Demystifying Income Drivers-Production System

Terms of Reference (TOR)

IDH, February 1st, 2023

1. Background on IDH

IDH is an organization (Foundation) that works with businesses, financiers, governments, and civil society to realize sustainable trade in global value chains, including cotton, coffee, tea, cocoa, palm oil, food crops and food ingredients. We believe that action-driven coalitions will drive impact on the Sustainable Development Goals and create value for all. We currently reach over 4 million farmers in 30 countries.

In global agri-commodity supply chains, many smallholder farmers do not earn a Living Income (LI). There is a gap between what farmers currently earn and the level of income required for them to afford a decent standard of living for all members of their households. Closing this Living Income gap is increasingly seen as a key factor through which other social and environmental issues can be addressed. In many sectors this has driven the increasing momentum among value chain actors to address the LI gap.

IDH has been a frontrunner in bringing Living Income issues to the forefront of sustainable livelihoods. IDH is a recognized leader, having supported numerous companies in their journeys to close Living Income gaps in their supply chains. IDH has also spearheaded several initiatives to drive sector-wide industry action on Living Income. IDHs efforts have resulted in the creation of several landmark industry commitments to close Living Income gaps in various key sectors (e.g. Cash crops, food grains, spices, floriculture, fruits and vegetables, aquaculture).

Recognizing that value chain actors may not take effective action through commitments alone, IDH has gone to great lengths to contribute to a supportive environment. Through the initiation of programs and provision of practical tools such as the *Income Driver Calculator and Income Measurement Survey*, these actors are supported in their efforts to address Living Wage and Living Income issues in their supply chains. IDH's dual capacity to drive sector-wide commitments on Living Income, while offering support to practically implement these commitments, has proven successful.

2. Background on Better Income

IDH has 4 broad impact themes – Better Jobs, Better Income, Better Environment and Gender. IDH is working to secure Better Income for smallholder farmers in several sectors and landscapes. IDH's Better

Income impact pathway has three categories of Better Income:

- **More income** for women and men to be able to alleviate poverty towards a living income.

- **Stable income** to be resilient against shocks and other risks throughout and over the years

- **Equitable income**, to ensure that men, women and youth have equal chances on a better income while not harming the environment, local communities and generations to come.

IDH follows a sector agnostic **Income Driver framework** to access and support the design of effective interventions to improve household incomes towards the broader goal of closing Living Income gaps. The framework consists of 5 Income drivers – Land, Price, Volume, Cost of Production and Diversified Income. Each of these income drivers has a significant influence on household income, and they are often inter-connected.

The scope of this assignment will deal primarily with the income drivers of Cost of Production and Volume. When conducting research and sharing insights, we often integrate these income drivers as the "production system" due to the interaction and interdependency of these two variables in research, analysis and intervention evaluations. See below for more context on each income driver:

Cost of Production – Refers to all possible costs associated with farm production and processing required before the produce leaves the farm gate. This would include (and not limited to) the costs associated to full range of services, inputs, utilities & certification. Further if there are any associated costs for on farm processing, labour & productivity enhancements for ex. costs of storage. It would also include costs in the

form of on-farm investments like machinery & equipment, implications of which on the cost of production would involve operating and maintenance costs as well as further implications over temporal scale such as depreciation. Other aspects that also can be considered are timing and availability of cash and overall cash flow through the year and/or season.

Volume – Refers to the final volume that is fit for sale for both primary as non-primary crops grown on the farm. It would cover aspects such as yield, losses and variations in volumes related to product characteristics and parameters (quality, level of processing etc) for differentiation at the point of sale. It would also include biologically dependent parameters of the crops that impact the above-mentioned parameters like variety/cultivar used, age in context of tree crops.

The ambitions for most production systems varies as we move from a household to system level often treading a fine line between aligned and competing interests.

Household level – The ambitions **for small-holder households** are to lower cost of production (efficient use of labour, types of inputs use etc) while maintaining or improving volumes (increasing yields, reducing losses etc, value addition through processing etc). This is rooted in the larger ambition of improving household income. There are also ambitions relating to having stability in income through the year (stable cashflows, savings for poor productivity seasons) and this also can reflect in their choices for example – timing of harvest, choice of non-primary crops, role of trees and livestock etc.

System level – The system level ambition **for supply-chain actors** is to ensure quality and steady availability of agricultural produce at the best prices possible towards the broader ambition to maximise profits across the supply chain which would reflect in for example in their procurement practices. Other goals could include improving level of processing in the lower segments of the supply-chain, transparency and traceability, building producer loyalty.

There is a strong emphasis on investing in improving farm productivity towards these objectives. This includes investments in the form of inputs, trainings etc which can also have an impact on cost of production at a household level. More volume (with desired quality ex. moisture levels, fats content, visual appearance, residue levels etc.) in the market would provide supply chain actors with more choice as well as leverage to negotiate for prices. Consistency in being able to accurately forecast production would benefit actors as they can plan for their business operations more efficiently. This can often reflect in procurement practices eventually which can have significant influence on production system choices for household level.

For governments and institutions improving farmer household incomes and supporting business can often be a part of their core development as well as political ambition. This would reflect in their regulations and policies which in turn can have significant influence choices within small-holder production systems.

At IDH, we strongly believe that multiple actors have a role to play and for systems-change we need to go beyond changing farmer behaviour. Practically, we expect that not only will farmers & farmer groups need to take certain actions, but others will need to share value through investment (value/risk sharing, changes in procurement practice), sector governance, policy, etc.

Please refer to Annex 4. For a more general overview of various actors and what role they can play across the 'Smart-mix' of strategies.

3. Objective of the Assignment

Building on this momentum, IDH seeks to deepen it's understanding of the income drivers of Volume + Cost of Production (i.e. Production System) through extensive secondary and tertiary research. The broad aim of the assignment is to build intelligence, gather evidence and develop a sector agnostic framework that enables multiple stakeholders to take action to achieve the system and household-level ambitions for production systems vis a vis other income driver and in-so-doing, closing living income gaps.

The outputs of the research will directly contribute to the Better Income learning agenda and the development of actionable tools for use by IDH teams and industry partners. The focus of the outputs of this assignment are to inform practical action and not academic debate. The expectations are that the findings are evidence and data-based and are not rooted in assumptions and extrapolations**.**

4. Scope of the Assignment

This section highlights the expectations from the assignment. The section is further divided into sub-sections based on the varied nature of outputs expected.

The deliverable is fourfold:

1. A word document for the findings of the assignment including analysis framework

2. Powerpoint presentation summarizing key findings and explaining the analysis framework
3. A word document with short summaries of each of the most relevant literature sources
4. An excel sheet organized in the format of IDH's existing 'Evidence Base' for all newly identified interventions

Please note, the assignment's scope would be across all IDH relevant sectors (e.g. Cash crops, food grains, spices, floriculture, fruits and vegetables, aquaculture) and geographies.

The evidence gathered during the assignment can be quantitative, qualitative, or mixed. A balance across the 3 would be ideal with emphasis on quantitative data. When evaluating the available evidence, we would like to include not only academic standard evidence but also evidence found in grey literature (e.g. FAO, World Bank reports). Given the different levels of rigor across these sources we would like the consultant to highlight the reliability of key evidence used.

4.1. Research

The goal of the research is to build a strong evidence-based understanding of the most significant aspects of income drivers of cost of production and volumes as they relate to delivering a better income to smallholder households. The research should cover the following (not exhaustive) –

- **Overview for volume and cost of production**
    a. *Historic trends and developments* in the domain of both volumes and cost of production in IDH relevant sectors (the role of colonization, political economy, geo-politics, development aid strategies, private sector investments including procurement practices and CSR/sustainability programs, and technology advancements).
    b. *Trends and patterns of yields and production costs* across various commodities and geographies over the last decade with quantitative evidence. Also considering entanglements with micro and macro-economic indicators.

For example – x% of small-holder interventions target productivity improvements with only y% show increase in yields, only x% of interventions in coffee lead to actual yield

improvement beyond 3 years of implementation, x% increase in consumer demand for cocoa products reflected in y% increase in cocoa production.

c. *Definitions, categories, segmentations, and types* of small-holder production systems along with their prevalence across sectors and geographies. Parameters and drivers for the same.

- **Role of volume and cost of production in achieving better income for smallholders,** supported by quantitative evidence, including:

  a. Positive and negative influence in increasing income and/or closing living income gaps. Support with quantitative evidence and conditions for success.

  b. Positive and negative influence on income stability

  c. Insights on the distribution of risks and benefits of targeting volume and/or cost of production improvements across different populations within the smallholder context, ie women, smallest landholders, indigenous communities, etc.

  d. Methods, tools and/or frameworks to help identify obtainable improvements to volume and cost of production among various populations and smallholder contexts

- **Designing volume and cost of production interventions (short and long-term) in context of improving household incomes. (**Examples to support the same)

  a. Parameters for designing effective interventions

  b. Key drivers/factors for success and failure

  c. Considerations, challenges and limitations for small-holder farmers while changing/ improving production systems

  d. Role, influence, opportunities and limitations among various actors influencing production systems, for example

     i. Consuming country government policies on trade, taxation, due diligence, sustainability, investment and/or lending

     ii. Producing country government policies on agriculture, trade, specialization vs diversification; and/or limitations in infrastructure investment due to GDP and debt payments

iii. Traders on inputs provided, procurement practices, traceability etc

iv. Processors and brands on inputs, procurement practices, traceability, risk sharing

v. Investors on improving on farm productivity, on-off farm processing etc

vi. Banks on access to finance, financial products, insurance schemes etc.

Please refer to Annex 4. For a more general overview of various actors and what role they can play across the 'Smart-mix' of strategies.

- **Measuring volume and cost of production**. Comparison of methodologies, considering -
  - Key indicators/parameters to measure volume and cost of production as well as the efficiency (optimum use of resources) and effectiveness (ability to deliver on the desired output) of the production system,
  - whether available data and analysis reveal most influential variable(s) for volume and cost of production and volume across various crops and geographic contexts. For example: Labour costs account for x% of cocoa production in West Africa, fertilizers and inputs account for y% of cost of production for Robusta coffee in Uganda, z% of tomatoes produced in southern India are fall under top quality grading.
- **Impact of Innovation and technology on volume and cost of production** with evidence on their impact on household income from the last 2 decades.
  a. Evidence and insights should include conditions for success, risks and failures of implementation, and unintended consequences.
  b. Major innovations and digital and non-digital technologies can be inclusive of small and large-scale reach, from improved farm-level processing technology managed by a household to new mechanisms of trade and/or data sharing managed by a sector.
  c. Recent developments in yield forecasting and calculating cost of production.
- **Synergies and trade-offs between**

a. Production system income drivers of volume and cost of production

b. Production system improvements and other income drivers

c. Production system improvements and environmental impact

d. Short-term Vs long-term effects (of changing productions systems)

4.2 Contributing to IDH's Evidence base

IDH has developed an Evidence Base (for internal use) consisting of over 120 small holder interventions and their impact on household income. These interventions are organized and segregated across various parameters (See Annex 1). We would like the research from this assignment to further build on this evidence base as we recognize that some interventions are still missing in this evidence base and for some interventions there are still have gaps in information.

The consultant will contribute to the evidence base by assessment and organization of all interventions that will be identified during the implementation of the assignment in alignment with the structure of IDH's existing evidence base.

We foresee 2 scenarios -

i. Intervention already exists in the Evidence base - The expectation in this scenario would be to add to the existing information and not reinvent the wheel.

ii. Intervention does not exist in Evidence Base - The expectation in this scenario would be to define and organise the information in the Evidence base's existing format.

4.3 Framework for analysis

Based on the research, the expectation from the assignment is also to develop a framework for analysis for volume and cost of production (or production system as a whole). This framework will support IDH and it's partners to critically analyse the potential for volume and cost of production to impact household income in a given sector and geographic context. Along with this the framework will also support evaluation of the most promising interventions for volume and cost of production in specific geographic and sectoral context to maximise farmer household income. The framework would be built on the outputs from section 4.1 and 4.2.

The framework should be able to achieve the following:

I. **Analyse:** Support in analysis on how to evaluate/analyse/identify the *current* state and *desired* state of a production system and to assess it's potential to increase household income in any given sector and countries/regions. Potential methods/tools/frameworks to identify obtainable levels (quantitative).

II. **Approach selection:** Support in identifying a short list of interventions/approaches (from the evidence base) to effectively capitalise on the potential of volume and cost of production as income drivers in a given geographic and sectoral context. The framework should be able to help classify interventions and approaches based on lead actor, value creation/value distributional effect, synergies and trade-off with other income drivers and ease of implementation (resources, time and expertise).

III. **Country/Region specific approach development:** The framework should support the development of informed hypotheses for IDH team and partners on how to evaluate effectiveness of various potential interventions within volume and cost of production in the any given sector countries/regions.

Additional Information on IDH & key sources for review can be found in Annex 5

5. Profile of the consultant

The team of consultants need to fulfil the following minimum criteria:

- Expertise in monitoring, evaluation and learning and/or academic research
- Experience with IDH key sectors working on Better Income, including cocoa, coffee, tea, cotton, spices, aquaculture, and food crops
- Expertise in smallholder farming systems and private sector-led sourcing and sustainability initiatives
- Be independent and credible.
- Flexibility to adapt to changing scope.
- Analytical and Result-oriented.
- Critical on quality & reliability of information.
- Dedicated adherence to deadlines.

- Sensitivity how to treat confidential information and cognizant of data privacy regulations.
- Excellent written and spoken English, culturally sensitive, analytical.

6. Proposal

IDH is asking consultants/researchers to prepare a proposal (max. 5 content pages) in which it is explained how the consultant will organize its engagement and team (when applicable) to contribute to the objectives as explained above.

- The proposal should at least contain:
  - Your understanding of our needs and approach to the assignment.
  - Team composition & track record.
  - Proposed approach to evidence that balances rigor (I.e. RCTs) with reliable yet less rigorous insights and evidence.
  - Proposal and workplan.
  - Resource allocation, costs and budget indication per deliverable (man/days).

7. Selection criteria & procedure

The proposal will be assessed based on the following selection criteria:

- Quality of the proposal in line with the scope of work and deliverables of this assignment.
- Demonstrated experience of the team of consultants/researchers.
- Cost-effective budget, detailed per deliverable/service.

The following timelines apply to the procedure and assignment. Selected applicants will be invited to present and discuss their proposals with IDH. The proposal should be submitted to IDH via email by **17th February 2023**. A final decision will be made by the **28th February, 2023.**

8. Contact at IDH

Vaibhav Panpaliya

Innovation Manager – Better Income

panpaliya@idhtrade.org

Annexures

Annex 1 – Parameters for adding information to the Evidence base

Scope of adding information to the existing evidence base would entail the following -

i. Validate each intervention's categorization of intervention type(s) (see Annex 2 for definitions)
ii. Validate each intervention's relationship to income driver(s)
iii. Indicate directional relationship in short term versus long term (if different), e.g. rejuvenation of tree crops reduces yield in short term and increases yield in long term; whereas inputs increase cost of production while increasing yield
iv. Validate each intervention's function (see Annex 3 for key functions and definitions), including validation of the function definitions and suggestion for additional functions if/as needed
v. For each intervention, indicate the difference between what is effectively an intervention (extension services), and what is a way of delivering that intervention (digital extension services)
vi. Validate each intervention's typical impact on income in terms of the way it effects income (more, stable, equitable) and the degree to which that can be achieved
vii. Evaluate the available evidence of cost and risks associated with each intervention
viii. Add maximum 10 "design tips" per intervention found in the literature that provides guidance on how the intervention is deployed to achieve the intended result on income, which might include but not be limited to the following:
    a. Validate and build on common bundled interventions
    b. Essential features
    c. Context considerations/requirements
    d. best practices
ix. Validate each intervention's lead actor, including further specificity where useful
x. Indicate where the evidence shows proof of interventions in specific regional or national contexts
xi. For interventions identified but without descriptions, all categories of data should be developed based on existing evidence
xii. Clear data sources linked to each intervention.

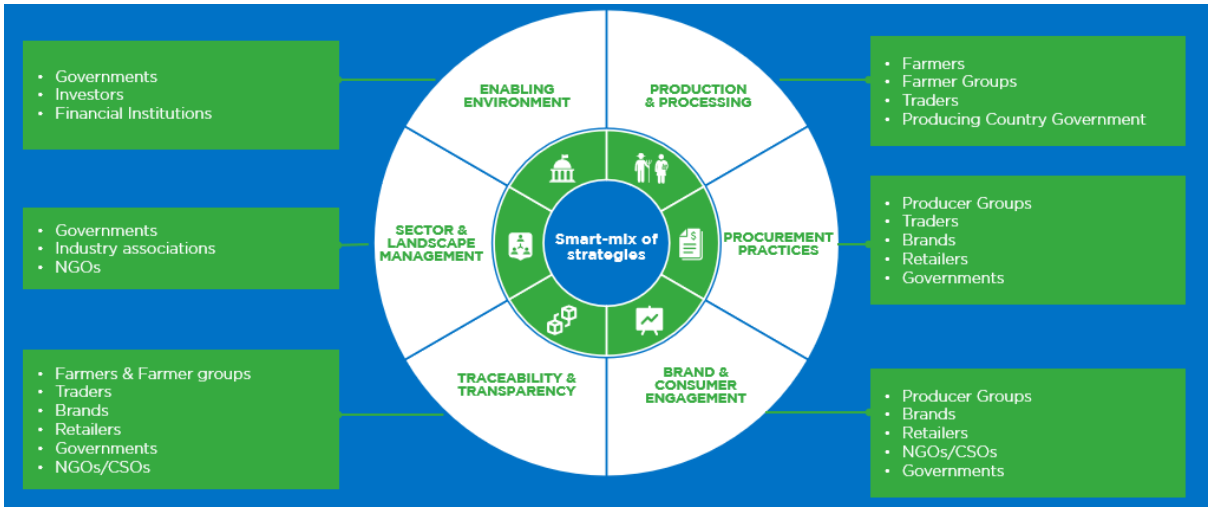
Annex 2 - Primary type(s) of intervention

Service Delivery/ Production and processing	Engagement between private sector and farmers/farmer groups at origin, focusing on key services such as training (farmers and cooperatives), inputs, financial products, information, processing and storage, equipment and mechanization, certification and market access.
Procurement Practices	Sourcing principles and actions often related to supply chain structure, relationship management and information exchange between suppliers/buyers, and contract terms including and especially pricing and volumes.
Brand/consumer engagement	Efforts around marketing and branding, route-to-market approaches, sales, and other downstream activities and strategies occurring closer to end-product sales and consumption.
Traceability & Transparency	Interventions which, deliberately or not, improve transparency in the supply chain. Often this is for the benefit of the consumer, downstream actors in the supply chain, though sometimes it can also work to the advantage of the producers who gain clearer market access and information.
Sector and landscape management	Voluntary actions by supply chain companies requiring alignment, coordination and/or collaboration across a sector, including traceability, certification, sector management, and landscape programmes. This is often initiated by downstream actors within the supply chain.
Enabling environment	The range of factors that together create the context in which an SDM operates and which can facilitate sourcing and service provision within a value chain, typically including infrastructure, policy and regulatory environment, investor environment. includes activities relating to volume and price management at the sectoral, national or international level.

Annex 3 - Value creation, value distribution, cost minimization and risk mitigation

Value creation	Expansion/enhancement or creation of value for farming households from activities
Value distribution	Change in value distribution across supply chain to the benefit of upstream actors, specifically farming households and/or farmer groups.
Cost minimization	Activities targeting cost reduction specifically, which may or may not contribute to value creation
Risk mitigation	Practices at farm level that are taken to either adapt or mitigate risks such as climate risks, disease risks, production risks

Annex 4 – Smart-mix strategies and role of actors



Annex 5 - IDH & Key Partner Sources for Review (not an exhaustive list)

- IDH Better Income Impact Pathway narrative
- IDH Evidence Base (will be shared upon final selection of the consultant)

- IDH Cocoa Traceability Brief: https://www.idhsustainabletrade.com/publication/technical-brief-on-cocoa-traceability/
- The Sustainable Procurement Kit: https://www.idhsustainabletrade.com/sustainable-procurement-kit/
- MARS Farmer Income Lab publications including but not limited to: Farmer income lab: what works to increase smallholder farmers' income?
- JPAL: https://www.povertyactionlab.org/initiative/agricultural-technology-adoption-initiative
- Wageningen University
- Evidensia: https://www.evidensia.eco/
- International Initiative for Impact Evaluations: https://gapmaps.3ieimpact.org/evidence-maps/agricultural-innovation
- Agriculture in the Digital Age Evidence Maps: https://agricultureinthedigitalage.org/explore-data/