

# Participatory Workshop for Co-designing Innovations and Interventions



INITIATIVE ON  
Rethinking  
Food Markets

Towards Inclusive Growth, Employment, and Income Opportunities in the Coffee Value Chain of Honduras

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November 2023



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## ABSTRACT

Between November 2022 and January 2023, the WP1 team from the CGIAR Initiative on 'Rethinking Food Markets and Value Chains for Inclusion and Sustainability' strategically consulted stakeholders of the coffee supply chain to obtain an overview and insights into bottlenecks and innovations at market linkages of the export coffee supply chain in Honduras. Simultaneously, a literature review on respective bottlenecks and innovations was conducted. The workshop engaged participants through plenary discussions, short online surveys that were accessible via QR-codes and through small-group discussions where participants self-selected based on interest. While the first part of the workshop served to achieve a shared understanding on issues and potential innovation areas in the coffee value chain, the ensuing working groups in the afternoon actively engaged participants in (1) the identification of innovations, (2) the prioritization of these, (3) bundling the most promising innovation, (4) capturing the associated theory of change and (5) tentatively suggesting associated research and scaling activities.

The core innovations identified by workshop participants gravitate around a better understanding of the need, implementation, and potential benefits of transparent traceability schemes for coffee beans and ancillary services. The remaining innovation offered solutions for access to loans for marginalized groups through innovative ways for formalization of land tenure. The theory of change behind the traceability innovations is that the increased transparency will reduce asymmetry of information between actors of the value chain. It is assumed that this information asymmetry often prevents the occurrence of transactions that would otherwise happen under perfect information. This in turn yields sub-optimal results along the value chain such as farmers selling coffees at inferior prices, buyers failing to source the amounts and qualities of coffees they need, and financial institutions failing to allocate loans efficiently, amongst others. Moreover, the coming EU regulations on zero deforestation due diligence poses a threat - and an opportunity - to strengthen the traceability of coffees.

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## BACKGROUND

The CGIAR Initiative on 'Rethinking Food Markets and Value Chains for Inclusion and Sustainability' aims to provide evidence on what types of bundled innovations, incentive structures, and policies are most effective for creating more equitable sharing of income and employment opportunities in growing food markets while reducing the food sector's environmental footprint. In Honduras, the Initiative is led by the Alliance of Biodiversity International and CIAT (ABC). It focuses on two work packages (WPs): WP1 on making globally integrated value chains more inclusive, efficient, and environmentally sustainable, and WP2 on innovations for inclusive and sustainable growth of domestic food value chains, that focuses on improving participation, profitability, and the environmental footprint of smallholder farms and agrifood SMEs in the domestic maize and bean value chains (DFVCs)

WP1 in Honduras focuses on increasing participation and profitability of smallholders and agri-food SMEs in the global coffee value chain (GVCs). On February 2nd, 2023, the Initiative's WP1-team held a full-day participatory stakeholder workshop in Tegucigalpa, Honduras, on 'Co-designing Innovations and Interventions'. The workshop served to share and validate the findings of their scoping study, co-select core innovations for prioritized innovation areas, co-design innovation bundles and jointly identify potential activities for the years 2023 and 2024.

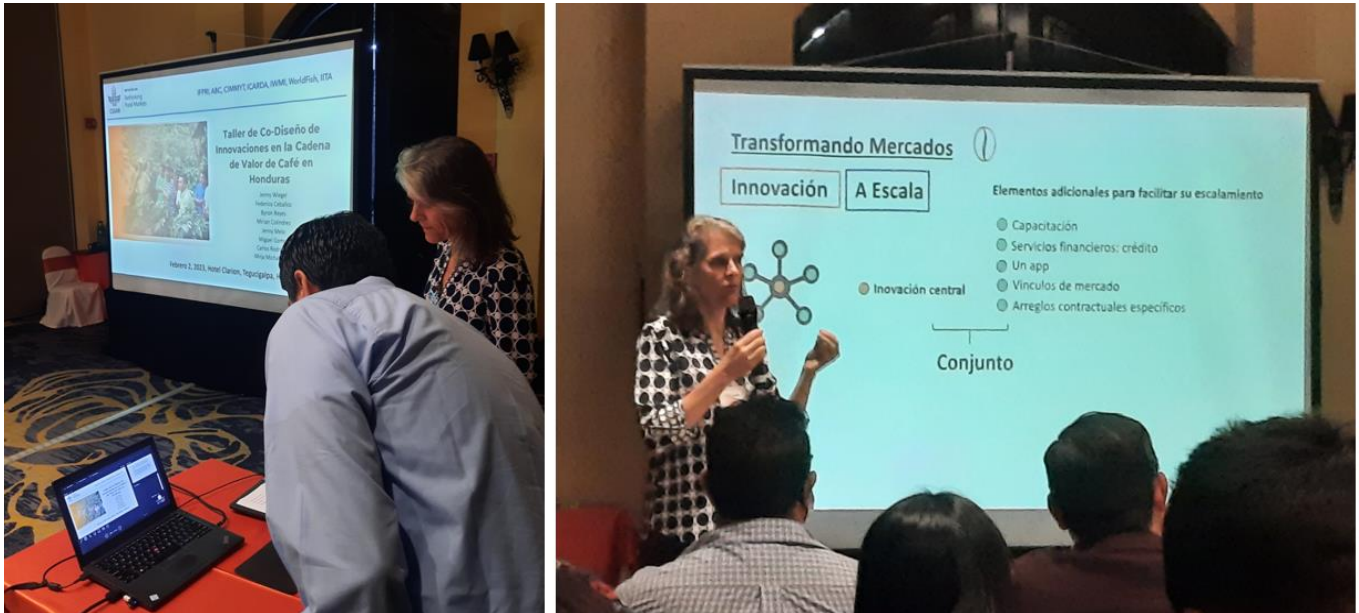
Between November 2022 and January 2023, the WP1 team in Honduras strategically consulted stakeholders of the coffee supply chain to obtain an overview and insights into bottlenecks and innovations at market linkages of the export coffee supply chain in Honduras. Simultaneously, a literature review on respective bottlenecks and innovations was conducted. The workshop engaged participants through plenary discussions, short online surveys that were accessible via QR-codes and through small-group discussions where participants self-selected based on interest. While the first part of the workshop served to achieve a shared understanding on issues and potential innovation areas in the coffee value chain, the ensuing working groups in the afternoon actively engaged participants in (1) the identification of innovations, (2) the prioritization of these, (3) bundling the most promising innovation, (4) capturing the associated theory of change and (5) tentatively suggesting associated research and scaling activities. Lastly, the group was asked to report back their results to the plenum.

Participants were repeatedly and differently invited to contribute to the co-design of innovations and interventions. The WP1 country team was prepared (e.g., with content inputs, process suggestions and a protocol for the working groups), but adaptive in processes and contents, signaling to participants that their input mattered. In addition to taking participants through the co design process for the innovations of interest, the workshop exposed participants to a systematic process for co design which can be replicated by participants in other contexts. The workshop design also allowed for participants to learn from each other about innovations underway in the sector, to establish new connections and relationships, and identify opportunities for synergies across their work.

The remainder of the report is structured as follows: Section 2 sets the scene describing the information that was conveyed to the workshop participants about the Initiative. Section 3 summarizes the findings from the scoping study that were presented to participants, while Section 4 presents the feedback given by participants on the results of the scoping study. Section 5 describes the results of the co-design exercise by group, and Section 6 concludes. The workshop agenda and the list of stakeholders are presented in Annex 1 and 2 respectively.

## SETTING THE SCENE

The workshop was launched by introducing the workshop hosts and their roles, the workshop aims, and the agenda. The invited institutions were welcomed. OneCGIAR's focus on generating evidence on innovations to support scaling was explained and an overview of the OneCGIAR Initiatives was given before the Rethinking Food Markets Initiative research agenda was introduced, globally as well as how it proposes to engage with the coffee sector in Honduras. The strategic pathways for rethinking the export coffee supply chain were described as improving vertical coordination, and product quality and fostering the use of digital innovations. It was further explained that innovations will be prioritized in terms of their contribution to at least one of the following three impact areas: (i) poverty, livelihoods, and income, (ii) inclusivity towards women and youth, and (iii) environmental sustainability, as prioritized by the CGIAR.



**Figure 1:** Initial presentations on the scope of the Rethinking Markets Initiative

A definition of and examples for innovations and innovation bundles were provided. Innovation bundles may be at different stages of scaling readiness, being developed, tested or increasingly adopted. The initiative was reported to target smallholders growing coffee, farm workers, small and medium enterprises i.e., processing or retailing coffee and, among these, particularly, women and youth. The initiative will measure the impact, i.e., the actual change caused by innovation adoption on users, their extended social network, and the environment. Experience has shown that many great innovations are not taken up by potential users. To address this, the initiative is taking a different approach by thinking beyond pilot impact and onto preparedness to scale. The development and scaling approach of the initiative is to bundle a core innovation with enabling factors (Minh 2022). The initiative will be going through learning cycles and invites everyone, including the workshop participants, to participate in this process. The first step in the Initiative's learning cycle was the scoping study, whose results were shared in the first workshop presentations.

## SUMMARY OF SCOPING STUDY RESULTS

The Honduran team presented the results of the scoping study carried out between October 2022 and January 2023. The study sought to identify bottlenecks and potential innovations in the coffee value chain. The team followed a three-pronged process. First, a systemic review of the literature and secondary data on the Honduran coffee supply chain; second, consultations with relevant actors in the sector, and third a complementary scoping on digital innovations in the Central American coffee sector. The

The literature review adapted the protocol by Liverpool-Tasie et al. (2020) classifying each publication according to the value judgment it made on the relationship between pairs of actors of the supply chain (Ceballos-Sierra 2023). These relationships were worker-farmer, farmer-intermediary, farmer-cooperative, intermediary-exporter, cooperative-exporter, intermediary-roaster, and cooperative roaster. Second, the Honduran team compared the findings from the literature with the information gathered through 37 interviews with relevant actors in the sector, which in turn served to validate the findings from the literature review and to learn about the innovations that are being implemented in the sector. Third, a complementary scoping exercise was completed to look at digital innovations in the sector using literature and consultations with users or owners of these innovations.

## Bottlenecks in the coffee sector

This process identified three main problems, including (i) informal labor markets particularly at production, (ii) unfavorable first-sale conditions due to local oligopsonistic markets, and (iii) limited high-quality contracting between international buyers and domestic sellers. The *informal labor markets* were a recurrent topic both in the literature and the consultations. For instance, the worker farmer relationship was mentioned in negative terms in 28 out of 62 papers reviewed (45%) and was identified as the main bottleneck affecting the value chain, being mentioned on 12 separate occasions by as many actors. The negative mentions around these issues revolve around the scarcity of labor and the predominance of informality in the market due to its dependence on itinerant and migrant labor.

The *oligopsonistic markets* that negatively impact farmers' income was also identified in the literature and consultations. The systemic literature review identified 32 negative mentions of the relationship between farmers and intermediaries (52%), this was the most negative dyadic relationship within the supply chain. Similarly, the consultations identified the lack of experience in marketing and bargaining (12%), lack of trust in commercial relationships (5%), and high levels of intermediation (4%) as bottlenecks that prevent the correct functioning of the value chain. Horizontal integration through associations and cooperatives was posited as a solution for this problem, yet the literature and actors also recognize that there are significant hurdles for the scaling up of this model, due to the distrust in commercial relationships.

Finally, the scoping study identified *limited high-quality contracting* between international buyers and domestic sellers as the final issue. Although not explicitly identified in the literature, there are multiple mentions of high fragmentation within the supply chain (Smith and Loker 2012) and the negative impact it has on the consistency of quality (Ruben et al. 2018) and on the rents perceived by farmers (Fromm and Dubon 2006). Therefore, between 80 and 85% of coffee is sold through highly fragmented channels where transactions are not backed by formal contracts or price premiums are paid for quality. The actors interviewed also identified this as a bottleneck, attributing it to high levels of intermediation and a lack of experience in building commercial relationships.

These problems were structured using the problem tree presented in Figure 2, which identifies the oligopsonistic intermediation markets as the core problem (#2). Prioritized problem #1 (informal labor markets particularly at production), and prioritized problem #3 (limited high-quality contracting between international buyers and domestic sellers) are identified as secondary effects of prioritized problem #2 inasmuch as these imperfect markets have a negative impact on the quality of coffee supplied, and on the rents perceived by farmers.

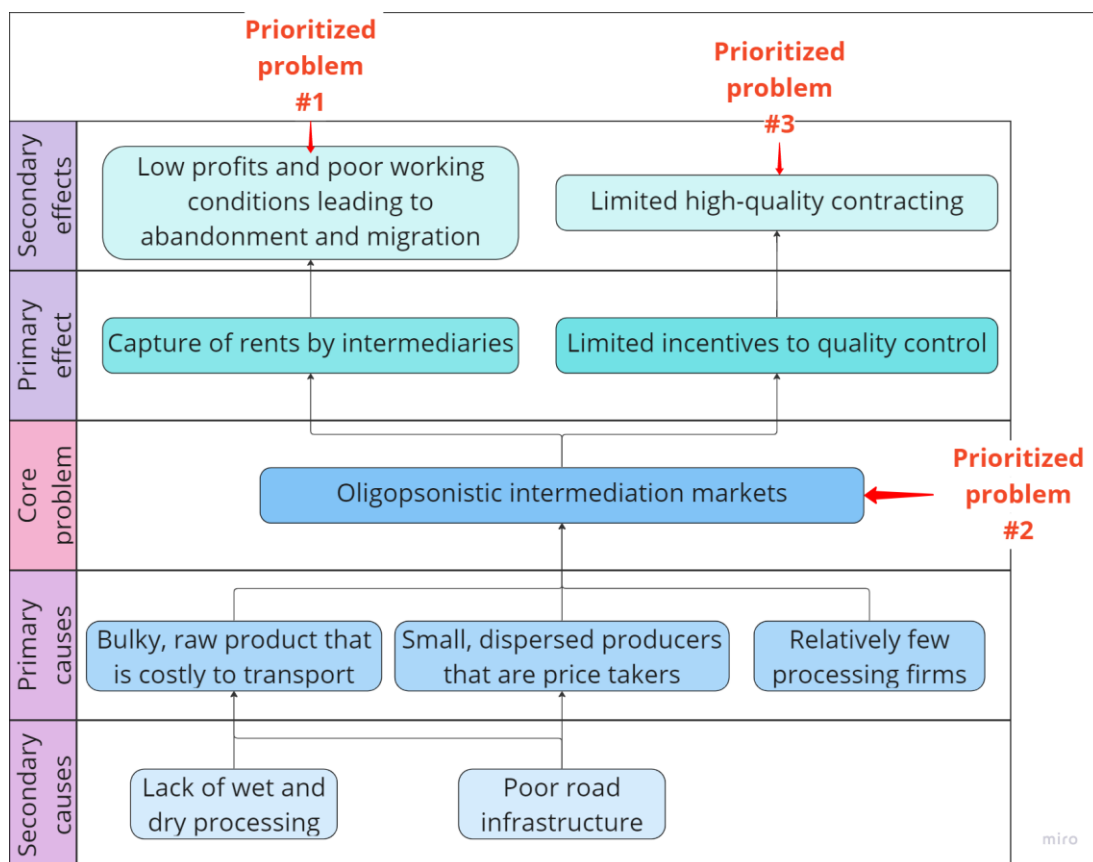


Figure 2: Problem tree shared with participants identifying the prioritized problems



## Innovations in the coffee sector

The consultations identified 179 innovations<sup>1</sup>, 81 of which were related to the three areas of action of the initiative: (i) vertical coordination among actors of the value chain, (ii) quality upgrading including food safety and sustainability, and (iii) identifying and scaling digital innovations for tracing products and making market information accessible to actors. Table 3.1 shows the classification of the 81 innovations by focus area of the Initiative:

**Table 1: Mentions by focus area of the Initiative**

Area	Mentions
Quality upstream-downstream	21
Women empowerment and youth inclusion	15
Digital Tools for Market Information	11
Associativity	7
Environmental sustainability	5
Total	<b>85</b>

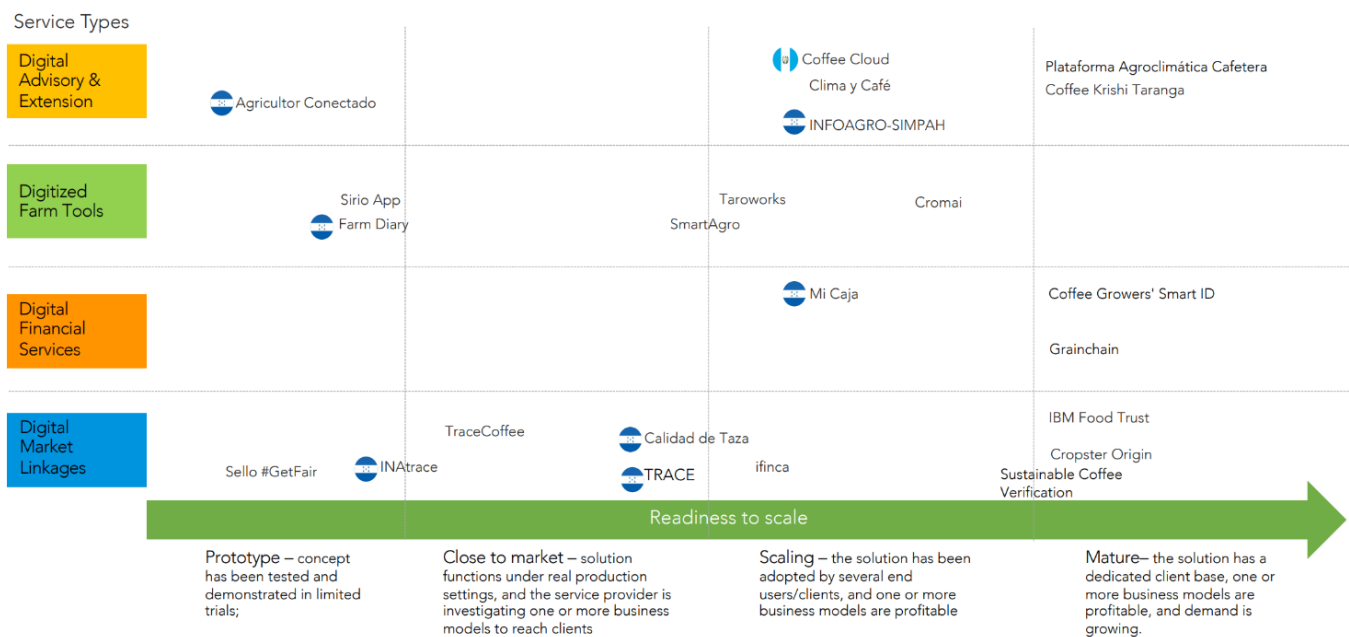
Many technical innovations to the production link were identified through the consultations. Within these, there are many innovations developed or being developed by the National Institute for Coffee (IHCAFE). Second in relevance were innovations in marketing where many innovations are being implemented around the area of interest of traceability and information diffusion. There was significant input around financial and environmental innovations. At the bottom of the distribution were innovations related to gender, youth, labor, logistics, and policy. It might not come as a surprise that few innovations were identified in logistics and policy, yet it is striking that so few innovations were identified in terms of gender, youth, and labor given how frequently related issues were mentioned in the literature as bottlenecks. This point was brought up during the presentation.

Through the complementary scoping exercise focused on digital innovations, 23 digital innovations were identified and classified based on type of digital innovation as well as their readiness to scale. (Melo and Wiegel 2023) Innovations in digital financial services, digital agricultural tools, digital advisory and extension, and digital links with the market were identified. The scoping also presented an assessment of the readiness of each technology, as shown in Figure 3.

<sup>1</sup>98 innovations were excluded from further analysis as they were considered outside of the scope of the Initiative.

# Readiness to scale of the digital technologies in the mapping

General view



**Figure 3:** Mapping of digital innovations by area and readiness to scale

The most salient innovations were classified under the area of action and presented to the audience as examples. Those were: Vertical coordination among actors of the value chain: Direct purchases, process certification (including certifications for coffee produced by women and youth), and promotion of associativity.

Quality upgrading including food safety and sustainability: Laboratories and training in cupping, infrastructure and training in post-harvest processing, packaging for the conservation of quality.

Identifying and scaling digital innovations for tracing products and making market information accessible to actors: digital traceability for quality and environmental legislation compliance and alternative channels for commercialization.

Finally, these innovations are linked to the prioritized problems identified through the scoping study:

Informality of labor contracts: Innovations that improve the income of women.

Oligopsony/low negotiation power by producers: Traceability based on quality and origin, innovations that improve the bargaining power of producers, price paid based on quality.

Limited high-value/Quality contracts: Traceability based on quality and origin, traceability based on environmental characteristics (zero deforestation), and price paid based on quality.

The team then grouped these innovations into four areas of innovation: (i) Innovations with intermediaries concerning quality and price transmission, (ii) Innovations that improve women’s incomes, (iii) Innovations for traceability based on quality and origin, and (iv) Innovations for traceability based on environmental characteristics (avoiding deforestation). These were presented during the last presentation of the morning session of the workshop.

## REFLECTION AND FEEDBACK ON THE SCOPING STUDY AND PROPOSED INNOVATION AREAS

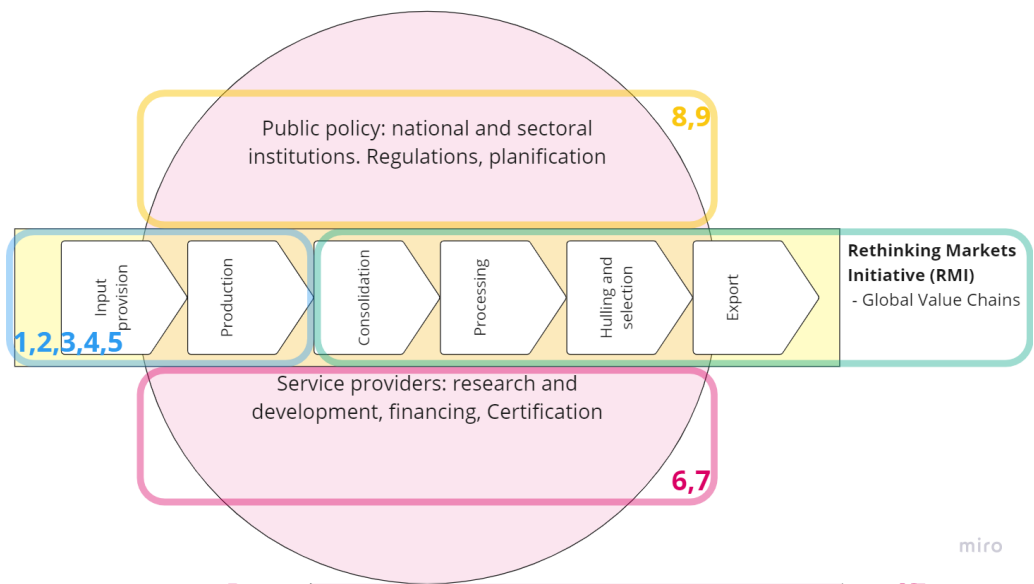
Right after sharing the scoping study results, the workshop engaged participants through plenary discussions, short online surveys that were accessible via QR-codes and through the interest-based sign-up to innovation areas, serving as starting points for subsequent working groups. The Initiative team gave ample time for feedback, contextualization and framing of feedback/suggestions. The plenary discussion centered around explaining again the scope and mandate of the Initiative.

First, it was important to reiterate the role that ABC could take, namely, that of a partner that could study and deliver evidence on the impact and scalability of innovations already implemented by partners. Strong emphasis was given to the fact that the ABC team is looking for developed innovations for which research activities could start in the coming months. However, the team made the point that other innovations at the initial stages of development are also of interest and can be co-developed for study in later years.

Second, it proved necessary to reassert the focus of the Initiative. Some participants felt that the proposed market-oriented innovations left out several important topics that need to be addressed in the coffee value chain. For instance, participants were concerned that the Initiative would not tackle bottlenecks in the financial and productive areas, which were widely considered to be key issues in Honduras. The Initiative team had received similar comments during the consultations and had prepared a conceptual image to communicate the focus of the Initiative in Honduras versus how other areas of action are being tackled by other work packages within the initiative or by other initiatives. Figure 4 shows the illustration used.

**Other initiatives:**

- 1) Excellence in agronomy
- 2) AgriLAC Resiliente
- 3) Climate Resilience
- 4) Plant Health
- 5) Accelerated breeding
- 6) RMI - Work Package 3
- 7) Digital Innovation
- 8) RMI - Work Package 4
- 9) National Policies and Strategies



**Figure 4:** WP1’s focuses and complementarity with other WPs and Initiatives

Third, it was critical to identify the focus areas as what happens after the coffee leaves the farm and the process that takes it to the consumer. The discussion was useful for narrowing down the area of action and predisposing participants to offer solutions in this area.

Lastly, the discussion touched on women’s empowerment and inclusion. Some participants questioned the choice of this topic as a stand-alone innovation area, given that there are broader areas of actions. We explained that this area is important for the initiative given targets set for impacts on women and youth in response to CGIAR donor priorities.

In terms of innovation areas, participants pointed out that innovations to be selected must have the potential to benefit the majority of producers. They emphasized that the initiative should pay special attention to the ~80% of farmers that sell their coffee either as cherry or wet parchment and that often sell to intermediaries at low prices. Innovations that can drive changes within the intermediary market channel will have the most potential for impact at scale. Some participants highlighted the key role that drying infrastructure plays in breaking this negative relationship. Alternatively, horizontal integration schemes (associations of farmers) could be effective in improving quality and price negotiation given the high initial costs of installing drying infrastructure for many producers. For either one of these alternatives, it was widely accepted that farmers face one key obstacle. There is no systematic price recognition of extra efforts in processing, therefore a lot of effort must be placed in building capacity for marketing and negotiation either among farmers or among organizations as well as for quality assessment and use for price determination.

When prompted through the additional online survey on what the Initiative was missing in terms of innovation areas, three respondents mentioned training for producers or cooperatives on good agricultural practices, three others thought nothing was missing, two respondents mentioned access to finance, one mentioned policies that need to be implemented to the benefit of the producers, the lack of labor, the consideration of intermediaries, the need for innovating in the commercial structure for domestic and export products, the prices paid for ecological farming (e.g., agroforestry), considering the ecology of coffee landscapes, access to land, and the importance of disseminating the results beyond individual projects or initiatives.



## CO-DESIGN OF INNOVATIONS

The aim of co-designing innovations was to jointly brainstorm on, select and bundle innovations as well as to develop corresponding action plans. Participants were asked to sign up for one of four working groups with distinct topical foci. Each working group moderator used the same sequence of methodological steps and materials to guide the groups through the co-design of innovations and interventions. Each group modified elements such as the sequence or the innovation prioritization method, according to group suggestions and consent.

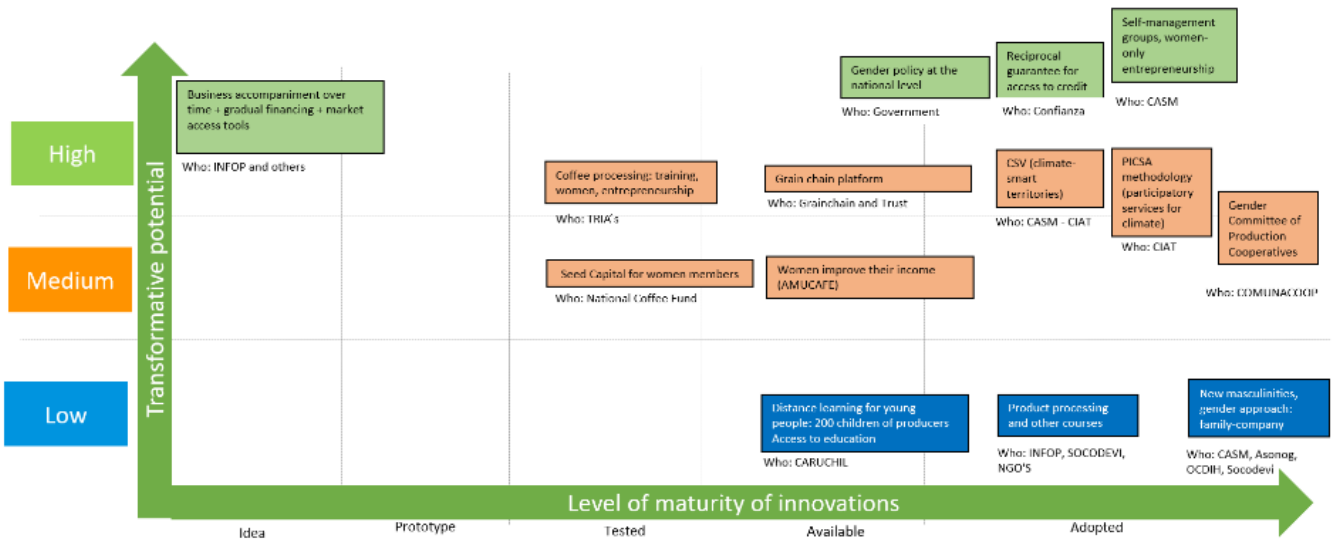
The consolidated findings of the scoping study were processed into a suggestion of four innovation areas that addressed the main bottlenecks and offered the most promising corresponding core innovations. These innovation areas (column 1 of Table 2) were proposed to the workshop participants, who in turn gave feedback on their relevance and suggested other areas of interest (Column 2 of Table 2). Participants were asked to register in any of the innovation areas proposed (Columns 1 and 2). As a result, the innovation areas in column 3 of Table 2 were identified and it was decided that co-design process would be based on them.

**Table 2: Innovation areas**

<b>Original innovation areas</b>	<b>Innovation areas proposed by workshop participants</b>	<b>Final innovation areas</b>
Innovation area 1: traceability for quality and origin (nobody signed up)	Short value chains (nobody signed up)	Innovations with intermediaries concerning quality and price transmission
innovation area 2: innovations that improve women's income (4 people signed up)	Innovations with intermediaries concerning quality and price transmission (9 people signed up)	Innovations that improve women's incomes
innovation area 3: prices paid for quality (3 people signed up)	Processing for quality (drying infrastructure) (nobody signed up)	Traceability based on quality and origin
innovation area 4: traceability for environmental characteristics (no deforestation) (6 people signed up)	Market support with digital tools (nobody signed up)	Traceability based on environmental characteristics (avoiding deforestation).

The co-identified innovation areas would then serve for the group work and co-design process. Based on their personal interest, workshop participants would then be asked to sign up for one of the four co-identified innovation areas. The registration per group was not limited i.e., we took the risk of unequal group sizes to favor participants preferences, hoping to maximize their motivation for contributions. Each group first identified existing innovations related to the selected innovation area in Honduras. Participants shared briefly about the innovation and who and where it was being used. They then placed the innovation on a matrix based on scaling readiness and potential to scale. The core innovation was selected within the pool of all innovations. Additional innovations that were considered necessary or beneficial to the implementation of the core innovation were also singled out and placed around the core innovation in a second pre-defined matrix. An example of the matrices is shown in Figure 5 A and B:

# A Innovation Landscape Matrix



# B Strategic elements for the success of this innovation

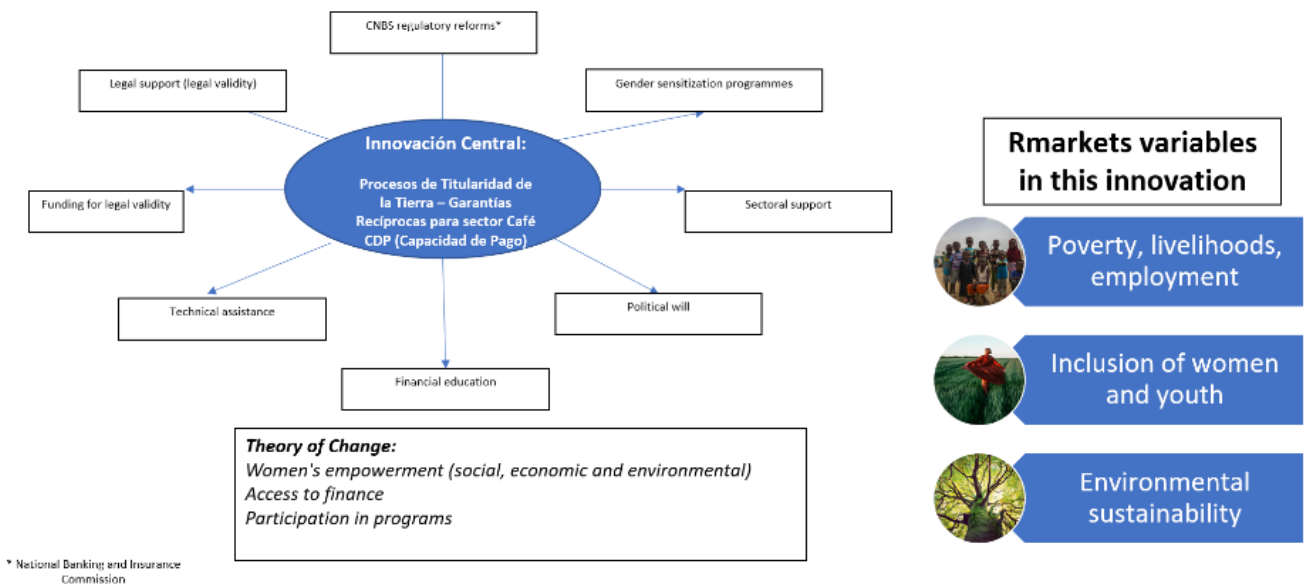


Figure 5: Innovation landscape (A) and strategic elements (B) matrices used in the co-design exercise

## Group 1: Innovations with intermediaries concerning quality and price transmission

Participants of this group (n=9) were diverse, ranging from exporters, a think tank representative, a sub-sectoral authority, producers, IHCAFE, and a representative of an NGO. Upon commencing, the moderator explained and thus reminded participants of the focus of this group, providing them with an overview of the process that they would jointly go through. Federico explained the matrix for mapping innovations and how the post-its were supposed to be used to indicate the scaling readiness and transformative potential of a proposed innovation.



**Figure 6:** Co-design exercise in Group 1

The chosen problem was that farmers have few alternatives but to sell to intermediaries that often pay poorly and do not recognize better quality through premiums. Once the problem was set, it was easier for the participants to think about innovations and place them on the matrix. At an advanced stage of the discussion, there was one suggestion that everybody immediately agreed on and was interested in. The moderator summarized the discussion by saying ‘it looks like this is the most promising innovation that we have had and that we could build on’ – and everybody seemed to agree. This core innovation was taken forward for bundling and participants were very engaged to mention elements that were key for adoption and scaling. The participants transferred some of the other innovations in the matrix onto the flipchart as elements to bundle with the core innovation. Capturing the ToC came easy, too, since one participant explained his view and the others agreed.

Concerning the activities ahead, the moderator directly addressed the stakeholders asking for their willingness to engage. For instance, IHCAFE was willing to engage, but there was too little time to discuss details, so these conversations will be taken up bilaterally after the workshop. Participants of the group mentioned what different actors were doing already in 2023 regarding the core innovation or bundle elements, thus the Initiative could link to these. Thus, the innovation was clearly defined, related ongoing activities were identified and now ABC needs to decide and discuss how they will accompany these from the perspective of the Initiative. Mrs. Angi Rubi represented the group, summarizing the core innovation bundle and the ToC to the plenum (Table 3).

**Table 3:** Summary of the innovation proposed by Group 1

<b>Core innovation</b>	Implementing a commercialization scheme that strengthens the supply chain through better monitoring (using traceability tools), financing, and technical assistance to farmers.
<b>Additional elements of the bundle</b>	<ul style="list-style-type: none"> <li>▶ Transparent quality standards for buying coffee (producers/intermediaries know what price they get for what quality; these standards are controlled and recognized throughout the supply chain),</li> <li>▶ Better understanding of intermediaries (midstream part of the value chain),</li> <li>▶ Better traceability for enforcing the transparency and fairness of the transactions,</li> <li>▶ Quality differentiation, and</li> <li>▶ Promote on-farm drying technologies (this is not necessary for scaling the core innovation, but it is a possible addition / another core innovation to look at that would nicely play together with this core innovation).</li> </ul>

## Theory of change

- ▶ If exporters implement a more transparent business model that incentivizes the purchase of coffee based on quality, and they monitor it, the prices that are paid throughout the value chain are going to be better.  
Impact area: poverty, employment, and livelihoods; environmental sustainability; women's empowerment.

## Possible activities, when and who?

- ▶ One activity: Study of intermediaries (understanding them better),
- ▶ Reaching out to those that said that they were interested in collaborating, and
- ▶ This innovation can be tested in 2023 in the form of BECAMO's model.

## Group 2: Innovations that improve women's incomes

This group included representatives from Confianza, Socodevi, CASM (Mennonites Social Action Commission), and the CARUCHIL cooperative. To come up with innovations, participants wrote down their ideas silently. When participants placed their innovations onto the matrix, they explained what the idea was about and why they placed it there. After everybody put in their ideas, they started to discuss whether the readiness level is correct by cross-checking their knowledge of the readiness level. Once the exchange and mapping of innovations reached a saturation point; participants used the sticky dots to vote for their preferred innovation. Two ideas got votes; one was, by far, most voted for and taken forward as the core innovation (Table 4).



Figure 7: Co-design exercise, Group 2.

Table 4: Summary of the innovation proposed by Group 2

### Core innovation

Alternative forms of recognition of women's landownership and land-based guarantor process (Garantía recíprocas) to improve credit access for women (e.g., Confianza is guaranteeing 35% of the loan)

### Additional elements of the bundle

- ▶ Update policies related to land tenure, (that facilitate access to land for women and youth),
- ▶ Update policies related to access to finance to facilitate the access of women and youth to financial services,
- ▶ Technical assistance,
- ▶ Financial education,
- ▶ Legal counsel to formalize land tenure, and
- ▶ Sectoral support (IHCAFE and CONACAFE can help women with legalization and lobby at the higher level).

## Theory of change

ToC: If women have the land title for farming, they have access to credit, they will increase their income and will be empowered in a social, economic (and environmental) way. Women will also be able to participate in programs (some programs ask 'applicants' to have land titles in order to become their beneficiaries). Women will also increase their capacity to pay. Impact area: poverty, employment, and livelihoods; environmental sustainability; women empowerment.

## Possible activities, when and who?

- ▶ Accompaniment and management for the creation of the legal framework,
- ▶ Suggesting reforms /changes to the norms related to guarantees and institutions along the coffee value chain (not accepting the rental agreement as guarantees),
- ▶ Key actors: Honduran Institute of Property (IP), Ministry of Agriculture (SAG), National Commission for Banking and Insurance (CNBS), National Institute for Women (INAM), IHCAFE, National Coffee Council (CONACAFE), Alliance of Women in Coffee (AMUCAFE), cooperatives, among others, and
- ▶ The Initiative's role in 2023: research (on women's situation in the sector, better characterize women's situation, data collection to support lobbying efforts around these issues (framing/formulation of reforms - aligning/bring together)

## Group 3: Innovations that improve women's incomes

Participants of this group (n=3) included representatives from World Coffee Research (WRC), GrainChain, and OFI (OLAM). The group identified three innovations: (i) An App (TrackAgro Café) developed by OIRSA. The app is ready to use but not in use for coffee yet, (ii) Fingerprinting of coffee varieties, and (iii) Blockchain traceability apps, for instance, INATrace (GIZ) and GrainChain. The summary of the discussions of Group 3 is presented in Table 5.



Figure 8: Co-design exercise, Group 3.

Table 5: Summary of the innovation proposed by Group 3

## Core innovation

App for tracing processes along the supply chain. Two alternatives were discussed: (i) GrainChain: a series of 4 Apps adapted to producers, consolidators, financial services, and marketing. (ii) INATrace: an app developed by the German Cooperation Agency GIZ.



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**Additional elements of the bundle**

- ▶ For farmers: define incentives, checks, and balances, for example, incentives can be better access to credit and high value markets. Checks and balances can be instruments enforced by loan providers that would cut benefits if farmers do not comply with the requirements for traceability,
- ▶ For cooperatives/associations, and private intermediaries: capacity development particularly in terms of keeping records of costs and earnings and how to enter that information into the app,
- ▶ For financial services: A financing partner must be found. In the case of GrainChain, Confianza has been identified as a potential partner. This partner must also be trained in how to use the financial version of the App,
- ▶ External audit: Necessary to ensure trust in the system, not clear yet who could fulfill this role nor how it is paid for, and
- ▶ Additional input from World Coffee Research (WCR): the fingerprinting technology implemented by WCR can be used to boost trust in the system. It can be used to determine the genetic purity of varieties so that buyers who use the app know for certain what they are buying.

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**Theory of change**

The implementation of a traceability scheme will decrease the information asymmetries between actors of the value chain. For instance, buyers will be more willing to buy from farmers that are sharing their information (location, area, harvest forecasts) through the app. Farmers will be willing to do so to access better markets. Once these connections are made, they can be leveraged to access loans in better conditions. Similarly, financial institutions would be more willing to offer loans that are backed by agreed sales whose money can be traced easily  
Impact area: poverty, employment, and livelihoods.

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**Possible activities, when and who?**

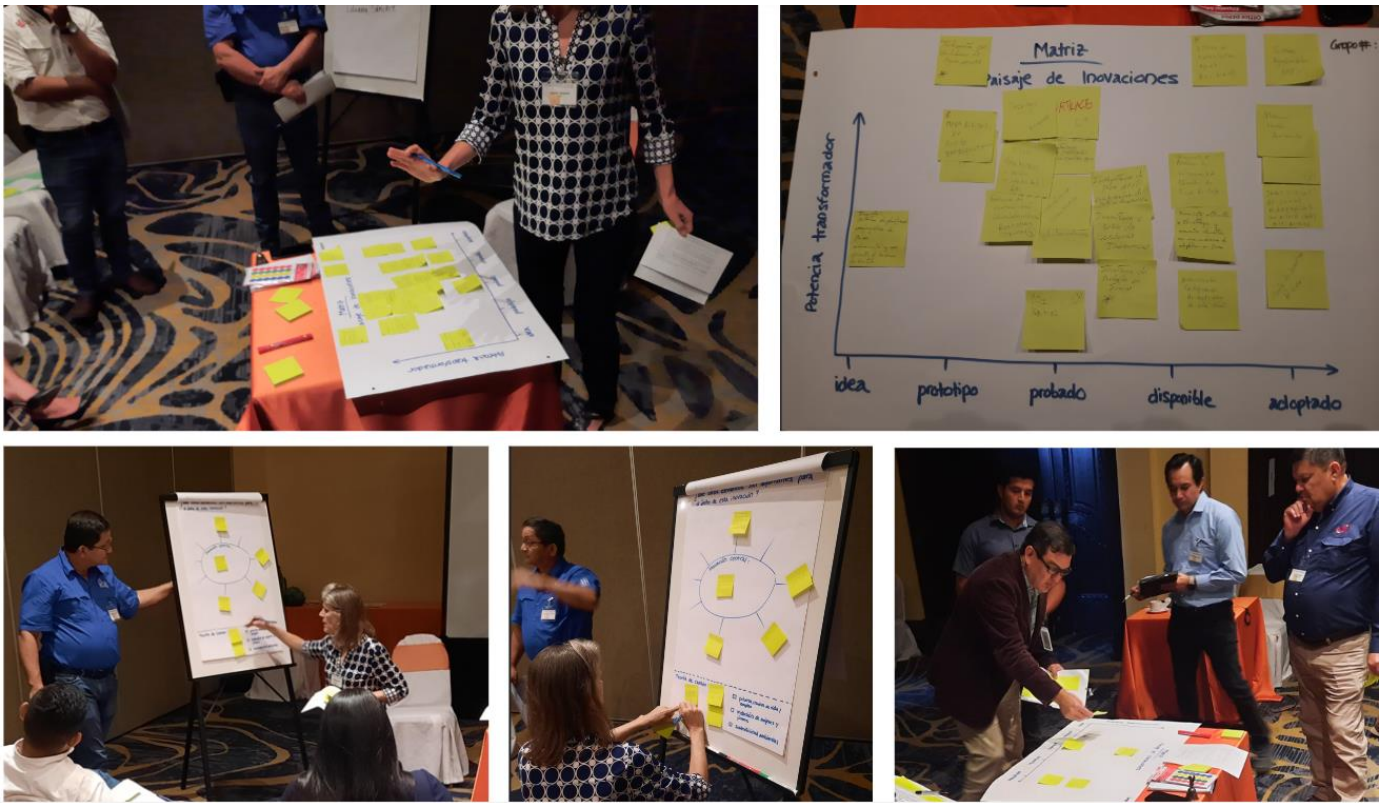
- ▶ With whom: farmer cooperatives,
- ▶ Limitation: Grain Chain has been doing this with small cooperatives that usually produce high quality coffee. Large cooperatives would have to categorize their members e.g., those producing specialty coffee and those producing conventional coffee,
- ▶ Role of ABC: monitoring and evaluation (provide evidence), facilitation of dialogue for scaling,  
Because this needs time, the pilot should take place during the 2023-2024 season. Fingerprinting could be done earlier as farmers would benefit from knowing the purity of their trees.

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**Group 4: Innovations for traceability based on environmental characteristics**

Participants of this group (n=6) included representatives from CRS, COHONDUCAFE, CARUCHIL, OFI (OLAM Honduras), JDE Coffee, and SWISSCONTACT. Initially, the stakeholders identified innovations in a wide range of themes: some innovations were beyond the scope of the group's theme or even of the initiative. The group did not use the axis on the level of transformative potential very consistently – many gravitated to the middle and this dimension was not discussed much.





**Figure 9:** Co-design exercise, Group 4.

Some of the innovations identified included:

- ▶ Tools CRS has to trace the impacts of coffee on water quality under Blue Harvest as well as digital soil mapping tools to support decision making in coffee areas around productivity measures. This is already being implemented in Guatemala and Nicaragua. It is used to improve efficiency in inputs for production and soil care. It can be part of a database available to producers, and the traceability of inputs applied.
- ▶ OFI has an unconsolidated database of coffee producers georeferenced in KMZ format. This can be useful to identify deforestation phenomena related to coffee and will be used to analyze further environmental topics in their supply chain.
- ▶ Terra-i, an online platform used to generate deforestation alerts based on satellite imagery (including EU imagery) based on changes in land cover and available for Honduras. It has been calibrated to identify coffee and can be the basis of a traceability system for coffee exports that are related or not to deforestation. This has already been piloted in western Honduras with HRNS and several cooperatives.
- ▶ CARUCHIL is working with a CO<sub>2</sub>-neutral project under the frame of the voluntary carbon market, which would require a traceability system such as the one implemented as a pilot called TRACE, in the Capucas Cooperative, by CONACAFE, SOLIDARIDAD, and IHCAFE. This is an easy-to-use blockchain-based platform able to make agri-food businesses supply chain transparent and traceable from farm-to-fork, as part of the Fair Food Platform.
- ▶ The Food Trust platform, based on Blockchain technology, has been used to carry out the complete traceability of producer cooperatives from the nursery to the farm, to the buyer, such as COPRANIL. This platform is implemented by Heifer Honduras, among others. A similar platform, with a similar scope called INATrace has been used by producer organizations in pilot projects with GIZ support.
- ▶ Trazar Agro is an official platform of the Ministry of Agriculture and Livestock (SAG) (its acronym in Spanish), the National Service of Agrifood Health and Safety (SENASA) (its acronym in Spanish), and the International Regional Organization for Agricultural Health (OIRSA) (acronym in Spanish), has registered 143,253 people and 148,726 establishments of which 141,264 correspond to coffee farms. It would be important to understand more about the scope of this platform, given that it was barely mentioned.

The summary of the discussions of Group 4 is presented in Table 6.

**Table 6: Summary of the innovation proposed by Group 4**

<p><b>Core innovation</b></p>	<p>The core innovation chosen was traceability to comply with EU's due diligence on zero deforestation that works with intermediary supply chains as this represents 80% of farmers in Honduras. The group considered that</p>
<p><b>Additional elements of the bundle</b></p>	<p>A system that enables the registration and traceability from the coffee farms through transformation, transport, and export of the beans. There are still areas to be clarified in terms of how the legislation will be implemented.</p> <ul style="list-style-type: none"> <li>▶ The traceability system for EU will also allow for quality and price traceability.</li> <li>▶ Digital tools to facilitate traceability data collection and management to minimize costs in context of supply chains with many small suppliers and many transactions.</li> <li>▶ Major exporters also implement requirements or systems with their intermediary suppliers to incentivize traceability i.e., price incentives.</li> <li>▶ Work at national level to identify role for CONACAFE or others in information systems (deforestation, coffee census, etc), policies or institutional systems to support traceability for coffee as a public good (SENASA, IHCAFE, ICF?)</li> </ul>
<p><b>Theory of change</b></p>	<p>A traceability system that allows for verification of deforestation free coffee in a cost efficient way and work within sourcing relationships between small farmers and intermediaries can contribute to ensuring small farmers are not excluded from European export markets due to the costs of compliance with the new regulation, while also contributing to reducing the rate of coffee related deforestation as well as opening up possibilities for traceability of other attributes including quality which could contribute to better prices to farmers who manage quality. If this system can be created based on public goods or open tools that can be easily adopted, this will make widespread adoption within the sector possible and avoid exclusion of farmers without direct relationships with exporters.</p> <p>Impact area: poverty livelihoods/employment and environmental sustainability.</p>
<p><b>Possible activities, when and who?</b></p>	<ul style="list-style-type: none"> <li>▶ Establish a management group to promote the pilot.</li> <li>▶ Define the first strategic zones for the pilot such as El Paraíso, Occidente, and Comayagua.</li> <li>▶ Engage with intermediaries to understand better how their systems work and how a traceability system might be integrated with what costs and benefits.</li> <li>▶ Based on a well-defined pilot, the top 5 coffee exporting organizations would be contacted by CONACAFE to get them on board. Participating organizations such as CONACAFE, ADECAFE, UNECAFE, Exporters, JDE Peats, Nestlé, intermediaries, Solidaridad, IHCAFE, AICAFE, OIRSA, among others, could participate in this pilot. Together with them, the scope of a prototype for the year 2023 can be defined to be applied during the 2023 - 2024 harvest.</li> </ul>

## CO-DESIGN OF INNOVATIONS

Throughout the workshop, participants were repeatedly and differently invited to contribute to the co-design of innovations and interventions. The country team was prepared with contents and process suggestions (e.g., a protocol for the working groups), but assumed an adaptive approach to incorporate the feedback from participants, signaling to these that their input mattered. The core innovations identified by workshop participants gravitate around a better understanding of the need, implementation, and potential benefits of transparent traceability schemes for coffee beans and ancillary services. These types of innovations were identified by three out of the four groups; the remaining innovation offered solutions for access to loans for marginalized groups through innovative ways for formalization of land tenure. The theory of change behind the traceability innovations is that the increased transparency will reduce asymmetry of information between actors of the value chain. It is assumed that this information asymmetry often prevents the occurrence of transactions that would otherwise happen under

perfect information. This in turn yields sub-optimal results along the value chain such as farmers selling coffees at inferior prices, buyers failing to source the amounts and qualities of coffees they need, and financial institutions failing to allocate loans efficiently, amongst others. Moreover, the coming EU regulations on zero deforestation due diligence poses a threat - and an opportunity - to strengthen the traceability of coffees.

The identified innovations around traceability schemes highlighted the importance of working with intermediaries regardless of whether they are cooperatives/associations or private intermediaries. Group 1 identified the need for a better understanding of intermediation markets and intermediaries. Similarly, Group 3 identified the need to build capacity for keeping records among intermediaries, given their role as consolidators. Finally, Group 4 considers that intermediaries must be involved in the pilot to implement traceability for zero deforestation, for it to be successful and serve all farmers in Honduras, particularly smaller farmers. These opinions contrast with the null participation of intermediaries in the workshop, suggesting that more effort must be made to engage with them in the future.

It is well understood that for the core innovations to work, an array of ancillary innovations must be implemented too. These ancillary innovations can be categorized under four broad umbrellas: (i) pre-harvest innovations including better agronomic practices such as tissue management and genetic traceability, (ii) post-harvest innovations such as better on-farm and off-farm drying facilities and product differentiation through controlled fermentation, (iii) financial services which are considered critical to alleviating the cash constraints that hinder adoption of new innovations and tie farmers to unfavorable commercial arrangements, and (iv) regulatory innovations that address challenges such as exogenous due diligence requirements, limited implementation of commercial rules, and unequal access to land and ensuing financial and sub-sectoral services. These offer an opportunity to engage with other CGIAR and non-CGIAR initiatives focused on the advancement of those types of innovations.

Finally, it is worth noting the overall confidence of participants in the ability of the Rethinking Markets Initiative, together with this broad group of stakeholders, to conduct impartial and relevant research on the innovation suggested. The Honduras team has held follow-up meetings with the principal partners mentioned in the groups and is in the process of constructing a research agenda to be shared with the participants soon. They also wish to thank all stakeholders for their participation in the consultations and in the workshop, their input has been critical for the advancement of the agenda of the Initiative. We hope that we can continue engaging with you as we plan next year's workshop.

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## ABOUT THE AUTHORS

**Federico Ceballos-Sierra** is a Postdoctoral Fellow for the Food Environment & Consumer Behavior Research Area of the Alliance of Bioversity International and CIAT.

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## ACKNOWLEDGMENTS

This work is part of the CGIAR Research Initiative on [Rethinking Food Markets and Value Chains for Inclusion and Sustainability](#). Launched in January 2022, the Rethinking Food Markets initiative is a collaborative effort of seven CGIAR centers, including the International Food Policy Research Institute (IFPRI), the Alliance of Bio-versity International and the International Center for Tropical Agriculture (Alliance Bioversity-CIAT), the International Institute of Tropical Agriculture (IITA), the International Maize and Wheat Improvement Center (CIMMYT), the International Center for Agricultural Research in the Dry Areas (ICARDA), Inter-national Water Management Institute (IWMI), and WorldFish. The initiative further collaborates with national and international partners to leverage innovations and policies that improve the functioning of food markets and value chains in order to address food insecurity and malnutrition, reduce poverty and income inequality, and minimize food systems' ecological footprint.

We would like to thank all funders who supported this research through their contributions to the [CGIAR Trust Fund](#). This publication has not been peer-reviewed. Any opinions are those of the authors and not necessarily representative of or endorsed by CGIAR.

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## ANNEXES

### Annex 1. Agenda

# Co-Design Workshop on Innovations for Inclusive Growth and Sustainability in the Honduran Coffee Value Chain

February 2, 2023

Hotel Clarion, Room Madrid I - Tegucigalpa

#### OBJECTIVES

1. Share the results of the exploratory study of innovations in the coffee value chain in Honduras and validate the findings,
2. Socialize the proposed research agenda of the initiative in terms of prioritized problems and innovations,
3. Co-design the sets of innovations to be evaluated with potential partners.

#### AGENDA

8:30 - 9:00	Registration of participants	Ada Pineda CIAT Bioversity Alliance
9:00 - 9:25	Introduction to the workshop: Innovations for the transformation of the coffee value chain for inclusion and sustainability in Honduras	Jenny Wiegel CIAT Bioversity Alliance
9:25 - 9:40	The problems of the coffee sector in Honduras from the perspective of inclusion and sustainability	Federico Ceballos CIAT Bioversity Alliance
9:40 - 10:05	Innovations underway in the sector with potential for impact at scale on inclusion and sustainability	Miguel Gomez Consultant Mirian Colindres CIAT Bioversity Alliance
10:05 - 10:20	Focus on digital innovations in the coffee value chain and their potential for transformation at scale	Jenny Melo Alianza Bioversity CIAT y University of Missouri
10:20 - 10:40	Coffee break	
10:40 - 11:00	Proposed research agenda of the initiative in the coffee value chain in Honduras - problems and innovations	Federico Ceballos CIAT Bioversity Alliance
11:00 - 12:00	Discussion and feedback of the agenda by the actors of the chain <ul style="list-style-type: none"><li>- How pertinent are the prioritized issues?</li><li>- How relevant and feasible are the prioritized innovations?</li><li>- In which area of innovation am I interested in collaborating?</li></ul>	Jenny Wiegel CIAT Bioversity Alliance
12:00 - 13:00	Lunch	
13:00 - 15:00	Co-design and planning of innovations: <ul style="list-style-type: none"><li>- What concrete experience do we have with this innovation? Who has it?</li><li>- How ready is this innovation to scale?</li></ul>	Mirian Colindres CIAT Bioversity Alliance  Mirja Michalscheck

- With what other innovations can/should this innovation be grouped, or other considerations to ensure its success?
- Where or with whom could we study this innovation to generate evidence on its impact at scale? When could we start?

IWMI

Working groups by innovation area

15:00 - 16:00 Presentation of innovation proposals

Representatives of groups

16:00 - 16:30 Next steps and closing words

Byron Reyes

CIAT Bioversity Alliance

## Annex 2. List of participants by institution and type

Type of institution	Institution	Name
Financial institution	Banco de Occidente	Guillermo Donaie
Financial institution	Confianza	Jose Almendares, Francisco Fortin
Research and extension	Alliance of Bioversity-CIAT	Marlon Duron
Research and extension	WCR	Salvador Urrutia, Santos Barrera
Exporter	BECAMO	Jose Manuel Calero Moraga
Exporter	OLAM HONDURAS S.A.	Rolando Soto
Importer	JDE Coffee	Gina Canales
Cooperative	CARUCHIL	Carlos Alberto Trejo, Maria Rosario Pineda, Jose Manuel Mendez
Cooperative	COMUCAP	Marina Hernandez
Regulatory institution	MiAmbiente	Jorge Salaverri
NGO	CASM	Cindy Gomez
NGO	COHONDUCAFE	Javier Enrique Rodriguez
NGO	SWISSCONTACT	Liliana Sanchez Ivan Rodriguez
NGO	CRS	Beatriz Pozo, Alejandro Aguero
NGO	SOCODEVI	Dariel Diaz, Jimena Moncada
Multi stakeholder platform	Global Coffee Platform	Guillermo Alvarado
Donor	USAID	Hector Santos
Subsectoral institution	CONACAFE	Nelson Omar Funez
Subsectoral institution	IHCAFE	Nestor Meneses, Cristian Lizardo
Subsectoral institution	DOM	Zoyla Moreno
Producer	Ramon Amaya	Ramon Amaya
Producer	Fincas Ruland	Angie Rubi



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We would like to thank all funders who support this research through their contributions to the CGIAR Trust Fund: [www.cgiar.org/funders](http://www.cgiar.org/funders).

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