

Assessing Transformative Change Potential of Multi-Stakeholder Platforms within Agricultural Commodity Systems

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Introduction

Background on Multi-Stakeholder Platforms (MSPs)

Collaboration and innovation within supply chains are critical to improve their contributions to the socioeconomic and environmental sustainability of agricultural commodity systems.¹ In particular, existing research suggests that multi-stakeholder platforms (MSPs) can foster both collaboration and innovation through knowledge-sharing and the exchange of ideas, information, services, and resources among participants while strengthening the capacity of stakeholders to address cross-cutting issues and challenges.^{2,3} Collaboration and innovation through agricultural sector MSPs, because it can engage multiple, diverse stakeholders along the agri-value food chains,² has the potential for a novel form of governance for sustainable development. These possibilities exist for MSPs that exist in both virtual and/or physical spaces but how stakeholders use and organize these spaces shapes the potential of the MSPs for transformative change.

Global food and agricultural commodity systems are complex, interconnected networks of political governance structures, ecological systems, energy grids, and changing consumer demand. Assembling an equitable and functional MSP within this context requires the participation of stakeholders who may vary in their willingness to maintain partnership long enough for actions to be implemented and who hold differing motivations, perspectives, and experiences.

UNDP FACS Initiatives

In response to the pressing need for transformative action within food and agricultural commodity systems (FACS), the United Nations Development Programme (UNDP) has been at the forefront of catalyzing change through its initiatives. The UNDP endeavors to transcend traditional paradigms by advocating for diversified and resilient, agroecological systems and value chains.⁴

Central to UNDP's strategy is the promotion of collaborative action among stakeholders, aiming to foster trust and innovate solutions to systemic challenges within FACS. At the heart of this endeavor lies Multi-Stakeholder Platforms (MSP), which are led by governments, propelled by active participation from diverse stakeholders, and facilitated by UNDP. Through its Green Commodities Programme, UNDP serves as a neutral mediator, assisting in the forging of these shared visions and enabling constructive dialogues among all involved parties.⁴ By April 2024, the UNDP had initiated MSPs in 13 countries across eight commodity sectors; cocoa, palm oil, pineapple, coffee, cashmere, beef, soy, and fisheries.⁵

MSPs bring together government officials, farmers, civil society, and the private sector to address sustainability challenges collectively. Stakeholders of MPSs focus on creating clear policies, land-use plans, law enforcement strategies, and financial support to enhance farming practices. Steering committees facilitate decision-making and oversee the drafting of National Action Plans, ensuring agreed-upon actions are implemented and monitored effectively.⁴

Capstone Project Scope and Goals

Understanding the extent to which MSPs are able to catalyze and propel sustainable change is part of the evaluation of their success and replicability. Hence, the goal of this project was to assess the level at which the MSPs initiated by the UNDP FACS team led to transformative change in their respective commodity sectors. The scope of our capstone project encompassed MSPs in five countries across six agricultural commodities: Pineapple and Fisheries in Costa Rica, Cocoa in the Dominican Republic, Palm Oil in Indonesia, Beef and Soy in Paraguay, and Palm Oil in Liberia. In assessing how the MSPs worked in the selected sites, our team also sought to refine the current *Signals of Change* (SoC) framework utilized by UNDP FACS. Our assessment began with the development of a *Transformative Change Framework* (TCF), drawing upon and adapting theories of integral development. The evidence for the study included case studies of six MSPs, and an additional in-depth analysis of the MSPs related to the palm oil sector in Indonesia.

Framework for Transformative Change

Transformation is defined by Scoones et al. as “fundamental changes in structural, functional, relational, and cognitive aspects of systems that lead to new patterns of interactions and outcomes”.⁶ Transformational change is irreversible, multidimensional, multilevel, system-wide change. In this case, the transformation of national agricultural commodity sectors involves the improvement of environmental, social, governance, and economic indicators on a system-wide level towards greater sustainability.

The Signals of Change Framework (SoC) along with the 10 Key Principles of Effective Collaborative Action, developed by the UNDP, is one tool to assess changes occurring in a system (see Figure 1). The SoC is organized into early, intermediate, and advanced signals of change. Early signals of change include new insights, networks, capacities, commitments, and trust. Examples of intermediate signals of change include new policies, regulatory frameworks, and stakeholders proactively collaborating and co-creating with each other. Lastly, advanced signals of change include new institutions, organizational level change, and the widespread adoption of novel belief systems.

Figure 1. Signals of Change Framework

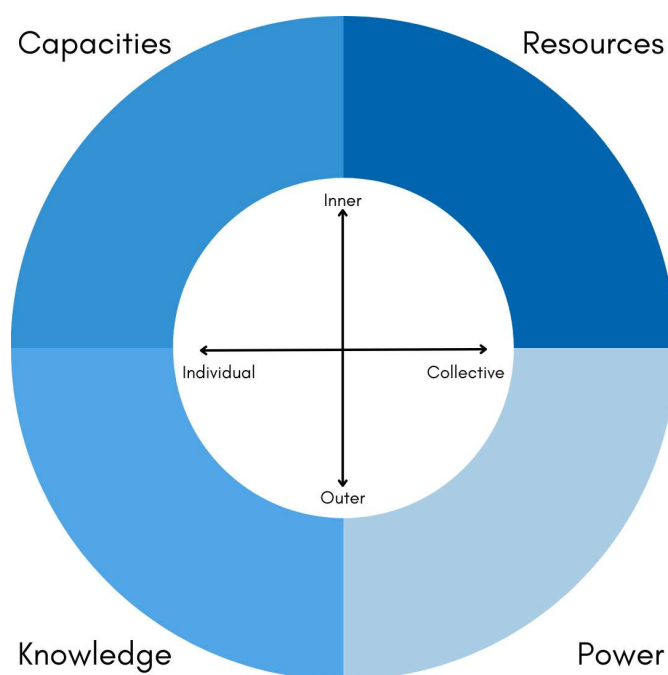
	OUTCOMES Anything that others – individuals, groups, institutions, parts of institutions DO DIFFERENTLY, including behavior or mindset change. Actions can be large or small			IMPACT
	EARLY SIGNALS OF CHANGE	INTERMEDIATE SIGNALS OF CHANGE	ADVANCED SIGNALS OF CHANGE	
Realization	Relevant initiative design and implementation generate enabling preconditions for transformation.	Interim outcomes external to the initiative boundaries are evident and catalyze progress toward long-term, self-sustaining outcomes.	Long-term, self-sustaining outcomes are materializing.	Positive change in the living conditions of people or in the environment
Examples of signals	<ul style="list-style-type: none"> • New insights • New commitments • New experiments/acting together in new ways • New network, teams • New capacities, skills • Increased connectivity between stakeholders • New relationships • Increased levels of trust. 	<ul style="list-style-type: none"> • Stakeholders proactively collaborating with each other and co-creating new activities and initiatives • New policies and regulatory frameworks • Better incentives • Strengthened support systems • Innovative financing instruments • New budget allocations • Removal of obstacles/ letting go of ineffective approaches. 	<ul style="list-style-type: none"> • New institutions, alliances, movements • New beliefs/mental models/values • New narratives • Organizational/Institutional level changes • Scaling and replication • Institutional, financial sustainability. 	<ul style="list-style-type: none"> • Less deforestation • Less CO2 emissions • Improved living conditions of smallholders and rural communities • Improvement of food security • Improved nutrition

The SoC is not a comprehensive assessment tool for transformative change. Rather, it is a tool to assess whether ongoing changes may lead to system transformation. Additionally, the SoC framework does not explicitly distinguish between changes at the individual and organizational level, or between internal (i.e., beliefs, views, values) and external domains (i.e., social movements, networks, practices). Additionally, because the SoC is not designed specifically for assessing change in agricultural commodity systems, it does not include the key elements of agricultural systems such as agricultural inputs, credit, farm-level practices, or the infrastructure for production, transportation, distribution, or sale. The SoC mainly focuses on a set of indicators that may lie along the transformative change pathway, but does not elaborate upon the relationships among these indicators. A theory of transformative change that can help make sense of its dynamics is necessary to assess whether the included indicators will occur early or later in the process of transformative change.

Furthermore, Winhall and Leadbeater,⁷ describe four “keys” that unlock systems. These include purpose, power, resources, and relationships. Relationships are largely incorporated in the SoC framework through assessing changes in networks, connectivity between stakeholders, collaboration, and support systems. However, purpose, power, and resources are largely left out of the SoC. The purpose of the system “provide[s] the point around which people, activities, and resources are organized”.⁷ When transformation occurs, there is often a new or refined purpose. In our case, has the overall purpose of the commodity sector changed? Similarly, a new system is unlocked by changes in the distribution of power. Since the platform's creation, how has power shifted among stakeholders? Do all stakeholders feel they can voice their opinions and be heard? Who makes the decisions among stakeholders? Lastly, changes in resource flows can unlock a system towards transformation. Are new resources available, such as agricultural inputs, to all farmers? Are farmers more informed since the start of the platform?

We adopted these insights about transformative change and elements of MSPs in the agricultural commodity sector into a Transformative Change Framework (TCF) drawing upon arguments presented by O'Brien and Hochachka,⁸ (Figure 2) to better assess change in agricultural commodity systems due to the presence of MSPs. The TCF consists of an outer ring and four inner quadrants. Drawing on research proposed by Winhall and Leadbeater regarding the four keys that unlock systems, The 10 Principles of Effective Collaborative Action noted by the UNDP, along with additional research the outer ring of our framework categorizes changes impacting the entire system - capacities, resources, power, and knowledge. The inner quadrant core of our framework denotes on which levels changes occur. These quadrants are formed by two intersecting lines or continuums noting different levels of change; the vertical (or y-axis) denotes inner and outer level change and the horizontal (or x-axis) denotes individual and collective level change.

Figure 2: Transformation Framework



The inner-individual quadrant refers to changes in beliefs, views, preferences, and ideas. The inner-collective quadrant pertains to changes in culture, discourses, norms, and worldviews. The outer-individual quadrant consists of changes in actions, behaviors, and practices that an individual undertakes. Lastly, the outer-collective quadrant refers to changes in social movements, networks, collective actions, and policies. Visualizing where changes might be concentrated or if changes are occurring on multilevel, multidimensional scales may provide better insight into the transformative change potential of MSPs. Based on this compiled framework, we developed interview and survey questions that assess the changes that have occurred and if they resulted in or demonstrate the potential for transformational change.

Phase 1 (Case Studies)

In the first phase of our research, we assessed UNDP FACS initiatives in five countries: Indonesia, Paraguay, Dominican Republic, Liberia, and Costa Rica. We gathered data primarily through interviewing UNDP focal points or program staff in each country. The purpose of these initial case studies serves to assess the establishment of multi-stakeholder platforms (MSPs) and to allow for comparison across MSPs. The case studies provide background on the commodity sector in each country, describe platform creation, investigate how these platforms operate, and summarize the successes, challenges, and current status of each platform. The following sections provide short summaries of each of the case studies. The table in Appendix A provides more information on each of the platforms studied in this initial phase.

Dominican Republic: National Cocoa Platform

Cocoa production has long been a crucial component of the Dominican Republic's economy, and the sector is only continuing to grow. The country is the world's largest producer of organic cocoa,⁹ occupies the ninth position in world exports of cocoa beans¹⁰ and exports more than 90% of all its cocoa production.¹¹ From 2010 to 2020, Dominican cocoa exports increased by 40%.¹² Small-scale farmers produce more than half of the country's cocoa with little institutional and financial support to improve operational efficiency.¹³ This has resulted in low crop yields and stagnant profits for smallholder farmers despite increasing exports.

The combined challenges of aging farmers, poor agricultural infrastructure, and limited farmer profits spurred a collaboration between Mondelēz International's Cocoa Life Program, UNDP Green Commodities Programme (now the Food and Agricultural Commodity Systems), UNDP Dominican Republic country office, the National Cocoa Commission, and the Ministry of Agriculture. Together, in partnership with local stakeholders, they created the National Cocoa Platform (NCP) in 2013 under the National Cocoa Commission, which culminated into the National Plan for Sustainable Cocoa Development in 2018. The mission of the National Cocoa Platform was to articulate a sustainable path forward in cocoa production that benefitted all stakeholders, including farmers, communities supported by cocoa production, relevant government entities, exporters, and cooperatives.

The National Plan is centered around improving farm productivity, strengthening associations in cocoa trading entities, and ensuring the well-being of people in cocoa-growing communities. There is a transversal focus on investment in human capital (production, technical, vocational, and professional), supply of inputs and planting material, supply of credit, improvement of the business climate, gender and youth.¹³ Additionally, the Ministry of Agriculture prioritized increasing national cocoa production by 200% by 2028 to increase the nation's economic development and income opportunities for both farmers and communities.¹³ The findings of this initial case study show that as of July 2023, it is unclear how the implementation of the National Cocoa Plan has progressed and what goals have been achieved.

Paraguay: National and Regional (Chaco) Platforms for Sustainable Beef

The Sustainable Beef Platform for the Chaco region in Paraguay was launched in 2019 with support from UNDP under the Good Growth Partnership (GGP) and through the local UNDP project “Green Chaco” to address the negative impact of beef production on the environment in the Chaco region. Later, the National Sustainable Beef Platform was launched in 2020, and the regional platform was fully integrated in this national-level framework.

The regional platform was established as a multi-stakeholder space for collaboration, allowing stakeholders to actively contribute to sustainable beef production by sharing their experiences, concerns, and knowledge. The platform aimed to promote sustainable land use practices, increase the production of sustainable beef, and improve the livelihoods of local communities. To achieve these objectives, the platform (1) promoted partnerships between stakeholders, including local communities, government, and the private sector, and (2) leveraged technology and innovative solutions to enhance the sustainability of beef production.¹⁴

The Chaco platform enabled dialogue and coordination between farmers, cooperative associations, government, non-governmental organizations (NGO), academic institutions, and Indigenous communities with different interests. The platform’s collaborative efforts resulted in the adoption of the Chaco Beef Action Plan in 2019. The plan covers six main areas: Research, Legal domain, Productivity, Society, Environmental Sustainability, and Market Strategies. Specific actions include promoting sustainable livestock research, improving coordination among land management institutions, distributing a unified guide for Good Livestock Practices, boosting the reputation of beef production, aiding indigenous community governance, monitoring land use changes, and advocating for the establishment of the Paraguayan Meat Institute (IPC), among others.¹⁵

The national and regional platforms have been on hold since the end of 2021, when the GGP interventions in Paraguay came to an end, but currently, the regional platform is undergoing a reactivation process under the Paraguayan Ministry of Environment and Sustainable Development (MADES).

Liberia: National Oil Palm Platform of Liberia

Liberia strategically targeted agriculture, particularly palm oil development, as a catalyst for sustainable development following subsequent civil wars and Ebola outbreaks.^{16,17} With limited national protections surrounding palm oil development, however, Liberia’s natural resources, local communities, and traditional ways of life were at risk of exploitation by an unregulated palm oil sector, which is often associated with deforestation, land degradation, socioeconomic inequities, and human rights abuses.^{18,19,20} In response, the UNDP Green Commodities Programme partnered with the Liberian Government and Conservation International through the

Good Growth Partnership establishing the National Oil Palm Platform of Liberia (NOPPOL) in 2019.

The NOPPOL coordinates and engages stakeholders along the entire national commodity crop supply chain. It aims to create a system that supports local communities and smallholder farmers, avoids disruptions to sustainable food systems and traditional ways of life, helps the government achieve economic and developmental targets, ensures the protection of biodiversity and conservation of natural resources, and facilitates sustainable palm oil development and revenue generation. The NOPPOL comprises two levels: one national platform and two subnational platforms. The Subnational Platform in the Northwest region of Liberia is operational, while the Subnational Platform in the Southeast remains under development.

The NOPPOL achieved initial successes in developing a sustainable palm oil sector. The National Sustainable Oil Palm Strategy and Action Plan (NOPSAP), endorsed in 2021 and launched in 2022, outlines frameworks and targets for sustainable development in Liberia's palm oil sector. The Platform developed a national interpretation of the Roundtable on Sustainable Palm Oil (RSPO) standards and employs multiple communication mechanisms to engage and coordinate stakeholders.²¹ Palm oil is now a permanent focus in the country's environmental forest management agenda and Liberia's commitment to the Africa Sustainable Commodity Initiative at COP27 acknowledges the role of agriculture in deforestation while emphasizing responsible production principles.²²

Despite these achievements, significant barriers impede continued platform success. Funding from the UNDP concluded with the program's pilot phase in 2022. As of October 2023, the NOPPOL team was actively raising funds to support the continuation of Platform activities and operations. With a government election and subsequent transition at the end of 2023, however, the fate and status of the Platform is unknown.

Costa Rica: National Platform for Sustainable Pineapple Production / Fisheries of Large Pelagics

The UNDP FACS team established two multi-stakeholder collaboration platforms in Costa Rica: the National Platform for Sustainable Pineapple Production (2011) and the National Platform for Sustainable Fisheries of Large Pelagics (2016). The former platform was established to help improve the sustainability of the pineapple sector in Costa Rica as production has steadily grown over the past two decades and is expected to remain a fixture of the Costa Rican agricultural commodity sector.²³ The pineapple platform developed as a partnership between the UNDP Green Commodities Program, and Costa Rican government agencies such as the Ministry of Environment and Energy, the Ministry of Agriculture and Livestock, the Ministry of Labor and Social Security, and Ministry of Health, among other organizations. The main objectives of the platform were to establish a National Action Plan (NAP), legalize the NAP through national decree from the President, and implement the actions agreed upon. The NAP, formally called the

National Initiative for Sustainable Pineapple Production, contained eleven lines of action, from adopting best practices for the use of agrochemicals to promoting measures adaptive to climate change.²⁴ At the time of publication, approximately twenty-five percent of the actions from the NAP had been implemented, namely those related to land-use and intentional location of pineapple plantations. One example of this is the establishment of a monitoring system for land use across Costa Rica, the Monitoring of Land Use Change in Productive Landscapes. Satellite imagery is used to build maps of agricultural and forested land to gauge the degree of deforestation as a result of pineapple production.

To improve sustainability in the fishing sector, stakeholders in Costa Rica launched the National Platform for Sustainable Fisheries of Large Pelagics in 2016. The primary sustainability challenge at the time was the uncertain impact of longline fishing on bycatch, namely endangered sharks and sea turtles.²⁵ Their goal was to facilitate democratic dialogue between the longline fishing sector, non-governmental organizations focused on marine conservation, seafood exporters, academia, governmental agencies, and the gastronomy sector, and as well as to build capacity for the international seafood market. The main purpose of the platform was to develop and formalize the National Action Plan (NAP) for Sustainable Large Pelagic Fisheries which contained objectives to promote fishery improvement projects, develop a monitoring system, and position Costa Rica as a country committed to sustainability and development in the international seafood market. Unfortunately, the platform did not achieve its full purpose and the NAP was never legalized. Nevertheless, representatives of all the longline fishing associations involved with the development of the NAP took it upon themselves to continue the work as intended.

Indonesia: National Platform for Sustainable Palm Oil

Palm oil is a significant part of Indonesia's economy, but can also have adverse effects on the environment. Thus, minimizing these adverse effects of the palm oil sector while maintaining economic growth is crucial.²⁶ A collaboration between the UNDP and the Indonesia Ministry of Agriculture (MoA) began in 2012 with the goal of supporting sustainable palm oil through multi-stakeholder dialogue and collaboration. In 2014, the Indonesia Sustainable Palm Oil Platform, or FoKSBI in Bahasa, was established. Funding for the platform was supplied by the Global Environmental Facility (GEF), the Swiss State Secretariat for Economic Affairs (SECO), non-governmental organizations, private sector, and the government.

Three working groups were established within the platform to accomplish three distinct goals: one focused on improving smallholder capacity and strengthening data, one focused on environmental management and conflict resolution, and the third on strengthening the Indonesia Palm Oil Certification. The working groups worked to identify the causes impeding the production of sustainable palm oil and provided recommendations on programs and actions to address these challenges. These programs and actions were consolidated into the National Action Plan of Sustainable Palm Oil (NAP SPO), legalized in 2019 and set to be implemented until

2024. In 2020, the Indonesia Sustainable Palm Oil Platform (FoKSBI) transitioned into the National Implementation Team (NIT). NAP SPO also mandates the development of subnational action plans, and plans have been established in places such as Riau, North Sumatra, West Kalimantan and Jambi provinces, and in Sintang, South Tapanuli, Pelalawan and Tebo districts. Currently, eight provinces and ten districts have developed their own action plans.

Many different stakeholders participate in the platforms, including smallholder farmers, non-governmental organizations, development partners, academic institutions, and members of the private sector. As of 2022, 245 organizations had been involved in dialogue and collaborative action at national and subnational levels.²⁷ At the national level, 14 government ministries are involved in the implementation of NAP SPO, including the Ministry of Agriculture, Ministry of Home Affairs, Coordinating Ministry of Economic Affairs. These three Ministries lead the functioning of the platform with UNDP support.

Phase 2

After the initial case studies were completed during Phase 1, we began the second phase of the study. The goal of this phase was to further explore the impact of multi-stakeholder platforms on commodity sectors. We were particularly interested in understanding the changes that have occurred in commodity sectors as a result of the MSPs, and the potential of these changes to lead to transformation of the commodity sector. Through evaluating change, we also hoped to refine the UNDP's Signals of Change Framework.

Of the MSPs studied in Phase 1, we chose to move forward with platforms in Indonesia since the platforms are active and we would have consistent communication with UNDP staff working on the ground in Indonesia. We believed this would allow more opportunities to disseminate the survey and provide willing interviewees compared to the other platforms that are deactivated. Indonesia also has a multitude of MSPs at different levels (national, provincial, and district), providing opportunities to assess variances between levels. To provide comparison with another commodity sector, we also chose to move forward with the Dominican Republic, as recommended by the UNDP FACS team.

Background on Indonesia

The palm oil sector is integral to Indonesia's economy as it comprises 4.5% of its GDP,²⁶ employs three million people, and has increased production by 400% over the past two decades.²⁸ Furthermore, palm oil is an ingredient in fifty percent of consumer products and serves as nearly forty percent of the world's vegetable oil.²⁹ The primary sustainability challenge facing the palm oil sector in Indonesia is the deforestation of rainforests to clear land for plantation expansion. As a result of this land conversion, greenhouse gas emissions released through this process drive climate change.³⁰ Moreover, the expansion of palm oil plantations into biodiverse tropical peatlands and forests threatens endemic flora and fauna, such as the

orangutan, gibbon, and tiger.³¹ Although palm oil has the potential to substitute for fossil fuels in the form of biofuel, it cannot compensate for the clearing and rapid draining of peatlands.³¹ On a local level, increased air, water, soil, and health concerns have emerged, such as increased risk of wildfires due to the significantly drier oil palm ecosystem. Among these challenges, the competing interests of different stakeholders, including smallholder farmer associations, private sector organizations, NGOs, and government officials has proven to be a challenge in navigating conflict and implementing agreed upon actions.

In 2014, the UNDP and Indonesia Ministry of Agriculture collaborated to form the Indonesia Sustainable Palm Oil Platform, a multisectoral, collaborative approach to the sustainability challenges confronting the palm oil sector in Indonesia. As mentioned prior in the case study on Indonesia, three working groups under the direction of the National Implementation Team developed the National Action Plan of Sustainable Palm Oil, which was signed into law in 2019 and is active through 2024 at time of publishing.

Methods

Data Collection

To assess change, we developed survey and interview questions based on the Signals of Change framework and our Transformational Change Framework. The survey primarily focused on assessing relationships between stakeholders, including assessing changes in meeting frequency and improvement in relationships. The interviews focused on sustainability initiatives, platform achievements, and the reasons behind those achievements. For a complete list of survey and interview questions, see Appendix B.

We gathered data from four platforms in Indonesia: National, North Sumatra and Jambi at the provincial level, and Tebo at the district level. A survey was administered at platform meetings with the goal of reaching a large number of stakeholders. We received responses from 62 individuals. Thirty-seven respondents took the entire survey, and an additional 25 respondents filled out a portion of the survey. See Appendix C for more information on the demographics of survey respondents.

Survey respondents were selected for the interview portion to represent a diverse set of stakeholder groups and platforms, as well as their prior involvement in the platform. Since the survey was administered at platform meetings, there were some survey respondents who were attending for the first time or had very little previous involvement in the platform. Thus, we excluded those with little to no prior experience from the interviews. However, we received minimal response from this initial group of potential interviewees, and thus received other contacts from UNDP staff, primarily from the National Action Plan Implementation Team.

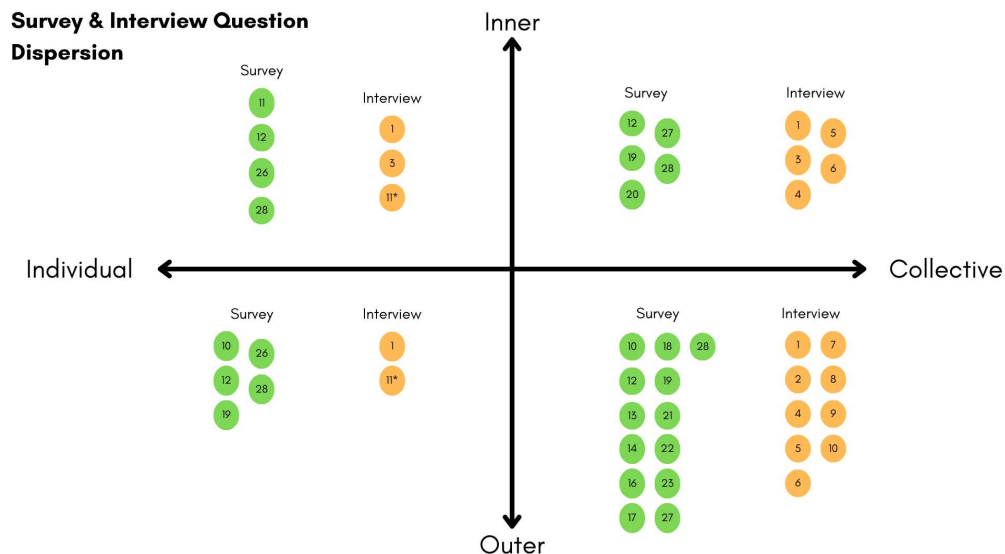
Thirteen virtual interviews were conducted. See Appendix C for more information on the demographics of interview respondents.

As for the Dominican Republic, we were not able to collect sufficient data. The platform concluded in 2018 and has since become inactive, leading to a considerable time gap since its completion. As a result of this prolonged period, potential interviewees may encounter challenges in recalling details or may exhibit reduced enthusiasm for participating in interviews. Thus, although a survey was prepared it was never sent out. However, we were able to conduct three interviews with former platform participants, two from the private sector and one government official. As this data is not sufficient to draw any significant conclusions from, a summary of the interviews will only be included in the appendix (see Appendix D).

Analysis

Once data collection finished, survey responses were translated using Google Translate. Interviews were conducted with the assistance of an interpreter, who transcribed interview responses during and immediately after conducted interviews, i.e., within 12 hours.

Prior to data analysis, the research team categorized survey and interview questions into the corresponding quadrants of transformative change. When questions contained multiple dimensions of transformative change, it was noted in all corresponding quadrants. Once we organized questions into their respective quadrants, we plotted this data onto our framework. A visual of this question plotting can be found below. The purpose of this exercise was to visualize which aspects of transformative change our prepared questions pertained to and understand the dispersion of survey and interview questions. For example, if a large number of questions correlated to a specific quadrant within our framework, we expected to find more survey and interview responses pertaining to that quadrant. After analyzing survey and interview questions, we found a fairly equal distribution of questions in quadrants relating to inner-individual, inner-collective, and outer-individual dimensions of transformation. The quadrant pertaining to outer-collective change had approximately double the number of questions corresponding to this dimension of transformative change. This was an anticipated component of our question dispersion, as many aspects and goals of MSPs relate to outer, collectively-focused efforts.

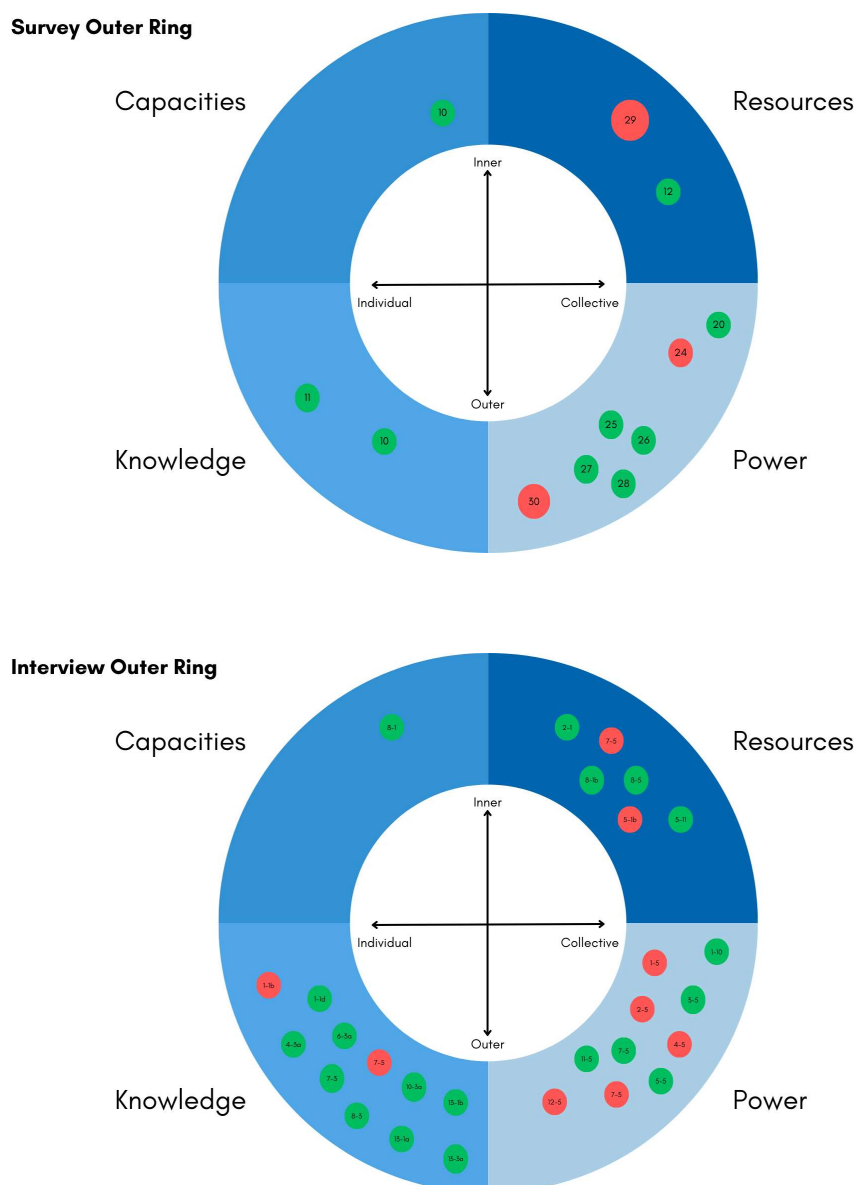


To analyze survey data, we calculated the frequency of responses for multiple choice questions, and categorized short answers into thematic groups. After this, each member of the research team read through survey responses and made suggestions regarding which quadrant or category of transformative change answers correlated to. The research team reviewed these suggestions and a consensus was reached regarding how to organize survey data within our proposed framework. We then plotted survey responses with a dot in the corresponding transformative change quadrant and marked the dot with the survey question number. Dots were also color coded to demonstrate if the answer showed positive change or no/negative transformative change, i.e., green related to positive change and red signified no or negative change.

After interview transcriptions were finalized, we analyzed interviews similarly to survey responses. Research team members read through interview transcripts, highlighting responses pertaining to quadrants of transformative change and suggesting which quadrants answers pertain to. Once the research team reached consensus regarding the organization of interview responses, this data was plotted in the quadrants of our transformative change framework. Dots were marked with the corresponding interview and question numbers, e.g., Interview # - Question #. For example, if Interviewee 1 spoke to individual-inner change in question 2 of our interview we plotted a dot in the corresponding quadrant marked with 1-2, denoting the interview and question number respectively. This method allowed us to reference plotted dots and review interviews and questions iteratively. We also color coded dots similarly to survey responses to demonstrate if the answer showed positive or no/negative transformative change potential.

Once survey and interview responses were plotted within quadrants of the transformative change framework, results were further organized by theme. After reviewing plotted data in each

responses with a dot including the respective interviewee number and question number. As with the four quadrants, dots were color-coded to demonstrate if the answer showed positive or no/negative transformative change potential.



Results

Across the various dimensions in which transformative change occurs, two central themes emerged from our data: communication and collaboration among different stakeholders and a mindset shift on the importance of sustainability. Within the theme of increased communication and collaboration, the importance of smallholder representation and participation from a wide variety of stakeholders was evident, as was the presence of individual agendas and related

conflicts. Additionally, the heightened importance of sustainability was observed through an increase in knowledge concerning sustainable agriculture practices, and a better understanding of the unique yet interconnected sustainability challenges of the different sectors involved. These themes were present to some extent in all quadrants, although manifested in different ways.

To summarize our findings, on the inner, individual (i.e., smallest scale), the quadrant charts changes in beliefs, views, preferences, and ideas. Examples of these changes include shifting mindsets toward sustainability and the health of the environment, both in terms of convergence and conflict. On the outer and individual level, actions, behaviors, and practices taken by households and individuals have the potential to influence their vicinity and the people in their immediate communities. Respondents also reported increased political engagement and more widespread use of sustainable agriculture practices. On the inner and collective level, the importance of sustainable practices within the palm oil sector is more widely understood among stakeholders. Even though there was evidence in both the interviews and surveys of improved communication and collaboration, sectoral egos are still present and illustrate a lack of alignment in viewpoints and an underdeveloped sense of community within the platforms. Lastly, in the outer and collective quadrant, increased coordination coupled with decreased conflict among stakeholders was observed. Many respondents noted that the multi-stakeholder platforms provided different perspectives on issues within the sector, and while some agricultural policies (i.e. Indonesia Sustainable Palm Oil Certification, Regional Action Plans, Presidential Instruction 8/2018) were promoted, there was a common sentiment that policies need to be better aligned with a common vision and standardized across the sector.

Appendix E provides results of the most pertinent survey questions by stakeholder group and platform.

Inner-Individual Quadrant

Beliefs, Views, Preferences, Ideas

Survey and interview responses pertaining to individual-inner change, i.e., change in beliefs, views, preferences, and ideas, highlight several individual shifts in perspective regarding sustainable palm oil practices and the role that multi-stakeholder platforms can play in commodity supply chains through enhanced communication and collaboration.

The importance of **communication, collaboration, and coordination** within the MSP is noted in several responses as being integral to platform success and adding value to the commodity supply chain. Government officials from the National platform underscored their individual changed beliefs afforded by exposure to the collaboration and enhanced coordination within the platform. One official highlighted their belief in the importance of differing perspectives brought forth through participant engagement and discussion as a main benefit. Another stated that due to their platform involvement, they now believe a universal understanding shared by all platform

participants is the most important factor. One stakeholder from the North Sumatra platform representing the academic sector also views the inclusive nature of the platform as important for every stakeholder along the supply chain. Additionally, a government representative from North Sumatra now believes in the importance of proper stakeholder collaboration to increase capacity and positive views of palm oil plantations.

As evidenced by stakeholder interviews and survey responses from several platforms, the incorporation of sustainable practices within the palm oil commodity supply chain is increasingly viewed as both feasible and necessary for its continued growth and development. Stakeholders from the Jambi platform emphasize the importance of mindset shifts toward sustainability, with several government officials noting their changed beliefs regarding environmental protection and the role of sustainability within the palm oil sector. For instance, one government official expressed a newfound responsibility to protect the environment and believes negative impacts from agriculture should be mitigated and natural habitats preserved. Another highlights how participation in the platform fosters creativity, enthusiasm, and forward-thinking among individual stakeholders. Similarly, a private sector representative from Jambi expressed heightened motivation to better understand sustainable plantations and practices.

Stakeholders from the platform in North Sumatra also underscore the importance of **shifting mindsets toward sustainability**. Despite initial concerns, one government official now considers the integration of sustainability initiatives surrounding palm oil production as achievable. Another remarked on the significance of mindset shifts resulting from platform participation and finds the most important element of the platform to be a shared vision held by all stakeholders regarding the importance of sustainable palm oil practices. Additionally, an academic stakeholder from North Sumatra recognizes the link between sustainability and inclusivity, viewing the inclusive nature of the platform as important for all stakeholders.

While many responses highlight the importance of sustainability, challenges related to integrating sustainability measures within the supply chain are also noted. As noted by a private sector stakeholder from the National platform, conflicts often arise when attempting to implement sustainability measures. Furthermore, one National platform government official highlighted how difficult changing mindsets can be.

Inner-Collective Quadrant

Norms, Worldviews and Culture

The inner-collective quadrant contains changes in norms, worldviews, and culture - changes that occur internally at the collective level. When individuals' inner shifts are recognized and then shared across the organization, it falls within the inner-collective quadrant. The most frequently cited change in this quadrant is the **enhanced perspectives on and comprehension of sustainable practices** among stakeholders. For instance, during the interviews, one government

stakeholder from the National platform highlighted the emergence of a nearly universal understanding of the importance of sustainable palm oil practices. Another government stakeholder from North Sumatra also mentioned that, through the forum, he and his organization now understand that palm oil production can be maintained while mitigating environmental impacts. Similarly, in the surveys, four respondents identified an increased understanding of sustainability practices as the greatest achievement of the platforms. This transition to sustainability highlights a shift in the norms and culture of the commodity sector. The understanding of the importance of environmental regulations has improved as well. One government stakeholder from the Jambi platform emphasized the necessity of taking environmental management and Environmental Impact Assessments seriously.

Another notable change is the **convergence of shared perspectives among stakeholders**, although complete alignment of perspectives across all stakeholders has not yet been achieved. For instance, in an interview, one NGO stakeholder from the Jambi platform one respondent noted stakeholders' recognition of the importance of smallholder farmers' roles within the sector and increasing their capacities. An academia stakeholder from North Sumatra highlighted that initially, communication among stakeholders in the platform was difficult, as was coming to an agreement due to differing opinions. Over time, the stakeholders were able to agree upon the Action Plan and found that implementation has been easier because of the prior agreement.

Changed opinions and viewpoints for other stakeholders is also observed. For instance, one NGO stakeholder from Jambi noted the NGOs' newfound respect for the government through their involvement in the platform, which was previously perceived as less involved. Similarly, one survey respondent from the private sector of the Tebo platform highlighted an increased awareness among the private sector regarding farmers' rights, such as wages, health or pensions.

Despite the emergence of sustainable mindsets and shared viewpoints, there is still some misalignment on viewpoints. For example, one interviewee highlighted conflicts between the government and business entities due to certain businesses having their own agendas (Jambi, NGO). Several survey respondents also pointed out a lack of common vision and sustainable mindset at the collective level as challenging factors.

Cultural shifts, such as adherence to work norms, improved treatment of small farmers, and a sense of togetherness, are also noted. For example, one survey respondent from the government of the Jambi platform noted the private sector and smallholders increased compliance with work norms and K3 (labor issues concerning occupational safety and health). Another survey respondent from the private sector of the Tebo platform also pointed out the improved treatment and protection of farmers. In addition, 26 survey respondents agree that their voice, opinion, and concerns are heard at platform meetings, while one survey respondent from the North Sumatra platform identified "togetherness" as the greatest achievement of the platforms.

Improved communication between organizations has also resulted from the platforms. One interviewee from the North Sumatra platform reported initial difficulty in communicating across regional communication styles, but that improved over the course of the platform as individuals developed a commonly-agreed upon goal to work towards. Additionally, a government official familiar with the National level platform stated there was improved communication within the Ministries, both vertically and laterally.

However, strong sectoral egos and lack of openness remain challenging factors. Five survey respondents identified strong sectoral egos, where priorities of individual sectors take precedence over collective objectives or the common good, as challenges for working collectively, and one respondent from the private sector of the National platform pointed out a lack of openness among stakeholders.

Outer-Individual Quadrant

Practices & Actions

The outer-individual quadrant aimed to chart changes on the individual level (i.e., a person or household) related to outer actions, behaviors, or practices. Overall, interview responses and survey responses yielded congruent data. Of the 13 interviews, 8 mentioned an **improvement in sustainable practices** since the start of the platform undertaken by individuals, primarily farmers. One interviewee from the Jambi platform noted an improvement in knowledge, such as the ability to distinguish between authentic or counterfeit palm oil seedlings. Another respondent from the Jambi platform stated that farming training programs, such as those for transitioning rubber producers into palm oil producers, can be attributed to the platform. Additionally, one interviewee from the North Sumatra platform emphasized an understanding of sustainable peatland management as a result of the platform. Multiple respondents across platforms reported both **improved access to becoming RSPO/ISPO certified**, as well as a need for continued government support for smallholder farmers.

Moreover, short answer survey responses stated that the Tebo platform provided insight into **proper plantation management**, such as more efficient harvesting techniques and herbicide application. One respondent from the Jambi platform highlighted learning about the importance of quality seeds. Interestingly, one government official from the Tebo platform stated that the greatest thing the platform achieved was enabling them to become a “better gardener”. As training on sustainable agricultural practices became accessible, farmers experienced a standardization of knowledge, to some degree. A respondent from the Tebo platform expressed the difficulty in reaching those in the most remote locations, an impediment to widespread adoption of ISPO practices.

However, many of these statements were made in the future tense, as practices that were going to take place in the future. For example, one government official discussed plans to create a

high-yielding variety of palm oil, while a different interviewee from Jambi indicated that “high-level commitment” is important for expanding inputs necessary for farmers, such as fertilizers. Furthermore, only 38% of complete survey responses indicated that their platform had achieved its stated goal of implementing sustainable land-use practices. Thus, although some practices have been implemented, **complete adoption of sustainable farming practices has not occurred** throughout the palm oil sector yet.

Behaviors

Fewer interviewees cited behavior change brought about by the platform. In short answer responses from the survey, one government official from the North Sumatra platform reported feeling more confident in their professional life and better equipped to address industry challenges. Another government stakeholder from NAP IT remarked that they take into consideration the programs and activities of other agencies when preparing the programs and activities of the agency where they work, indicating improved collaboration. Lastly, one correspondent stated that they had become active in campaigning for the RANKSB and ISPO (Indonesia Sustainable Palm Oil Certification) through their involvement with the platform itself.

Outer-Collective Quadrant

Social Networks

Both the survey and interviews note that there has been an increase in **coordination and collaboration** among different stakeholders since the platform began. Since the start of the platform, 25 out of 37 survey respondents noted that their relationships had improved with other stakeholder groups, 32 out of 37 respondents believe that collaboration among stakeholders had improved, 28 out of 37 respondents said that their support network had increased, and 29 out of 37 respondents noted that the number of stakeholders they interact with had increased. Furthermore, 30 out of 37 respondents agreed or strongly agreed that there is consistent and clear communication among platform stakeholders, and 27 out of 37 respondents believe that there have been decreases in conflict between stakeholders since the start of the platform. This pattern was also emulated in the short answer portions of the survey. When asked if the platform was progressing in a way that was beneficial to the participant or their organization, a respondent from Jambi noted that multi-stakeholder connectivity was supporting smallholder farmers, a National platform participant believes that forum meetings and discussions provide different perspectives on different issues, and that the platform increased cooperation, communication, and coordination between stakeholders in all platforms

Although the interviews did not ask directly about multi-stakeholder collaboration and support networks, as that was a main focus of the survey, many interviewees noted changes in these facets throughout their interviews. Multiple interviewees from different platforms noted that **new networks had been developed and coordination had increased** because of the forum. One interviewee from the National platform stated that she began interacting with other government

agencies due to the platform, and a government stakeholder from North Sumatra mentioned that her team interacts with others outside the government on palm oil work now, including smallholder farmers. Another interviewee mentioned that they now have a greater understanding of the roles of other stakeholders within sustainable palm oil and are able to collaborate with others more. Another interviewee from the National platform stated that the increased coordination in palm oil management, which has historically been very sectoral, has made communication easier.

However, both the survey and interview responses indicated that challenges still remain in terms of multi-stakeholder collaboration. Interviewees from the Jambi platform mentioned that there was no consistency in the participants who attended meetings and that there is a lack of participation by some stakeholder groups, such as business entities and smallholder farmers. Similarly, a participant involved in North Sumatra and the National platform believes that involvement of different parties depends on support from external parties, such as donors and development partners. Different levels of knowledge and backgrounds have also made it difficult for participants to work together, as noted by a participant in the National platform. These sentiments were echoed by survey respondents as well. Multiple respondents noted that there are often challenges with sectoral egos and balancing different perspectives and interests within the platform, as noted by participants in all platforms. Some respondents from all platforms also noted that there are still challenges of coordination and communication within the forum. Furthermore, when asked about which platform goals had been achieved, only around half of respondents agreed that the goal of strengthening multi-stakeholder collaboration had been achieved (35/62).

Policies and Collective Action

Both the survey and interview responses suggest that the MSP helped to **promote a number of policies and collaborative actions**. Mentioned by interview participants from all four platforms, these include the Presidential instruction 6/2019, which enacted the National Action Plan for Sustainable Palm Oil, the creation of profit sharing funds by the national government with local governments, increased support for smallholders pursuing Indonesian Sustainable Palm Oil certifications and cultivation permit licenses, replanting program, a regulation to manage high biodiversity areas, regional action plans and monitoring programs, and a regulation to increase per hectare productivity of palm oil and postpone new palm oil plantation licenses (Presidential Instruction 8/2018). One interviewee from the North Sumatra Platform also noted that the sustainability initiatives undertaken by the forum focus on palm oil farmers, rather than private companies.

As for who is undertaking sustainability initiatives, multiple interviewees mentioned that many different stakeholders were involved in the aforementioned and other sustainability initiatives. Similarly, the survey indicated that respondents strongly agree or agree (31/37) that new policies

were enacted to improve the sustainability of palm oil, and that these initiatives were undertaken by all stakeholder groups, but primarily by the government.

However, the data indicates that sustainable policies and collective actions have not been fully realized by the platforms. For example one interviewee from the Jambi Platform did not believe any collective actions had been achieved yet. Many survey respondents (14/35) indicated the policies need to be better aligned among different stakeholders and integrated between sectors, as well as a need for a common vision and perception among stakeholders within policymaking. Some survey respondents also indicated that not much has occurred as a result of the platform (5/60), and that the platform is constrained by resource and funding availability (7/35). There have also been many challenges with ISPO certification. Although the certification was introduced in 2011, smallholders are not required to be certified until 2035. However, only 10% of smallholders are certified. This slow implementation of ISPO was noted by two interviewees (one North Sumatra Platform stakeholder and one National Platform stakeholder), and one survey respondent mentioned that there is a lack of assistance for remote farmers to be certified.

Furthermore, it is **difficult to understand the full role that platforms played in the adoption and promotion of policies**. For example, one government stakeholder from the National platform noted that Presidential Instruction 8/2018 was one initiative implemented after the start of the platform. However, other sources are uncertain if the National Platform had a role in the adoption of Presidential Instruction 8/2018. Furthermore, many respondents noted that increased ISPO certification was a result of the platform, but it is unclear how the platform has aided in certification or how many smallholders have been certified as a result of the platform. Thus, it is difficult to draw specific conclusions on the platforms' influence on policy.

Connections and Flows

The outer ring of our framework categorizes changes that impact the entire system and enable transformational change to occur, namely through the improvement of capacities, resources, power, and knowledge. Survey and interview responses indicate similar trends within these four categories.

Capacities & Resources

Numerous responses noted **changes in capacities and resource allocation as a result of the platforms**. When asked about the attainment of platform goals, approximately 55% of respondents (34 out of 62) indicated that support for sustainable development in the commodity sector had been achieved. Additionally, around 27% of survey respondents (17 out of 62) cited the successful implementation of sustainable land use practices, while 43% acknowledged improvements in smallholder capacities (27 out of 62). A government official from North Sumatra further highlighted how aid, in the form of fertilizers and seedings, supports local farming communities.

Conversely, **insufficient resources and lack of funding present significant obstacles to platform progress**. In response to a survey question regarding the primary challenges facing government support of platforms, 8 out of 35 respondents (~22%) identified funding as a significant barrier. Several stakeholders representing the Jambi, Tebo, and North Sumatra platforms also highlighted a need for more funds and necessary resources. One particular interviewee from academia underscored how smallholders face barriers to funding and skill attainment, thereby limiting their power and ability to adopt sustainable practices in accordance with IPSO certifications.

Power

Notable progress regarding platform power dynamics has been observed through survey and interview responses. Survey results indicate **increased power across all stakeholder groups**, with significant increases noted in both government and NGO sectors, and moderate increases expressed for academia, development partner/international organizations, private sector, and smallholder association stakeholder groups. While suggestive of a positive trend, these increasing shifts in power may not necessarily signify movement toward equitable power distribution. Pre-existing power imbalances could persist despite apparent progress. However, there is consensus among survey respondents that **voices and opinions are heard at platform meetings**, with 26 out of 37 respondents (~70%) noting agreement or strong agreement with this statement. Several government representatives from the National platform highlighted improved power dynamics and one noted a fair distribution of roles at platform meetings. One interviewee from the North Sumatra platform representing the academia sector also spoke to changing power dynamics with governments now providing links among stakeholders.

Despite some meaningful progress, survey and interview responses also highlight **significant barriers centered around power that hinder the effectiveness of platforms**. For instance, 21 out of 37, or nearly 57%, of survey respondents view stakeholder power imbalances as negatively impacting platform functionality. Furthermore, in response to a short answer survey question regarding challenges impeding the coordination and collaboration of the platform, approximately 46% of respondents (16 out of 35) highlighted challenges within the outer ring of our framework, with 23% (8 out of 35) specifically noting power imbalances as a major obstacle. Of the 13 interviews, 5 indicated that the existence of power disparities impacts platform operations, with these responses coming from a diverse mix of stakeholders representing all levels of platforms surveyed. Several stakeholders from the Jambi platform highlighted lacking representation of smallholder farmers and a need for community involvement in decision-making processes. One respondent representing both the Jambi and Tebo platforms expressed how smallholders are hesitant to convey how they feel about the platform and suggests that invited participants may hold favorable, pre-existing relationships with government officials, potentially skewing participation dynamics. Similarly, another stakeholder from North Sumatra echoed concerns about smallholders' limited power within the platform.

Knowledge

Survey responses and interviews collectively underscore significant progress in knowledge acquisition resulting from platform engagement. For example, approximately 92% of survey respondents (57 out of 62) noted **increased knowledge of palm oil** due to their involvement in the platform. Moreover, 6 out of 13 interviewees highlighted increased knowledge and skill development stemming from platform participation. A government official from Jambi noted the platform's role in removing obstacles and improving farmer expertise as a significant achievement.

Furthermore, stakeholders from Jambi, Tebo, and North Sumatra highlight the knowledge gained for smallholders through training programs. One interviewee from the Jambi and Tebo platforms speaks to how, as a result of the platform, farmers have increased their knowledge about preserving the environment. Government officials from the National platform also cite improved communication and increased awareness of regulations and other ministerial activities resulting from their platform involvement.

Overall, responses underscore the role of platforms in fostering knowledge exchange and skill development. However, dimensions of the commodity sector relating to capacities, resources, and power of all represented stakeholder groups require further progress to facilitate transformative change.

Discussion

Assessing transformative change

As described earlier, transformational change occurs when there is change in inner and outer collective and individual elements in a system. Our case study of the palm oil sector in Indonesia, and how the MSP for it helped promote change in the sector assesses whether these changes are transformative by mapping them to the four quadrants of the transformative change framework. For these changes to be truly transformative for sustainability, they also need to conform to shifts in social, environmental, and economic dimensions towards greater balance.

Based on this definition and our analysis using the Transformative Change Framework, it is evident that the palm oil MSP in Indonesia did not lead to a transformative change. The changes that have occurred within the four quadrants as a result of the platform, include shifts in personal actions and views toward sustainability, some level of adoption of policies and Action Plans that promote conservation, and increased collaboration and communication among stakeholders.

These improvements, while valuable, are not representative of system-wide, transformative change. For example, respondents noted that the platform is constrained by a lack of funding and resources, and smallholders are not fully involved. Although programs such as ISPO are

progressing, the lack of certification of smallholders provides evidence that there is still work to do in implementing sustainable practices. Many of the platforms have also only been established recently. As one interviewee who is involved in Jambi noted, since the program has only existed for a few years, the impacts on the agricultural commodity itself are not measurable yet.

Furthermore, when evaluating transformation in the system, it is also important to recognize the purpose of the platforms, which is ultimately to enable dialogue between stakeholders and establish trust. It is proposed that trust building eventually leads to changes in policy and practices, fostering sustainable transformation. Thus, the changes noted should not be disregarded as they represent crucial progress made towards transformational change. The potential for transformational change, both within and irrespective of the platform, is present in the palm oil sector of Indonesia, yet remains contingent upon future support of the platform and a sustained common vision.

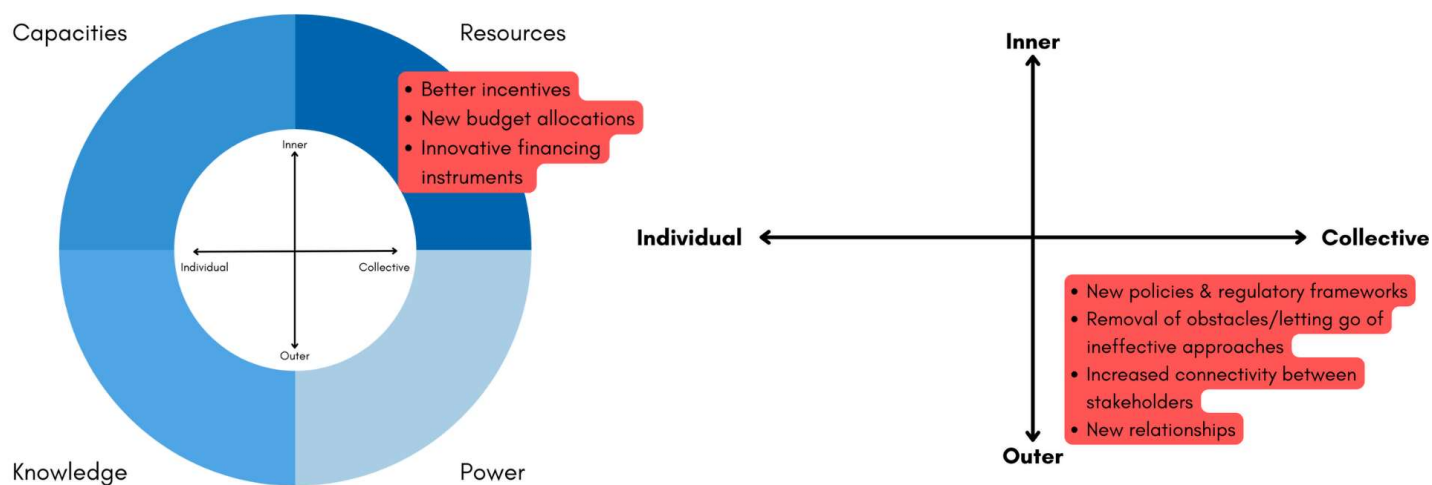
Modifying the Signals of Change Framework

The existing Signals of Change Framework (SoC) devised by the UNDP could be improved by incorporating a more nuanced approach to evaluating transformative change. Notably, the SoC could better distinguish between changes occurring at both individual and organizational levels, as well as within internal (e.g., beliefs, views, values) and external domains (e.g., social movements, networks, practices), thus embracing the multidimensional and multilevel nature of transformational change. Moreover, the SoC framework's general applicability may overlook critical factors unique to agricultural commodity systems, such as shifts in agricultural inputs, credit, practices, and infrastructure. Consequently, it may not fully capture the intricacies of transformation within agricultural contexts.

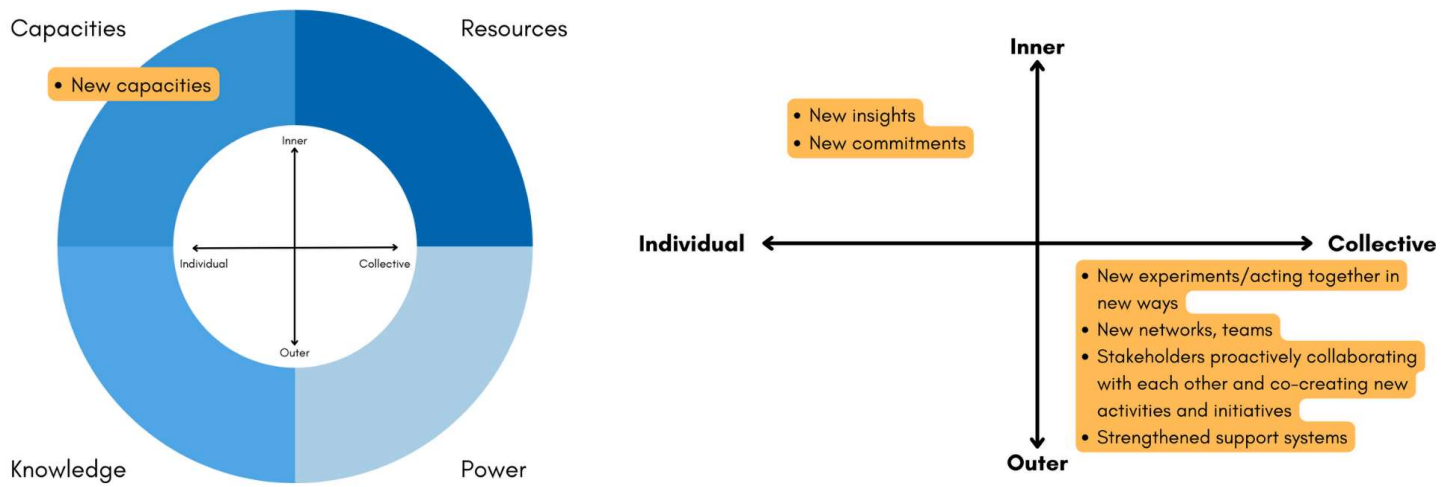
Furthermore, there is room to reconsider the sequencing of the different elements within the early, intermediate, and advanced signals. Currently, early signals include new insights, networks, capacities, and trust-building; intermediate signals include new policies and collaborative stakeholder efforts; and advanced signals include the emergence of new institutions and beliefs. However, this sequence of change may not always advance in this way, especially considering the origin of change. For instance, grassroots movements might witness individual-level changes, such as heightened insight, capacity building, or increased trust, in the early phases, with subsequent policy changes occurring in the intermediate phase. However, in top-down approaches, individual mindset shifts or capacity building might lag behind policy implementations. This observation is supported by our research findings, wherein survey and interview respondents frequently highlighted policy initiatives as being enhanced by the platforms, with individual capacity building often seen as a result rather than an early signal. Notably, challenges such as a lack of openness underscore the ongoing necessity for trust-building efforts.

To this end, we propose to refine the existing Signals of Change Framework by integrating its elements into our Transformative Change Framework. This revised framework seeks to address the limitations of the current approach by reorganizing the phases of change and incorporating elements specific to agricultural commodity systems. Our proposed framework not only delineates the various phases of the change process but also emphasizes the levels at which change occurs. By doing so, it provides a more granular understanding of the transformative process, and allows for the measurement of shifts in capacities, resources, power dynamics, and knowledge accumulation necessary for transformative change to take place. Moreover, we advocate for incorporating elements specific to agricultural contexts into the outer ring of the framework. These include agricultural inputs, labor, infrastructure, and credit, which would be categorized as resources, or agricultural practices which would be categorized as capacities or knowledge. By incorporating these agricultural-specific elements into the framework, we enhance its utility as a tool for measuring transformation within agricultural contexts. We expect that this refined framework offers a clearer trajectory of transformative change and facilitates a more targeted identification of sectors in need of intervention or support.

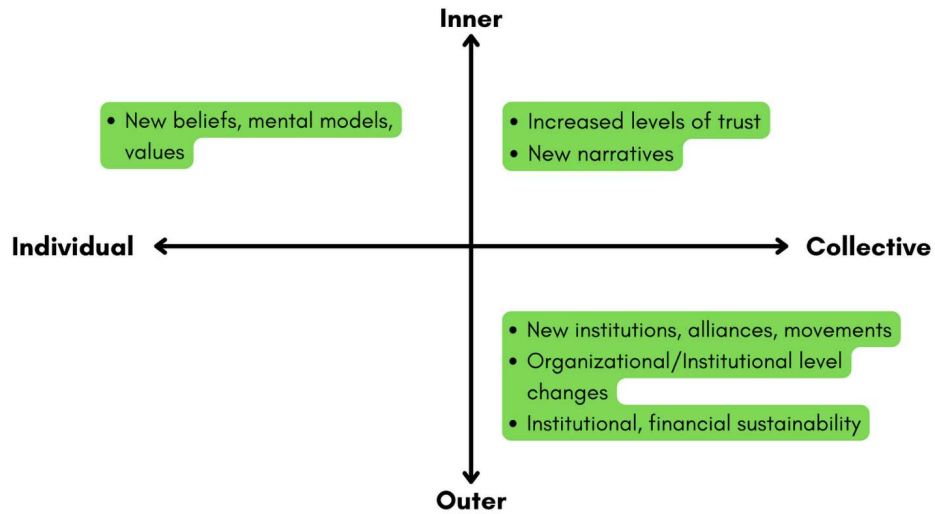
a. Refined Early Signals of Change



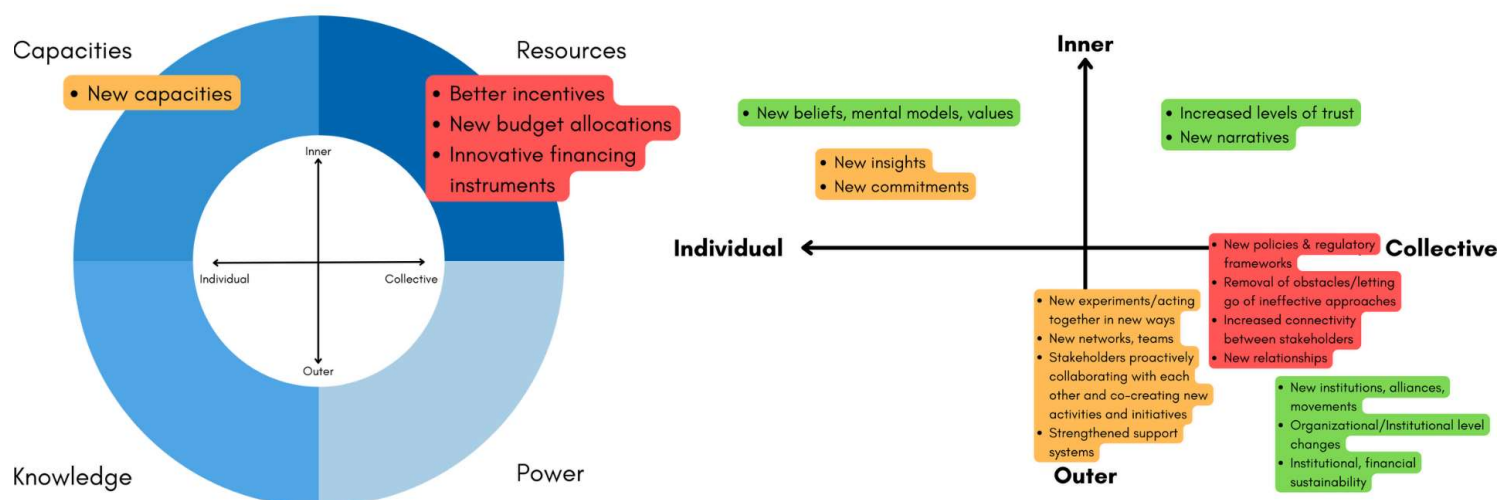
b. Refined Intermediate Signals of Change



c. Refined Advanced Signals of Change



d. Integrating Signals of Change into Transformative Change Framework



Research Limitations

Assessing the transformative impact of MSPs in Indonesia's palm oil sector required us to navigate a challenging landscape. Our data collection process was marked by hurdles ranging from limited interviews and incomplete surveys to a lack of baseline data and stringent time constraints. These obstacles not only hampered our ability to gather comprehensive data but also posed limitations on the scope of our evaluation and results.

To truly understand the impact of the four MSPs studied in Indonesia, we would have needed robust baseline data on the state of the palm oil sector before the MSPs were implemented. We did not have this baseline data, so we asked stakeholders in interviews and surveys to tell us how things have changed due to the program, potentially inserting bias into stakeholders' perception of the MSPs.

Despite immense efforts to reach out to stakeholders, scheduling conflicts and a lack of response from platform participants resulted in a limited number of interviews. Similarly, incomplete survey responses hindered the comprehensive collection of data, potentially affecting the depth and accuracy of the analysis. Due to a language barrier, we relied on a native Bahasa speaker to translate; however, the transcription was a synopsis of the interviewees' responses rather than a direct translation thereby limiting discernable takeaways.

Our research also faced time constraints, which impacted the thoroughness and scope of data collection efforts. A compressed timeline may have restricted the depth of analysis and prevented exhaustive exploration of key themes and factors influencing transformative change.

Additionally, time limitations may have precluded the implementation of certain data collection strategies or the opportunity for more comprehensive stakeholder engagement.

Factors such as inactive platforms and transitions within governmental bodies posed challenges to data collection efforts. The lack of engagement from certain platforms and disruptions caused by government transitions may have limited the availability of key stakeholders and impeded the collection of comprehensive data across all platforms.

Lastly, constraints related to research funding and travel restrictions further constrained data collection efforts. The inability to allocate sufficient resources for fieldwork and travel prevented our team from conducting in-person data collection, potentially limiting the depth of insights obtained and the validity of findings. Limited access to stable internet connections among participants hindered the reach and inclusivity of interviews, potentially excluding valuable perspectives from the analysis (such as those of remote smallholder farmers). Furthermore, our inability to conduct in-person interviews may have impacted rapport-building and depth of insight obtained from stakeholders.

While our research aimed to provide valuable insights into the effectiveness of MSPs at enacting transformative change in the Indonesian palm oil sector, several limitations constrained data collection and analysis efforts. These challenges should be acknowledged to contextualize the findings and inform future research projects.

Recommendations for UNDP

Building upon our findings, several key next steps can be identified to further evaluate and advance the effectiveness of MSPs in facilitating transformational change.

We recommend broadening the definition of stakeholder groups beyond conventional categorizations to encompass a diverse range of actors: governmental bodies; private sector entities; smallholders; NGO/CSOs, academia, and international organizations. Within each stakeholder group, no less than thirty participants should complete a survey to ensure the applicability of statistical analyses and a normal distribution of data. The number of interviews per stakeholder group is not as important in replication because interviews provide in-depth insight and contextual knowledge, rather than quantitative data.

Furthermore, UNDP should streamline survey administration processes by adopting app- or web-based platforms such as the platform used in our research, Qualtrics. This approach offers several advantages, including enhanced accessibility, convenience, and scalability. Additionally, the facilitation of surveys during platform meetings and compensating respondents as an incentive can increase participation, ensuring representative feedback and maximizing the validity of results.

While surveys provide valuable quantitative data, interviews offer in-depth qualitative insights that contextualize survey results. UNDP should prioritize conducting in-person interviews wherever feasible, as face-to-face interactions build rapport and trust, facilitating an exploration of all stakeholder perspectives. In-person interviews also allow participants who may not have internet access, such as smallholders, to have their voices heard.

Lastly, UNDP should prioritize collecting data from the same participants throughout the duration of MSP activities. By establishing baseline data and monitoring change over time, UNDP can gain deeper insights into the evolution of stakeholder dynamics, policy effectiveness, and the overall impact of platforms. This iterative process enables informed decision-making, facilitates adaptive management, enhances the accountability of MSP initiatives, and builds trust with stakeholders over time.

Appendix F contains revised survey and interview questions that can be used to assess transformative change of MSPs in the future. We removed many of the short answer questions from the survey and added questions to ensure a more equal representation of questions from each quadrant. We also revised questions to be worded more clearly, and added more options to many multiple choice questions for more useful data.

Conclusion

In assessing the effectiveness of MSPs to enact transformative change in agricultural commodity systems, our team developed a Transformative Change Framework and applied it to four MSPs implemented by UNDP FACS in the Indonesian palm oil sector. Through an initial case study, distributed surveys, and stakeholder interviews, we found that MSPs are a necessary tool for fostering communication and collaboration amongst stakeholder groups; however, it is still challenging to unify voices due to sectoral egos, resource limitations, power imbalances, and the lack of sustained funding.

The evaluation of MSPs within the palm oil sector in Indonesia has illuminated significant progress and challenges in fostering transformative change. After analyzing data collected from surveys and interviews, two central themes emerged: increased communication and collaboration among stakeholders, and a mindset shift towards sustainability. These themes, observed across all quadrants of our framework, highlight the complex and multidimensional nature of transformative change within agricultural commodity systems.

The enhancement of communication and collaboration abilities among stakeholders has been instrumental in promoting knowledge sharing, capacity building, and trust within MSPs. Stakeholders have recognized the importance of inclusive participation, particularly from smallholders, and the need to overcome individual agendas and conflicts to achieve collective goals. Despite improvements, challenges such as sectoral egos and a lack of alignment in

viewpoints persist, highlighting the ongoing need for dialogue, consensus-building, and community-building efforts within MSPs.

A notable shift in mindset towards sustainability was observed, with stakeholders increasingly acknowledging the importance of sustainable practices in the palm oil sector. This shift is reflected in heightened awareness of environmental concerns, improved understanding of sustainable agriculture practices, and a growing commitment to environmental protection.

The evaluation also revealed disparities in power dynamics and resource distribution, posing barriers to inclusive participation and equitable representation, particularly for smallholder farmers. Addressing these challenges requires greater capacity building, resource allocation, and policy alignment to ensure the meaningful engagement of all stakeholders.

While significant progress has been made within MSPs in promoting communication, collaboration, and sustainability in the palm oil sector, the journey towards transformative change is ongoing. Sustaining momentum, fostering unity, and addressing persistent challenges are essential for advancing towards a more equitable, resilient, and sustainable future for all stakeholders involved in the Indonesia palm oil sector. The insights learned from our evaluation will inform future efforts to strengthen MSPs implemented by the UNDP FACS team and drive meaningful change within agricultural commodity systems.

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Appendix

A. Case Study Table

Platform	National Platform for Sustainable Pineapple Production	National Platform for Sustainable Fisheries of Large Pelagics	National Platform for Sustainable Palm Oil	National Platform for Sustainable Cocoa	National and Regional (Chaco) Platforms for Sustainable Beef	National Oil Palm Platform of Liberia
Country	Costa Rica	Costa Rica	Indonesia	Dominican Republic	Paraguay	Liberia
Actors	Ministry of Environment and Agriculture, Ministry of Agriculture and Livestock, Ministry of Labor, Ministry of Health, Costa Rican Institute of Water and Sewage, pineapple export MNCs	Ministry of Environment and Energy, Ministry of Agriculture and Livestock, Costa Rican Institute of Fishing and Aquaculture, Ministry of Foreign Trade, National Learning Institute, National Longline Sector, National Chamber of Fisheries and Aquaculture Exporters	Ministry of Agriculture, Coordinating Ministry of Economic Affairs, multiple other gov agencies, NGOs, academic institutions, smallholder farmers, development partners, certification bodies	Ministry of Agriculture, Mondelez International's Cocoa Life Program, National Cocoa Commission, Producers and marketers (both small and large-scale), communal representatives	Ministry of Environment and Sustainable Development, Farmers, Rancher Cooperatives, Indigenous communities, Civil Society Organizations, Academia	Conservation International, Ministry of Agriculture, Forestry Development Authority, Environmental Protection Agency, Cooperative Development Agency, Liberia Land Authority
Key Objectives	Develop a NAP to address the negative externalities associated with pineapple production; promote sustainable agricultural practices, mitigate the presence of agrochemicals in waterways, and managing deforestation surrounding cultivation areas	Improve management, monitoring, and profitability of fisheries through precision fishery projects that create a database of biological, socioeconomic, and productive information; development of a framework that allows for governance of the fishery via acquisition of necessary equipment and efficient resource use; capacity to serve global demand for	Improve: smallholder capacities, environmental conservation, and palm oil governance and conflict resolution. Strengthen Indonesia Sustainable Palm Oil certification for wider acceptance and market access	Boosting farm profitability, strengthening multi-stakeholder collaboration, and enhancing the well-being of all actors in the Dominican Republic's cocoa community through the development and implementation of a 10 year Cocoa National Action Plan	To promote sustainable land use practices, increase the production of sustainable beef, and improve the livelihoods of local communities.	Create a system that supports local communities and smallholder farmers, avoids disruptions to sustainable food systems and traditional ways of life, helps the government achieve economic and developmental targets, ensures the protection of biodiversity and conservation of natural resources, and facilitates sustainable oil palm development.

		sustainably-harvested seafood				
Level of Support	UNDP-GCP, Costa Rican governmental agencies, IDH, ICCO, BCIE, Dutch Embassy	UNDP-GCP, Costa Rican governmental agencies (national)	UNDP-GCP, Indonesian National Government, Regional governments, ADM capital, Walmart, Foundations, PT. Anj Agri Siais, PT. PN III, Swiss State Secretariat for Economic Affairs	UNDP-GCP, DR Ministry of Agriculture, National Cocoa Commission, Mondelez International's Cocoa Life Program	UNDP-GCP, Paraguayan national and local agencies, WWF	UNDP-GCP (pilot phase 2017-2022), Ministry of Agriculture, Conservation International
Policy Support	NAP legalized in 2016 but not fully implemented	NAP never legalized	NAP legalized in 2019 and set to be implemented until 2024	NAP validated in 2015 and implemented from 2018-2028	Chaco Beef Action Plan adopted in 2019	National Sustainable Oil Palm Strategy and Action Plan launched in 2022
Outcomes	Establishment of "Monitoring Land Use Change in Productive Landscapes" system across Costa Rica; educational materials to members; adoption of alternative agrochemicals.	The Fishery Improvement Project provides a certification roadmap; 100% of vessels are equipped with monitoring systems to track fishing in marine protected areas and Exclusive Economic Zones.	NAP developed and being implemented. 8 provinces and 10 districts have developed action plans. Improved smallholder capacities, increased collaboration, expanded ISPO certification.	NAP developed and set to be implemented (2017-2027). National Cocoa Platform completed in 2016. Improving farm productivity, strengthening associations in cocoa trading entities.	The Chaco Beef Action Plan adopted and implemented. Developing a unified guide for Good Livestock Practices, aiding indigenous communities.	RSPO National Interpretation, commitment to Africa Sustainable Commodity Initiative, National Sustainable Oil Palm Strategy and National Action Plan launched in 2022.

B. Initial Survey and Interview Questions

Survey Questions

1. Name
2. Email
3. Whatsapp
4. Position
5. Organization
6. Please select which platform you are involved in. Select all that apply:
 - a. National Action Plan Implementation Team (NAP IT) - Indonesia
 - b. Provincial Action Plan Implementation Team (PAP IT) - North Sumatra
 - c. Provincial Action Plan Implementation Team (PAP IT) - Jambi
 - d. District Action Plan Implementation Team (DAP IT) - Tebo
 - e. Unsure
7. Please identify the stakeholder group with which you identify with:
 - a. Governme
 - b. Civil Society Organization/NGO
 - c. Academia
 - d. Development Partner / International Organization
 - e. Private sector
 - f. Smallholder association
 - g. Other
8. Please describe your involvement in the platform (for example, how many meetings do you attend, how long have you been involved, what activities have you participated in)
9. If you're aware of them, please indicate the goals that you believe the platform seeks to achieve (select all that apply)
 - a. Support sustainable development of the commodity sector
 - b. Improving smallholder capacities
 - c. Strengthening multi-stakeholder collaboration
 - d. Implement sustainable land use practices
 - e. Other (short answer section)
10. Of the goals you selected, which do you think have been achieved? (select all that apply)
 - a. Support sustainable development of the commodity sector
 - b. Improving smallholder capacities
 - c. Strengthening multi-stakeholder collaboration
 - d. Implement sustainable land use practices
 - e. Other (short answer section)
11. Has your knowledge of palm oil increased, decreased, or remained the same since your involvement in the platform?
 - a. Increased
 - b. Decreased

- c. Remained the same
12. Do you feel like the platform is progressing in a direction beneficial to you or your organization? How? (short answer)
13. In your view, how has the platform impacted your relationship with different stakeholders (improved, remained the same, worsened)?
- Government : i. Improved, ii. remained the same, iii. worsened
 - CSOs/NGO i. Improved, ii. remained the same, iii. worsened
 - Academia i. Improved, ii. remained the same, iii. worsened
 - Development partners/international organizations: i. Improved, ii. remained the same, iii. worsened
 - Private sector: i. Improved, ii. remained the same, iii. worsened
 - Smallholder associations: i. Improved, ii. remained the same, iii. Worsened
 - Other: Improved, ii. remained the same, iii. Worsened
14. Before the platform, how often did you meet with these other stakeholder groups?
- Government: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - CSOs/NGO: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Academia: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Development partners/international organizations: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Private sector: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Smallholder associations: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Other: Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
15. Since the platform, how often do you meet with other stakeholders involved in the platform?
- Government: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - CSOs/NGOs i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Academia i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Development partners/international organizations: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Private sector: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Smallholder association:: i. Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
 - Other: Weekly ii. Monthly iii. Multiple times per year iv. Yearly v. never
16. The number of stakeholders with whom I interact has increased, decreased, or remained the same since the introduction of the platform.
- Increased
 - Decreased
 - Remained the same
17. My support network has increased, decreased, or remained the same since the start of the

platform. (A support network is a group of people that you can rely on and receive help from, especially in a time of need.)

- a. Increased
 - b. Decreased
 - c. Remained the same
18. Please indicate your level of agreement with this statement: “As a result of the platform, new policies were enacted that will lead to sustainable commodity production in my country”.
- a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
19. Which stakeholders/stakeholder groups have undertaken sustainability initiatives related to agricultural production for any of the following since the introduction of the platform?
- a. Financial or technical support for smallholder farmers: i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - b. New agricultural policy: i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - c. Support for marketing (ex. Commercial marketing): i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - d. New infrastructure to support agriculture (example: Roads, irrigation, harvesting material): i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - e. Improved supply of inputs for agricultural production (example: fertilizer, pesticides/herbicides): i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - f. Improved credit for sustainable commodity production (example: loans): i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
 - g. Changes in labor practices (example: Better wages, better working conditions): i. Government, ii. CSOs/NGOs, iii. Academia, iv. Development partners/international organizations, v. private sector, vi: Smallholder association
20. Please indicate your level of agreement with this statement: “I feel that my voice/opinions/concerns are heard at platform meetings.”
- a. Strongly agree

- b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
21. Please indicate your level of agreement with this statement: “I believe that there is consistent and clear communication among platform stakeholders.” For example, information is communicated clearly, stakeholders communicate regularly with each other, stakeholders listen to others when they speak).
- a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
22. Please indicate your position with this statement: “I believe that collaboration among stakeholders has improved, declined, or remained the same since the start of the platform.”
- a. Improved
 - b. Declined
 - c. Remained the same
23. I believe conflict among stakeholders has increased, decreased, or remained the same since the platform’s establishment.
- a. Increased
 - b. Decreased
 - c. Remained the same
24. In my view, differences in power between stakeholders impact the functioning of the platform extensively, somewhat, or not at all. (Examples of power include some groups dominating conversation, marginalized groups silenced, dismissed, or not represented).
- a. Not at all
 - b. Somewhat
 - c. Extensively
25. Please indicate how the amount of power each stakeholder group holds has changed since the start of the platform. (For example, are some groups able to engage in dialogues that weren’t able to before? Are more groups represented at meetings now? Have dominant groups allowed more space for others to talk?)
- a. The power of Government has: i. Increased, ii. Decreased, iii. Stayed the same
 - b. Civil Society Organization/NGOs: i. Increased, ii. Decreased, iii. Stayed the same
 - c. Academia: i. Increased, ii. Decreased, iii. Stayed the same
 - d. Development Partner/international organizations: i. Increased, ii. Decreased, iii. Stayed the same
 - e. Private sector i. Increased, ii. Decreased, iii. Stayed the same

- f. Smallholder association i. Increased, ii. Decreased, iii. Stayed the same
 - g. Other: i. Increased, ii. Decreased, iii. Stayed the same
26. What changes have taken place as a result of the platform, for you as an individual? (short answer)
 27. What changes have taken place as a result of the platform for your organization? (short answer)
 28. In your opinion, what is the greatest thing the platform has achieved (short answer)?
 29. What are the biggest challenges for the government to support the platforms (implementation teams) and the implementation of the action plans at the national, provincial and district levels and what do you suggest?
 30. What do you think are the challenges for coordinating and working collaboratively and what should be done to overcome it?

Interview Questions

1. To get us started, would you mind sharing your experience with this program in your own words?
2. What has the forum and/or the NAPSPO team achieved?
 - a. What factors have helped the implementation and functioning of the forum and/or NAPSPO?
 - b. What factors have hindered the implementation and functioning of the forum and/or NAPSPO?
 - c. Are these impacts immediate or evolving? Do you feel that they are short-term or long-lasting?
 - d. Have any obstacles to sustainable palm oil been removed since the start of the forum or NAPSPO?
 - e. If time allows: Do you think these changes are irreversible? Have they occurred throughout the whole palm oil production system? Elaborate as needed.
3. Are you aware of any sustainability initiatives that have been implemented since the start of the forum or NAPSPO?
 - a. If so, what are these initiatives?
 - b. Which stakeholders/stakeholder groups have undertaken sustainability initiatives related to agricultural production since the introduction of the forum or NAPSPO?
4. What new capacities or skills have you gained since the start of the forum or NAPSPO?
 - a. What new beliefs or values have you gained since the start of the forum or NAPSPO? (For example, have you changed any views on how palm oil should be produced / on who should be involved in decision-making processes / on sustainable development within the palm oil sector?)
 - b. Have any of your norms or worldviews changed since the start of the forum or NAPSPO? (For example, have you changed any views on how...)
5. How has the forum or NAPSPO launch affected your organization?

- a. How has the forum or NAPSPO affected commodity agriculture in your area?
6. Would you be comfortable answering questions related to power dynamics?
 - a. How would you describe the present power dynamics in this commodity system? For example, are some groups able to engage in dialogues that weren't able to before? Are more groups represented at meetings now? Have dominant groups allowed more space for others to talk?
7. Would you be comfortable answering questions surrounding conflict related to the forum or NAPSPO?
 - a. Are you aware of any conflict? If so, how is it addressed?
8. What collective actions have been taken since the start of the forum or NAPSPO? Has anything been co-created?
9. Have any new policies or regulatory frameworks been enacted since the start of the forum and/or NAPSPO?
10. Have there been any changes to land tenure/land rights since the forum or NAPSPO began?
11. Which partners/organizations/entities/individuals did you interact with before the forum and/or NAPSPO began?
 - a. Has that changed and if so, with whom do you interact now?
 - b. Who are the new stakeholders in your network?
12. For smallholder farmers: Have you learned anything in this process? If so, what? Please provide an example. Have you, or will you, apply it in your own work?
 - a. Have you learned anything new about sustainability / sustainable farming practices since the forum and/or NAPSPO began? Do you feel like you have the resources and support to implement these new practices? Do you think that these practices are achievable or practical?

C. Demographics of Survey and Interview Respondents

Survey Respondents

Of the 62 respondents, 24 were part of the Jambi platform, 25 were part of the National platform, 15 were part of North Sumatra, and six from Tebo. Of the 37 respondents who filled out the whole survey, fourteen indicated that they were part of the Jambi platform, fourteen of the National platform, thirteen of North Sumatra, and four of Tebo. Since some participants are involved in multiple platforms, the total does not equal the number of respondents. Of the 62 stakeholders who filled out at least a portion of the survey, 38 were government stakeholders, ten were part of the private sector, six were part of CSOs/NGOs, and two members from the remaining stakeholder groups of academia, development partner/international organizations, and smallholder farmer associations. Of stakeholders who completed the entire survey, 21 respondents were government stakeholders, seven were part of the private sector, two were in academia, two were part of CSO/NGOs, one was from a development partner/international organization, and two were a part of smallholder farmer associations. Two respondents indicated being in a different stakeholder group.

Interview Respondents

Six of the interviewees are involved in the National platform, five in North Sumatra, three in the Jambi platform, and two in Tebo. Of these, seven interviewees were government stakeholders, two were a part of CSO/NGOs, and one stakeholder was involved in each development partner/international organization, private sector, academia, and other stakeholder group.

D. Dominican Republic Interviews and Summary

Introduction

The National Cocoa Platform in the Dominican Republic started in 2013 and remained active until approximately 2016. As the platform has been inactive since then, it was not possible to disseminate a survey to platform participants due to limited contact information available for those involved in the platform. However, we conducted three interviews with various stakeholders involved in the platform. Summaries of these interviews can be found below.

Interview 1 - National Cocoa Commission

Interview 1 was conducted with a member of the National Cocoa Commission, a public-private institution in the Dominican Republic. The aims of the National Cocoa Platform were discussed, in addition to achievements resulting from the platform and current challenges facing the platform's reinstatement.

The interviewee has worked in cocoa since 2013 and initially focused on cocoa diseases. As a result of their participation in the platform, they gained a deeper understanding of plantation management, quality control, and markets. Their awareness of challenges facing cocoa production was broadened through training programs and they have come to understand the importance of farm-level investments to ensure sustainable, long-term production. They view a proactive approach to assisting producers in improving their farming practices as paramount. As a result of the platform, they have a newfound understanding of the importance of cocoa in the Dominican Republic's environment, economy, and social fabric. They believe in the power of unity and small-scale actions to bring about meaningful change. Overall, they view the platform as a transformative tool for fostering collaboration and achieving common goals.

According to a National Cocoa Commission representative, the National Cocoa Platform aimed to assess the cocoa sector's strengths, weaknesses, opportunities, and threats, otherwise known as SWOT analysis, culminating in a National Action Plan to guide decision-making in the Dominican Republic's cocoa sector. This SWOT analysis provided a comprehensive diagnosis of the cocoa sector and involved all actors along the supply chain over a 5 year period. Before the platform's establishment, a strategic plan in the cocoa sector had not existed since 1987. Combined challenges of an aging farmer population, less productive plantations, climate change, natural disasters, and the threat of disease and pests have pushed the cocoa sector to a vulnerable state. The National Cocoa Platform operated as a way to confront these challenges and integrate resiliency into the cocoa sector, ensuring its viability and productivity for years to come.

While operative, the platform celebrated several achievements. As a result of the platform, a National Action Plan guiding the sustainable production of cocoa was developed and there was an assessment of the cocoa sector from all involved in the platform. New artisanal cocoa

processing companies were created and there are now chocolate quality contests. Improvements in the production of cocoa plants in nurseries have also been realized. Additionally, progress has been made in training programs. Technicians, along with producers, have implemented new and broader training models. There have been some improvements in farms, however, this is not at the level needed. According to the interviewee, 60% of cocoa plantations are decades old and their deteriorated state requires high investment to restore their productivity. There have also been improvements in the organic management of farms. While the platform may not have directly influenced the rise in producer numbers, it has helped to raise awareness among breeders through training programs and guidelines outlined in the action plan. This awareness has led to the formation of associations aimed at improving the quality and management of cocoa production and export, addressing some of the issues identified by the platform.

Although initial excitement surrounded the platform and its potential for building a more sustainable and resilient cocoa sector, this progress was upended by a government transition pausing many of the platform's initiatives and plans as outlined in the National Action Plan. The private sector has remained involved in some of the plan's initiatives, however, most of these efforts have been focused on commercial marketing. For many years the cocoa sector has largely focused on trade, in turn losing focus on agricultural infrastructure, producers, and the environment. Due to declining income and lack of opportunity, younger generations have not pursued farming and an aging producer population threatens the sustainability of the cocoa sector.

The interviewee states a need for resiliency, consensus, and unity within the cocoa sector. Greater support from the public sector is also required. Due to continued challenges and growing threats facing the cocoa sector, a continuation of the National Cocoa Platform could help to instill greater resiliency and sustainability within the sector. A clear articulation of the platform's goals and clarifying its purpose would also lead to a greater understanding for all involved. Finding a leading institution with greater permanence to carry out the reinstatement of the platform could alleviate potential future upheavals due to politics and government transitions.

Interview 2 - Private Sector

Interview 2 was conducted with a stakeholder from the private sector within the cocoa trade industry of the Dominican Republic.

According to the interviewee, stakeholders involved in the platform included producers, cocoa processors, government representatives, and finance institutions. Meetings took place at the National Cacao Committee's office. Several functional tables were established, each dedicated to address specific aspects such as funding, sustainable environmental practices, educating producers on best practices, and budget management. Each table operated independently,

contributing individual progress reports during subsequent plenary sessions. However, the interviewee noted that a National Action Plan was made but has not been implemented.

The interviewee noted that the platform recognized the needs of the cacao-producing sector, including improved cocoa production and processing technology, more training and education for the producers, better economic and labor conditions, funding through banks, and increased consciousness of the environment. By first understanding these challenges, the platform is better able to work to solve them.

Regarding the acquisition of new norms and worldviews resulting from the platform, the interviewee mentioned that as climate change was one of the main topics discussed during the platform meetings, there was an increase in knowledge of climate change compared to before the platform. As a result, there has been an increase in knowledge and practice of sustainable farming and agreements that farming should be done to preserve the environment. According to the interviewee, the number of cocoa producers in the Dominican Republic have increased because cocoa production is more profitable thanks to the knowledge gained from the platform.

However, despite these achievements, there are still many aspects of the platform that can be improved. The interviewee believes that there was a power imbalance within the platform, with the private sector holding more power due to their economic resources. Moreover, there is distrust among stakeholders, especially between the private sector and smallholders. This distrust makes the whole cocoa trading process longer and slower. (Producers own the plants and are responsible for harvesting cacao, while traders manage the entire process, from extracting cacao to producing the final product. This is mainly due to the traders' resources and ability to handle large volumes of cocoa, while producers often lack the necessary technologies to do so). Furthermore, the interviewee mentioned that no direct sustainability initiatives have been implemented since the platform's launch.

Overall, the interviewee has learned a lot about sustainable farming practices through the platform and noted that these practices are achievable, practical and should be prolonged. However, there are not many resources available to support these new practices, especially for producers. In the interviewee's opinion, the gains of the platform, such as a knowledge about sustainable farming practices, may last for the short term but are unlikely to be long-lasting due to the fundamental issue of a lack of economic resources for producers in the Dominican Republic. Producers require economic support to maintain their farms in good condition, yet they lack this assistance, resulting in unprofitable production.

After the platform ended, the interviewee's organization began to implement the sustainable agricultural practices learned from the platform. For example, they have provided training and

education to producers, imparting the knowledge of sustainability practices they gained from the platform.

Moving forward, the interviewee believes that a win-win approach to negotiation between traders and producers is essential. Overcoming the fear of one side losing while the other wins is crucial as they currently view each other as competitors. There's no assurance that the producers will provide their cocoa to the interviewee's own company since other companies offer financial incentives. This situation generates distrust, resulting in a slower process as they work to convince each other that there's no intent to harm anyone in this collaboration. The interviewee hopes that the platform will continue in the future and tackle these existing problems, like distrust and unequal distribution of resources among stakeholders.

Interview 3 - Private Sector

Interview 3 was held as a brief call with a stakeholder from the private sector within the cocoa export industry of the Dominican Republic.

As the platform has not been active for several years, the interviewee does not remember much about it. Although the interviewee recalls attending several meetings, no plans were implemented after these meetings. Furthermore, in the Dominican Republic, the previous government's initiatives are rarely passed to the next government. Even if a plan had been implemented into policy, the interviewee doubts that this policy would continue to exist today.

Summary

Despite the limited number of interviews, this assessment of the Dominican Republic's National Cocoa Platform reveals achievements, challenges, and considerations for the future.

In terms of achievements, significant progress has been made, including the development of the National Action Plan guiding sustainable cocoa production, the establishment of new artisanal cocoa processing companies, advancements in cocoa plant nursery production, improvements in organic farm management, implementation of training programs, and increased awareness of climate literature and sustainable practices.

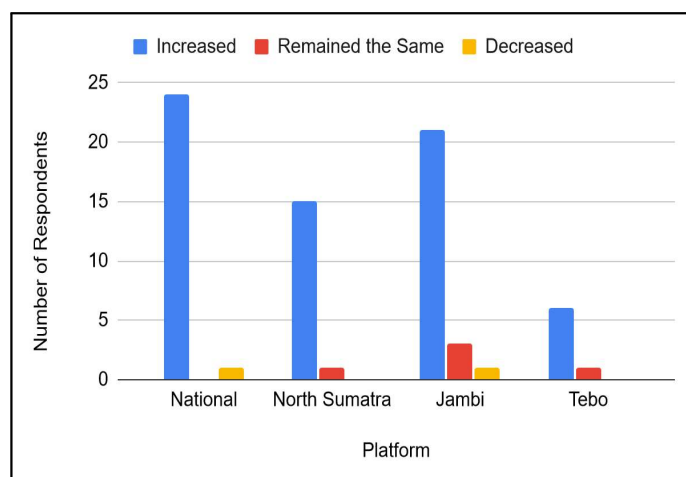
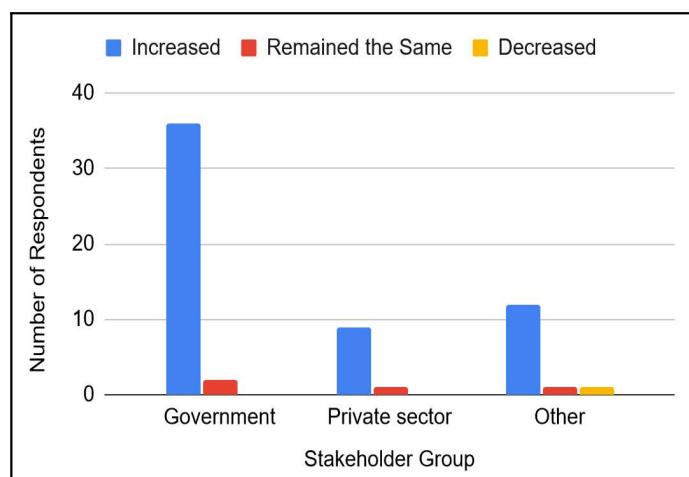
However, challenges persist. During the platform's operation, a power imbalance favored the private sector due to its economic resources, while distrust among stakeholders hindered collaboration. Furthermore, the sustainability initiatives outlined in the National Action Plan faced interruptions during the government transition. Smallholders continue to struggle with limited economic resources, and the cocoa market remains primarily commercial-focused rather than comprehensive.

The interviews underscore the importance of collective collaboration among diverse stakeholders, recognizing the multi-stakeholder platform as a transformative tool. Nevertheless, efforts are required to ensure its sustainability and effectiveness. These efforts should include addressing power imbalances among stakeholders, securing sufficient funding or resources to sustain initiatives and to empower smallholders, and ensuring policy continuity amidst changes in government.

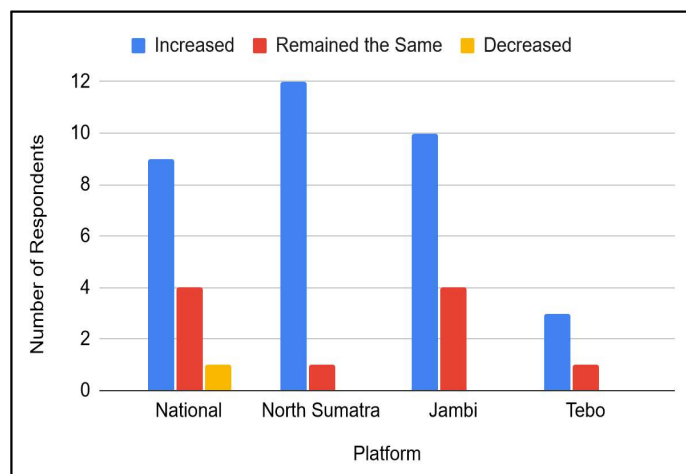
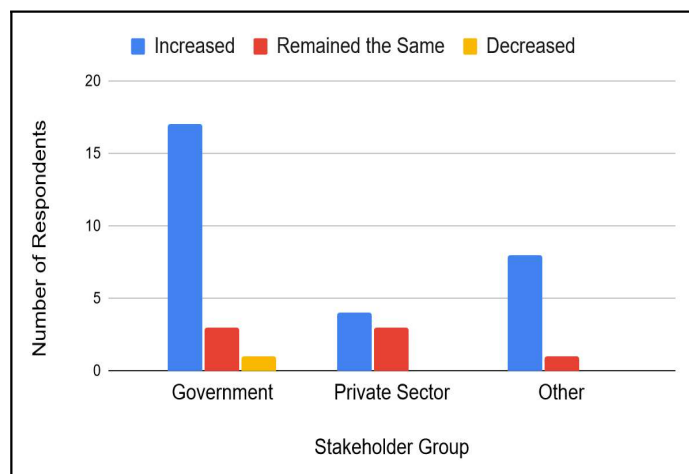
E. Survey Results

The following charts display the results for the most pertinent survey questions by platform and stakeholder group. Due to the lack of responses from NGOs/CSOs, Development partners/International organizations, Academia, Smallholder Farmers, and stakeholders who identify as “Other”, these stakeholders are grouped together into the “Other” category. Overall, the results of our survey show that perspectives are generally consistent among stakeholder groups and platforms.

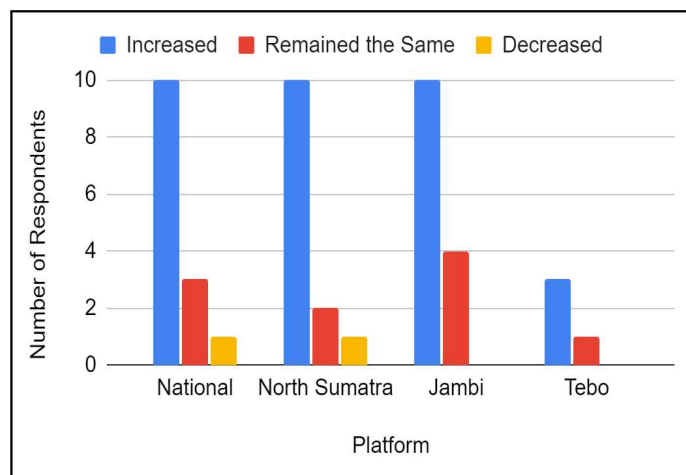
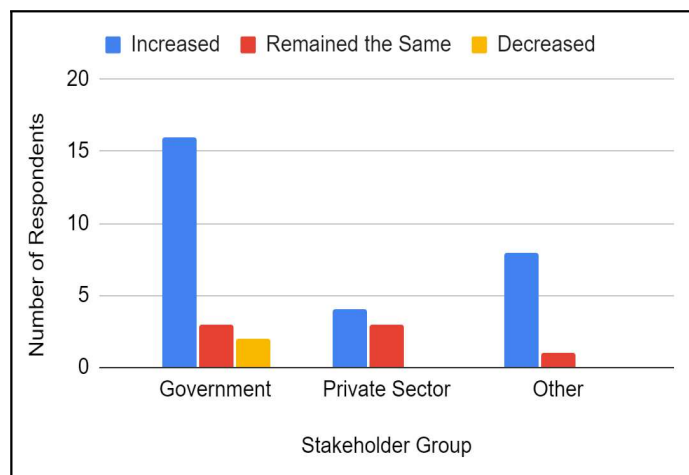
11. Has your knowledge of palm oil increased, decreased, or remained the same since your involvement in the platform?



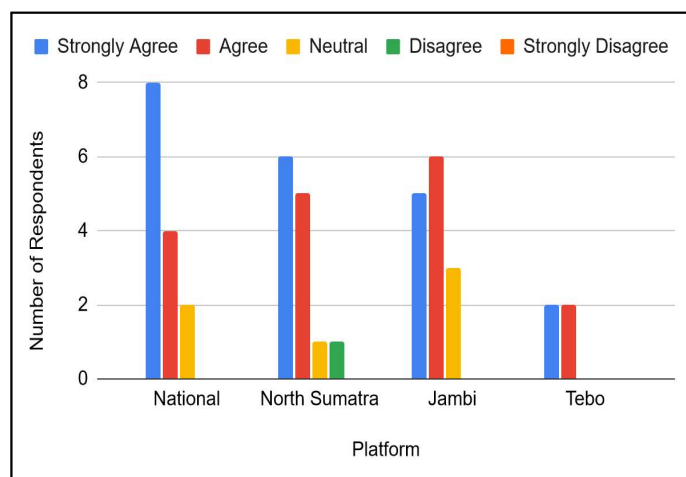
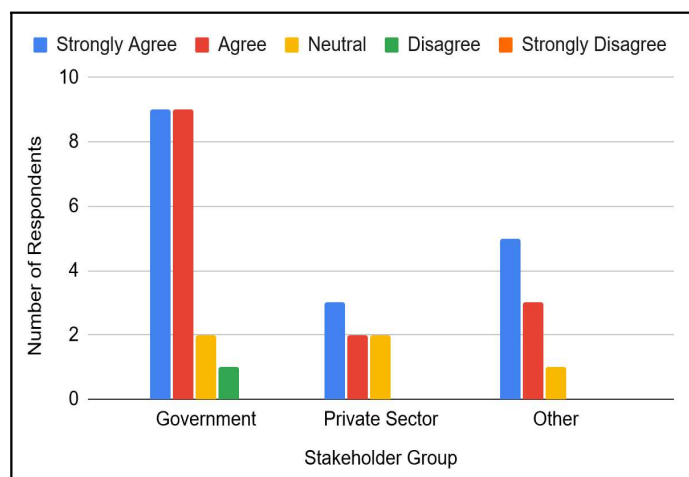
16. The number of stakeholders with whom I interact with has increased, decreased, or remained the same since the introduction of the platform?



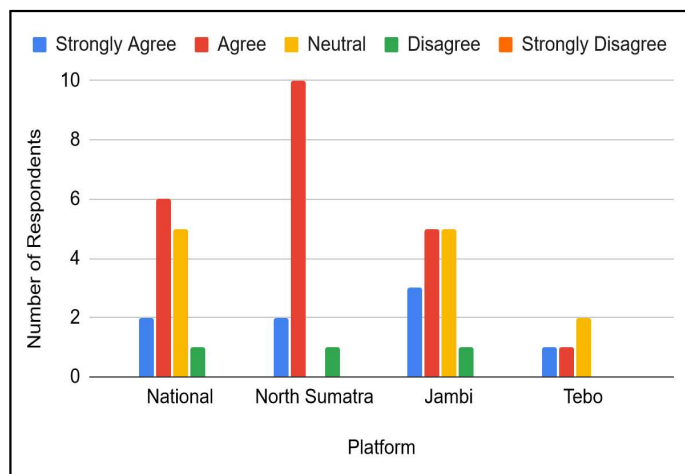
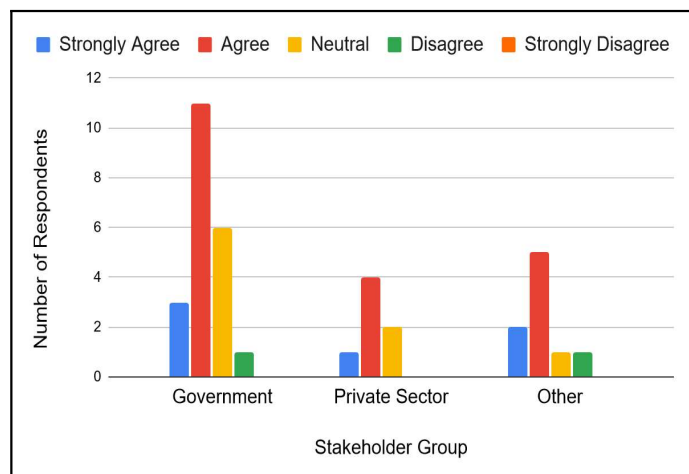
17. My support network has increased, decreased, or remained the same since the start of the platform?



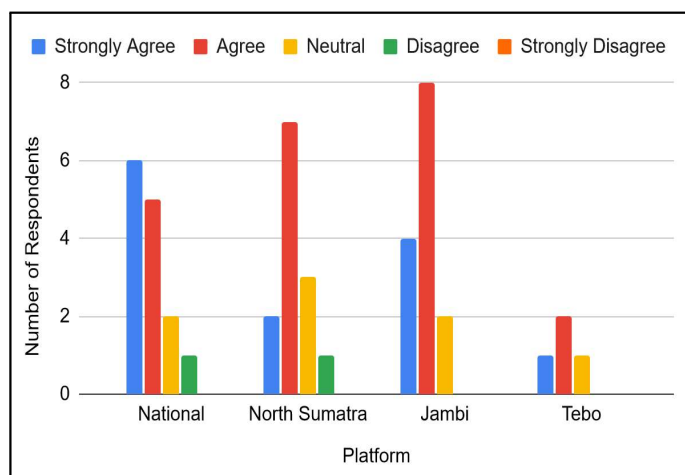
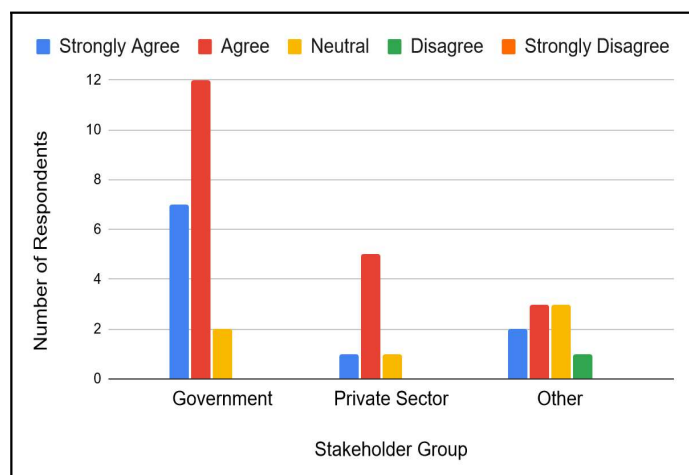
18. Please indicate your level of agreement with this statement: "As a result of the platform, new policies were enacted that will lead to sustainable commodity production in my country."



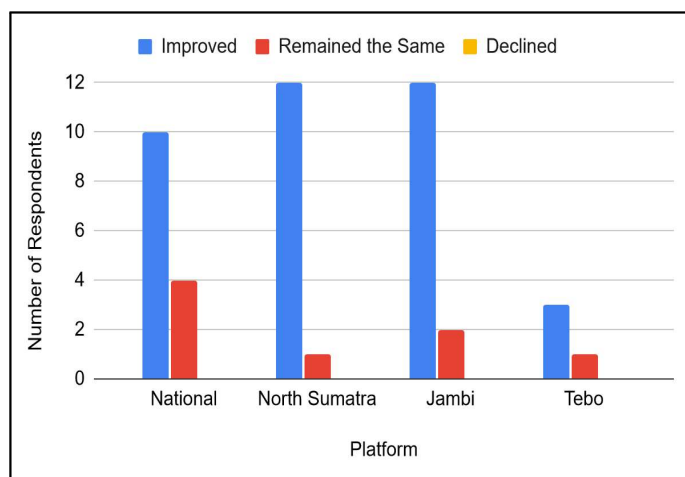
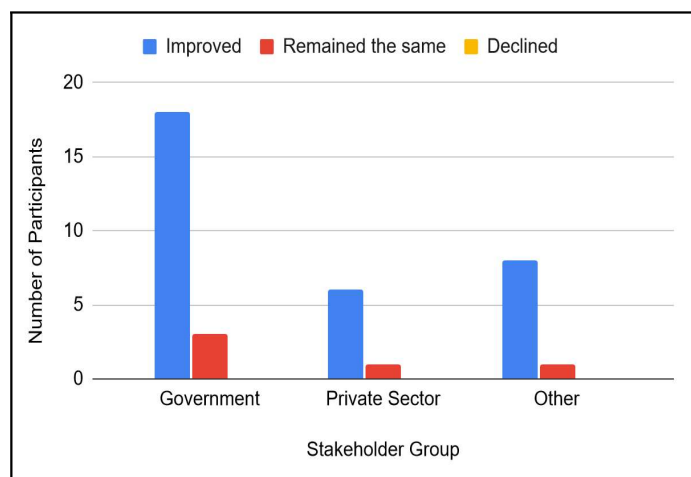
20. Please indicate your level of agreement with this statement: “I feel that my voice/opinions/concerns are heard at platform meetings.”



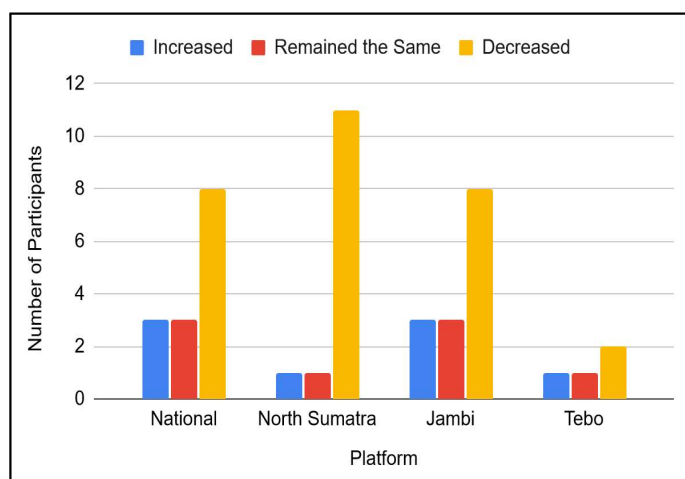
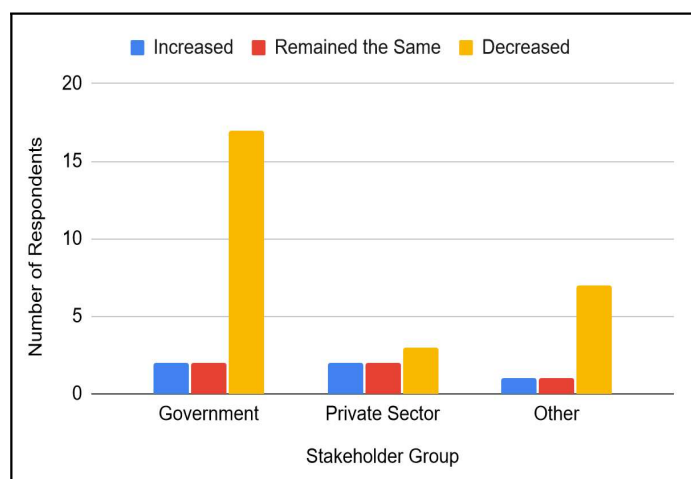
21. Please indicate your level of agreement with this statement: “I believe that there is consistent and clear communication among platform stakeholders.”



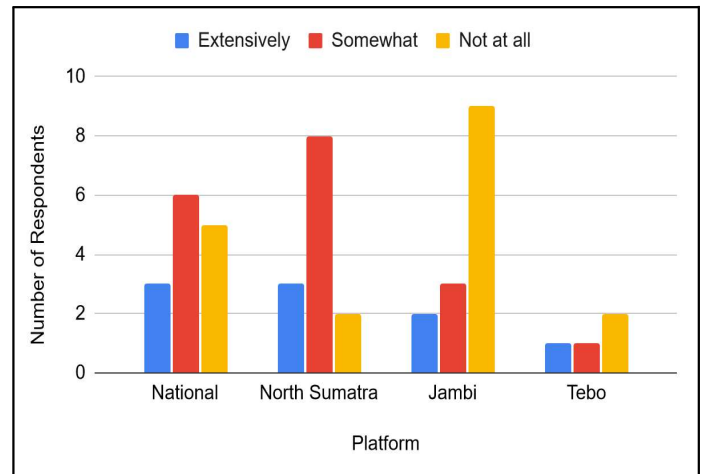
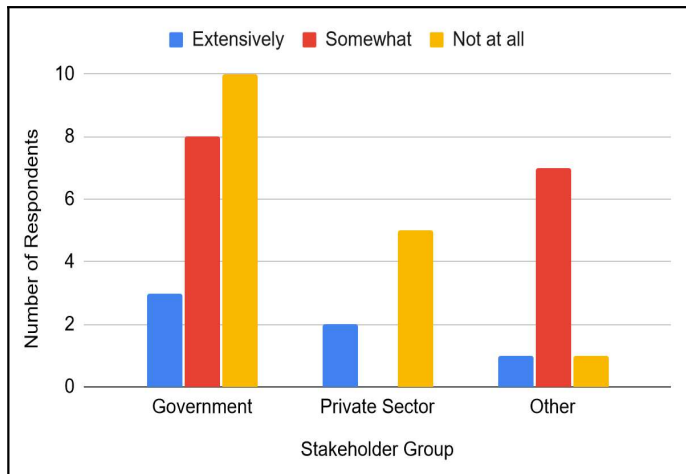
22. Please indicate your level of agreement with this statement: “I believe that collaboration among stakeholders has improved, declined, or remained the same since the start of the platform.”



23. I believe conflict among stakeholders has increased, decreased, or remained the same since the platform's establishment.



24. In my view, differences in power between stakeholders impact the functioning of the platform extensively, somewhat, or not at all.



F. Revised Survey and Interview Questions

When revising our survey and interview questions, we had a few primary goals: (1) reduce the number of short answer questions from the survey to make it less time-consuming, thereby increasing the likelihood of complete survey submissions; (2) ensure a more equal distribution of questions among the four quadrants, particularly for the survey; (3) add more options for multiple choice questions to improve the quality and accuracy of responses; and (4) improve the flow of the survey and interviews by reordering some of the questions.

The revised list of questions is below. The quadrant or element of the outer ring that the question corresponds to is listed in bold.

Survey Questions

1. Name
2. Email
3. Whatsapp
4. Position
5. Organization
6. Please select which platform(s) you are involved in. Select all that apply:
 - a. Add platform
 - b. Add platform (if applicable)
 - c. Unsure
7. Please identify the stakeholder group with which you identify with:
 - a. Government
 - b. Civil Society Organization/NGO/Development partner/Academia
 - c. Private sector
 - d. Smallholder association
 - e. Other
8. Please describe your involvement in the platform. (For example, how many meetings do you attend, how long have you been involved, what activities have you participated in)?
9. To what extent has each platform goal been achieved (completely, mostly, minimally, not at all)?
 - a. Platform goal: i. Completely, ii. Mostly, iii. Minimally, iv. Not at all
 - b. Platform goal: i. Completely, ii. Mostly, iii. Minimally, iv. Not at all
 - c. Platform goal: i. Completely, ii. Mostly, iii. Minimally, iv. Not at all
10. To what extent has your knowledge of the commodity crop increased since your involvement in the platform? (**outer ring - knowledge**)
 - a. Not at all
 - b. Slightly increased
 - c. Greatly increased

11. How has the platform impacted your relationship with different stakeholders (greatly improved, slightly improved, remained the same, slightly worsened, or greatly worsened)? **(outer-collective)**
- Government: i. greatly improved, ii. slightly improved, iii. remained the same, iv. slightly worsened, v. greatly worsened
 - Civil Society Organization/NGO/Development partner/Academia: i. greatly improved, ii. slightly improved, iii. remained the same, iv. slightly worsened, v. greatly worsened
 - Private sector: i. greatly improved, ii. slightly improved, iii. remained the same, iv. slightly worsened, v. greatly worsened
 - Smallholder association: i. greatly improved, ii. slightly improved, iii. remained the same, iv. slightly worsened, v. greatly worsened
12. Since your involvement in the platform, has the number of stakeholders that you interact with greatly increased, slightly increased, stayed the same, slightly decreased, or greatly decreased? **(outer-collective)**
- Greatly increased
 - Slightly increased
 - Stayed the same
 - Slightly decreased
 - Greatly decreased
13. How has your support network changed since your involvement in the platform? (A support network is a group of people that you can rely on and receive help from, especially in a time of need.) **(outer-collective)**
- Greatly improved
 - Slightly improved
 - No Change
 - Slightly worsened
 - Greatly worsened
14. Please list and describe policies or programs that have been enacted since the start of the platform that will lead to sustainable commodity production. (For example, new agricultural policy, new infrastructure to support agriculture, policies that support improved supply of agricultural inputs, improved credit, policies leading to changes in labor practices.) **(outer-collective; outer ring - resources, capacities)**
15. Please indicate your level of agreement with this statement: "I feel that my voice/opinions/concerns are heard at platform meetings." **(outer ring - power)**
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree

16. Please indicate your level of agreement with this statement: “I believe there is consistent and clear communication among platform stakeholders.” (For example, information is conveyed clearly and stakeholders communicate regularly with each other.)
(outer-collective)
- Strongly agree
 - Agree
 - Neutral
 - Disagree
 - Strongly disagree
17. Please indicate your position with this statement: “I believe that collaboration among stakeholders has significantly improved, improved, stayed the same, declined, or significantly declined since the start of the platform.” **(outer-collective)**
- Significantly improved
 - Improved
 - Stayed the same
 - Declined
 - Significantly declined
18. Please indicate your position with this statement: “I believe that conflict among stakeholders has significantly increased, slightly increased, stayed the same, slightly declined, or significantly declined since the start of the platform.” **(outer-collective)**
- Significantly increased
 - Increased
 - Stayed the same
 - Declined
 - Significantly declined
19. Please indicate your position with this statement: “In my view, differences in power between stakeholders extensively impact, somewhat impact, or have no impact on the functioning of the platform.” (Examples of differences in power include some groups dominating the conversation or marginalized groups silenced, dismissed, or not represented.) **(outer ring - power)**
- Extensively impact
 - Somewhat impact
 - Have no impact
20. Has the power of smallholder farmers or other historically marginalized groups significantly increased, slightly increased, stayed the same, slightly decreased, or significantly decreased since the start of the platform? **(outer ring - power)**
- Significantly increased
 - Slightly increased
 - Stayed the same
 - Slightly decreased

- e. Significantly decreased
21. Please indicate your position with this statement: "As a result of participating in the platform, I now believe producing palm oil sustainably is extremely important, somewhat important, or not important at all." **(inner-individual)**
 - a. Extremely important
 - b. Somewhat important
 - c. Not important
 22. How strongly do you agree or disagree with the statement: "As a result of the platform, other stakeholders in my organization believe that producing palm oil sustainably is important." **(inner-collective)**
 - a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
 23. How strongly do you agree or disagree with this statement: "There is sufficient funding and resources available to support the platform I participate in." **(outer ring - resources)**
 - a. Strongly agree
 - b. Agree
 - c. Neutral
 - d. Disagree
 - e. Strongly disagree
 24. Please indicate your position with this statement: "The platform I participate in has significantly increased, slightly increased, slightly decreased, or significantly decreased smallholder farmers' ability to produce palm oil sustainably." **(outer ring - capacities)**
 - a. Significantly increased
 - b. Slightly increased
 - c. No change
 - d. Slightly decreased
 - e. Significantly decreased
 25. What are the biggest challenges to the functioning of the platform?

Interview Questions

1. To get us started, would you please share your experience with and involvement in the platform?
2. Are you aware of any sustainability initiatives that have been implemented as a result of the platform? If so, what are these initiatives? **(outer-collective)**
 - a. Have any new policies or regulatory frameworks been enacted as a result of the platform? **(outer-collective)**
3. What factors help the implementation and functioning of the platform? What factors

- hinder the implementation and functioning of the platform? **(outer-collective)**
4. What new capacities or skills have you gained since the start of the platform? **(outer ring - capacities, knowledge)**
 5. What new beliefs or values have you gained since the start of the platform? (For example, have you changed any views on how palm oil should be produced / on who should be involved in decision-making processes / on sustainable development within the palm oil sector?) **(inner-individual)**
 - a. Do you feel that these new beliefs or values are also held by members of your community? Are they universal? **(inner-collective)**
 6. How has the platform affected your organization? How has it affected commodity agriculture in your area? **(outer-collective; outer ring)**
 7. Would you be comfortable answering questions related to power dynamics? If so, how would you describe the present power dynamics in this commodity system? (For example, are some groups able to engage in dialogues that weren't able to before? Are more groups represented at meetings now? Have dominant groups allowed more space for others to talk?) **(outer ring - power)**
 8. How is conflict within the platform addressed or resolved? **(inner-collective; outer-collective)**
 9. Do you trust other individuals involved in the platform? Why or why not?
 - a. For individuals that you trust, what is their role in the platform (UNDP staff, government employees, smallholders, etc)? **(inner-collective)**
 10. What funding or resources are available to the platform? Do you think there is enough funding? **(outer ring - resources)**
 11. Have there been any changes to land tenure/land rights since the start of the platform? **(outer ring - resources)**
 12. Is there anything else the platform achieved that has not already been mentioned yet? **(outer-collective)**
 13. Do you think the changes you've mentioned are irreversible? Have they occurred throughout the whole palm oil supply chain?
 14. For smallholder farmers: Have you learned anything new about sustainability / sustainable farming practices since the platform began? Do you feel like you have the resources and support to implement these new practices? Do you think that these practices are achievable or sustainable? How have your agricultural practices changed as a result of the platform? Do you feel that you yield equal power with other stakeholders in the platform, especially the government or private sector? **(outer ring - knowledge, resources, power; outer-individual)**