, Amaggi, and SLC, these are either regional in scope or focus on specific commodities (Wilmar dominates the trade in palm oil, ED&F Man is a sugar specialist, Ecom focuses on coffee and cocoa, Amaggi in soy, Olam in rice, cotton, coffee, and cocoa). Given the recent volatility driven by COVID, conflict, and related logistics issues, and the inflationary price pressures and large trading profits that have resulted, there has been significant attention focused on their dominance of the food system. Some of this is overstated. While the ABCCDs control a large portion of the trade in grain, for example, this only represents 18% of total production.

They face increased competition from BRICS traders, large corporations with their own internal trading divisions, financial service firms including hedge funds, and tech-based startups with lower operating costs. This fragmentation is likely to squeeze margins in the future. However, the rapidly increasing costs of finance have created huge challenges for smaller commodity traders which, combined with longer shipping times due to new conflict zones and the resulting increase in working capital requirements, will result in further consolidation. It is also true that the '...financial results of commodity traders tend to correlate more with volatility than absolute price.'² This is likely to increase along with the growing competitive advantage of the ABCCDs in data flows and information.

Finally, a long-term trend towards vertical integration has expanded traders' operations from traditional 'downstream' activities, including processing and sales, to 'upstream' activities such as land ownership and production. All major commodity traders have subsidiaries or associated companies that invest in, own, or control upstream assets. This ranges from LDC's Calyx Agro Ltd, a private equity investment vehicle based in Argentina, to Proterra Investments, spun out of Cargill's Black River Asset Management, a global hedge fund.³

At the other end of the supply chain, the traders are increasingly competing with branded manufacturers in end markets as a means of capturing value. This dominance and leverage is reflected in their lobbying efforts, directly in political power centres such as DC, Brussels, and Beijing, at multilateral institutions such as the UN

and WTO, and indirectly through farmers groups and trade associations. This has had an outsized impact on calls for delays to the EU's Deforestation Regulation (EUDR) and underlines the importance of traders in establishing and executing large scale reform. Involving traders with relevant exposure to piloting *Codex Planetarius* for specific commodities and geographies would help to ensure actionable results and future buy-in for execution on a global scale. Understanding the trends, issues, and motivations around increasing regulatory requirements, including the minimum standards associated with *Codex* and compliance to them, is therefore key to secure their buy-in and that of the exchanges that support them.

Exchanges and Trading Infrastructure

ABCCD traders are facilitated by a global network of commodity exchanges where a handful of companies including CME (the Chicago Mercantile Exchange that incorporates the Chicago Board of Trade), ICE (Intercontinental Exchange), and the Dalian and Shanghai Futures Exchanges (both based in China), are equally dominant. Exchanges are typically regulated for the purchase and sale of standardised, enforceable contracts tied to the price of commodities and process very large transaction values and volumes. CME alone handles over 150 million agricultural contracts each year with a value of \$25 trillion (US) and a total traded value including natural resources such as oil and metals of over \$1 quadrillion (US). Commodity exchanges are central to the effective trade in commodities, providing contracting infrastructure for trades, futures markets that pass the risk of price changes to counterparties who are willing to assume it, and auctions and mechanisms that determine prices.

The importance of exchanges in transferring risk, providing liquidity, establishing market pricing, and promoting efficient, low-risk, low-cost transactions cannot be understated. One of their core functions is the creation of standardised contracts to reduce friction in trading that incorporate quantities, pricing, terms, delivery, payment, quality, and physical characteristics. These final two elements are typically incorporated into a CoA (Certificate of Analysis) showing third-party confirmation that the traded product meets minimum specifications. These are key quality assurance documents that accompany all commodity shipments in and out of warehouses. Traditionally this has been purely physical

but are increasingly being adapted to also show other non-physical characteristics such as sustainability. The London Metal Exchange introduced the LME passport in 2021 to digitise CoAs, bringing increased security, accessibility, and transparency to the trading process (**Figure #2, page 7**). While mineral supply chains are fundamentally different from those in agriculture, the inclusion of sustainability criteria into the passport is of relevance to the development of *Codex*. It provides traders with 'access to comparable, verified and wide-ranging sustainability credentials and data regarding global producers.'⁴ This is a cross-standard approach that incorporates initiatives ranging from the Extractives Industry Transparency Initiative (EITI) to the Responsible Minerals Initiative (RMI) and Global Reporting Initiative (GRI), which ensure consistency across producers, markets and standards.

The passport will be mandatory from the end of 2024, and over half of all LME brands are currently participating. It illustrates how a major platform can impose disclosure metrics for specific ESG areas and represents a potential model for setting minimum environmental standards for agricultural commodities. This could be attractive to exchanges due to the baseline nature of *Codex* and represents an opportunity to incorporate standards into existing mechanisms such as CoAs due to exchanges' scale and semi-regulatory structures. This would tap into long-term trends towards increased ESG regulation and reporting and accelerate these trends by providing a common compliance platform for traders.

2. The Costs of Compliance

Compliance is the process of ensuring that an entity follows all applicable laws, regulations, standards, and practices. Historically this most often meant financial compliance – ensuring that a company adhered to tax, anti-fraud, anti-corruption, and related industry and regulatory standards. However, this has since become very broad to also include both internal and external issues (**Figure #3, page 8**). This has driven an enormous rise in the cost of regulatory and internal compliance. For traders, this represents a relatively small portion of revenues (anywhere from 0.1% to 0.5% depending on the sector, company size, commodity and geographical focus) but this represents a substantial portion of operating costs in industries

where margins are thin and can materially affect profitability. This compliance covers everything from data regulation such as GDPR or DPO to health (e.g. SPS), product (e.g. industry or exchange contract specifications), social (e.g. labour, DEI, and modern slavery), trade (e.g. tariff and format requirements), financial (e.g. anti-fraud, anti-corruption, competition, tax and sanction considerations), and environmental (e.g. clean air act, EUDR). Much of these areas overlap – deforestation, for example, can be linked not only to multiple environmental impacts (including biodiversity and habitat loss), GHG emissions, and pollution, but also smuggling, illegality, forced labour, land rights and livelihoods, as illustrated here.

The costs of compliance include the human resources required, often in the form of highly specialised professionals, the actual cost of regulatory filings and reporting, and the systems required to implement the process. These types of costs have increased slowly over time although more rapidly since the 1970's. This has been complicated by both the inter-relation between types of compliance and the introduction of technology that both facilitates compliance and increases its costs (e.g. through privacy legislation and issues of IP and data ownership).

Three key issues now dominate traders' compliance efforts. The first is corruption. Traders often generate significant financial flows through countries with weak governance leading to a high-risk operating environment. This has been highlighted by scandals such as the Brazilian 'Car Wash' which drew in Glencore, Trafigura and Vitol. The second is the proliferation of sanctions on individuals, companies, and governments which have serious legal and financial implications for companies that do not keep up with a dynamic environment.⁵ The third is ESG compliance.

Beginning in the 1970s, environmental regulation became part of a wave of social legislation driven by the increased willingness of governments to intervene in business. This typically directly affected manufacturing businesses in the countries in which they operated and had little impact on the traders buying and selling products rather than producing them. However, this shifted in the 1990s with the signing of the Kyoto Protocol and development of carbon markets and taxes to regulate both direct and indirect environmental impacts, including scope 3 emissions.

More recent legislation, such as the European Union Deforestation Regulation (EUDR), marks a significant shift of regulation from direct towards indirect environmental impacts on supply chains. This imposes penalties of up to 4% of turnover and confiscation of goods on companies that do not comply. In its impact assessment of the regulation, the EU estimated that it would increase costs somewhere in the range of €175 million-€2.6 billion, which could equate to between 0.3%-4.3% of companies' input costs. Costs will also apply not just to companies based in the EU, but multinationals importing to the EU.⁶ The key issue for the large traders is that their business model has historically been based on turning agricultural products into interchangeable, 'fungible' commodities. This reduces the costs of trading and allows sourcing to be switched to take advantage of supply and demand shifts. Environmental standards that require detailed, non-physical traceability disrupt this model.

3. Commodity interchangeability

Global trading systems have developed in ways that incentivise the creation of goods that are 'fungible' – interchangeable for commercial purposes and practically indistinguishable physically from each other. This has helped drive the growth of opaque supply chains that ignore environmental impacts and, 'launder away negative externalities'⁷ through limited traceability and transparency. This means that, while end products such as palm oil or soy may end up as indistinguishable commodities, the difference between the environmental impacts of the worst and best performing producers can range from 22 times in the case of beef to 66 times for palm oil.⁸ Because of this, farms make up 60-80% of impacts but only 5-10% of production and an even smaller portion (0.5%-2.5%) of world trade.

That makes dealing with the worst performers as proposed by *Codex Planetarius* much more important than improving the rest. The problem is that identifying them is difficult in commodity chains that are expensive to segregate and are part of a system where there is little commercial incentive to do so. The profitability of the traders that dominate the global food system is based on selling interchangeable products at scale and retaining, not sharing, information, so when market demand

or pricing changes the traders have a competitive advantage.

That advantage is exacerbated by the fact that over 40% of key commodities, including palm oil, cocoa, soy, and beef, are purchased through intermediaries or third-party supply chains.⁹ However, this fungibility has also been critical to the growth in global trade because it allows for the efficient buying and selling of goods and helps to establish standard pricing for them. This in turn allows the financing of commodity flows, the effective hedging of risks, and the use of commodities as an asset class. Pooling commodities from different sources gives buyers pricing leverage with producers, reduces friction and therefore costs through standardisation, provides a quality guarantee to end customers, and creates a platform for financing commodity trades. Historically, commodity traders have therefore had a clear vested interest in maintaining fungibility and a reluctance to add expense and complexity to their supply chains, particularly where this involves transparency that reduces their competitive advantage.

This is not to say that there isn't differentiation within the same commodity, but this has traditionally been restricted to different physical grades or types of the same product, such as the purity or 'ICUMSA' of sugar. Differences in transportation, storage, processing (raw vs refined vs liquid sugar), and regulation make full interchangeability complex to manage. But this is mitigated through standardisation by global commodity bodies. For the purposes of *Codex* implementation, the single greatest threat to commodity fungibility, and therefore the greatest potential cost to traders and end customers, is environmental regulation such as EUDR. This is because it adds an indirect standard that differentiates commodities based on production rather than physical criteria. This makes it difficult to identify and costly to comply with. Regulation such as the EUDR could cost up to 0.6% of trader revenues, because it requires a traceability and compliance program beyond the level of mills, intermediate processors, or aggregators, to the level of specific farms. As of February 2024, 28% of food companies and retailers did not have any sort of deforestation management programme and, of those that did, 43-63% was inadequate with only 13% having traceability in place for their own operations in addition to direct and third-party suppliers (**Figure #4, page 8**).

The issue for producers is that there is a significant cost to data and compliance, which has led to political pushback both from producing countries such as Brazil and the EU farming lobby. End customers are concerned about traders passing on the costs through price increases. Segregating supply chains for previously interchangeable commodities is anathema for traders. The implication for *Codex* design and its buy-in at a commercial and political level is that new minimum standards should focus on global applicability and reducing, rather than increasing, friction and cost in global supply chains. *Codex Planetarius* has the potential to do this by creating consistent, globally recognised, minimum environmental standards that can support ‘green fungibility’ for the benefit of producers, traders, and the long-term natural resources base for agriculture.

4. The Upside of Data

The introduction of EUDR and similar legislation puts pressure on global traders and end customers to measure, report, and monitor environmental standards in at least a portion of their supply chains and at a level of detail beyond existing transparency initiatives such as TNFD, TCFD, IIRC, or CDSB. This represents a potentially huge data and information systems cost but also a related commercial opportunity. A good example of this is Cargill’s proprietary ‘3S’ (Sustainably Sourced & Supplied) sourcing platform. In common with other trading systems, this is based on ‘mass balance’ – a chain of custody approach that maps certified and non-certified products but does not physically segregate them. This means that if Cargill sources 100mt of RSPO-certified palm oil and 100mt of non-RSPO palm oil, it can only sell 100mt of product under the RSPO label to a customer.

However, the physical product actually delivered to the customer could be a mix of certified and uncertified as long as the amount of certified product is not exceeded. This is attractive to traders because it fits within the traditional model of selling fungible, interchangeable products. Complying with physical segregation of products represents a fundamental change to this model and therefore significant costs. For EUDR specifically, companies will need to establish much more rigorous due diligence and traceability systems, implement satellite mapping, and segregate logistics,

handling, and storage. How effective or widespread this will be will depend on how regulation develops beyond regional legislation.

Historical parallels suggest a need to take a global approach, such as that proposed for *Codex*, for this to have a real impact. An example of this is the 2010 Dodd-Frank Act, which required companies to disclose the source of their ‘conflict minerals’. This led to some companies simply halting all sourcing from DRC, establishing parallel supply chains. The EUDR may have similar unintended consequences. However, the investment that it requires also represents a significant opportunity for traders to generate a ‘green premium’ through efficiencies, cost optimisation, asymmetric price discovery, access to low-cost financial products such as green bonds, and improved market and customer access. It will also generate new opportunities to trade in both voluntary and regulated markets for environmental externalities such as carbon and biodiversity.

Traders typically make higher profits during periods of volatility due to effective risk management, financial speculation, and information asymmetry. This makes ABCCD companies ideally placed to profit from these markets. According to McKinsey, “To capture these advantages and opportunities, players must accurately track the carbon exposure of their products and cargoes and connect it with their customers’ willingness to pay while also setting up the necessary physical processes and accounting protocols for compliance. In the future, this tracking could extend past carbon to a holistic view of multiple environmental, social, and governance (ESG) elements.”¹⁰ The downside for other players is that this increasing traceability will generate a vast amount of data.

While this has the potential to allow public and private assessment of environmental claims and help “rebalance deeply entrenched asymmetries in who has access to information about the origins and impact of traded commodities,”¹¹ it could also exacerbate imbalances between producers, traders, and end customers. The volume of data required is now so large that making effective use of it and applying it to global markets or supply chains has become a barrier to entry. This is not simply about raw data, which is increasingly available either publicly or through private feeds, but converting it into usable information.

“Today, there are literally thousands of sources of data available. Those companies able to assimilate this information tsunami and detect the signal from the noise will emerge as the future leaders.”¹²

The ABCCDs have the existing knowledge management infrastructure and the resources to invest in technical solutions that will turn vast streams of data into usable, actionable information. These risks are significant, but the rise of big data in trading also creates an opportunity for *Codex Planetarius*. It means that there are existing data systems whose costs have already been included in business models that could provide a platform for *Codex*. It also means that global minimum environmental standards could represent a lower cost than other regulation and it means that *Codex* could provide a way for traders to consolidate compliance at a global level. However, data and information management that is not company specific needs to be incorporated into pilots to ensure an effective knowledge management platform for *Codex*.

5. Financing Green Commodities

The ABCCD traders have always relied on the financial markets to manage risk and generate profits in low-margin commodity sectors. However, their reliance on these markets and the incorporation of commodities into investment portfolios has been accelerating. This is partly because they can provide higher returns when stock markets are volatile and partly because the introduction of financial instruments such as derivatives, Exchange-Traded Funds, and Exchange-Traded Commodities (ETFs and ETCs) provide a relatively low-cost way of investing. This is part of the increasing involvement of financial investors in agri-food systems, particularly in futures markets through financial derivatives. This is driven by long-term deregulation of financial markets at the same time as regulation of physical commodity markets, through legislation such as EUDR, is increasing.¹³

There is growing evidence that this accentuates the food price volatility that occurs periodically in global trading systems and that speculative activity in financialized food markets increases dramatically during crises, including the 2020-2023 period incorporating COVID and the beginning of the Ukraine conflict.¹⁴ Financial

institutions including banks and insurers as well as hedge funds and financial subsidiaries of traders drove the value of the market for agricultural product derivatives to \$33 trillion (US) in 2023. These trades are purely speculative with no intention of taking possession of a physical commodity and can therefore accelerate pricing trends in the markets.

As investors have profited from this type of instrument, the ABCCDs have established financial subsidiaries to manage both their own and third-party funds through commodity hedge funds and tailored Over-The-Counter (OTC) derivatives such as swaps. Derivatives have long been used to manage price risk in physical supply chains and make speculative profits for traders' own accounts to offset losses in other areas. What is new is their scale and spread.

Figure 5 (page 9) illustrates the impact of these instruments on food traders' median profits – shown as an index with 2019 as 100. From 2019, gross profit in the sector was much lower than profit before tax, showing the significant impact of financial services on profitability. The inter-dependence of financial and commodity markets has a number of implications for *Codex Planetarius* and investment in 'green commodities' more broadly. This is fundamental. Futures markets and derivatives are currently used to manage risk, secure supply chain finance and improve profitability – all of which are critical to the development of a sustainable food system. It suggests that both commodity exchanges and related financial markets could be used to offset any increased pricing or market risk associated with environmental standards through financial instruments and non-traditional markets used to secure financing for *Codex* itself.

Derivatives encourage investment, protecting vulnerable or liquid assets from volatile market conditions when external capital is costly or difficult to obtain. In addition, green bonds could represent a cost-effective way of covering the costs of *Codex* implementation tied to specific ongoing revenue streams.¹⁵ Finally, developing financial instruments backed by multilaterals to enhance the profitability of commodities that comply with *Codex* would provide a commercial incentive for traders and exchanges to participate in real-world pilots.

6. Positioning Codex Planetarius

Codex Planetarius is modelled on the structures and approach of *Codex Alimentarius* but there are a number of practical issues with its integration into WTO structures. For standards to have force within the WTO, they require application to the Sanitary & Phytosanitary (SPS) agreement or its equivalent, which is likely to be a very slow process. In addition, the experience of Maximum Residue Levels (MRLs) through these structures shows that, even where global organisation and regulation exist for food, a lack of resources and flexibility to keep up with the speed of change in complex environmental externalities can lead to negative implications for global trade.¹⁶ Given the broader bottlenecks within the WTO system, this suggests that for *Codex Planetarius* to work effectively, a more dynamic structure should be considered within WTO, as should the resourcing required to manage high levels of complexity and change in standards, their measurement, and application.

Integrating *Codex Planetarius* into existing WTO regulatory structures rather than creating new ones while configuring the organisation itself differently should be a priority. This is underlined by the consensus nature of WTO decisions that have led to the stalling of agriculture trade negotiations initiated in 2001 as part of the Doha round. This highlights the '...conflicting interests between developing and developed countries.'¹⁷ And it suggests that a key stakeholder concern around *Codex Planetarius* is likely to be that it will disproportionately impose costs on producers.

An initial bilateral approach to implementing *Codex Planetarius* through pilots that demonstrate its value and provide an 'investment case' for all parties, as well as related funding mechanisms, should therefore be part of the piloting process. This should ensure that *Codex* is positioned as a cost-effective means of improving both agricultural production and its trade and that it will enhance, not penalise, producing countries. However, both multilateral and bilateral approaches to implementing *Codex* are likely to be slow due to wider political issues.

A parallel approach that integrates both private sector trading companies and semi-regulatory commercial exchanges has the potential to lead to much faster, if less broad, acceptance. This paper has

shown that environmental compliance costs, financial market participation and the fungibility of commodities are key concerns for both traders and the exchanges that facilitate their activities. Positioning *Codex Planetarius* as providing a common baseline that reduces the risks and costs of environmental compliance is highly cost effective. It can replace a mass of overlapping certification and regulation, and increase profits and financial flows related to the trade in green commodities, which has enormous potential to deliver for both commercial traders and the environment.

Conclusions

Fundamentally, the global trading system is based on product interchangeability, efficient contract infrastructure, risk mitigation, and leverage of financial markets. Long-term changes to the regulatory environment can create the sustainability in agricultural supply chains that is critical to long-term food security, but they can also create cost and inefficiency across this system. *Codex Planetarius* represents a huge opportunity to simplify and provide consistency for environmental standards across multiple geographies and jurisdictions, through both public sector institutions such as WTO as well as the private sector exchanges.

This paper is an outline of often highly complex areas of the global trade in agricultural commodities and is not intended to be complete or definitive. There are significant gaps and uncertainties, particularly in terms of compliance costs, financial markets, and exchange mechanisms that require further review and a number of related actions:

- **Create a model for a new, fungible category of environmental commodity that can be readily traded, securitised, and financed:** Create a model through discussion with traders and exchanges that uses *Codex Planetarius* as a platform to create green commodities that they can support, finance, and employ across their global operations.
- **Structure data and knowledge management for Codex as part of pilots:** Ensure that privacy, confidentiality, data collection, intellectual property, information dissemination, and knowledge management is a core part of *Codex* pilots with a view to creating a common platform for its implementation.
- **Test key messages with the exchanges, traders, and producing countries**

most likely affected by the Codex:

Develop a proposition that emphasises the consistency, simplicity, cost-effectiveness, and funding mechanisms that make *Codex Planetarius* distinct, credible, and effective, including key points of difference such as ‘minimum’ standards, and a focus on the worst performing producers.

- **Identify existing regulations and standards for incorporation into Codex:** Review and incorporate relevant

standards and initiatives where appropriate into the *Codex Planetarius* pilots. In particular, identify potential overlap with widely adopted structures such as TNFD, CSRD, and SMI to generate traction.

- **Implement pilots with commodity traders and exchanges:** Identify key traders and exchanges for each commodity pilot to ensure future buy-in, provide secondary data sources, and establish commercial credibility. This should also

look at traders national-level operations given that the majority of commodities are produced for domestic and regional markets and are critical for food security and south-south trading relationships. ■

Peer Reviewers

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Figures

Figure 1. Revenue and Profitability of the ABCCD traders 2022. Data from Hietland, M. et al (2024), 'Hungry for Profits' SOMO.

USD\$ (M) 2022						Total ABCCD
Revenue	\$ 101,556	\$ 67,232	\$ 165,000	\$ 108,286	\$ 59,931	\$ 502,005
Volume (MT)	60	142	217	180	83	682
Net profit	\$ 4,365	\$ 1,678	\$ 6,680	\$ 3,384	\$ 1,007	\$ 17,114

Figure 2. LME Sustainability metrics as input to passport. Source: London Metals Exchange.

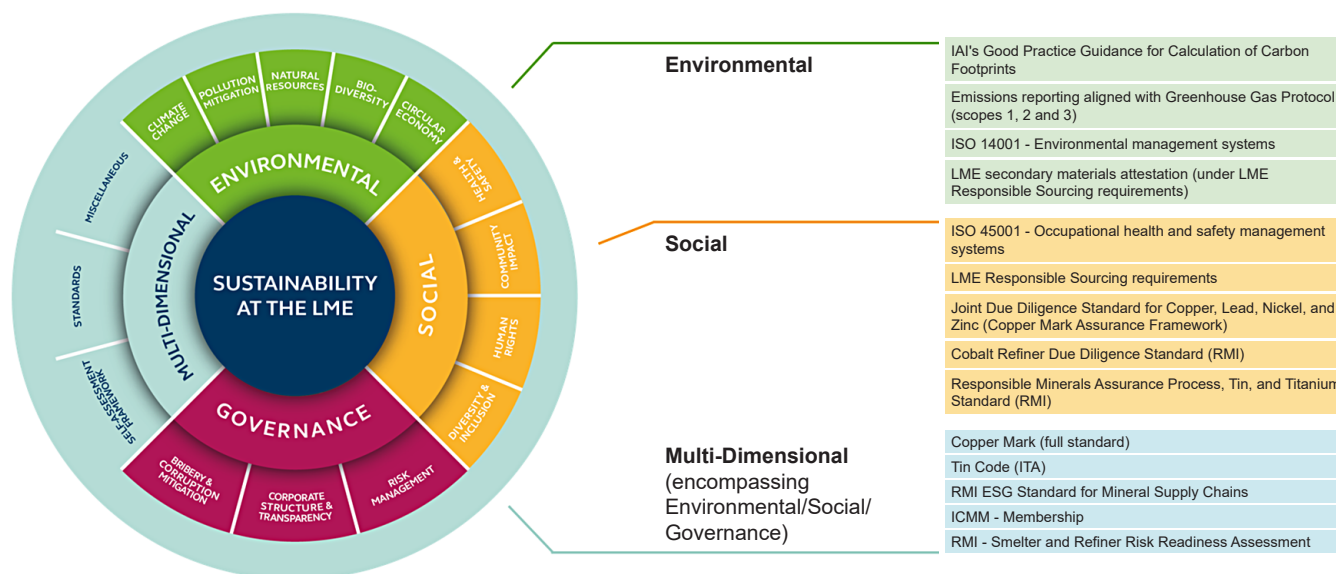


Figure 3. Compliance Issues for Commodity Traders. Data from Dorfmueller, H. et al (2022), ‘Responsible Business Conduct in Commodity Trading – A Multidisciplinary Review.’

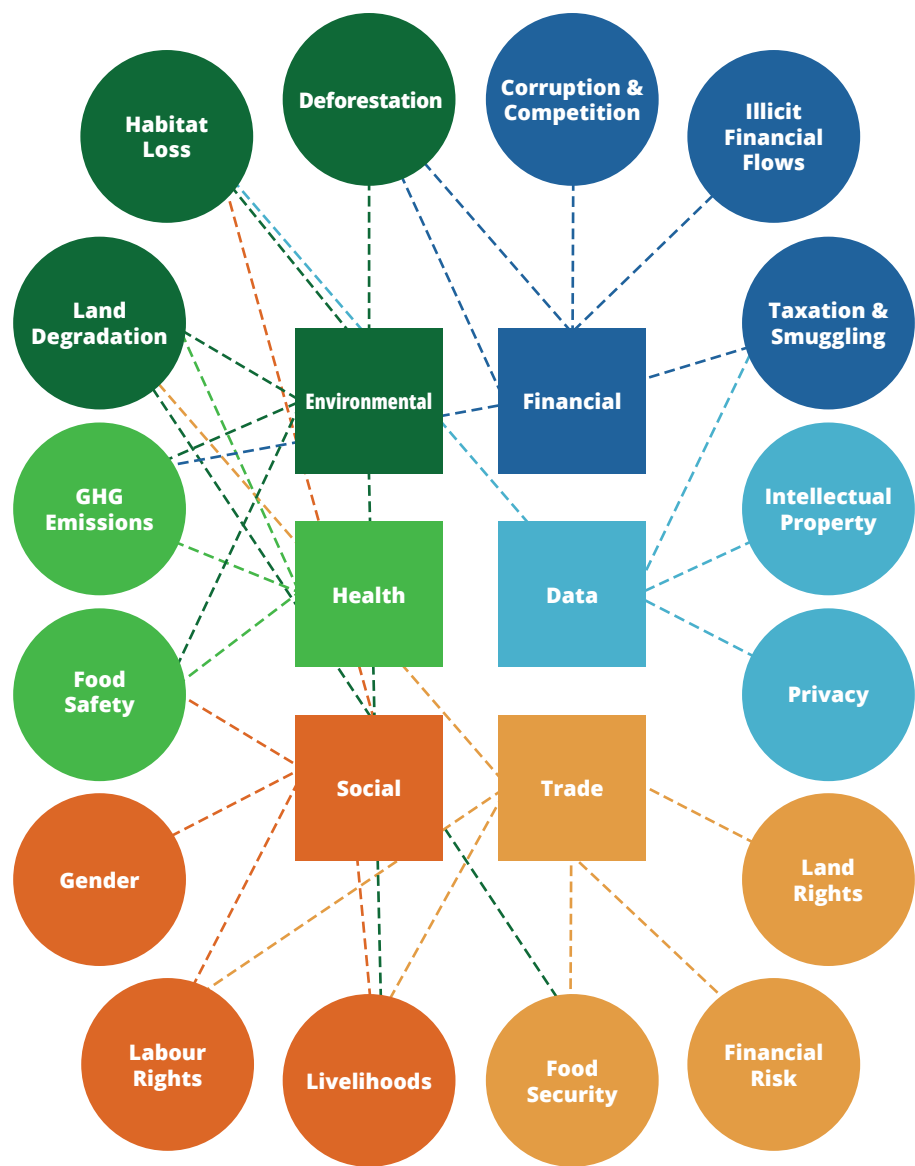


Figure 4. Deforestation programme strength in the EU food sector. Morningstar Sustainability (2024), Navigating the EU Regulation on Deforestation-Free Products

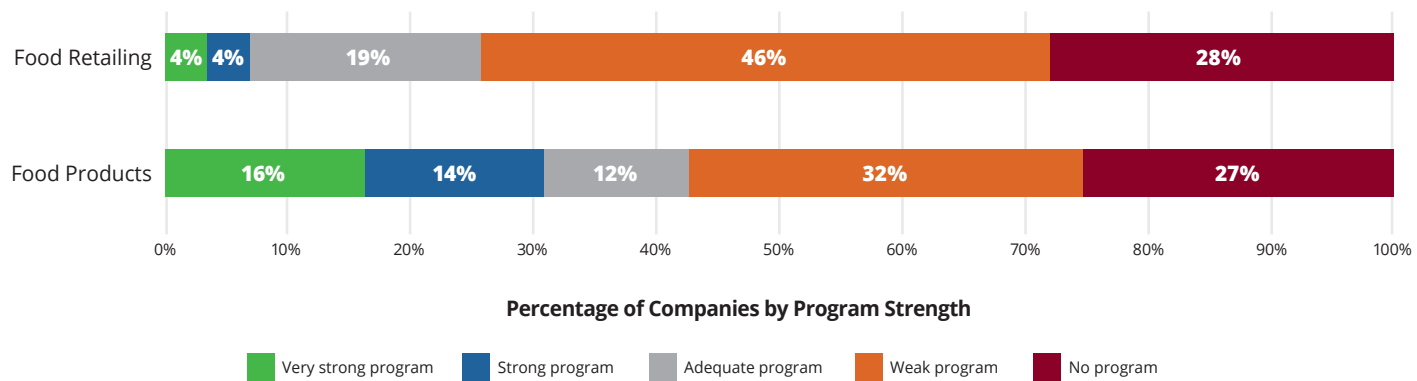
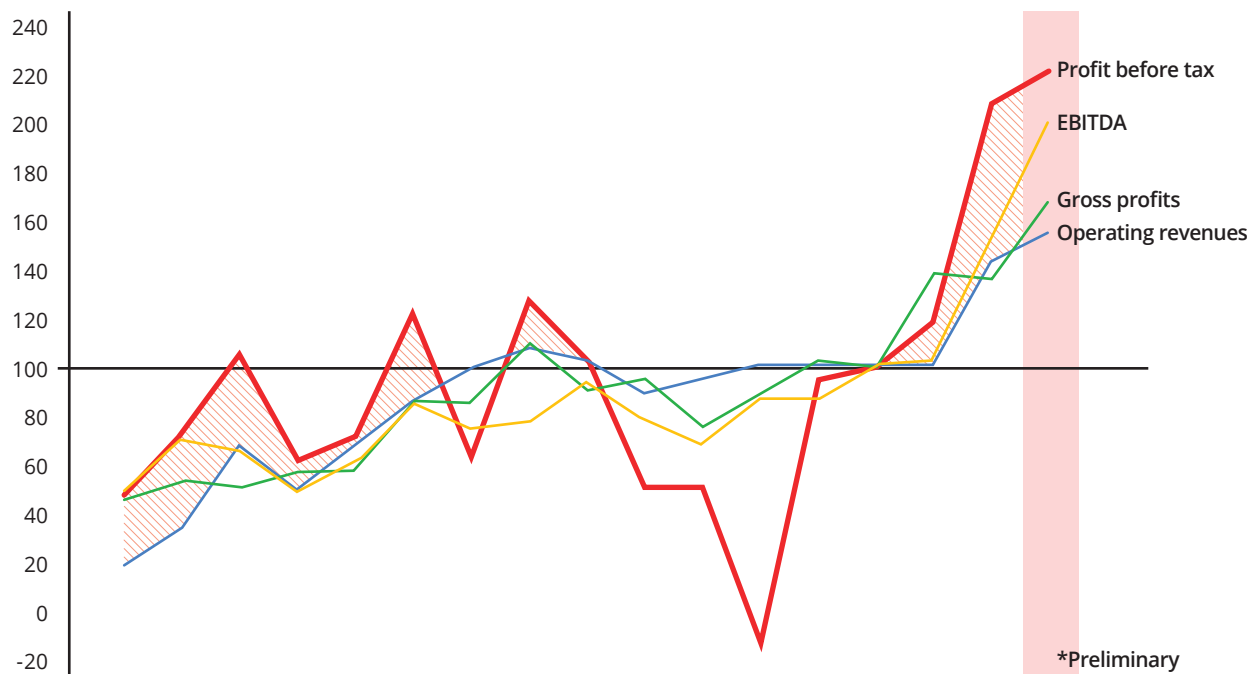


Figure 5. Financial operations driving profit growth in the food trading sector. *Source: UNCTAD (2023) – Trade & Development Report.*



Footnotes/Citations

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