INCLUSIVE VALUE CHAINS
PHILIPPINES

INCLUSION IN VALUE CHAINS:
THE PROCESS AND TOOLKIT

A toolkit from the Inclusive Value Chains project in the Philippines (2020-2025) for enhancing inclusion in value chains

ABBREVIATIONS AND ACRONYMS

ACRONYMS

ANU	Australian National University **(project team)**
CAT	Community Adaptation Template
COFAH	Coffee Farmers Association of Hinalaan
CSIRO	Commonwealth Scientific and Industrial Research Organisation **(project team)**
FAC	Foodlink Advocacy Cooperative **(project team)**
FSA	Farming systems analysis
GAP	Good agricultural practices
IEF	Inclusive engagement framework
I-MEL	Integrated monitoring, evaluation and learning
IVC	Inclusive value chains
MEL	Monitoring evaluation and learning
MPC	Multi-purpose cooperative
NCGA	Nuling Coffee Growers Association
NGO	Non-governmental organisation
UPLB	University of Philippines Los Banos **(project team)**
UPMIN	University of Philippines Mindanao **(project team)**
UQ	University of Queensland **(project team)**
SMEs	Small and medium sized enterprises
ToC	Theory of change
VSU	Visayas State University **(project team)**

Disclaimer

This Toolkit has been based on the IVC Team's experience in the project and in their research in value chain assessment, inclusion, systems science, and international development more broadly. The toolkit compiles some of the key lessons, best practices and resources developed in the IVC project, to aid similar future projects. However, toolkit users are responsible for assessing the suitability of the information or material contained in the toolkit for their specific purposes. To the extent permitted by law, the IVC Team partners exclude all liability to any party for expenses, losses or damages and costs arising directly or indirectly from using this toolkit.

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INTRODUCTION

Working towards inclusion in value chains requires a diversified approach with a multitude of stakeholders. The adoption of a combination of complementary tools is required to effectively reach this goal.

This toolkit was designed to capture the processes that were used to explore inclusion in smallholder communities in the Philippines in the Inclusive Value Chain Philippines Project ("IVC Project"). This project involved case studies on coffee and vegetable value chains in two regions in the Philippines. The IVC Project, conducted from 2020 to 2025, was a collaborative effort between partner organisations from Australia and the Philippines ("IVC Team").

The intention of this toolkit is to provide an overview of the tools used to analyse, design, implement, and evaluate interventions in the IVC Project case studies. This toolkit is not designed as a step-by-step instruction manual. Instead, the toolkit provides guidance by highlighting the suite of tools that can assist future research managers in applying an inclusion lens to agricultural research-for-development and value chain research and practice. This toolkit demonstrates where and how the various tools were used to inform a specific phase in the IVC Project process.

The toolkit provides a structure for the evaluation of inclusion in value chains, an understanding of the underlying needs and priorities of the various actors of the value chain, and a summary of the locally led, co-design of practical solutions to increasing inclusion in an equitable manner across a value chain.

1. BACKGROUND

An overall aim for traditional agri-food value chain development is to stimulate economic growth among farming families, their communities, and the broader region. Economic growth is assumed to lead to positive outcomes for a range of value chain actors which might include increased income and better financial security. However, value chain actors have varying access to resources with which to improve their circumstances and are often disproportionately exposed to the risks of farming (German et al., 2020). Poor and marginalised farmers often experience entrenched cultural, social, political, and economic barriers to fully engage in value chain opportunities (Ros-Tonen et al., 2019).

In the context of this study, Philippine farmers and other value chain actors are frequently impacted by interconnected polycrises where social, political and environmental disruptions occur suddenly, affecting their capacity to undertake farming and to recover quickly. Examples include frequent natural disasters, market instability, vulnerability to international price fluctuations for agricultural inputs, and ongoing fragility of post conflict security, especially for those in regions such as Sultan Kudarat.

Integrating dimensions of *inclusion* in project design and implementation is one way to address the complexities experienced in agri-food value chains in a variety of different contexts and to bring about fairer, more sustainable development outcomes.

1.1 Integrating inclusion into value chains

Many existing models of inclusion in value chains tend to view inclusion as synonymous with farmer participation. While farmer participation is important, we believe inclusion goes beyond this ideal.

Inclusion is more than the numbers of men and women farmers, traders and other actors involved in the chain. In the IVC Project we consider inclusion to be more aligned to the concept of 'being involved' or 'engaged'. Inclusion is more closely connected to the quality of the actor interactions along the chain, the capacity of actors to interact on terms that suit them, and that the interactions provide the actors with value. Value is based on their aspirations which are typically broad-ranging and extend into sustainable livelihoods and broader indicators of wellbeing (e.g. health and family wellbeing (German et al., 2020)).

We define *inclusion* as a process which seeks to address the needs of diverse people to meet their economic and wellbeing goals. *Inclusive value chains,* in this context, is a series of practices, among actors who are seeking to make connections across shared interests, over time.

Furthermore, we take a systems view of value chains. This means in addition to the value chain and its actors (all with their varying roles, goals and values), we consider the farming community and the physical and societal environment in which they live and work. For example, their farming systems and livelihoods, personal and societal aspirations, and the influence of natural or other hazards are included in this assessment. We also consider the broader institutional landscape that can enhance or constrain inclusion in value chains. This requires working with value chain actors and a range of institutional actors to progress towards the intended impact of our work.

1.2 Addressing the research questions of the IVC Project

The IVC Project aims to enhance the design, implementation and adoption of inclusive value chains in smallholder farming systems in the Philippines.

Broadly, the approach taken in the project involved:

- Understanding roles, conditions and specific value chain interventions that improve engagement and benefit the livelihoods of farmers, their communities and their chain partners.

- Developing practical applications embedded in value chain practice in coffee and vegetable farming systems.

- Developing and employing integrated systems methodologies to track change over time.

The overarching research question of the IVC Project was *"How do inclusive value chains lead to livelihood benefits for smallholder farmers, their communities, and their value chain stakeholders?"*

Four research questions underpinned the project efforts to design effective and inclusive interventions and monitor the outcomes and changes on the ground.

1. What motivates smallholder farmers, their households and communities, and agribusinesses to participate in inclusive value chains, and what conditions drive or impede participation?

2. How can interventions in value chain development be inclusive? Which interventions contribute to more inclusive value chains, and which enabling environments support continuity?

3. How can principles and processes of inclusive value chain development be synthesised into scalable models?

4. How can income gaps be quantified for sustainable livelihoods to measure the progress towards inclusive value chains?

The IVC Project took a co-design approach in coffee and vegetable value chains (Box 1.1 & 1.2) to identify Inclusive Value Chain (IVC) development strategies and processes (i.e. case studies). The IVC Project explored how collaborations, relationships and partnerships across the value chain and the enabling environment could be built with different value chain actors. These actors included farmers, cooperatives, associations, traders and other small and medium enterprises, wholesalers, retailers and all levels of government.

Box 1.1: Coffee value chain in Sultan Kudarat

Coffee is considered one of the high-value crops in the Philippines. The province of Sultan Kudarat is located on the Island of Mindanao and produces approximately 80% of the Philippines' supply. The case study examined robusta coffee production in the communities of Hinalaan and Nuling. In the two communities, production volumes are low, with farmers generally selling green (unroasted) coffee beans[1] of relatively poor quality. There is limited investment in production and post-harvest activities by farmers and other value chain actors in the communities. Overall, household and farm expenses are much higher than the income gained from coffee production.

In this case study, the focus of the IVC Team was to support farmers in processes that would enable them to upgrade their production and processing to reduce losses, as well as diversify market access. A key emphasis was post-harvest investment, and the IVC Project partnered with the local *barangays*[2] in Hinalaan and Nuling to develop coffee dryer infrastructure in the communities.

Drying the coffee beans is a critical post-harvest step for robusta coffee. It is a determining factor of the quality and its subsequent price. Drying is particularly challenging in Sultan Kudarat region due to its frequent rains. The project worked with the two local coffee associations: Coffee Farmers Association of Hinalaan (COFAH), and Nuling Coffee Growers Association (NCGA).

Conversations and training with farmers (Photo: IVC Team)

The new dryer box for the coffee beans that is built on stilts to raise it from the ground (Photo: IVC Team)

The IVC Project introduced activities to two local coffee farmer associations that were designed to strengthen their capacity to be inclusive and entrepreneurial, as well as increase their ability to manage the dryers more sustainably and thereby improve the quality of the coffee produced, which increases the price for which they can sell their produce. Organisational strengthening was therefore a key entry point for inclusion in this case study.

The approach included capacity building on financial literacy, leadership strengthening, entrepreneurship, forward thinking and strategy, business planning, development of inclusive governance and conflict resolution, proposal preparation, infrastructure management, and maintenance of specialty coffee. The facilitation of market linkages to identify access to diversified markets was also a part of this organisational strengthening. The combination of these enabling elements in the project's approach was seen as essential to inclusion of the farmers in the value chain as well as the sustainability and resilience of coffee production in the communities.

[1] *Green coffee beans are the raw, unroasted coffee beans (the seeds of the fruit that is picked). The fruit is picked, de-husked and dried, but the green coffee beans may be of poor quality if the unripe or damaged fruit was not separated and discarded or if the fruit is not properly dried.*

[2] *A "barangay" is the smallest administrative division or local government unit in the Philippines. It serves as the basic political unit, similar to a village or neighbourhood, and is responsible for implementing government policies and programs within the community.*

Box 1.2: Vegetable case study in Cebu

This case study focussed on vegetables grown in two farming communities in the *barangay* of Taptap and Sudlon, both located in the province of Cebu, in Visayas, the Philippines. The topography in this area is generally hilly and mountainous. The main crops grown in Taptap include chilli pepper, string beans, eggplant, and bitter gourd, while in Sudlon the main crops include cucumber, lettuce and tomato. The IVC Team engaged with members and non-members of the Lamac MPC (Multi-purpose cooperative) farming clusters. The aim of the farming clusters is to develop good agricultural practice and entrepreneurial skills such as financial management. Each cluster comprises of 10 to 15 farmers who are trained and work together to produce product for markets.

Cebu City is a major demand centre and trade route for vegetables across the country, including the produce of vegetable farmers in Taptap and Sudlon. The farmers in the case study area primarily trade with ambulatory traders (who travel between the farmers and other markets) and with the wholesalers of the local fresh market. Alternative outlets for vegetable sales include farmers directly selling their produce to household consumers, or engaging in direct retail practices, selling directly to supermarkets or small shops. Only a small percentage of vegetables are traded through organised cooperatives such as Lamac MPC, who currently have a limited market for vegetables. Despite this, Lamac MPC is an important actor in the region because it provides inputs and capital for farming operations.

The farming communities in this region are regularly faced with challenges related to climate variability, which threatens the reliability of their access to water, financial stability, and extreme events such as typhoons. Furthermore, during the COVID-19 pandemic, the extended periods of lockdowns and related closures in the restaurant industry greatly reduced demand for vegetables. The shutdown of trade during the pandemic highlighted the need for stronger relationships between vegetable farmers and value chain actors, as well as an access to diverse markets to help manage risks and to enhance adaptability as resilience to shocks. Compounding the challenges during that period, in 2021, Typhoon Odette caused widespread damage to crops and infrastructure in Taptap and Sudlon.

The increasing market for "food-safe vegetables" was identified as a promising opportunity to explore. However, the associated national Good Agricultural Practices (GAP) certification is expensive and challenging for most farmers to obtain and retain, especially in the event of natural disasters that destroys farm infrastructure. The IVC Project interventions intended to support farmers in processes to enable them to transition to production mechanisms that meet food-safe vegetable production standards without necessitating formal GAP certification.

On-farm activities involved participatory field trials to test conventional and bio-pesticide applications, evaluate compliance with maximum residue limits, while trialling digital resources to support farm production and capacity building activities (e.g. entrepreneurship training, record keeping).

The project facilitated opportunities to link farmers to diversified markets. This approach aimed to develop mutually beneficial relationships between farmers, multi-purpose cooperatives and traders in Cebu with the intention to generate the possibility of traders and wholesalers being able to source food-safe vegetables in sufficient quantity to supply to supermarkets, hotels and other buyers.

A technical advisory group, comprising of representatives from local government and three farmer federations in the region, was established to provide oversight and input to the project interventions and develop a strategic body for strengthening access to finances for wider farming needs in the region (e.g. irrigation).

Vegetable farming in the province of Cebu (Photo: IVC Team)

Challenges common to both case study communities included limited access to financial capital for investing in production, such as purchasing agricultural inputs, as well as insecure tenure over their cultivation rights and ownership of the land. In addition to concerns around finance, many households expressed significant challenges related to maintaining their physical and psychological health, with many farmers overworked with inadequate time to spend with their family and to fulfill their spiritual needs. The additional costs for medicine and the time it takes to access healthcare were key barriers to accessing healthcare services for households in communities.

1.3 Inclusive Value Chains Philippines project partners

The Inclusive Value Chains Philippines project (IVC Project) was a collaboration between the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian National University (ANU), Foodlink Advocacy Cooperative (FAC), University of Philippines Los Banos (UPLB), University of Philippines Mindanao (UPMIN), Visayas State University (VSU) and University of Queensland (UQ).

1.4 The Toolkit

The primary audience for this toolkit is research managers (across academic, government, non-governmental organisations (NGOs) or other institutions) who are interested in applying an inclusion lens to agricultural research-for-development and value chain research and practice. The toolkit intends to demonstrate to practitioners how similar research projects could be undertaken and provides examples of tools that may be useful to support the process.

The manual is also intended for general use by students, researchers, program developers from government and private sector and research funders.

This manual introduces the Inclusive Engagement Framework (IEF) that was developed to guide the IVC Project research (Section 2). The research approach and the key methods and tools that were used by the IVC Team are outlined in Sections 3 and 4, respectively. A more detailed description of the tools can be found in the Appendix. All tools and methods included in this document have been used by the IVC Project.

2. THE INCLUSIVE ENGAGEMENT FRAMEWORK

The concept of inclusion in development is commonly linked to measuring who participates in productive activities, how many participate, how much commodity is produced, or income generated. The inclusive value chain approach assumes that not all actors in a value chain will benefit equally from participation. Additionally, not all actors face the same level of risks from participating in agricultural value chains. Risks are diverse and are associated with limited access to resources, especially for women and marginalised farmers. Traders can also find themselves vulnerable to securing profitable markets to sell the produce that they buy from farmers. These risk and power considerations can sometimes be overlooked in projects assessing value chains.

The Inclusive Engagement Framework (IEF) was specifically developed by the IVC Project team to guide considerations regarding inclusion as a set of institutional structures which enhance and support chain engagement and market access. To support this definition, "Institutions" include the combination of informal and formal practices, norms, rules, regulations, and organisations that support or hinder engagement in value chains.

The goal of the IEF is to assist researchers and implementers to identify the drivers and obstacles to inclusion during the project design and implementation phases (see Figure 2.1). For example, the IEF can be used to refine and refocus research instruments, plan research activities, pilot interventions, and monitor progress. It can also be used as a bridging tool to start conversations about inclusion with other actors (such as private sector partners). The IEF is a living document to be revised as needed especially as a team learns and refines its understanding of how inclusion functions (and falters) in the context of different value chains.

Figure 2.1: The Inclusive Engagement Framework

The IEF pillars are relevant at the farmer and trader level, as well as at the level of organisations and enterprises. The pillars can function as principles and are interrelated, some pillars have greater relevance for particular actors than others, depending on the value chain context. There are five pillars in the IEF that act as guiding principles for diagnosis, design, piloting and evaluation:

Pillar 1: Recognises culture and diversity as integral to identity

This pillar assumes identity is multifaceted (i.e. individuals often hold multiple roles in their lives simultaneously). Identity can refer to family, livelihood, household, ethnicity and gender. Moreover, diversity can relate to age, physical abilities and qualities, sexual identity, ethnicity, race and gender. Individuals, groups and organisations each hold unique values and aspirations, as do the various actors in the chain. Importantly, these values and aspirations can be complimentary or competing. This pillar recognises the uniqueness of culture, ethnicity and diversity to individuals or groups belonging in enterprise.

Pillar 2: Supports agency, voice and trust for fairer decision-making

Pillar 2 identifies and supports agency, voice and trust and their links to power. Agency, voice and trust are naturally dynamic and are in constant flux in value chain interactions. Agency (the individual's belief that they possess the power to make their own choices) can build empowerment, especially for women entrepreneurs. Without voice, agency is unlikely to be realised. Trust is key to effective functioning of value chain interactions, especially between farmers and traders, acting as a secondary 'currency' for business transactions. Power can manifest in many forms, yet it is often invisible.

Pillar 3: Builds equitable conditions for engagement in the value chain

Equity links strongly to Pillars 1 and 2. Equity refers to ensuring that individuals with diverse interests, capacities and needs are included in the processes and conditions that supposedly aim to benefit them. In relation to gender, equity considerations must extend beyond articulating roles of women in the value chain and ideally relate more broadly to understanding the relationships, responsibilities, and interactions between gender roles. Consequently, gender considerations must also include men and their roles and responsibilities. Gender-blindness (i.e. disregarding gender differences) can further exacerbate existing inequalities.

Pillar 4: Works towards resilience as an outcome

Supporting resilience in a value chain is strongly linked with sustainability, yet both are interdependent. Resilience is strongly linked to the sustainability of interventions, including the longevity and stability of institutions created to persist long-term (for example, organisations, finance mechanisms and collectives). This pillar also applies to the resilience of individuals to respond to disasters, ill-health, and other unexpected events (such as pandemics). In this context, wellbeing in all its dimensions is crucial to resilience and sustainability of value chains.

Pillar 5: Scalable and systems focussed

The fifth pillar recognises that inclusive value chains (IVC) function across various geographies and institutions (local and regional, cooperatives and associations). An IVC is systems-oriented, in that it captures the broader drivers (both positive and negative) which enable and hinder engagement in value chains. The scalability of interventions is strongly linked with sustainability, while both are independent.

2.1 Scaling inclusion

The central aim of scaling is to extend the benefits of research beyond any project. Scaling is traditionally considered as an exercise in replication, and it is most clearly seen in the context of technological adoption.

Contemporary development literature, however, recognises there are multiple possible approaches to scaling, each with varied goals and each involving different actors (Moore et al., 2015; Millar and Connell, 2010; Wigboldus et al, 2016).

- *Scaling out* describes the geographical expansion and dissemination to additional project sites or increased technology use across sites. While scaling out is a useful strategy for simple innovations or problems, it can neglect the cultural, social and political enablers and hurdles to scaling impact.

- *Scaling up* on the other hand refers to the ability to influence institutions to make appropriate changes that support the innovation to be scaled. In this context, institutions can include formal and informal practices, rules, organisations, etc. Therefore, scaling up can be achieved through policies, and development of skills, capacities and leadership within institutions to enable scaling.

- *Scaling deep* refers to the embedding of shared values that leads to lasting cultural and social change.

Importantly, scaling up, out and deep are not mutually exclusive and often work in complementary ways.

For the IVC Project, our focus was on scaling inclusion. In this regard, inclusion is defined as an institutional process that supports market access. Inclusion is multidimensional and relevant to all actors in the IVC, not just farmers.

Scaling inclusion in this context is a learning process and requires integrating knowledge from a range of stakeholders to facilitate institutional change. The IVC Project's scaling strategy therefore has a focus on scaling deep, while acknowledging that scaling out and up are complementary to this higher goal.

For scaling to be successful, scaling strategies need to be linked to overall project goals, be well-resourced and coordinated. Leadership across the organisations which are involved in scaling efforts is a fundamental component and leadership initiatives should be focussed on achieving impact.

3. PROJECT RESEARCH APPROACH

3.1 Transdisciplinarity

3.1.1 Why do we do transdisciplinary research?

Complex problems, such as how to achieve inclusion in value chains, are not individual problems but rather, intricately interlinked sets of problems that involve diverse stakeholders with multiple varied or competing goals.

Inclusion in value chains in the Philippine context integrates problems such as entrenched poverty, crop production pressures, the effects of changing climates on farming, sustaining resilience, and lack of financial and other resources. It also involves several stakeholders such as smallholder farmers, traders, small and medium sized enterprises (SMEs), and other agribusinesses, as well as enabling actors such as government and financial institutions. Working on such complex problems are challenging as they are typically ill-defined, highly uncertain, and have no clear or optimal solution (see Figure 3.1).

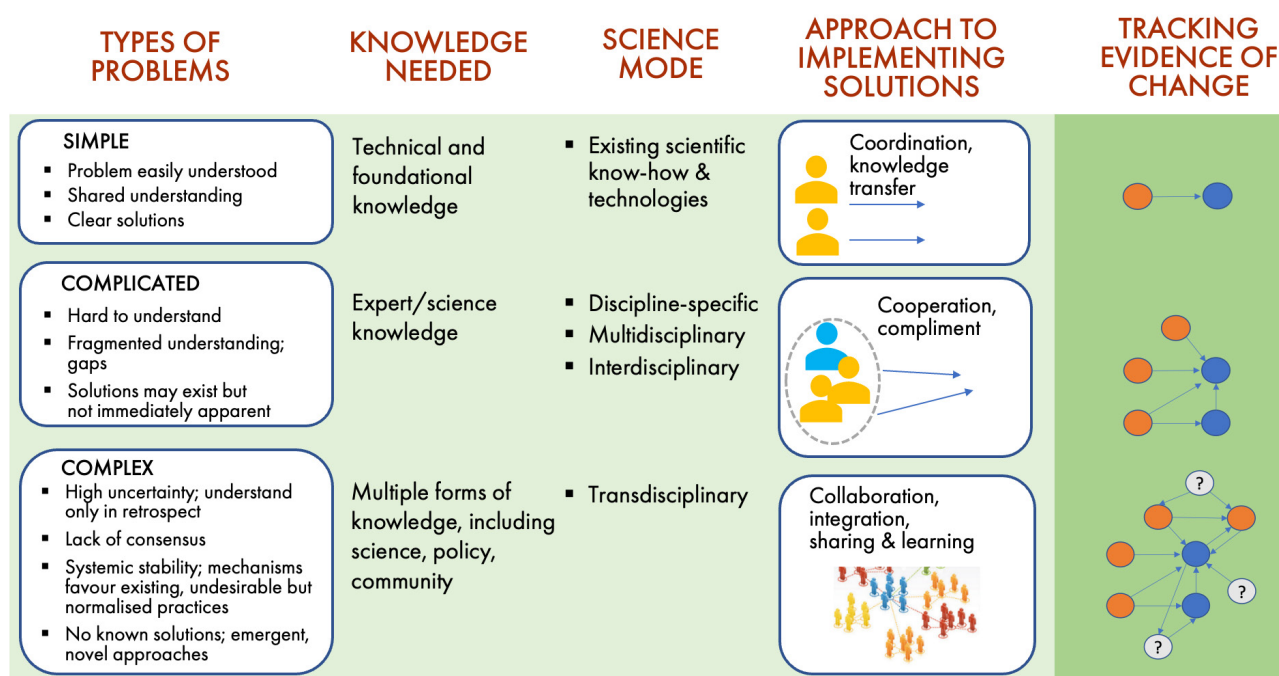| TYPES OF PROBLEMS	KNOWLEDGE NEEDED	SCIENCE MODE	APPROACH TO IMPLEMENTING SOLUTIONS	TRACKING EVIDENCE OF CHANGE
SIMPLE • Problem easily understood • Shared understanding • Clear solutions	Technical and foundational knowledge	• Existing scientific know-how & technologies	Coordination, knowledge transfer	
COMPLICATED • Hard to understand • Fragmented understanding; gaps • Solutions may exist but not immediately apparent	Expert/science knowledge	• Discipline-specific • Multidisciplinary • Interdisciplinary	Cooperation, compliment	
COMPLEX • High uncertainty; understand only in retrospect • Lack of consensus • Systemic stability; mechanisms favour existing, undesirable but normalised practices • No known solutions; emergent, novel approaches	Multiple forms of knowledge, including science, policy, community	• Transdisciplinary	Collaboration, integration, sharing & learning	

Figure 3.1: Different types of problems require different types of knowledge, science modes and approaches to implementing solutions. The outcomes to complex problems, such as integrating inclusion into value chains, are highly uncertain and the process can be difficult to track; these problems therefore require a transdisciplinary approach, which involves collaboration, integration, sharing and learning (adapted from Stone-Jovicich, 2020; Snowden, 2005; Arkesteijn et al., 2015)

Solving a complex problem is not just a matter of reducing it into the simpler problems within it and addressing each single component in isolation. Critical to complex problems are the interactions and interdependencies between the smaller components. This is consistent with the saying (attributed to Aristotle) "the whole is larger than the sum of its parts", which emphasises the system as a whole, including the characteristics or behaviours that emerge when the simpler parts interact. Focussing on the individual parts or simple problems in isolation will not yield a whole-of-system perspective.

Different types of knowledge, science modes and approaches are required to resolve complex problems. Complex problems are difficult to track; unlike more simple problems, with few variables involved and a well-established cause-and-effect, complex problems tend to involve several variables and processes, many of which are unknown (Figure 3.1).

A transdisciplinary mode of research acknowledges these challenges by aiming to integrate and reconcile multiple forms of knowledge, perspectives and values from across community, policy and science actors, as well as across disciplines and sectors. The involved actors will co-design solutions to their shared problems. In transdisciplinary projects, collaboration, sharing and learning is paramount. An otherwise restrictive approach (e.g. single disciplinary) may lead to inappropriate or incomplete understanding of the problem (Figure 3.2).

Figure 3.2: The 'blind men and the elephant' analogy illustrates how different perspectives (cf. disciplines) can be valid yet limited, and therefore a holistic view that integrates several perspectives is key to a more complete understanding of problems. Image: G. Renee Guzlas© (Source: Himmelfarb et al., 2002)

While *multidisciplinary* research involves several different disciplines, each contributing its own knowledge from their respective fields, this approach does not necessarily integrate these various perspectives and understandings (as in Figure 3.2 with the multiple blind men).

Interdisciplinary research goes further to extend the disciplinary boundaries and better integrate different knowledge types and methods from various fields, providing a more comprehensive understanding of the problem.

While *transdisciplinary* research transcends not only disciplinary boundaries, it also extends beyond academia to include non-scientists and non-researchers, including industry, government and community and other knowledge holders relevant to the problem. Transdisciplinary approaches bring together knowledge from science and practice (Figure 3.1); scientific knowledge is not enough on its own for comprehensive understanding of complex problems and addressing the problem.

3.1.2 What does the transdisciplinary research process involve?

Transdisciplinary projects work at the intersection between scientific research and societal practice (Figure 3.3), and the transdisciplinary research process involves research scientists from across disciplines, as well as societal actors such as NGOs, the private sector, government and communities. The process sees society on one side to ensure that the research carried out is relevant and practical, and it is surrounded by science on the other side, which helps ensure that the research process is robust and scientifically rigorous.
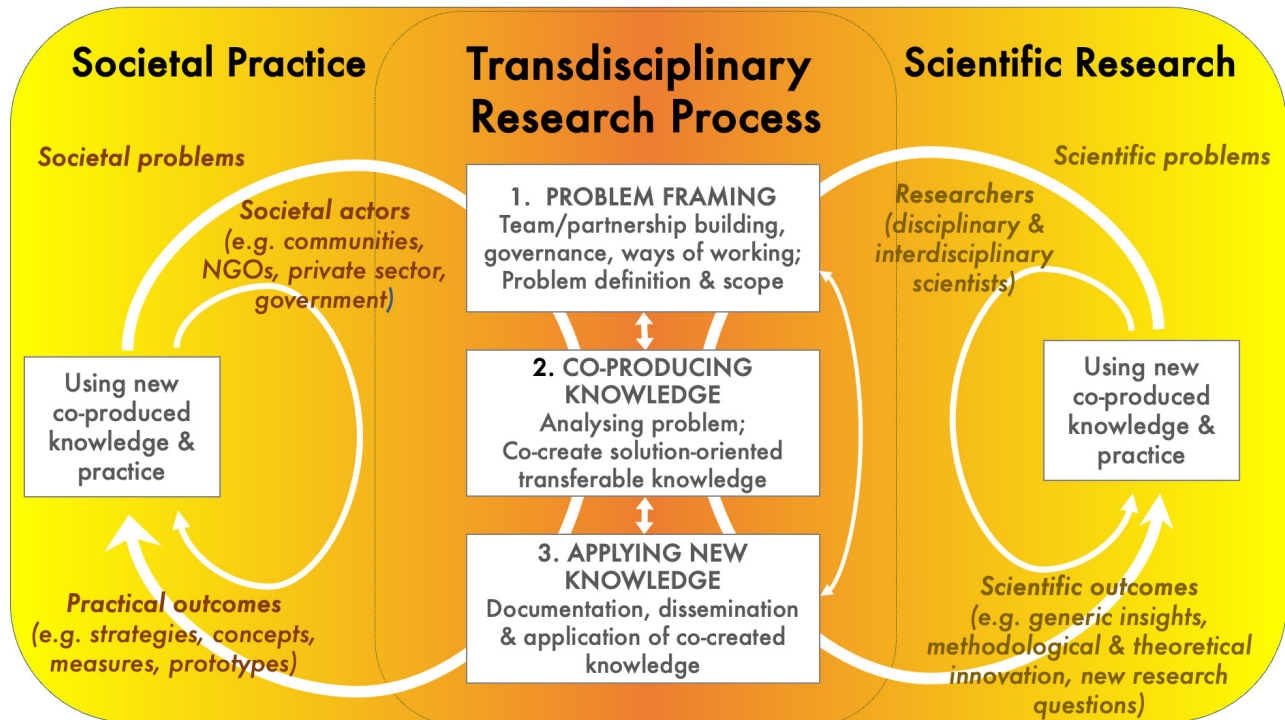

Figure 3.3: The transdisciplinary research process. Adapted from Hoffman et al. (2019), Pohl et al. (2021) and Lawrence et al. (2022)

A typical transdisciplinary research process involves three main phases (central column of Figure 3.3):

1. **Problem framing**, which involves not only defining the problem and scope but also the building of teams and partnerships and establishing the governance arrangements of the teams and their ways of working,

2. **Co-production of knowledge** by both the researchers and societal actors, and

3. **Applying the new co-produced knowledge** in both the societal and scientific realms.

While the research process generally follows phases 1 to 3, the phases do not always occur sequentially. Compared to 'single' disciplinary projects, transdisciplinary projects need to dedicate a considerable amount of time and effort into the "Problem Framing" phase. This is due to the highly complex nature of the problems that transdisciplinary projects address, which makes the problem itself very difficult to define or agree upon by societal actors and researchers.

Transdisciplinary research produces both *practical outcomes* such as strategies, prototypes and measures, that are useful for the communities, private sector, government and other societal actors, and *scientific outcomes* such as advances in methods and theory that contribute to science.

The various methods used in transdisciplinary research can be considered as serving four broad purposes (Bammer, 2016, 2017):

i. **Collaboration**, by building and fostering trust, and facilitating communication and sharing of knowledge among stakeholder groups,

ii. **Synthesis of knowledge** from relevant disciplines and stakeholders who have different perspectives and ways of thinking about the problem,

iii. **Thinking systemically** about the various parts of the problem, how they interact and influence each other, and

iv. **Making change happen** by diagnosing the problem and developing a strategy to achieve and monitor progress, including through interventions and influencing policy.

In the IVC Project, the transdisciplinary research process involved a large range of mixed methods (i.e. qualitative and quantitative methods) (Figure 3.4). This included, for example, methods such as Rapid Market Appraisal, Rapid Situational Analysis, Farming Systems Analysis and *Pangandoy* (an adaptation of the Pagdadala method) and Inclusive Value Chain Assessment for framing the problem; Risk and Opportunity Mapping, Three Horizons and Rapid Gender Assessment for co-producing knowledge; and Organisational Assessment and Development, Living Income and Pathway Diversity for applying new knowledge.

The project also produced practical outcomes such as establishing technical advisory groups, and developing an organisational development curriculum, as well as scientific outcomes such as the Participation Matrix, the Maturity Model and the Community Adaptation Template. These tools will be explained further in Section 4 and in their respective tools in the Appendix.
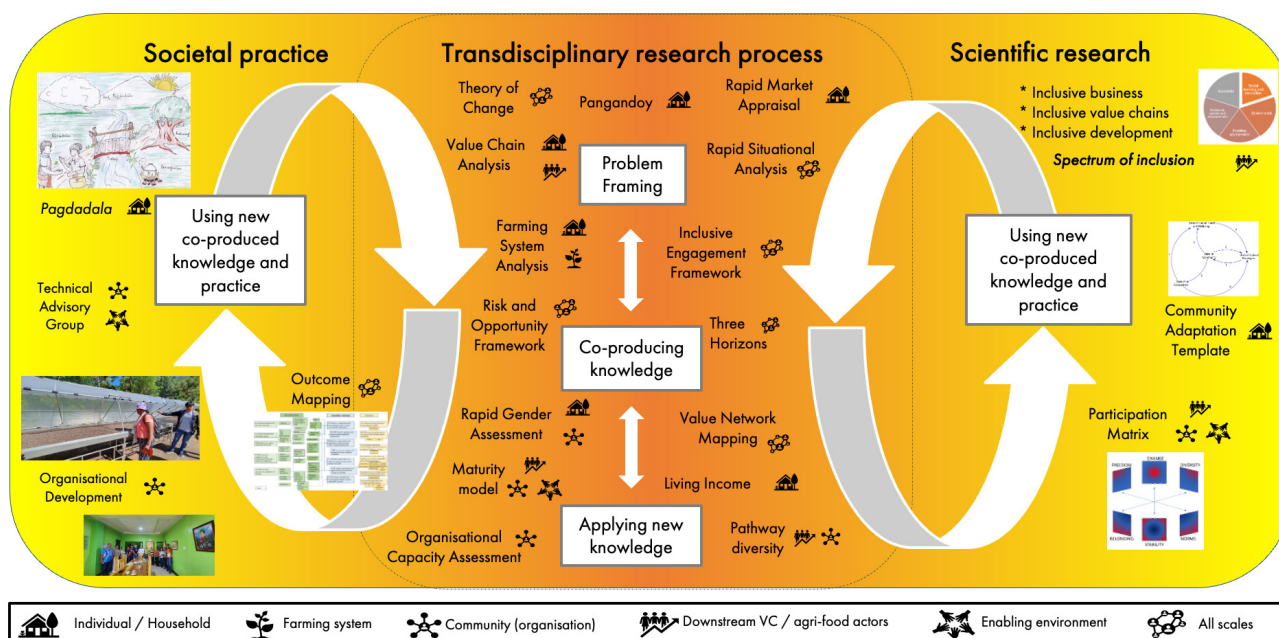

Figure 3.4: The various methods used and developed in the transdisciplinary research process of the IVC Project. The position of the methods on the diagram is indicative of their initial application, but in practice, the methods were used across phases.

3.2 Taking a systems approach to monitoring, evaluation and learning

Enhancing the design, implementation and adoption of inclusive value chains is a complex problem. Projects targeting complex problems have multiple possible pathways from intervention to impact, with feedback loops and dynamics that obscure the nature of these impacts as well as the timeframe or conditions for them to be achieved. Conflicting views between actors or ineffective yet normalised ways of operating need to be recognised and addressed. As outlined in Figure 3.1 above, the outcomes to complex problems can be highly uncertain. Consequently, the processes involved can be difficult to track, and these types of problems are often best understood in retrospect.

There is value in using tools like Theory of Change (ToC) and log frames, but complete reliance on linear or instrumental approaches to monitoring, evaluation and learning (MEL) is not appropriate because it overly simplifies the problem and the interactions of those involved. Instead, reflexive, adaptive and holistic MEL systems are needed which expressly employ multiple mixed methods approaches to tracking change (but with a strong emphasis on qualitative data).

To enhance impact, the IVC Project therefore adopted a systems approach to its MEL to achieve more inclusive and sustainable outcomes. The MEL strategy served two purposes in the project: firstly, to track change and report against our planned outcomes for the coffee and vegetable case studies (described in Box 1.1 & 1.2). Secondly, MEL was a research activity in itself, guided by the Inclusive Engagement Framework, where we investigated the design and implementation of MEL for complex IVC and (more broadly) research for development projects and programs.

The coffee and vegetable systems, the focus of the case studies, are inherently dynamic and complex, particularly given our focus on inclusion in those systems. From the project outset we faced multiple challenges, such as disagreement on the problems that needed addressing (and their solutions); that our knowledge of the system would always be incomplete, imperfect and perhaps contested; and, that inclusion outcomes would be difficult to define or measure (and could vary for different actors). This acknowledged complexity had far-reaching implications for how we designed, implemented and adapted our MEL process.

3.2.1 Integrated monitoring, evaluation and learning

Integrative research approaches explicitly work across knowledge domains to understand and address complex societal and environmental problems using a systems perspective. In the IVC Project we employed a problem-focused and reflective process that combines adaptive learning and integration research approaches; we refer to this as integrated MEL, or I-MEL.

In the context of this project, I-MEL aimed to provide strategic guidance to the case study activities, and document and synthesise outputs and outcomes from those activities. It endeavoured to answer three broad, interlinked questions (Figure 3.5):

1. How does the system function (i.e. inclusion in the case study value chains)?

2. How can the system be improved? and

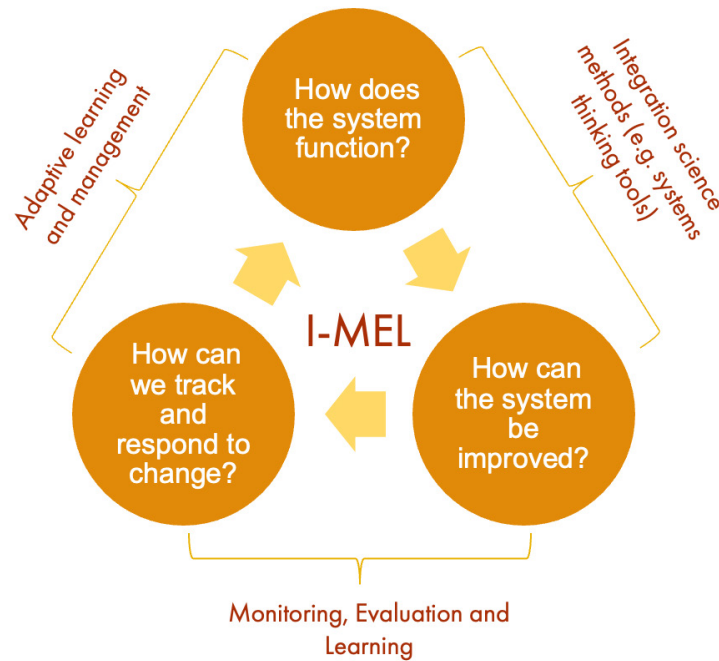3. How can we track and respond to change?

Figure 3.5: The Integrated-monitoring, evaluation and learning (I-MEL) process addresses three interlinked, fundamental questions

The I-MEL process closely aligned with the project's four phases: Diagnose, Design, Pilot and Evaluate (Figure 3.6). In the *Diagnose* phase, I-MEL was centred on defining the problem and scope of I-MEL activities, including establishing the system boundaries around the extent of considerations for what may facilitate or constrain inclusion. During the *Design* phase, the I-MEL team applied mixed-methods (including systems modelling approaches) to:

- Synthesise understanding from the case study activities and develop conceptual diagrams and systems models,

- Identify critical aspects to monitor including barriers and supporting mechanisms that might hinder or catalyse positive change, and

- Revisit the Theory of Change and impact pathways that underpin the IVC Project, considering the emergent co-design interventions.

The *Diagnose* and *Design* phases address the fundamental question of how the system functions (Figure 3.6). The *Design* phase also starts to explore how the system can be improved. The application of I-MEL activities in these first two phases was primarily designed to facilitate the aspect of 'opening up' the dialogue with value chain actors (Stirling 2008), including the exploration of divergent perspectives, interests and ideas, consideration of drivers and opportunities across the system, and a broadening of the evidence and knowledge base.

After 'opening up', it is then necessary for the research to start narrowing the range of solutions considered and prioritising perspectives (referred to as 'closing down'). This begins in the latter part of the *Design* phase, with a shift in focus on distilling shared knowledge within the project team and with our collaborators and (into the *Pilot* phase) developing or applying tools to support the team to prioritise intervention options and to identify and track expected and emergent outcomes.

I-MEL activities in the *Evaluate* phase focused on collating and analysing evidence for progress towards project outcomes specified in the project Theory of Change, as well as evaluating and testing I-MEL tools to improve their transferability and ability to be scaled.
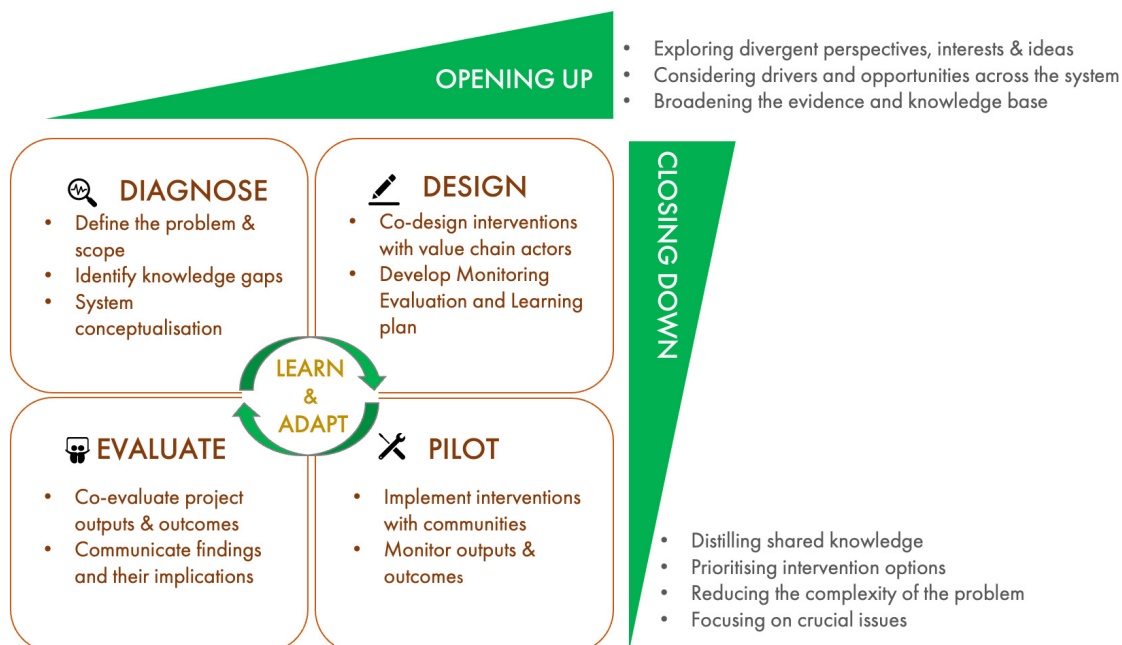
OPENING UP
- Exploring divergent perspectives, interests & ideas
- Considering drivers and opportunities across the system
- Broadening the evidence and knowledge base

CLOSING DOWN

DIAGNOSE
- Define the problem & scope
- Identify knowledge gaps
- System conceptualisation

DESIGN
- Co-design interventions with value chain actors
- Develop Monitoring Evaluation and Learning plan

LEARN & ADAPT

EVALUATE
- Co-evaluate project outputs & outcomes
- Communicate findings and their implications

PILOT
- Implement interventions with communities
- Monitor outputs & outcomes

- Distilling shared knowledge
- Prioritising intervention options
- Reducing the complexity of the problem
- Focusing on crucial issues

Figure 3.6: The four major iterative phases – Diagnose, Design, Pilot and Evaluate – of the IVC Project

We explored and reflected on progress towards intended outcomes and potential unintended outcomes, drawing on the IEF pillars to consider the implications of project activities and outcomes on inclusion in the value chain.

3.3 Applying the Inclusive Engagement Framework to explore inclusion in value chains

The Inclusive Engagement Framework (IEF) (see Section 2) was applied to value chains to explore and describe what inclusion could mean for farmers. This unpacking of inclusion in value chains, as depicted in Figure 3.7, distinguishes participation in the value chain and highlights aspects that would be improved when inclusion is enhanced in a value chain.
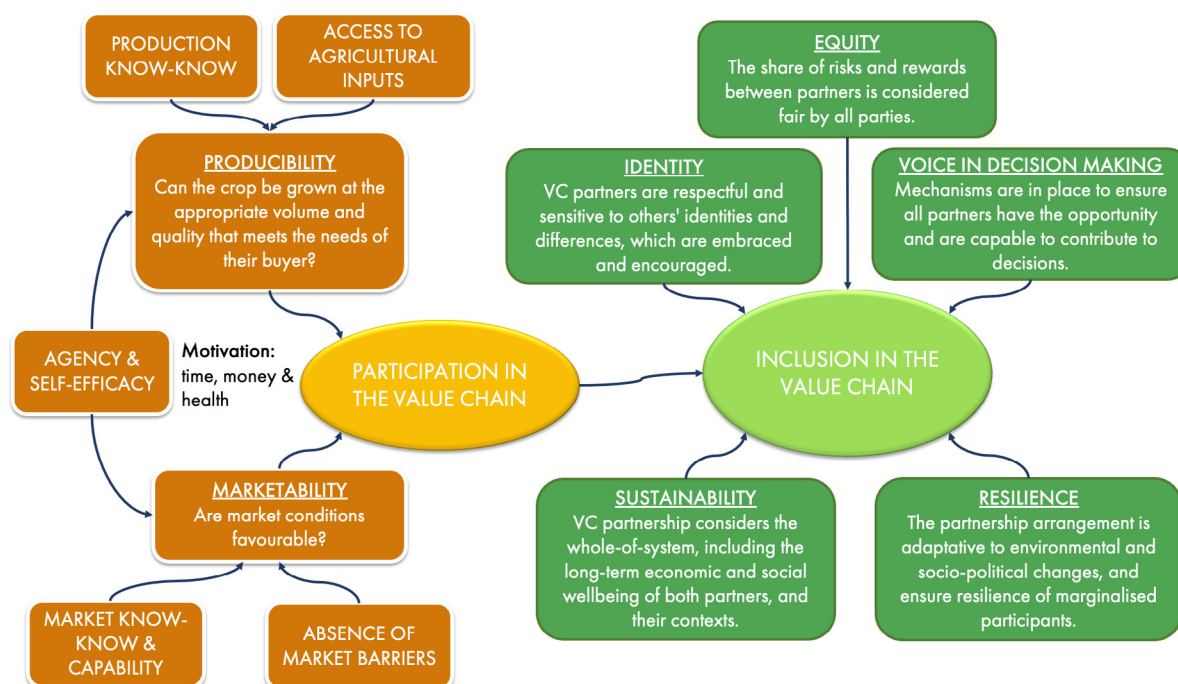

PRODUCTION KNOW-KNOW

ACCESS TO AGRICULTURAL INPUTS

PRODUCIBILITY
Can the crop be grown at the appropriate volume and quality that meets the needs of their buyer?

AGENCY & SELF-EFFICACY

Motivation: time, money & health

PARTICIPATION IN THE VALUE CHAIN

MARKETABILITY
Are market conditions favourable?

MARKET KNOW-KNOW & CAPABILITY

ABSENCE OF MARKET BARRIERS

EQUITY
The share of risks and rewards between partners is considered fair by all parties.

IDENTITY
VC partners are respectful and sensitive to others' identities and differences, which are embraced and encouraged.

VOICE IN DECISION MAKING
Mechanisms are in place to ensure all partners have the opportunity and are capable to contribute to decisions.

INCLUSION IN THE VALUE CHAIN

SUSTAINABILITY
VC partnership considers the whole-of-system, including the long-term economic and social wellbeing of both partners, and their contexts.

RESILIENCE
The partnership arrangement is adaptative to environmental and socio-political changes, and ensure resilience of marginalised participants.

Figure 3.7: Unpacking what inclusion in value chains could mean for farmers using the Inclusive Engagement Framework (IEF) pillars

For value chains, participation can be considered as the ability to partake in the value chain. For farmers, this could entail the capacity to 1) produce a crop at the appropriate volume and quality that meets the needs of the buyer (*producibility*), and 2) meet the market conditions to sell the product to the buyer (*marketability*).

Producibility is a function of the farmer's available resources and access to resources (agricultural inputs, e.g. land, water, seeds, fertiliser, pesticides, labour), and their production know-how. Marketability is a function of the presence of entry barriers (e.g. distance to market, market quality standards, minimum volume requirement), the yield and quality produced by the farmer, demand for the product and the farmer's market knowledge. Both producibility and marketability also depend on the farmer's agency (their belief that they possess the power to make this choice) and self-efficacy (their belief that they can do it).

If farmers cannot meet the producibility or marketability requirements, they cannot participate in the value chain. However, while participation is a necessary condition of inclusion in the value chain, it does not make the value chain inclusive. Participation in value chains that are not inclusive implies that there are adverse or unfavourable conditions for the farmer (or another actor).

In addition, there are five other conditions drawn from the IEF which are fundamental to creating optimal circumstances for IVC:

1. *Identity* – value chain partners are respectful and sensitive to others' cultural, social and gender differences, which are embraced and encouraged.

2. *Equity* – the share of risks and rewards between partners is considered fair by all parties.

3. *Voice in decision making* – mechanisms are in place to ensure all partners have the opportunity and capacity to contribute to decisions.

4. *Sustainability* – the value chain partnership considers the whole-of-system, including the long-term economic and social wellbeing of both partners, and their contexts.

5. *Resilience* – the partnership arrangement is adaptive to environmental and sociopolitical changes, and ensures resilience of marginalised participants.

These conditions of inclusion have been applied in the development of the IVC Project research methods, activities and outputs. Organisational strengthening provides one example of an activity where the inclusion conditions actively informed the design of the program.

3.4 Getting started

In a project focussed on inclusion, it is essential that the project *itself* embodies inclusive principles, demonstrating a commitment in practice and not just in theory. Inclusion is a highly context-specific concept. As project contexts can differ substantially, we have avoided providing specific advice, and instead this toolkit concludes by outlining a number of considerations for use by new project leaders and research managers to ensure inclusion when initiating projects.

When considering inclusion, regardless of the context, a project is necessarily examining quite a complex phenomena that requires integration of knowledge and perspectives across disciplines, as well as integration between scientific research and societal practice. For example, the IVC Project required a combination of approaches from social sciences, international development and agricultural sciences, as well as researchers working with practitioners, communities, private sector, government and other stakeholders.

In addition, this transdisciplinary research process, or integration of knowledge, has a number of conditions for successful application (Merritt et al. 2022): i) It takes considerable **time and resources** to facilitate the process, as a non-trivial process, integration requires adequate commitment and investment, ii) It requires a team culture that is **respectful of knowledges and ideas** that may be different from their own, and where members are willing to not only learn but also challenge their own thinking, and iii) It requires projects that are **flexible in their design**, such that the methodology, project activities and planned outcomes can be adapted as new learnings are generated.

3.5 Key processes to begin

The key considerations raised in this section are inherently nuanced and not easily resolved. These considerations are, however, critical to the outcomes of a project and warrant ongoing deliberation. Careful reflection and response to these points will help lead to more grounded, relevant and impactful research.

See Box 3.1 for a list of questions to reflect upon when developing and managing a project to enhance inclusion.

There are several priority areas for any inclusion project to consider at the beginning of the project development. It is critical to *build a core team* who have the skills, willingness and commitment to be integrative and inclusive in their research. This also means having team members who can provide a strong initial understanding of the key relationships and the interplay of dynamics for the relevant social networks. These connecting roles are essential as integration within groups of stakeholders is a critical component for inclusion in research projects. Integration, in its varying forms, creates the space, both structurally and conceptually, for trust to be built with the project team, and for diverse voices, perspectives and knowledge systems to be heard, represented and incorporated into the research. These elements enable inclusion in the project, in the sense that contributions from people whose perspectives are often sidelined in research, for example that of local communities and non-scientific or non-professional stakeholders, can be meaningfully incorporated into project outcomes.

After the core team is formed, it is necessary to *map the stakeholders in the system* for ongoing engagement. The process of stakeholder mapping needs to go beyond identifying who they are, but also what their perspectives and priorities are, and how they might influence or be affected by the project. Thought must also be given as to how the project leader and team interacts with the individual or organisation who funded or initiated the project to maintain their commitment. Of equal importance is understanding and responding to the existing power dynamics within and across the scales of the problem being addressed. These aspects are important considerations to support the project team in identifying risks and opportunities and in anticipating potential challenges in the wider network.

Over the lifecycle of any project, it is critical to *foster strong engagement with diverse stakeholder groups*, including local communities, and the enabling actors, such as government. This can be done through workshops, meetings and one-on-one discussions that reinforce alignment in rapidly changing contexts, ensuring ongoing buy-in and long-term sustainability beyond the life of the project. Careful consideration is also needed to *plan the process for the inevitable completion of the project and withdrawal of the project team*, to allow local implementers to incorporate the interventions into their ongoing practice.

Box 3.1: Considerations for managing a project to ensure inclusion over the long-term

- Which organisations and individuals are best placed to ensure inclusion is sustained? How can the project support their involvement?

- Which knowledge holders might be missing from the project team? In what ways could they be involved in the project?

- Which elements of the project or intervention would the donor/funder be most able to sustain in the long-term? Are these elements sufficiently embedded into practice?

- What is the project's exit strategy to ensure sustainability of interventions?

4. OUTLINE OF METHODS

Table 4.1 provides a snapshot of the breadth of tools and methods used by the IVC Team for the multi-scale research activities, engagement with project partners, collaborators and the I-MEL team. The tools are grouped by their primary function in the project for i) collecting data or ii) analysing and synthesising data and knowledge.

The table maps out each method against the three fundamental questions that underly the I-MEL process (Figure 3.5; Section 3.3) regarding: 1) how the system functions, 2) how the system can be improved, and 3) how we track and respond to change. These three fundamental questions broadly align with three of the four main phases of the project: *Diagnose*, *Design*, and *Evaluate* (the other phase, '*Pilot*' is not included in the table as its implementation is not facilitated by such tools).

Table 4.1 also indicates with which stakeholders along the value chain the tool was used. The final columns in the table note whether the tool was used for the coffee or vegetable case studies, or both.

The large range of qualitative, quantitative and systems thinking methods were complementary, with each method allowing the team to explore the complex problem from a different lens. Collectively, this provided the IVC Team with a comprehensive and nuanced understanding of inclusion in the value chains of the case studies and more broadly.

The first phase of the project, *Diagnose*, centred on understanding the system, including defining the problem and its scope. This phase involved secondary data analysis and on-ground research activities with individual farmers, their community or farming organisations, downstream value chain actors, and staff from government agencies. The key tools used were Farming System Analysis, *Pangandoy*, Rapid Situational Assessment, Inclusive Value Chain Analysis, and Rapid Gender Assessment. Each method provided a different perspective of the case study, with varied questions and scopes.

Key research methods in the Diagnose phase

The Farming System Analysis, for example, is a set of various participatory methods and it helped to create a system profile of the farming area, its community and their resources. *Pangandoy* was also conducted at a community level yet focused on understanding the farmers' and community members' aspirations, challenges to achieving their aspirations and their coping strategies; distinctively, this method delved deeper into understanding the personal goals and motivations of individuals, beyond that of farming.

On the other hand, an Inclusive Value Chain Analysis was applied to identify the pain points and opportunities for inclusive development and upgrading in the vegetable and coffee value chains. Other methods were applied to provide timely understanding of certain aspects of the value chain, including Rapid Situational Assessment and Rapid Gender Assessment, which respectively provided insights into the impact of Typhoon Odette (2021) on the vegetable value chain, as well as insights into the gender roles, relations, opportunities and challenges in both value chains. Collectively these activities helped the project to develop a holistic understanding of the value chain systems for the coffee and vegetable case studies.

The Inclusive Engagement Framework (IEF) provided guidance for the project team to start to consider drivers, enablers and constrainers of inclusion. The I-MEL team experimented with several systems approaches and reflexive practices with the wider IVC Team which helped to synthesise learnings and facilitate the identification of potential pilot activities. These tools included Risk and Opportunity Mapping, Value Network Mapping, Community Adaptation Template, and Three Horizons. The team also tested findings and activities with communities, value chain partners and other actors to check and further refine learnings, and to build trust and interest to participate in the pilot.

The understanding of how the system functions was developed during the *Diagnose* phase and formed the basis of the *Design* phase, which addressed the second foundational question of how to improve the system.

During the *Design* and *Pilot* phases, the project team co-designed and implemented project interventions across the value chain, working with collaborators from the farmers, associations and government.

The **coffee case study** interventions (in collaboration with local government) concentrated on Organisational Development modules and facilitating access of the coffee association members to a coffee dryer which was raised off the ground to enhance quality of the dried coffee beans, as traditionally the drying process occurs on plastic sheets laid on the ground.

The **vegetable case study** interventions centred around the production of food-safe vegetables and involved participatory farmer trials, as well as understanding and establishing market linkage. Additional information gathering activities, such as Rapid Gender Assessments and Organisational Assessment and Development, were conducted to support the iterative co-design process.

Across the *Design* and *Evaluate* phases, the I-MEL team developed monitoring, evaluation and learning processes and tools to support the team to track and respond to intended and emergent outcomes from the interventions. Guided by the IEF, tools such as the Participation Matrix and the Maturity Models, were developed and tested with the IVC Team. These tools could be suitable for use and adaptation in projects and contexts similar to the IVC Project where inclusion is being explored and is a core part of a project.

The distinction between the *Diagnose, Design, Pilot* and *Evaluate* phases and the project activities is less clear in reality than what is depicted in Table 4.1 as we have iteratively learnt and adapted our activities over the project, or leveraged opportunities, to undertake additional complementary research activities (such as Living Income and Pathway Diversity).

Table 4.1: Overview of the methods/tools used in the project, including: their description; the fundamental questions they were used to address (see Figure 3.5); the stakeholder scale at which the tool was used; and their application in the project case studies. The tools are grouped by their primary function in the project as data collection tools or analytical and knowledge synthesis tools.

Method/ tool	Description	Fundamental Question			Stakeholder Scale				Case Study	
		How the system functions	How to improve the system	Tracking change	Individual/ Household	Community/ Organisation	Downstream VC actors	Enabling environment	Coffee VC	Vegetable VC
Theory of Change (ToC) and Outcome Mapping	The Theory of Change is used as a tool to outline how a program or intervention is expected to lead to change and impact.	X	X	X					X	X
Farming Systems Analysis (FSA)	Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.	X	X		X	X			X	X
Living Income	A Living Income is based on the amount of money that covers the cost of food, housing, health and other essential needs. The Living Income tool is a process to determine a measure of a basic yet a decent standard of living for a worker and their family. The Living Income can be used to assess the livelihoods of smallholder farmers, to create a target for interventions to work towards, and to evaluate the effectiveness of interventions designed to improve income.	X	X	X	X			X	X	
Organisational Assessment and Development	Organisational Assessment and Development is an evaluation of six components: governance & leadership; operations & management; human resource development; financial management; business service delivery; and, external relations.	X	X			X			X	
Pangandoy	Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.	X	X		X	X	X		X	X
Pathway Diversity	Pathway Diversity is a method used to undertake a resilience assessment in which resilience is understood as the diversity of pathways available to an actor. Importantly, this method also considers the 'lock-in' or 'traps' that prevent actors from escaping undesirable states.	X	X		X	X	X	X	X	
Rapid Gender Assessment	Rapid Gender Assessment is an analysis of gender-related data to quickly understand the differing roles and responsibilities, aspirations, needs, opportunities and barriers for men and women's engagement in value chains and society in general.	X			X	X	X		X	X
Rapid Situational Assessment	The Rapid Situational Assessment is a methodology that is used to quickly understand the nature and the impact of a problem, often applied post-disaster. It draws on multiple data collection techniques.	X			X	X		X		X
Value Chain Analysis (VCA)	Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.	X	X		X	X	X	X	X	X

(Left vertical label: Data Collection)

	Method / tool	Description	Fundamental Question			Stakeholder Scale				Case Study	
			How the system functions	How to improve the system	Tracking change	Individual/ Household	Community/ Organisation	Downstream VC actors	Enabling environment	Coffee VC	Vegetable VC
Analytical & Knowledge Synthesis	**Cognitive Mapping**	Cognitive Mapping is a form of qualitative modelling of a defined system. This tool identifies and links the important variables and highlights the casual relationships between these variables.	?	?		X	X	X	X	X	
	Community Adaptation Template (CAT)	The Community Adaptation Template is a framework to cluster information and analyse the dynamics of complex systems. This is done by representing the system as the states of discourses, institutions, ecosystems and human wellbeing.	X	X		X	X			X	
	Maturity model for Inclusive VC Partnerships	The Maturity Model for Inclusive Value Chain Partnerships is a new framework developed during the IVC Project for assessing the maturity of "inclusion" in value chain partnerships against criteria in four dimensions.		X	X		X	X	X		
	Participation Matrix	The Participation Matrix is new tool developed during the IVC Project. The tool displays a scale of information relating to a chosen category which is adapted to the specific project context of "inclusion". In selecting the most appropriate responses, the IVC Team could measure changes throughout the project lifecycle and highlight outcomes that were counterproductive to inclusion.	X				X	X	X		
	Risks and Opportunities Framework	The Risks and Opportunities Framework is used to help broaden thinking about the value chain system. It is a tool that categorises constraints and opportunities in both production and market systems as: input, economic, institutional, socio-cultural, environmental and infrastructure factors.	X	X		X		X		X	X
	Three Horizons	Three Horizons is a scenario tool to guide discussions, and to reflect on the future and how to bring about transformation.		X		X	X	X	X	X	X
	Value Network Mapping (VNM)	Value Network Mapping is a method for visualising interactions between individuals and groups in a system and analysing the value that is assigned to these interactions and how the value is transformed. This process helps identify intervention points.	X	X		X	X	X	X	X	X

5. OVERVIEW OF PILOTED INTERVENTIONS

The previous section described methods that were used in the project to examine the value chains and farming communities, to identify and design interventions to support inclusion, and/or to evaluate and track change. Each method provided different insights on the problem, from different angles. This section briefly outlines the key interventions that were co-designed and piloted in the project.

As explained in Section 3.1.1 (*Why do we do transdisciplinary research?*), it can be useful to frame complex problems as nested scale problems, occurring across multiple spatial, temporal and organisational scales (see Figure 5.1). The inclusive value chains explored in the case studies (and in general) involve many processes occurring at the household level (e.g. family dynamics, farm production), community level (e.g. interactions with and from farming clusters or groups), to the regional level and beyond (e.g. interactions with markets, government policies).
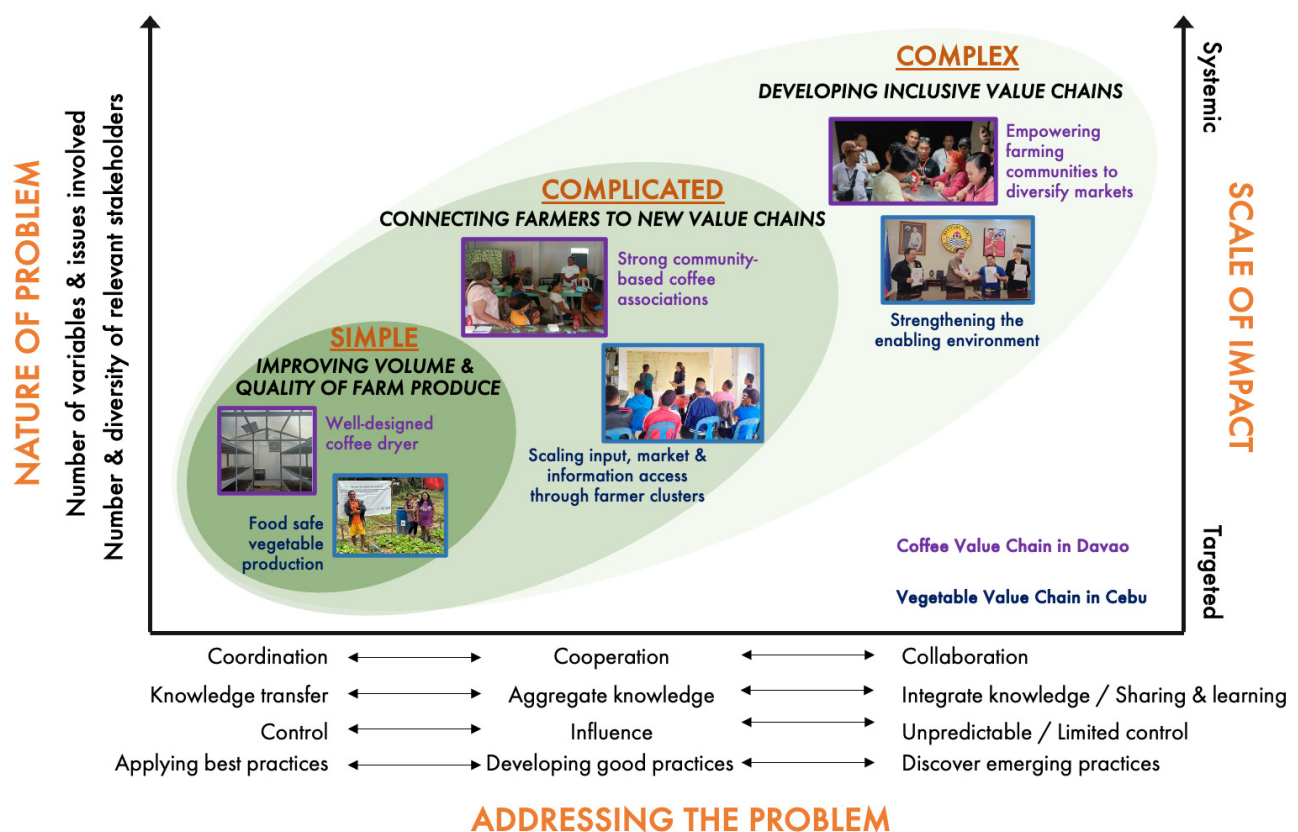

Figure 5.1: Complex problems, such as inclusion in value chains, can be considered as nested scale problems (reframing of Figure 3.1). This is illustrated with the two project case studies on coffee in Davao and vegetables in Cebu (adapted from Stone-Jovicich 2020)

Addressing inclusion in value chains necessitates an understanding of processes across all these levels and the ability to implement multiple context-specific interventions to target those processes. Accordingly, the interventions piloted in the IVC Project occurred at multiple levels for both case studies.

Coffee farming case study in Davao

The key intervention for the coffee case study involved designing and installing a coffee dryer for farmers to address the relatively simple problem of improving the volume and quality of farm produce. At the larger scale, we focussed on strengthening the coffee association, to ensure the community was able to maintain the coffee dryer and provide fair access to all coffee farmers. This included coordinating the management of the installation of the dryer and its access, as well as building the capacity of the associations' leadership and the members to be able to generate and manage resources, form new market linkages and strategically plan for new opportunities beyond their current value chains. As a result of these interventions the farmers became more empowered to engage and negotiate with buyers and therefore access diversified markets. The subsequent empowerment of the farmer community is considered a critical piece of the more complex problem of inclusion in value chains.

Vegetable farming case study

Food-safe vegetables were identified as a promising opportunity for farmers in Cebu from the perspective of both farming households (reduced exposure to toxic pesticide residues) and markets (better price for food-safe products). Providing training to individual farmers in food-safe production methods was considered a solution to the relatively 'simple' problem of improving the quality of farm produce. However, it is more complicated to scale to large numbers of farmers across communities and geographies. This is because production is very site specific, depending on biophysical aspects such as soils, water, pests and diseases, requiring access to local production information. Scaling also requires access to market information and agricultural inputs (including biopesticides and rapid testing for maximum residue limits) to the broader farming community.

As with the coffee case study, a critical part of "inclusion" in the vegetables value chains was empowering the farming community to access diverse markets through capacity building. Another critical, yet challenging, part of the IVC Project was how to attempt to bring about changes to support increased inclusion across the value chain. This required changes to be made to the enabling environment, including the policy and regulations impacting on farmer and traders. However, moving across the scale from a simple to a complex problem (Figure 5.1), not only does the nature of the problem become more ambiguous, but the ability of the project to influence the system and address the problem also becomes increasingly difficult. It is also very difficult to track impact at this scale, not only because of the longer time frames for change but also the increasing number of uncertainties and number of stakeholders.

6. REFLECTIONS

Given the complexity of inclusion in value chain development, especially in areas that experience polycrises such as the Philippines, many diverse methods and tools are required to understand the problem at an adequate depth and breadth.

The most suitable set of tools depends not only on the problem context, but also the resources accessible to the project team. For the IVC Project, the selection of tools was made by an iterative process, that developed as the understanding of the problem evolved and the knowledge gaps were identified. Project resources imposed practical constraints on the suitability of the tool. For example, in the beginning of the project, travel constraints were placed on the research team due to the COVID-19 pandemic, preventing visits to the field and community. While those restrictions were in place, the project team had to rely on secondary data sources and online collaboration (as opposed to face-to-face). Conducting multiple methods of data collection and analyses was crucial for gaining a more holistic view of the problem.

Understanding and attempting to address inclusion in value chains is necessarily a multi-scale endeavour. Inclusion cannot be understood without considering the people involved at the local level (e.g. the communities of the coffee and vegetable farming case studied). However, it also cannot be understood without examining the larger context in which the value chains sit.

A transdisciplinary research process, involving not only interdisciplinary researchers but importantly, the associated communities and societal actors (including government and private sector), is essential for gaining insights that are scientifically robust, and socially relevant and practical. The various methods adopted in the IVC Project, served different purposes in the transdisciplinary research process (Bammer, 2016, 2017). For example, participatory methods, such as Farming Systems Analysis, *Pangandoy*, Rapid Gender Assessment and Organisation Assessment and Development, helped researchers to engage and build trust with the community, as well as gaining important insight into the farming community resources and their aspirations and burdens.

Methods such as Inclusive Value Chain Analysis, the Risks and Opportunities framework, and the Community Adaptation Template, helped to bring together different perspectives on the inclusion in value chains and think systematically about the problem. Other tools, such as Three Horizons and the Maturity Model, helped to identify ways to bring about positive change. Many of the methods and tools served multiple purposes.

This toolkit has presented the methodology adopted for a project examining inclusion in value chains in the Philippine context, and the tools used to support the process.

While there is no one-size-fits-all approach to addressing problems around inclusion, collaboration across researchers, communities, private sector and enabling actors is key. Working across groups with different value systems, perspectives and knowledge streams is challenging but critical for addressing such complex problems.

Taking a collaborative sharing and learning approach to co-design and implementation is fundamental to achieving inclusion at scale. Having a MEL system that supports this is also crucial.

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ACKNOWLEDGEMENTS

APPENDIX

The tools used by the IVC team in the Philippines project

This section of the toolkit presents the tools and processes that were used by the IVC Team to enhance inclusion in the coffee and vegetable value chains in various smallholder farming communities in the Philippines.

The tools are divided into two categories "Tools for Data Collection" and "Tools for Knowledge Synthesis & Analysis". Each tool includes a short description and an explanation of how the tool was used in the context of the IVC Project in the Philippines. Where tools can inform or complement other tools this has also been highlighted.

Together, these tools provide guidance and structure for the evaluation of inclusion in value chains, an understanding of the underlying needs and priorities of the various actors of the value chain, and an outline of the locally-led co-design of practical solutions to increasing inclusion in an equitable manner across a value chain.

Tools for Data Collection

- Theory of Change and Outcome Mapping

A Theory of Change provides a foundation for the other tools and is listed first; the other tools below are listed in alphabetical order.

- Farming Systems Analysis

- Living Income

- Organisational Assessment and Development

- Pangandoy

- Pathway Diversity

- Rapid Gender Assessment

- Rapid Situational Analysis

- Value Chain Analysis

Tools for Knowledge Synthesis & Analysis

- Cognitive Mapping

- Community Adaptation Template

- Maturity Model

- Participation Matrix

- Risks and Opportunities Framework

- Three Horizons

- Value Network Mapping

Theory of Change and Outcome Mapping

The Theory of Change is used as a tool to outline how a program or intervention is expected to lead to change and impact. Used with Outcome Mapping, the tool defines the current problem, the desired change, and clarifies any underlying assumptions, uncertainties or risks, then identifies potential solutions or interventions.

The IVC Project proposal included a Theory of Change, it was then refined and adapted as appropriate across the *Diagnose*, *Design*, *Pilot* and *Evaluate* phases of the project. Outcome Mapping was used to collate the evidence of the expected and emergent change in response to the project interventions.

Description

A Theory of Change (ToC) outlines how a program, or intervention is expected to lead to impact and change. The process of developing a ToC involves defining the current problem and the desired change; clarifying the underlying assumptions, uncertainties and risks; establishing the boundaries of the project; and, identifying the potential solutions.[1]

A complementary tool is Outcome Mapping and it involves a participatory approach to map the priorities, goals and activities for the different actors with which a program interacts.[2] Outcome Mapping involves a design component that is included when developing a ToC that is centred on the actors involved, with a focus on behavioural change. It also involves a record-keeping phase that includes monitoring, evaluation and learning to understand and reflect upon progress towards the program or project outcomes.[3]

While a ToC generally focuses more on the underlying logic of how the program or intervention is expected to lead to change (including long-term impact), Outcome Mapping focuses on the key outcomes or intermediate changes that are essential for achieving those impacts.

How the IVC team used this tool in the Philippines project

A ToC was developed for the IVC Project proposal. It was continuously revised during the project, based on the learnings obtained from the *Diagnose* phase, as well as the series of co-designed and co-implemented interventions from the *Design* and *Pilot* phases of the project (Figure 1).

Outcome Mapping was used in the later stage of the *Pilot* phase and the *Evaluation* phase to identify the changes experienced by partner farmers and community organisations stemming (at least in part) from the project activities (Figure 2). The Inclusive Engagement Framework was also used to guide reflection on, and revisions to, the ToC.
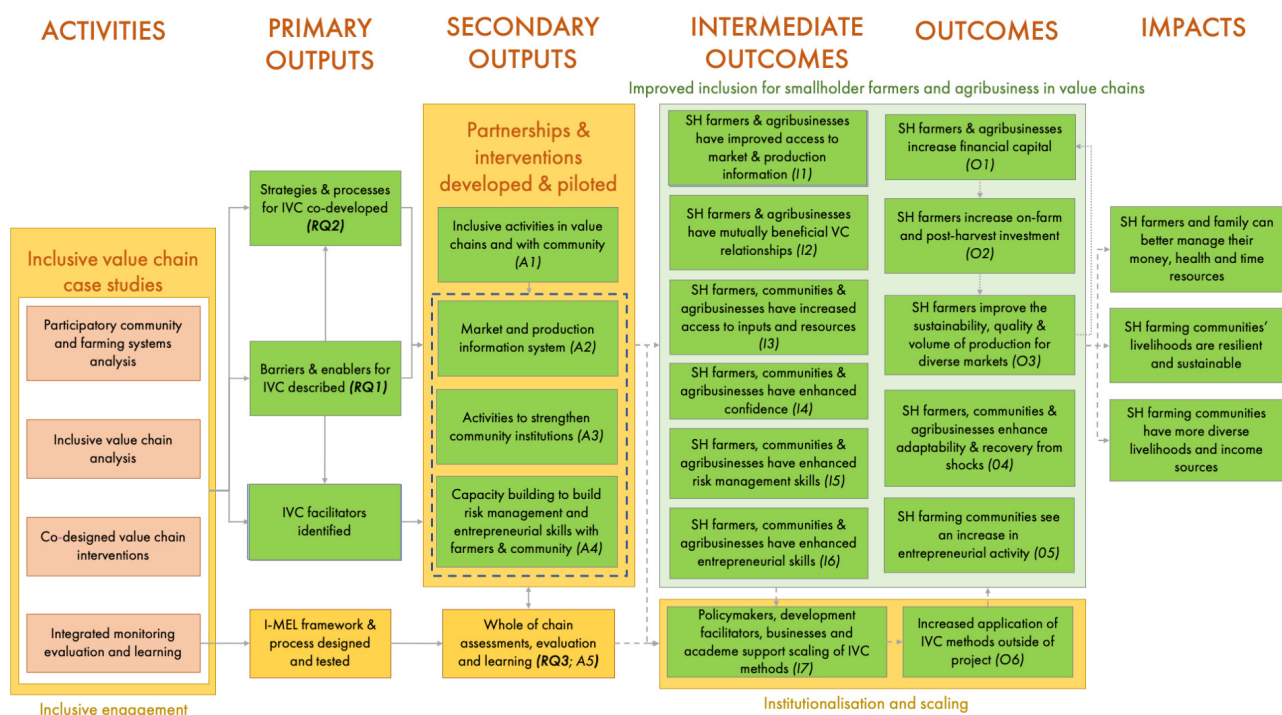
ACTIVITIES | **PRIMARY OUTPUTS** | **SECONDARY OUTPUTS** | **INTERMEDIATE OUTCOMES** | **OUTCOMES** | **IMPACTS**

Improved inclusion for smallholder farmers and agribusiness in value chains

Inclusive value chain case studies

- Participatory community and farming systems analysis
- Inclusive value chain analysis
- Co-designed value chain interventions
- Integrated monitoring evaluation and learning

Inclusive engagement

Strategies & processes for IVC co-developed **(RQ2)**

Barriers & enablers for IVC described **(RQ1)**

IVC facilitators identified

I-MEL framework & process designed and tested

Partnerships & interventions developed & piloted

- Inclusive activities in value chains and with community **(A1)**
- Market and production information system **(A2)**
- Activities to strengthen community institutions **(A3)**
- Capacity building to build risk management and entrepreneurial skills with farmers & community **(A4)**

Whole of chain assessments, evaluation and learning **(RQ3; A5)**

- SH farmers & agribusinesses have improved access to market & production information **(I1)**
- SH farmers & agribusinesses have mutually beneficial VC relationships **(I2)**
- SH farmers, communities & agribusinesses have increased access to inputs and resources **(I3)**
- SH farmers, communities & agribusinesses have enhanced confidence **(I4)**
- SH farmers, communities & agribusinesses have enhanced risk management skills **(I5)**
- SH farmers, communities & agribusinesses have enhanced entrepreneurial skills **(I6)**
- Policymakers, development facilitators, businesses and academe support scaling of IVC methods **(I7)**

- SH farmers & agribusinesses increase financial capital **(O1)**
- SH farmers increase on-farm and post-harvest investment **(O2)**
- SH farmers improve the sustainability, quality & volume of production for diverse markets **(O3)**
- SH farmers, communities & agribusinesses enhance adaptability & recovery from shocks **(O4)**
- SH farming communities see an increase in entrepreneurial activity **(O5)**
- Increased application of IVC methods outside of project **(O6)**

Institutionalisation and scaling

- SH farmers and family can better manage their money, health and time resources
- SH farming communities' livelihoods are resilient and sustainable
- SH farming communities have more diverse livelihoods and income sources

Figure 1: Final version of the Theory of Change for the IVC Project.

Secondary outputs | **Intermediary outcomes** | **Outcomes**

A1. Inclusive activities in VCs and with community

A2. Market and production information system

A3. Activities to strengthen community institutions

A4. CB to build risk management and entrepreneurial skills with farmers and community

A5. Whole of chain assessments, evaluation and learning

* TO DO

Pangandoy

FSA
RMA
IVCA

Organisational strengthening training

GAD plan and budget

Personal entrepreneurial competency assessment

Pathway diversity feasibility trip

Knowledge management

Living Income benchmark

Public briefings on system thinking analyses of Kal and Lebak

AW dryer

Nursery

Market exposure and information

Ratified VMG*

Capacitated farmers/ org leaders

Management functions

Website, facebook, online project materials, you tube, videos

Living Income Working Group workshops and briefings

Green Coffee Beans

Production (area and volume)

Coffee planting materials

Business plans

Capital build-up
Collection of monthly dues
Revive membership

Succession plan of leadership

Skills development (collaboration, communication, negotiation)

Resolutions, MOUs (LGUs, AAVC)

SH = smallholder

I1. SH farmers and agribusinesses have improved access to market and production information

I2. SH farmers and agribusinesses have mutually beneficial VC relationships

I3. SH farmers, communities and agribusinesses have increased access to inputs and resources

I4. SH farmers, communities and agribusinesses have enhanced confidence

I5. SH farmers, communities and agribusinesses have enhanced risk management skills

I6. SH farmers, communities and agribusinesses have enhanced entrepreneurial skills

I7. Policymakers, development, businesses and academe support scaling of VC methods

O1. SH farmers and agribusinesses increase financial capital — Membership

O2. SH farmers and agribusinesses increase on-farm and post-harvest investment — Nursery — Dryer

O3. SH farmers improve the sustainability, quality and volume of production for diverse markets — ?

O4. SH farmers, communities and agribusinesses enhance adaptability and recovery from shocks — Rice Trading — Business plan; Succession plan — Pathway diversity — Public briefings — GAD strategy — MOU collaboration with LGU

O5. SH farming communities see an increase in entrepreneurial activity — Capital build up

O6. Increased application of IVC methods outside the project — Living Income — MOU collaboration with LGU
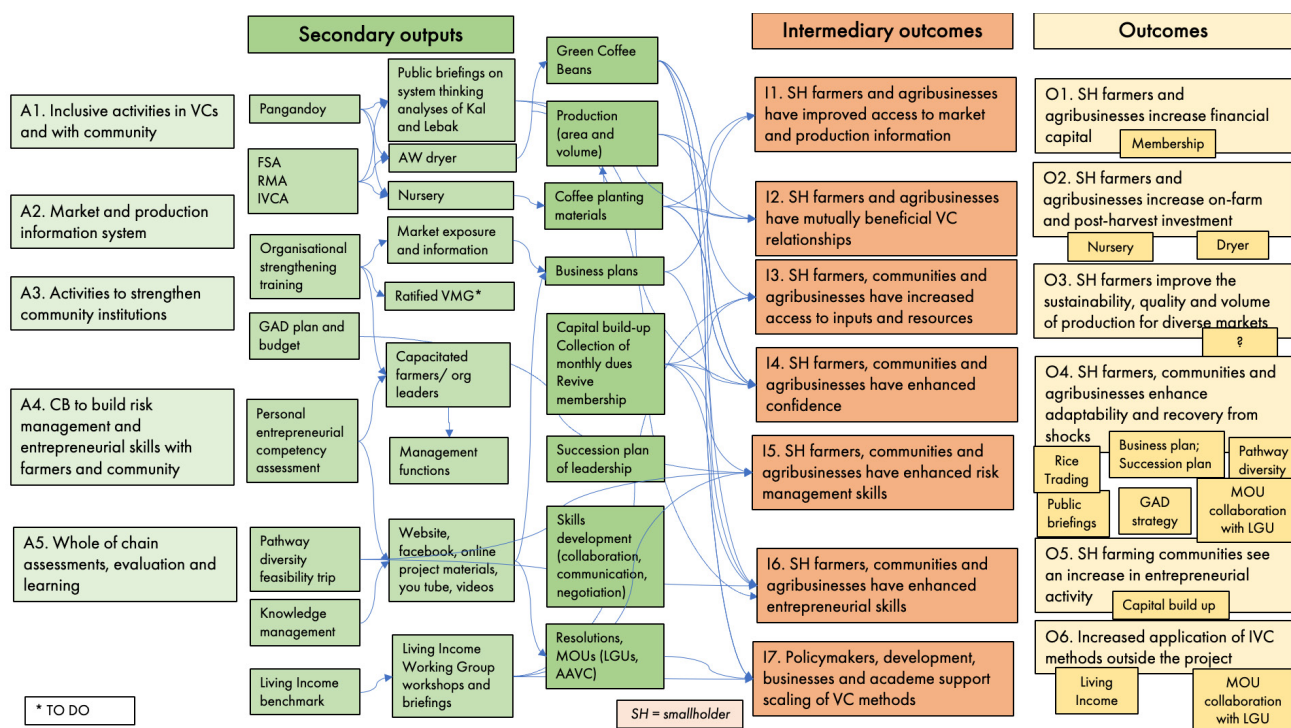
Figure 2: Outcome Mapping exercise conducted by the coffee case study team in Davao, March 2025

Complementary tools

A Theory of Change provides a foundation for the other tools and all the tools in this Toolkit can potentially influence the Theory of Change.

References

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Additional resources

- **Blundo-Canto, G., Triomphe, B., Faure, G., Barret, D., De Romemont, A. & Hainzelin, E.** (2019) 'Building a culture of impact in an international agricultural research organization: Process and reflective learning', *Research Evaluation*, 28, pp. 136–144.

- **Douthwaite, B. & Hoffecker, E.** (2017) 'Towards a complexity-aware theory of change for participatory research programs working within agricultural innovation systems', *Agricultural Systems*, 155, pp. 88–102.

Farming Systems Analysis

Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

It was used during the IVC Project as a data collection tool during the *Diagnose* phase to understand the biophysical and socio-economic context of the communities to support the co-design of interventions.

Description

A Farming Systems Analysis (FSA) uses multidisciplinary approaches to conduct an integrated analyses of the natural, technical and socioeconomic system in a defined farming area.

By applying a variety of qualitative and quantitative methods, an FSA aims to create a farming system profile of a selected farming community and their resources. These may include the farming areas, farming households, and other important capitals such as centres of governance, water and power sources, and infrastructure (Figure 1).

Figure 1: Illustration of farming systems components and their interactions. 'Capitals' refers to those components contained in the Sustainable Livelihoods Framework (natural, physical, social, human and financial).

Data collection methods can include:

- Village mapping and transect walking (Image 1),

- The production of farming calendars and resource mapping (Image 2),

- Historic timelines, and

- The participation of local stakeholders through focus group discussions (such as farmers and community leaders), as well as individual interviews.

On-farm and off-farm activities are typically included in an FSA. Figure 1 provides an example of farming system components and their interactions.

The goals of an FSA are multipurpose. Gaining an understanding of farming operations and outcomes is a common primary objective. The data gathered during an FSA is useful for guiding the direction of further research, including intervention design.

How the IVC team used this tool in the Philippines project

The IVC Project used the FSA to evaluate livelihood risks and resources to identify the potential areas that could be addressed for inclusive value chain development. A particular focus was placed on farming households in the communities involved with vegetable farming on Cebu Island and coffee production in the Suldan Kudarat province, Mindanao.

The biophysical conditions of the areas used for both coffee and vegetable-based production were investigated, alongside the production and marketing practices, and perceptions. The role of local knowledge in farming, along with gender roles and relations, was also explored during data collection. In addition, discussions addressed labour availability and natural resources.

Image 1: Transect walk in Barangay Hinalaan, Kalamansig, Sultan Kudarat (Photo: IVC team)

Multiple visits were undertaken to run community conversations and take photographs for future reference (see Image 1, example of a transect walk). A process of data triangulation and verification was also conducted after completion of the initial data collection phase to ensure the research team gained a holistic and comprehensive understanding of the farming systems under examination. Image 2 shows an example of a map that can be generated with the community during a Farming Systems Analysis.

Image 2: Village mapping output created during Farming Systems Analysis with Barangay Hinalaan, Kalamansig, Sultan Kudarat (Photo: IVC team)

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

- **Rapid Gender Assessment:** Rapid Gender Assessment is an analysis of gender-related data to quickly understand the differing roles and responsibilities, aspirations, needs, opportunities and barriers for men and women's engagement in value chains and society in general.

Additional resources

- **Diepart, J-C. & Allaverdian, C.** (2018) *Farming systems analysis: A guidebook for researchers and development practitioners in Myanmar*. Yangon: GRET—Yezin Agricultural University. (Accessed: 28 April 2025).

- **Giller, K.** (2013) *'Can we define the term "farming system"? A question of scale'*, *Outlook on Agriculture*, 43(3). (Accessed: 28 April 2025).

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Living Income Benchmarks and Targets for Intervention

A Living Income is based on the amount of money that covers the cost of food, housing, health and other essential needs. The Living Income tool is a process to determine a measure of a basic yet decent standard of living for a worker and their family. The Living Income can be used to assess the livelihoods of smallholder farmers, to create a target for interventions to work towards, and to evaluate the effectiveness of interventions designed to improve income.

This tool was used in the *Diagnose* phase of the IVC Project to determine the actual income of coffee farmers and to calculate any existing gap to achieve the Living Income, as a target for the planned interventions

Description

The concept of the Living Income has a long history and is a key principle for wage setting in many countries.[1] Determining a Living Income is a process run with variety of stakeholders including government and business, as well as communities. It is both a policy and a business tool.

Internationally, attaining the Living Income is an important action for businesses and governments to be able to work towards and achieve the Sustainable Development Goals. Living Income has also become a focus of trade policy for numerous countries[2-5] and Non-Government Organisations (NGOs).[6-8]

Defining a 'decent' standard of living may draw upon international standards, however it also requires local consultation to build ownership of the method and to align with the values of a country. The Living Income can also vary within a country and the calculations need to be regularly updated to correspond with changes in the cost-of-living.

The United Nation's International Labour Organization (ILO) has developed a methodology for calculating Living Income Benchmarks, known as the Basic Needs methodology.[9] Significantly, the Basic Needs methodology requires consultation within a country and to provide information for policy for wage discussions. A recent expert review highlighted the importance of consultation with in-country stakeholders for developing credible estimates.[10]

The Living Income is a reflection of its underlying assumptions, such as the size of the family and the number of workers within a family unit. Making these assumptions transparent can help explore policy settings —such as the different level of income needed for a large rural family.

Setting a Living Income Benchmark for a region can be established by using a survey of household income in the region. Subsequently, this helps to evaluate the effectiveness of the interventions used to achieve a Living Income.
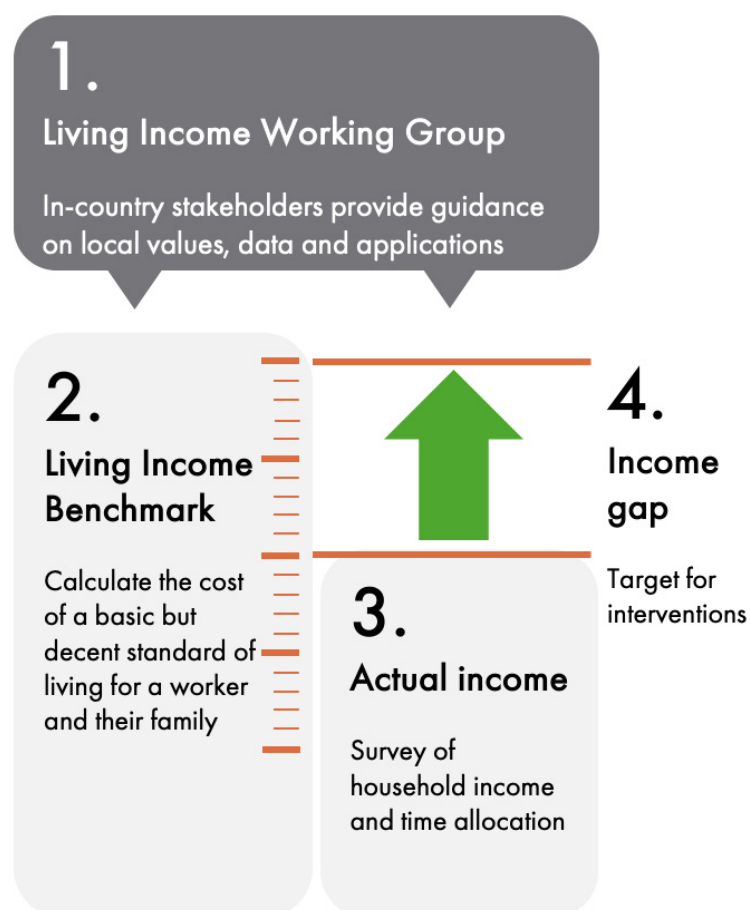
Figure 1: Using the Living Income to develop targets for interventions

How the IVC team used this tool in the Philippines project

The need to consider a Living Income as part of the IVC Project initially arose in response to requests from the private sector to help establish their income targets for communities they buy product from. Farmers indirectly generated this request while they were describing the aspirations for their livelihoods (see the *Pangandoy* method). The use of the Living Income by the IVC Team is described with reference to Figure 1.

1. **Living Income Working Group:** The IVC Team put consultation at the centre of the Living Income research to develop the methodology and the applications in the Philippines context.

   A Living Income Working Group was established at the start of year-three of the IVC Project. The Living Income Working Group included lead government agencies for development and wages, private sector buyers for agricultural products and NGOs representing farmers and families. The Living Income Working Group provided guidance on policy, data and applications, as well as managing a review process of the results at each stage of the calculations. The calculations were undertaken using open-source software and a training workshop was held for building capacity of government agencies to ensure that their staff can modify and update the calculations in the future.

   Once the Living Income Working Group was established, the IVC Team began to develop the Living Income Benchmarks, focussing on the coffee farming case study. This began by undertaking a pilot survey of the actual income for coffee farmers and calculating any existing gap to achieve the Living Income, as a target for the interventions (Figure 1).

2. **Living Income Benchmarks:** The Living Income Benchmarks were developed by considering each component of a decent living standard. The starting point was the ILO Basic Needs methodology, then modifications were incorporated to align with local policies. For example, the food costs for the ILO Basic Needs methodology were modified using the Philippines food and nutrition guidelines for energy intake,[11,12] the national food composition tables, and national surveys of household expenditure.[13] The calculations were presented to the Living Income Working Group for review.

   Living Income Benchmarks were developed for urban and rural areas at the province level in the Philippines —over 100 benchmarks across the country. These benchmarks highlight the variation in Living Income across the Philippines and provide a specific baseline when considering targets for interventions at the project level.

   An important feature of the Living Income Benchmarks is the transparency in the calculations and the ability to modify assumptions as the process evolves. The flexibility to adapt these components shifted the application of the Living Income Benchmarks, allowing it to become a tool for discussing appropriate assumptions for a specific context and application, rather than a fixed value that cannot be modified. The Living Income Working Group developed a format for presenting the results to ensure the assumptions were clearly communicated, as well as recommending the development of a scenario tool to explore assumptions for policy discussions.

3. **Coffee Community Income Survey:** A pilot Living Income survey was undertaken with a small but representative group of coffee farmers in the province of Sultan Kudarat for the 2023/24 production cycle. The survey was designed to be scalable by drawing upon existing surveys that are regularly undertaken in the Philippines.

4. **Income Gap Target for Interventions:** Based on assumptions that were developed with the Living Income Working Group, a Living Income Benchmark was used by applying the survey results to define an income target for the farmers in the case study region.

   The Living Income Benchmark and Living Income survey can be used as tools to track progress in closing the gap for a Living Income. Existing surveys in Sultan Kudarat of coffee production costs have shown that the average farmer has a net loss.[14] Similarly, the pilot survey showed that most farmers in the case study did not meet the Living Income Benchmark. Recent global and regional rises in coffee prices may partly close this income gap for some farmers (Figure 2).
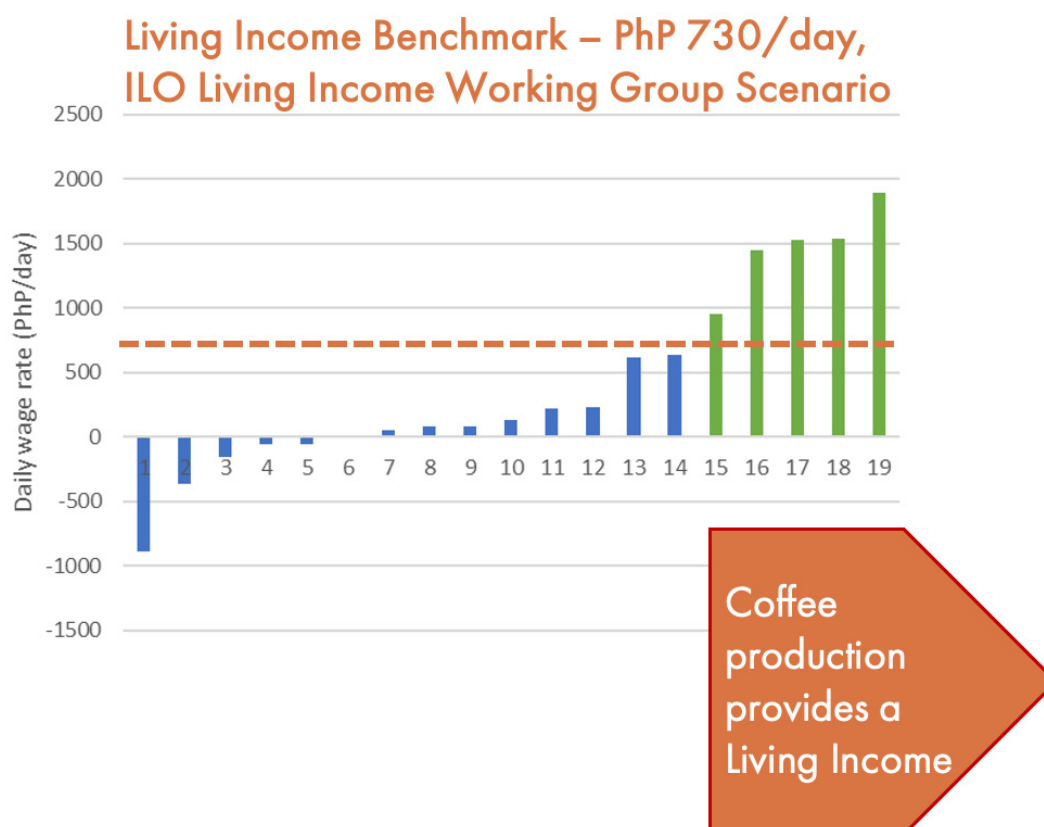
Living Income Benchmark – PhP 730/day, ILO Living Income Working Group Scenario

Figure 2: Demonstration of the Living Income Benchmark and income survey to define income targets for interventions to work towards

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

References

1. **Reynaud, E.** (2017) *The International Labour Organization and the Living Wage: A Historical Perspective.* Conditions of Work and Employment Series No. 90. Geneva: International Labour Organization.

2. **FTDC-ECD** (2021) *Joint Declaration by the Minister for Foreign Trade and Development Cooperation of the Netherlands and the Federal Minister for Economic Cooperation and Development of the Federal Republic of Germany regarding Living Wage and Living Income, 27 January 2021.*

3. **European Commission** (EC) (2017) *Sustainable garment value chains through EU development action.* Brussels: European Commission.

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5. **International Labour Organization (ILO)** (2022) _Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy._ Geneva: International Labour Office.

6. **Action Collaboration Transformation (ACT)** (2020) _Memorandum of Understanding between ACT Corporate Signatories and Industrial Global Union on establishing within global supply chains Freedom of Association, Collective Bargaining and Living Wages._ Berlin: ACT. (Accessed: 4 March 2021).

7. **Fairtrade International (FLO)** (2015) _Fairtrade Standard for Hired Labou_r. Available at: www.fairtrade.net (Accessed: 4 March 2021).

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13. **Philippine Statistics Authority (PSA)** (2020) _2018 Family Income and Expenditure Survey, National and Regional Estimates, Volume 1._ Quezon City: Philippine Statistics Authority.

14. **Philippine Statistics Authority (PSA)** (2022) _Production costs and returns of selected agricultural commodities._ Quezon City: Philippine Statistics Authority.

Organisational Assessment and Development

Organisational Assessment and Development is an evaluation of six components: governance & leadership; operations & management; human resource development; financial management; business service delivery; and, external relations.

This tool was used in the *Diagnose* and *Design* phases of the IVC Project to understand and to identify the strengths and weaknesses of two associations of coffee farmers to support the areas that were identified for further development. The Organisational Assessment and Development process can also be used in the *Evaluate* phase to monitor progress of organisational development and engagement in value chains.

Description

Organisational Assessment is a structured process to evaluate an organisation's strengths and weaknesses thereby identifying areas in need of further development. The process uses a suite of tools and can be applied to any organisational type including businesses, government, non-government and community-based organisations. The assessment involves representatives from across the organisation to discuss internal capabilities and capacities, which forms the basis of a training program designed to strengthen the organisation.

The Organisational Assessment and Development process[1] focusses its assessment on six components:

1. *Governance and Leadership:* the capacity of leaders to inspire, prioritise, make decisions, provide direction and innovate.

2. *Operations and Management:* the capacity of the organisation to implement key organisational functions such as prioritisation and planning.

3. *Human Resource Development:* the capacity of the organisation to help members develop their personal and organisational knowledge, skills, and abilities.

4. *Financial Management:* the capacity of the organisation to manage its resources to achieve financial objectives.

5. *Business Service Delivery:* the capacity of the organisations to offer services to members efficiently and in line with other service providers.

6. *External Relations:* the capability of an organisation to have formal relationships and partnerships, and being able to manage the external environment.

How the IVC team used this tool in the Philippines project

The Organisational Assessment and Development process was used in the IVC Project to assess the stage of development of the Coffee Farmers Association of Hinalaan (COFAH) and the Nuling Coffee Growers Association (NCGA) in Sultan Kudarat. The six organisational components were assessed through focused group discussions with association members, their board of directors, committees, and officers.

Results from these discussions revealed that both associations were still in their infancy stage in terms of financial management, leadership, visioning and direction, marketing, and inclusion. This observation is typical to many similar smallholder producer organisations. This process often reveals that it is the first time that actors are engaging in an organisation that requires strategic planning and implementation, as well as the need for relationship building outside of the organisation and community. Capacity and resources in these situations are often limited, so the Organisational Assessment and Development tool is regularly needed to generate adequate engagement in value chains.

Based on the results of the Organisational Assessments, the Organisational Development Modules were developed by the IVC Team to train both coffee farmer associations, which emphasised providing key management skills to the officers of the organisation to streamline operations. The training program included modules on:

- vision and direction setting

- inclusive leadership

- financial management

- resource generation and stakeholder engagement

- production and operations management

- marketing and market linkage, and

- monitoring and evaluation of organisational activities.

A field visit was also undertaken so that participants could learn directly from the experiences of other producer organisations and gain exposure to various coffee markets outside of their region.

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

References

1. **United States Agency for International Development (USAID)** (2015) *Organizational capacity assessment of farmers associations in Morogoro, Dodoma and Manyara regions: NAFAKA Activity.* Washington, DC: United States Agency for International Development.

Pangandoy

Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

It was used in the IVC Project as a data collection tool in the *Diagnose* phase of the project to elicit deeper insights into the aspirations of the farmers and communities as well as the challenges they face and coping strategies they use to move towards their aspirations. This knowledge informed the codesign of project interventions in the *Design* phase.

Description

Pangandoy (*Visayan* * for "aspirations") is a participatory, community-oriented research method which invites community members to share their hopes and aspirations for the future, their current burdens, and the coping strategies they use to lighten their loads as they journey towards a comfortable life.
(**a Philippine ethnolinguistic region*)

The Pangandoy method was adapted from its original Pagdadala model.[1] The Pagdadala model emphasised the "burdens being carried" (*dinadala* in Visayan) by the individuals and includes discussions on catharsis.

What makes Pangandoy distinct is its emphasis on aspirations by encouraging the sharing of individual personal goals. Sessions begin with aspirations and end with a discussion of coping strategies as an intentional strategy to start and end the discussion with a positive outlook. The research method has been used in a range of contexts including education and post-disaster scenarios.[2,3]

Figure 1: Backdrop illustration used during Pangandoy sessions during the IVC Project

How the IVC team used this tool in the Philippines project

The IVC Project applied *Pangandoy* as an initial research activity to understand the interactions of the individual farmers with agricultural value chains. This approach was used to gain a deeper insight into the aspirations of the farmers and community members, the challenges to achieving their aspirations, and the coping strategies they use to address these burdens. In addition, this approach was also used to understand the aspirations, challenges and burdens faced by traders in the vegetable case study.

The project applied the Pangandoy method in combination with the Farming Systems Analysis (FSA). While the FSA tends to look at community-level aspirations and their contexts, the Pangandoy method provides a more individual-level insight and clarifies factors that affect agronomic performance (even when they do not appear directly relevant to agronomic factors).

Once collected, the Pangandoy data was de-identified and coded, then analysed by themes and integrated into systems maps using stocks-and-flows diagrams (Figures 2 & 3). The central topics that emerged in this context included family, children's education, health, income, weather, roads, and traders.

The narratives revealed that low-income, smallholder farmers often used non-economic indicators as benchmarks to their own performance. Their farming decisions were generally centred around three key resources: 1) cash availability; 2) time and how much effort is needed for various activities; and, 3) their personal and family's health.

The relationships between these resources, as well as the scenarios depicting impact of disasters and government services, were all featured in the complex narratives the farmers shared.

The narratives also showed clear relationships and interactions between their children's education, managing farm labour and its effects on health, the impacts of disasters on farming and health, the timing and impacts of government services delivery, and concerns about technology adoption.

Response	Pax ID	Verbatim Responces	Chapter	Gender
SK-N-019	SK-N-F6	May panabang nga ihatag sa mga pananom	Aspiration	Female
SK-N-071	SK-N-M3	Magtanim ng magtanim para may pagkukunan ng income	Aspiration	Male
SK-N-029	SK-N-F2	Balakid ko sa buhay is kapos talaga financially	Burden	Female
SK-N-099	SK-N-M6	Mubuan ang tanan mga presyo fertilizer og pesticides	Burden	Male
SK-N-048	SK-N-F2	Una dahil andyan si lord. Andyan ang pamilya, kapatid na madaling lapitan always	Coping	Female
SK-N-146	SK-N-M7	Arawan (Labor work)	Coping	Male

Figure 2: An example of meta-cards placed on the Pangandoy backdrop (Figure 1) when used in a workshop and how they are de-identified and coded for thematic analysis
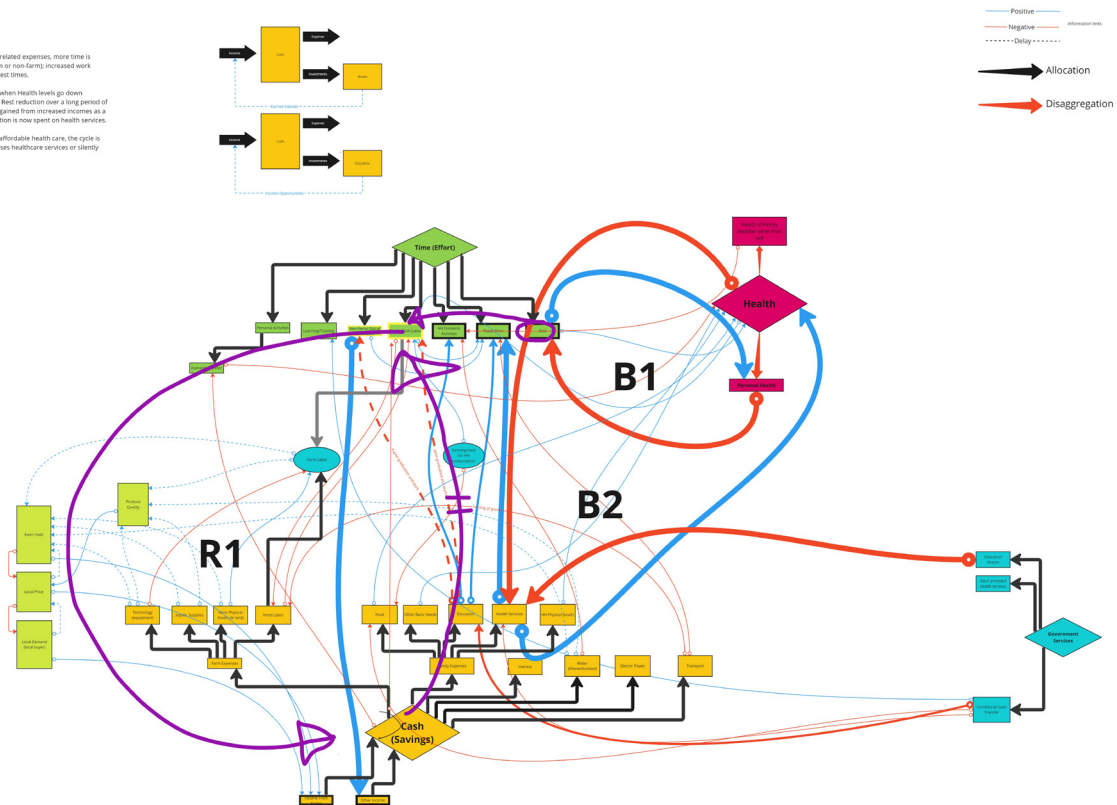
Figure 3: Example of a "stock-and-flows" diagram primarily informed by the Pangandoy method theme narratives and farming systems analysis. This particular diagram displays the feedback loops collected from narratives about children's education

Complementary tools

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

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1. *Conceptualised by Edwin T Decenteceo and later refined by Lyra Verzosa, to incorporate a community psychosocial lens.*

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3. **Fortunado, R.L.G. & Canoy, N.A.** (2021) 'Narrative inquiry on early-career teachers' stories of Pagdadala in caring for students in low-resource urban public schools', *International Journal of Qualitative Studies in Health and Well-being*, 16(1), 19178881. (Accessed: 3 August 2025).

Additional resources

- **Pinon, C.D., Geges, D.B., Alvaran, L.M.R.T., Palo, A.S.M., Buhia, G., Laurente, J. & Cruz, M.B.** (2024) 'How can smallholder farmers' gendered aspirations promote inclusivity on the coffee value chain development in Sultan Kudarat, Philippines?', *Journal of Economics, Management & Agricultural Development*, 9(1) [in press]. (Accessed: 3 August 2025).

Pathway Diversity

Pathway Diversity is a method used to undertake a resilience assessment in which resilience is understood as the diversity of pathways available to an actor. Importantly, this method also considers the 'lock-in' or 'traps' that prevent actors from escaping undesirable states.

It was used as a data collection tool in the *Evaluate* phase of the IVC Project for the coffee case study to understand the livelihood options available to farmers and to identify possible strategies for them to diversify their incomes. However, it could also be used in the *Diagnose* phase of a project to explore and assess the range of potential livelihood options.

Description

Pathway Diversity[1] is an approach to resilience assessment in which resilience is interpreted as the diversity of pathways available to an actor (or group of actors).

The approach draws from both systems and agency-based perspectives on resilience. Systems-based perspectives contribute concepts from ecology such as feedbacks, multiple stable states, regime shifts and tipping points. By incorporating agency-based perspectives from psychology, sociology and development studies into the Pathway Diversity approach this enables the consideration of a diversity of options that are available to an actor, the extent to which they are empowered to make decisions, and how the consequences of the chosen options might impact on future options.

A pathway is defined as a sequence of choices, actions or options. The Pathway Diversity process therefore offers a method to anticipate and monitor the effectiveness of interventions for *building resilience* in a system and is also a means to assess any undesirable states, known as a "lock-in" or "trap" from which the actors of a system are unable to escape.

How the IVC Project in the Philippines used this tool

In Kalamansig —within the *Barangay** Hinalaan in Mindanao, Philippines— farmers and other actors (e.g. traders) are in a "lock-in" situation where it is difficult to enhance the household financial situation (e.g. through diversification to other activities) or improve the coffee-farming system (through increased production or market access).

*A "barangay" is the smallest administrative division or local government unit in the Philippines. It serves as the basic political unit, similar to a village or neighbourhood, and is responsible for implementing government policies and programs within the community.

Farmers in a "lock-in" situation

Coffee farmers in Kalamansig usually have more expenses than income, except when there is a boom in coffee prices. This means they must access informal loans to pay for, or reduce spending on, essentials (food, education and health services), particularly from August to February when they receive no income from coffee. In this period, very few can afford to buy non-essentials and so there is little entrepreneurial activity. The area's remoteness, its limited infrastructure (e.g. roads, electricity), and a recent history of conflict resulted in little commercial investment to date, including from agribusinesses that would suit coffee farmers and provide income during the 'crisis' months. Resilience (as defined by Pathway Diversity) is low; most coffee farmers are 'locked-in' to coffee production and only during the harvest season (when there is money in the community) can some farmers supplement their income by selling meat products or running *sari-sari** stores (**convenience or "variety" store*).

The Pathway Diversity activity sought to explore possible strategies to support farmers to find new solutions to enhance resilience. The IVC Team invited three businesspersons to participate in a field visit and to provide their insights on if (and how) their business or corporate social responsibility (CSR) models might be feasible in the area. These business activities related to poultry production (for meat or eggs), beef cattle production, and a motorcycle manufacturer.

The Pathway Diversity activity involved:

- An *online orientation and co-design session* to introduce the participants to the IVC Project and the Pathway Diversity activity.

- A *site visit* to *Kalamansig, Barangay* Hinalaan where the IVC Team and businesspersons held meetings with officials of the *Barangay* Hinalaan and the Coffee Associations of Hinalaan (COFAH). They also visited sites within the *Barangay* to understand the landscape and talk with farmers and local community.

- A *focus group discussion* with the businesspersons and IVC Team; this session started with participants reflecting on the Kalamansig region and describing their vision for how their type of business could operate and support the farmers and their communities in diversifying their activities. This led to discussion on the opportunities, challenges and enabling conditions for business activities in the area.

As a result of the Pathway Diversity process, the participants identified that the most feasible option for the near future (0-5 years) was to establish a poultry production industry. Compared to cattle, there was a clear local market for eggs and chicken meat. In addition, poultry farming is an industry that could support participation of smallholder farmers and the existing association (COFAH) could provide an entry point for training to build skills and capabilities of interested farmers and initiate a small volume demonstration project. If successful, the development of an industry would require an investment in hatching, meat dressing and preparation facilities in the region.

Further development of the road and electricity networks is needed but this transformation of road and energy infrastructure is underway and the participants felt such infrastructure would not be a constraint to commercial investments within five years.

Complementary tools

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.
- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.
- **Risks and Opportunities framework:** The Risks and Opportunities Framework is used to help broaden thinking about the value chain system. It is a tool that categorises constraints and opportunities in both production and market systems as: input, economic, institutional, socio-cultural, environmental and infrastructure factors.
- **Three Horizons framework:** Three Horizons is a scenario tool to guide discussions, and to reflect on the future and how to bring about transformation.

References

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Rapid Gender Assessment

Rapid Gender Assessment is an analysis of gender-related data to quickly understand the differing roles and responsibilities, aspirations, needs, opportunities and barriers for men and women's engagement in value chains and society in general.

A Rapid Gender Assessment was used as a tool in the *Diagnose* phases of the IVC Project to develop an understanding and support co-design in the *Design* phase, and the implementation of project activities that were more inclusive in the *Pilot* phase. During the *Evaluate* phase the IVC Project built upon the Rapid Gender Assessment to determine the changes that had occurred for men and women because of the interventions.

Description

Rapid Gender Assessments are designed to accelerate data collection, often in times of emergency, to quickly understand the requirements to support the engagement of men and women in research activities and to design interventions that ensure inclusion. These assessments can be targeted at any group to obtain a higher understanding of their needs, challenges and opportunities. This approach enables a more gender-sensitive value chain design which explicitly accounts for women's equal participation and benefit sharing, along with asset ownership, and is more likely to bring about inclusive value chains.[1]

How the IVC Team used this tool in the Philippines project

Gender and diversity are explicit components of inclusive value chains. The IVC Project applied the Inclusive Engagement Framework pillars of identify, agency, equity, resilience, and scalability to underpin gender and diversity throughout the project activities.

The aim of the Rapid Gender Assessment in the *Diagnose* phase of the IVC Project was to describe men and women's participation in value chains. This included an analysis of their different roles and responsibilities, capacities, challenges and vulnerabilities, together with potential opportunities which could support both men and women, as well as the identification of appropriate mechanisms to co-design the interventions.

A Gender Working Group was established to help unpack gender considerations specific to both the coffee and the vegetable value chains. The task of the Working Group was to support the co-design of interventions, enhance the benefits of inclusion for women across the value chains, and assist in conducting the Rapid Gender Assessment. Focus group discussions, a rapid literature view, and a review of project reports supported this process. Particular attention was paid to women's engagement in organisations, such as farmer groups and farming associations.

The Rapid Gender Assessment led to the co-design of interventions focussing on:

- Strengthening organisational functioning of groups and associations through targeted capacity building (including leadership, financial management, entrepreneurship, proposal writing),

- Promoting gender sensitivity within groups and associations, and in the design of project interventions, and

- Promoting infrastructure, technology and tools which reduced time, costs and workload of men and women whilst supporting greater health, and additional access to knowledge and markets.

As part of the *Evaluation* phase, assessments were also undertaken to evaluate changes for women, based on the initial Rapid Gender Assessment.

Complementary tools

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

References

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Additional resources

- **Australian Centre for International Agricultural Research (ACIAR)** (2020) *Gender Guidelines for Project Proposals*. (Accessed: 3 August 2025).

- **Pinon, C.D., Geges, D.B., Alvaran, L.M.R.T., Palo, A.S.M., Buhia, G., Laurente, J. & Cruz, M.B.** (2024) 'How can smallholder farmers' gendered aspirations promote inclusivity on the coffee value chain development in Sultan Kudarat, Philippines?', *Journal of Economics, Management & Agricultural Development*, 9(1). (Accessed: 3 August 2025).

Rapid Situational Assessment

> The Rapid Situational Assessment is a methodology that is used to quickly understand the nature and the impact of a problem, often applied post-disaster. It draws on multiple data collection techniques.
>
> This tool was used early in the IVC Project in the *Diagnose* phase to understand how Typhoon Odette (2021) impacted rural communities near the City of Cebu and the implications for the vegetable case study. However, it could be used at any phase of a project following major events.

Description

A Rapid Situational Assessment (RSA) is a methodology that draws on multiple data collection techniques as well as qualitative and quantitative sources of data to develop a timely understanding of the nature and the extent of impact of a problem.

RSA is often used to firstly understand the health and social issues and the presence (or absence) or effectiveness of services and structures to address these issues. Then secondly, it can be used to develop plans and responses to combat the problem.[1] The RSA is often used by agencies involved in the humanitarian response to disasters to understand the extent of destruction and people's immediate needs.[2,3] The International Institute for Environment and Development (IEED) published a review of tools and frameworks (including rapid assessment methods) for humanitarian response in urban environments (Mohiddin and Smith, 2016).

How the IVC Team used this tool in the Philippines project

Super Typhoon Rai/Odette made its first landfall in the Philippines on 16 December 2021 in Siargao Island, before travelling westward across the country for almost 48 hours. Odette's impact was widespread, affecting 11 regions and 38 provinces, causing US$500 million (PhP 28 billion) in damage, with nearly PhP 80 million worth of damage to vegetable and horticulture crops borne by 5,580 farmers in the 28 mountain barangays (municipalities). The Agriculture Comprehensive Emergency Fund responded with loans for smallholder farmers, whilst bigger farms could access larger loans through the Landbank and the Development Bank of the Philippines.

In the IVC Project, an RSA was conducted on 10 January 2022, to determine the impacts of Typhoon Odette on the Cebu Province. This RSA focused on the impacts on electricity, water, fuel, agricultural, and financial resources in the first two to three weeks post-disaster.

Two months later, once the debris had been cleared from the roads, a follow-up visit was undertaken on 3 March 2022, to better understand the conditions of both the farms and the farmers, and to identify the coping strategies the farmers had since introduced. Affected areas were still undergoing repairs to water systems and electrification, but production and sales of harvests (of short turn-around crops) had recommenced. The field visits included surveying sites in Pinamungajan, Mantalongon and Sudlon, phone interviews and visits to the Department of Agriculture offices, and secondary data was also gathered.

The analysis drawn from the RSA from both visits highlighted that subsistence farmers preferred to rapidly access paid work with farming activities conducted on the side, contrasting with more entrepreneurial farmers who self-funded capitalisation for their farms or accessed funds through membership at cooperatives (mainly through loans).

References

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2. **Mohiddin, L. & Smith, G.** (2016) *A review of needs assessment tools, response analysis frameworks, and targeting guidance for urban humanitarian response*. IIED Working Paper. London: International Institute for Environment and Development (IIED). Accessed: 12 May 2025).

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Value Chain Analysis

Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhance participation and benefit sharing among value chain stakeholders.

This tool was used in the *Diagnose* and *Design* phases of the IVC Project to support the case studies for the vegetable and coffee farmers. The Value Chain Analysis helped to understand the relationships and the flow of produce from farmers to consumers, as well as identifying potential collaborators and areas for intervention to improve value chain functioning and sustainability. It could also be used in the *Evaluate* phase to monitor progress in the value chains as a result of interventions.

Description

Value Chain Analysis uses a combination of tools and techniques to achieve an overall understanding of the value chain. The analysis enables the identification of bottlenecks, barriers and opportunities, which aims to enhance value chain stakeholder participation and benefit sharing.

The analysis can draw on several complementary methods, including:

- *Rapid Market Appraisal,* to inform supply trends and market dynamics

- *Value Chain Participation Mapping,* to highlight the roles, incentives, motivation and capabilities of stakeholders

- *Relationship and Information Flow Analysis,* to characterise the nature of value chain relationships, including dimensions of trust, power and dependence), and

- *Value Addition and Product Flow Assessment,* to identify inefficiencies and opportunities for value-adding and diversification.

The Value Chain Analysis may draw on both primary and secondary data. Primary data can include data collected during field visits and reconnaissance trips, key informant interviews, focus group discussions, and participant observations. Secondary data are derived from existing information, which includes government statistics/data, project reports, socioeconomic and geographic profiles, and other information from non-government organisations.

How the IVC Team used this tool in the Philippines project

Value Chain Analysis was applied in the project to identify obstacles and opportunities for inclusive development and improvements in the vegetable and coffee value chains. In both case studies, the IVC Team first conducted a Rapid Market Appraisal. This is often a preliminary step in Value Chain Analysis more generally, as it provides a quick identification of key players and basic understanding of the flow of value from production to consumption.

A Rapid Market Appraisal can be conducted using secondary data only, which was critical in the IVC Project due to the COVID-19 travel restrictions that occurred early in the project which prevented researchers from visiting communities and collecting primary data.

Vegetable Case Study: The Rapid Market Appraisal for the vegetable case study identified various supply chains in Cebu, with further investigation completed for three types of supply chains: 1) cooperative-led, 2) concessionaire-led, and 3) wholesaler-led.

Building on the results of the Rapid Market Appraisal, a Value Chain Analysis was undertaken where primary data was collected through semi-structured interviews with key informants, on-site observations, and focus group discussions with clustered and non-clustered farmers. A cluster is a group of farmers who are working together to meet specific standards and market requirements but they are not a legal entity. It is a way of organising farmers to facilitate production and market access.

Access to inputs and the marketing of produce were the main problems faced by the vegetable farmers. Furthermore, one of the key opportunities identified through the Value Chain Analysis was the increasing demand for "food-safe vegetables" in Cebu. This led to the development of interventions around "Good Agricultural Practices" (GAP: a series of agreed standards and regulations around pesticide use and storage), as well as linking farmers to traders who were willing to buy food-safe vegetables.

Coffee Case Study: The Rapid Market Appraisal for the coffee case study in Sultan Kudarat, identified various supply chains including wholesaler- and trader-led. The regular supply of good quality and adequate quantity of coffee being a key issue for buyers.

For this Value Chain Analysis, a mix of primary and secondary data was collected. The Value Chain Analysis found that for the coffee value chain "inclusion" could be supported by improving access to shared resources and facilities (e.g. post-harvest facilities), and participation in activities such as training and workshops to strengthen organisational capacity.

Both the Nuling Coffee Growers Association (NCGA) and the Coffee Farmers Association of Hinalaan (COFAH) were at the "start-up" stage, requiring introductory-level management training. The strengthening of the coffee farmers' associations therefore presented the most promising opportunity for inclusive development of the coffee value chains. In addition, training using Organisational Development Modules developed by the IVC Team were conducted for both associations to help enhance the associations' capacity to participate in the coffee value chain.

Complementary tools

- **Rapid Gender Assessment:** Rapid Gender Assessment is an analysis of gender-related data to quickly understand the differing roles and responsibilities, aspirations, needs, opportunities and barriers for men and women's engagement in value chains and society in general.

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Organisational Assessment and Development:** Organisational Assessment and Development is an evaluation of six components of organisational development: governance & leadership; operations & management; human resource development; financial management; business service delivery; and, external relations.

Additional resources

- **Bammann, H.** (2007) 'Participatory value chain analysis for improved farmer incomes, employment opportunities and food security', Pacific Economic Bulletin, 22(3), pp. 113–125.

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Cognitive Mapping

> Cognitive Mapping is a form of qualitative modelling of a defined system. This tool identifies and links the important variables and highlights the casual relationships between these variables.
>
> It was used in the IVC Project as an analysis and synthesis tool in the *Diagnose* phase to examine the data from the *Pangandoy* regarding the aspirations, burdens and coping strategies of farmers.

Description

A cognitive map can be developed to represent any system. Many studies have used Cognitive Mapping to examine people's perceptions of complex social systems.[1,2] Tolman (1948)[3] was the first to use the term Cognitive Mapping when investigating how human and animals find their way in a complex environment.

The process involves the qualitative modelling of a system where the important variables that affect the system are defined and the cause-and-effect, or causal relationships, between them. The variables can include environmental states, such as declining soil fertility, social elements, like voluntarism, or even abstract ideas of political commitment, for example.

By drawing on participants' knowledge and past experiences, the application of this approach can help groups explore solutions to current problems, anticipate future possibilities, and facilitate subsequent decision-making.[4] A key strength of Cognitive Mapping is therefore the ability to permit a broad range of stakeholders to elicit and visualise both their knowledge and the related mental models of a particular system.

When developed in a participatory manner with local stakeholders, the application of Cognitive Mapping can provide stakeholders with the opportunity to not only contribute their (often deep) knowledge about the system yet it empowers them to contribute their ideas and opinions on possible solutions.

How the IVC team used this tool in the Philippines project

The IVC Team used Cognitive Mapping to represent the aspirations of the women and men vegetable farmers, the burdens they face, and their coping strategies —as described by the farmers participating in the *Pangandoy* activity— as well as the interrelationship between these factors (Figure 1). Women and men vegetable farmers share the same primary aspiration for their children to become educated and eventually pursue a professional career. However, their secondary aspirations differ, women want prosperous livelihoods while men desire good health for their family.

Both agreed that financial problems and the changing climate are burdening them from achieving these ambitions. In addition, they are affected by expensive goods and farm inputs, changing seasonal patterns, pests and diseases (women are predominantly affected), and traders' control over marketing activities (mainly impacts men).

Men and women further agreed on the importance of maintaining good virtues as part of their coping strategies. Yet other coping strategies differed with gender, namely spiritual support for women and access to credit for men. Together, the coping strategies employed (both jointly and separately) imply that improving the delivery of social services and welfare, including education, health and financial support, will enable farming families to improve vegetable production.
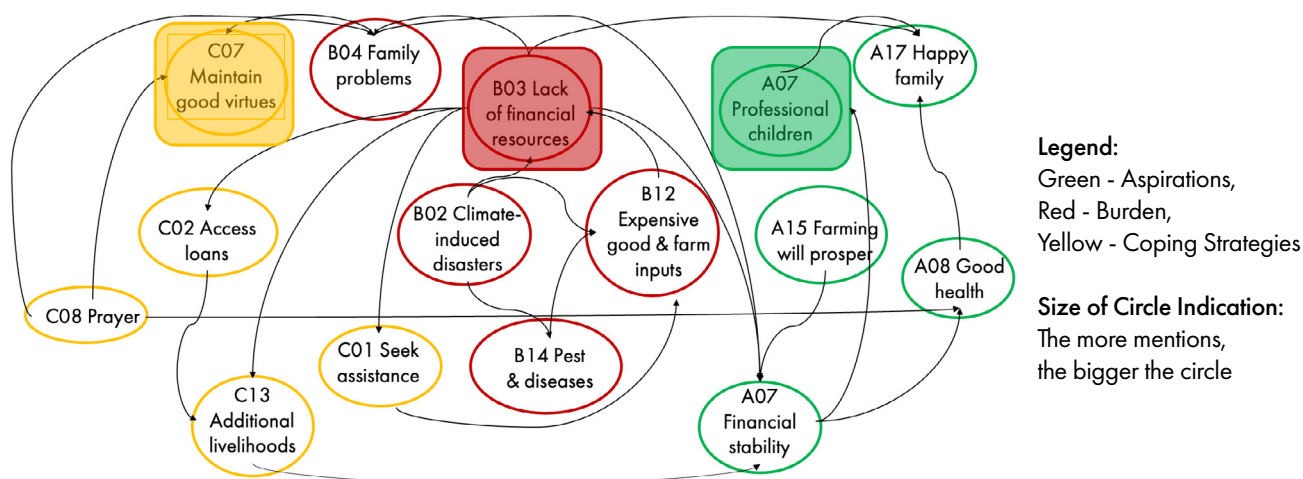
Figure 1: Cognitive map illustrating the same major aspiration of women and men vegetable farmers for their children to be become educated (Source: Piñon et al., 2024)

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

References

1. **Downs, R.M. & Stea, D.** (eds.) (1973) *Image and environment: Cognitive mapping and spatial behavior.* Chicago: Aldine Press.

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Additional resources

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Community Adaptation Template

> The Community Adaptation Template is a framework to cluster information and analyse the dynamics of complex systems. This is done by representing the system as the states of discourses, institutions, ecosystems and human wellbeing.
>
> This tool was used as an analysis and synthesis tool in the *Diagnose* phase of the IVC Project to develop an understanding of the needs and the wellbeing goals of the communities, and to support the co-design and implementation of project activities.

Description

The Community Adaptation Template (CAT)[1] is a framework to cluster and analyse empirical data relevant to sustainability challenges. It represents the system as four components:

- *State of discourses:* the discourse amongst individuals or institutions around the ideas that influence action.

- *State of institutions:* formal and informal rules and institutions representing the prevailing social institutions governing a community collective behaviour.

- *State of ecosystem:* natural environment, such as forests and water, and built environment, such as roads and vehicles.

- *State of human wellbeing:* the physical and psychosocial aspects of what it means to live well, including indicators of good health.

The CAT is sometimes referred to as the Human Ecology Framework.[2] It has been used in the Philippines and other South-east Asian countries on topics such as food systems and food security,[3] socio-ecological traps in small-scale fisheries,[4] and community-based adaptation to climate change.[5]

A Causal Loop Diagram is a complementary modelling approach to visualise the CAT framework by representing variables within each component and the interactions between them. These interactions are described through seven processes (Figure 1).
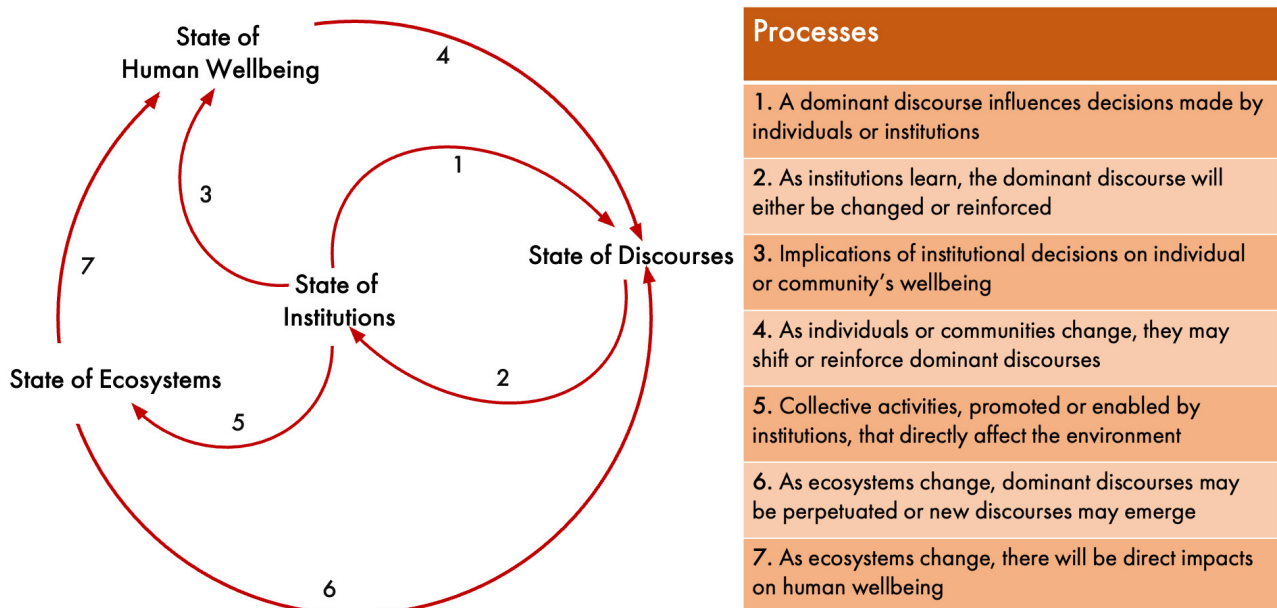

Processes
1. A dominant discourse influences decisions made by individuals or institutions
2. As institutions learn, the dominant discourse will either be changed or reinforced
3. Implications of institutional decisions on individual or community's wellbeing
4. As individuals or communities change, they may shift or reinforce dominant discourses
5. Collective activities, promoted or enabled by institutions, that directly affect the environment
6. As ecosystems change, dominant discourses may be perpetuated or new discourses may emerge
7. As ecosystems change, there will be direct impacts on human wellbeing

Figure 1: Community Adaptation Template (adapted from Davila et al., 2018)

How the IVC team used this tool in the Philippines project

Using the CAT to frame their analysis, the IVC Team analysed the data collected using the *Pangandoy* method to gain a deeper understanding of the dynamics and complexity of smallholder coffee farmers and their farming systems (Figure 2).

Even though the *primary aspiration* of the farmers was for their children to be educated and become professionals, this analysis highlighted that the income generated by farming activities was insufficient to cover education expenses and therefore this aspiration becomes a *burden*.[5] Farmers *cope* by identifying organisations and networks (within and outside the community) from whom they may be able to access credit, assistance, and other livelihood opportunities. Their financial burden is compounded by poor road infrastructure, which is limited and often damaged by heavy rains and typhoons. Disruptions due to road damage have large implications on farm production and market activities, as well as on the famers' health and progress towards educating their children. At best, the transport of coffee products is time-consuming and hard work considering the steep location of their farms and the distance to local municipal *Barangay* centres where the yields are consolidated.
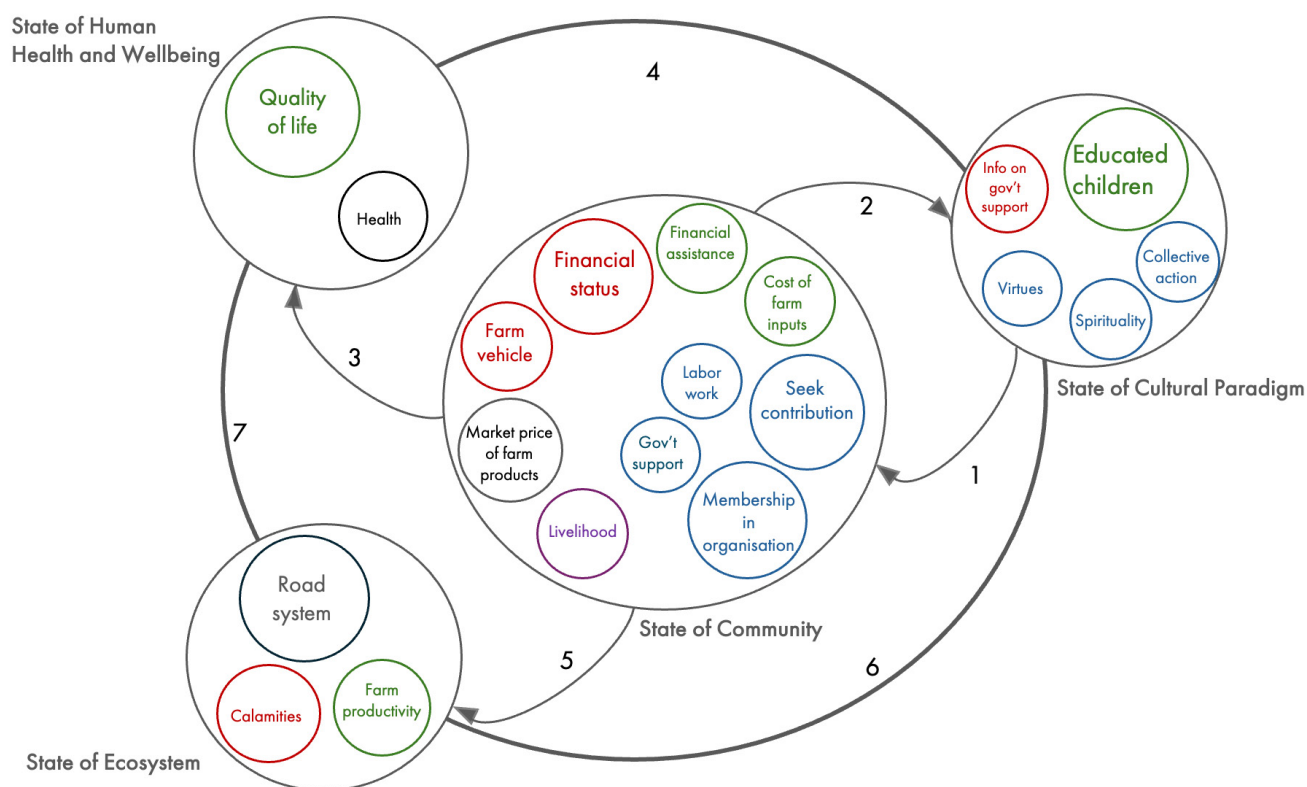

Figure 2: A simplified causal loop diagram of the aspirations, burdens, and coping mechanisms of coffee farmers in the Municipalities of Kalamansig and Lebak, Sultan Kudarat. (Source: Pinon et al., 2023)

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

References

1. **Dyball, R. & Newell, B.** (2015) *Understanding human ecology: A systems approach to sustainability.* London: Routledge.

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Maturity Model for Inclusive Value Chain Partnerships

The Maturity Model for Inclusive Value Chain Partnerships is a new framework developed during the IVC Project for assessing the maturity of "inclusion" in value chain partnerships against criteria in four dimensions.

It was tested in the *Evaluate* phase of the IVC Project as a monitoring and reflection tool for the case studies to assess how the actors involved had become more inclusive post-interventions. The tool could also be used within an organisation to reflect on how inclusion could be enhanced in their value chain partnerships.

Description

The Maturity Model broadly describes the interactions occurring within a value chain partnership in terms of:

- How a partner or group is able to express themselves without repercussion,

- Their voice and influence over partnership decisions (e.g. terms of transactions),

- The equity in risks and rewards distributed between the partners, and

- The sustainability of partnership outcomes.

Maturity Models provide a framework to assess how well an organisation or project is progressing as it works towards a specific goal (in this case, inclusion). The framework outlines performance in terms of a set of distinct characteristics or criteria, including a description of its level of maturity.

The purpose of the Maturity Model is to serve as a tool for monitoring, evaluating, learning about, and discussing inclusion in value chain partnerships. The quality of "inclusion" is not a fixed concept, it can be evaluated at different levels, reflecting different degrees of inclusivity.

The four criteria, or dimensions, of inclusion in the Maturity Model were based on the Inclusive Engagement Framework pillars. The levels of inclusion across the Maturity Model are defined as:

1. "Negative exclusion" occurs when one party excludes the other (as opposed to positive exclusion where a party voluntary excludes themselves from the engagement).

2. "Tokenistic inclusion" is where inclusion is superficial and participation in the value chain is not necessarily positive for both partners.

3. "Functional inclusion" indicates that greater attempts are made in offering opportunities equally to marginal groups, however the solutions adopted are often 'one size fits all' or a narrow approach to inclusion.

4. "Empowering inclusion" puts in place processes and systems for long-term outcomes and continuous improvement, in the face of new challenges and changing needs or aspirations.

The Maturity Model is intended to be used to support agribusinesses and other stakeholders in understanding and improving inclusion in specific value chain partnerships. We considered it to be too difficult for any individual actor to assess inclusion across the whole value chain. Any one actor is likely to deal with one or two value chain partners, rather than the whole chain. Therefore, taking a partnership approach can make accountability and intentions clearer between different value chain actors. For example, agribusinesses can self-assess their position in terms of achieving or enabling inclusion with respect to another partner in a value chain, as well as reflecting and setting goals regarding how they can improve their inclusive practices. Alternatively, an agency that is brokering a value chain partnership, may use the Maturity Model to guide how they facilitate the development of a partnership in terms of the relationship, processes or business agreements.

It should be noted that agribusinesses can modify the tool to suit their unique circumstances.

Table 1: A Maturity Model to demonstrate criteria used to assess Inclusive Value Chain Partnerships

	Negative exclusion	Tokenistic Inclusion	Functional Inclusion	Empowering Inclusion
	Di Sinali (Tagalog): 'excluded'	*Sinali* (Tagalog): 'brought in'	*Kasama* (Tagalog): 'a part of'	*Kapwa* (Tagalog): 'me within us'
Identity	Individuals are unable to express or be themselves when interacting with partners.	Individuals can only express themselves to some degree or in some interactions, but are obliged to conform to the dominant cultural norms.	Individuals are comfortable to express and be themselves in most interactions with partners. However, there are some situations where they are restricted in doing so.	Individuals are safe to express and be themselves when interacting with partners. Partners are respectful and sensitive to others' identities and differences, which are embraced and encouraged.
Agency, voice and trust in decision making	One partner has no or limited ability to participate in decision making. They have no opportunity to have their opinions heard by other partners in the decision-making process.	One partner is only able to voice their opinion on some matters and has limited influence in decision making.	Partners are able to voice their opinion about most decisions, but one of the partners may have limited ability to influence some of those decisions.	Mechanisms are in place to ensure all partners have their voices heard. All partners are given the opportunity to and are capable of, contributing to decisions.
Equity	There is a large imbalance of outcomes shared between partners, with one side barely benefitting and/or bearing an unfair risk or load of burden with few incentives.	Although all partners benefit, these benefits are skewed to one or a few individuals and/or benefits are highly dependent on certain market and environmental conditions, which if not met can be highly detrimental for some actors.	The share of beneficial outcomes, risks or burdens seems somewhat fair between partners, however, other outcomes (e.g. social, environmental) are less equitable.	The share of risks, burdens and rewards between partners is considered fair.
Sustainability	Value chain partnership focus is typically on short-term, economic outcomes.	Only instrumental (rather than intrinsic) drivers of sustainability are present. Viability of value chain partnership and their inclusivity is dependent on environmental and socio-political conditions remaining steady.	The value chain partnership considers economic, social and environmental outcomes of all actors, with a commitment to being socially and environmentally responsible in their practices.	The value chain partnership considers the whole-of-system, including the long-term economic and social wellbeing of both partners, and their contexts. The partnership arrangement is adaptative to environmental and socio-political changes, and ensures resilience of marginalised participants.

How the IVC team used this tool in the Philippines project

In the IVC Project, the Maturity Model was one of the tools developed to help synthesise our understanding about inclusion in value chains.

The IVC Team used the Maturity Model to assess and discuss inclusion in the value chains of three case studies: 1) the Coffee Association of Hinalaan (COFAH) and its members, 2) the Participatory Farmer Trials in the vegetable case study, and 3) the Technical Advisory Group (TAG) for the vegetable case study.

The Maturity Model allowed the IVC Team to consider where the partnerships started and how they had progressed post-intervention. During its implementation, the tool was identified as useful for farmer groups, associations, non-governmental organisations and agribusiness to explore their own position in fostering inclusion and how they can promote inclusion of others within value chains.

Complementary tool

- **Participation Matrix:** The Participation Matrix is new tool developed during the IVC Project. The tool displays a scale of information relating to a chosen category which is adapted to the specific project context of "inclusion". In selecting the most appropriate responses from the grid, the IVC Team could measure changes throughout the project lifecycle and highlight outcomes that were counterproductive to inclusion.

Additional resources

- **Ros-Tonen, M.A.F., Bitzer, V., Laven, A., de Leth, D.O., van Leynseele, Y. & Vos, A.** (2019) 'Conceptualizing inclusiveness of smallholder value chain integration', *Current Opinion in Environmental Sustainability*, 41, pp. 10–17.

Participation Matrix

The Participation Matrix is a new tool developed during the IVC Project. The tool displays a scale of information relating to a chosen category which is adapted to the specific project context of "inclusion". In selecting the most appropriate responses, the IVC Team could measure changes throughout the project lifecycle and highlight outcomes that were counterproductive to inclusion.

The Participation Matrix could also be used as an analysis tool in the *Design* or *Evaluate* phases of projects to support discussion or reflection on how inclusion may also bring about exclusion in certain value chain contexts.

Description

The Participation Matrix is a new tool, specifically designed by the IVC Team to evaluate the impact, and evolution, of initiatives designed to enhance inclusion across the value chain (Figure 1). It was developed to understand the many possible interpretations and contradictions of "inclusion" and "inclusive practice" from the data gathered across various research activities like the *Pangandoy* and Farming Systems Analysis.

The matrix is designed to be scenario-dependent, with the user choosing both their own categories to measure and the criteria to measure against. The category labels (chosen by the IVC Team) can be adapted to the different stages of a project and modified as the project matures. The tool allows the user to take into account the evolving context of inclusion efforts and any inconsistencies or paradoxes generated by the changes made to enhance inclusion.

The matrix can also be used to illustrate how changes in key pillars of inclusion, such as "Agency", "Voice", "Equity", and "Identity" are expressed along the value chain over time.

Unique: complete expression of one's own uniqueness and differences

Identity: Do the roles that individuals perform reflect their characteristics & traits?

Uniformed: Participants are treated similarly. Roles are assigned with no consideration of the one's own uniqueness and differences

Tailor-fitted: Highly individualised, personalised treatments, rewards that reflect preferences of the individuals

Equity: How are rewards, benefits, properties, assets, costs, risk, etcetera shared?

Equal: One-size fits all. Benefits and treatments are uniform across all participants.

Consensus making: all opinions must be considered when making decisions. Agreements must be reached across all individuals.

Voice: Can individuals express their opinion and are they heard?

Censoring: Only the opinion of the governing leadership matters. Participants opinions are not heard and likely not acted upon.

Voluntaristic: Absolute freedom; one can choose if or how they participate

Agency: Can individuals make decisions for themselves?

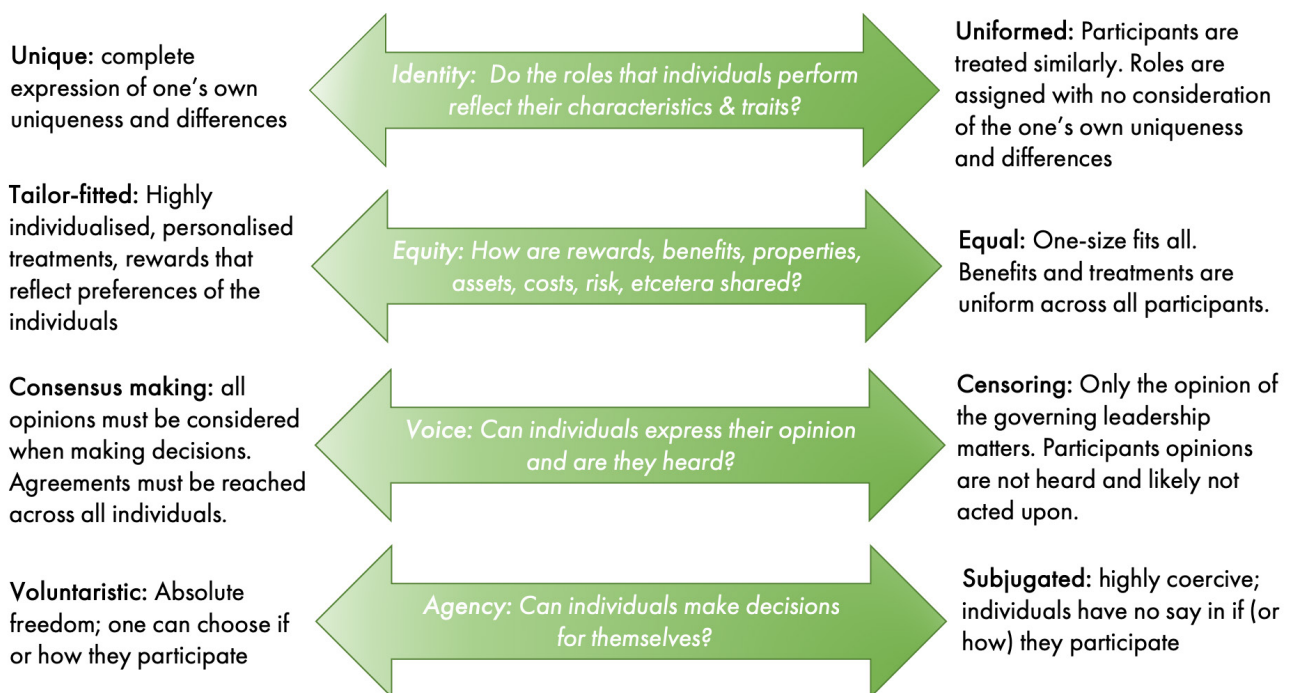**Subjugated:** highly coercive; individuals have no say in if (or how) they participate

Figure 1: A simplified representation of the Participation Matrix, highlighting key pillars of inclusion

By selecting one answer from a spectrum of possible responses in each category, the user can assess value chain performance and how well inclusion objectives have been met. This process can help identify imbalances and strengths in the project in different contexts.

The Participation Matrix is an assessment tool, with a range of criteria for each category to evaluate changes, impacts and points of tension as a project evolves.

The Participation Matrix can be used to encourage reflections on how the interventions that are designed to enhance inclusion may modify behaviour, potentially creating tension between different actors, causing trade-offs or generating outcomes which may be less inclusive.

For example, actors participating in value chains can be simultaneously cooperating and competing, or even enabling and disenabling each other during normal business practice. As organisational and institutional capacities strengthen within a farmers' association, changes can lead to shifts in power or increased efficiencies which may influence how members experience control or influence in the group, or how they express opinions and make decisions.

This tool allows users to view inclusion as a multi-step process which can shift as the value chain actors gain knowledge and confidence or face new barriers.

How the IVC team used this tool in the Philippines project

Table 1 below demonstrates a continuum of change in inclusion using the category of "Voice" as an example. *Voice* is the ability to express one's opinions freely and be heard, with the aim of informing and influencing the decisions of others. One way to evaluate the category of *Voice* of the actors involved is to assess how dissenting views are treated across the value chain. For example, the more that differing views are considered or even integrated into decision-making, the higher the level of *Voice*.

The left-hand side of Table 1 outlines a high-level *Voice* context, labelled "Consensus-Making". Importantly, as organisations mature, they may begin to emphasise efficiency over collaboration, likely leading to less capacity for actors to express *Voice*. Alternatively, value chain actors may opt to empower others at the expense of efficiency. The results of the Participation Matix can therefore highlight the importance of considering the trade-offs between different choices in interventions throughout the project lifecycle.

Table 1: Example of inclusion and its characteristics as it relates to the pillar of inclusion "Voice"

High-level *Voice* ⟵ ⟶ Low level *Voice*

Consensus-making	Negotiating	Compromising	Consultative	Delegating	Censoring
Each and every opinion must be taken into account when making decisions. Agreements must be reached across all individual participants otherwise no decision will be made.	Intention of the participant is to reach terms of agreements that are acceptable to that participant.	Participant makes a compromise with the goal of allowing the process to move as efficiently as possible.	Individuals consulted on their own individual opinions. Oftentimes it is the opinions that have factors common among them that will be carried forward into the decision.	Individuals rely on a representative that may—completely or partially— share their beliefs, goals, and interests. It is the decision of the representative that gets carried forward. Choices and options are often structured when presented to participants.	Only the opinion of the governing leadership is taken into account. Participants opinions are not heard and likely not acted upon.

Complementary tool

- **Maturity Model for Inclusive Value Chain Partnerships:** The Maturity Model for Inclusive Value Chain Partnerships is a new framework developed during the IVC Project for assessing the maturity of "inclusion" in value chain partnerships against criteria in four dimensions.

Additional resources

- Ferdman, B.M. (2017) 'Paradoxes of inclusion: Understanding and managing the tensions of diversity and multiculturalism', *The Journal of Applied Behavioral Science*, 53(2), pp. 235–263.

- Fox, N.J. (2011) 'Boundary objects, social meanings and the success of new technologies', *Sociology*, 45(1), pp. 70–85. (Accessed: 3 August 2025).

- Kaplinsky, R. & Morris, M. (2001) *A handbook for value chain research*. (Accessed: 31 July 2024).

- Star, S.L. & Griesemer, J.R. (1989) 'Institutional ecology, "translations" and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39', *Social Studies of Science*, 19, pp. 387–420. (Accessed: 3 August 2025).

Risks and Opportunities Framework

The Risks and Opportunities Framework is used to help broaden thinking about the value chain system. It is a tool that categorises constraints and opportunities in both production and market systems as: input, economic, institutional, socio-cultural, environmental and infrastructure factors.

It was used as a synthesis tool in the *Diagnose* phase of the IVC Project for the IVC Team to reflect on the different types of constraints or opportunities faced by actors across the value chain and the implication this had for inclusion. It was also used later in the project with the private sector to scope pathways to diversify incomes.

Description

The types of factors contributing to the sustainable value chain management of agri-food commodities are institutional, climate and economic (for both production and marketing at the upstream of the chain), as well as input for production and output/quality for marketing.[1]

The IVC I-MEL Team adapted this categorisation into a simple conceptual 'Risks and Opportunities' framework (Figure 1) to help identify possible constraints, barriers or challenges that the different actors along the value chain may encounter. The basic framework was generalised to make it applicable to any value chain actor, extra categories were added (socio-cultural and infrastructure factors), and climate factors were redefined as environmental factors. Examples of aspects are shown in Figure 1, from the perspective of a farmer actor.
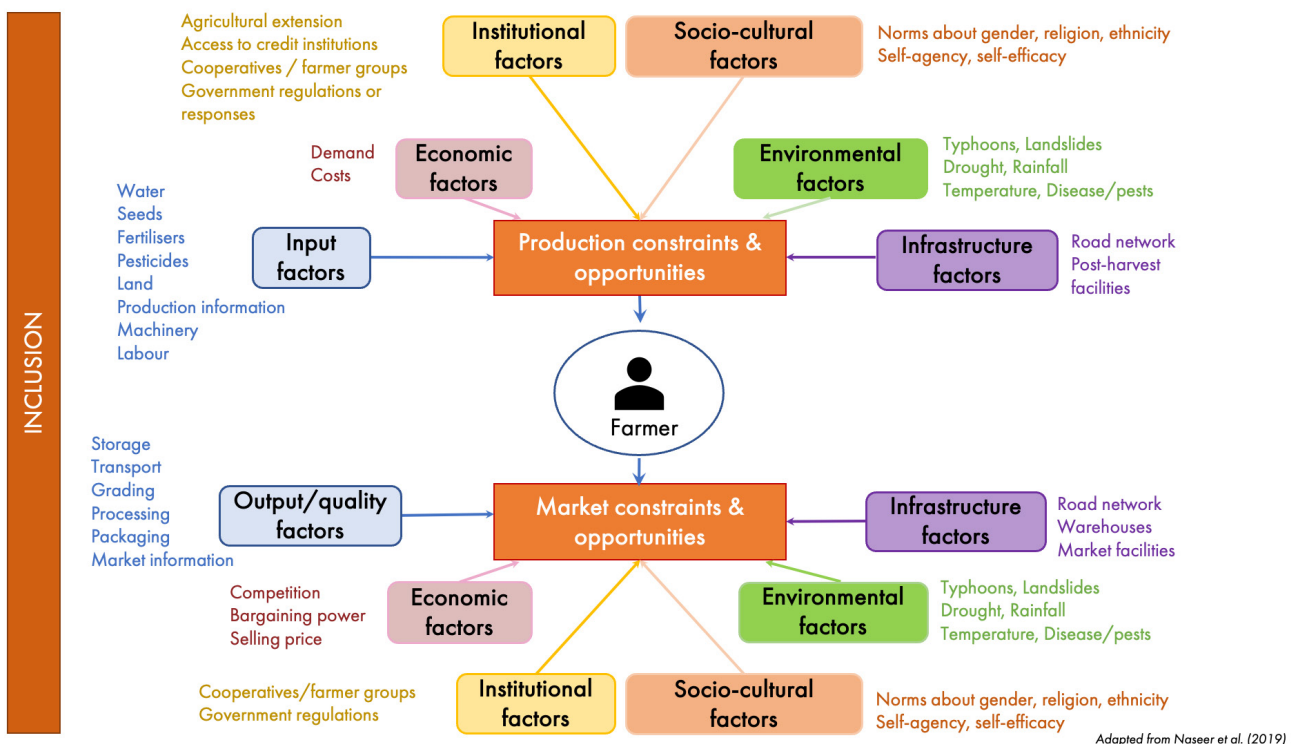

Figure 1: Risks and Opportunities Framework applied to a farmer actor (adapted from Naseer et al. 2019)

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How the IVC team used this tool in the Philippines project

The Integrated Monitoring, Evaluation and Learning (I-MEL) team in the IVC Project used the Risks and Opportunities Framework on multiple occasions as a tool to dissect the systems under evaluation as a way to understand the activities of the value chain actors involved, and the risks and opportunities that they face.

Vegetable case study: In August 2022, the framework was prepared to identify learnings from a field trip in Cebu and guiding questions were developed to identify the risks and opportunities for value chain actors. Reflection notes and workshop discussions following the less formal conversations with these actors enabled the I-MEL team to extract and synthesise the relevant constraints and opportunities for the various value chain actors and other stakeholders (drawing on the guiding questions for the analysis).

Coffee case study: In the *Barangay* Hinalaan region in Kalamansig, coffee production does not provide farming communities with enough income to support them throughout the year and there are few other livelihood options. In March 2025, the IVC Team developed and facilitated a Pathway Diversity activity *(an approach used to undertake a resilience assessment)* which aimed to further understand this 'locked-in' situation and seek possible strategies to get out of this cycle. The IVC Team facilitated a field visit with a small group of entrepreneurs and businesspeople —meeting with farmers, community and government actors— who were asked to reflect on whether their business ideas could be successfully conducted in the area. The Risks and Opportunities Framework was used to guide business actors in reflecting on the challenges and opportunities for the proposed business activity from their perspective as well as that of the farmers, small-medium enterprises (SMEs), or others who might participate.

Complementary tools

- **Pathway Diversity:** Pathway Diversity is a method used to undertake a resilience assessment in which resilience is understood as the diversity of pathways available to an actor. Importantly, this method also considers the 'lock-in' or 'traps' that prevent actors from escaping undesirable states.

- **Value Chain Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

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1. **Naseer, M.A.U.R., Ashfaq, M., Hassan, S., Abbas, A., Razzaq, A., Mehdi, M., Ariyawardana, A. & Anwar, M.** (2019) 'Critical issues at the upstream level in sustainable supply chain management of agri-food industries: Evidence from Pakistan's citrus industry', Sustainability, 11(5), p. 1326.

Three Horizons

Three Horizons is a scenario tool to guide discussions, and to reflect on the future and how to bring about transformation.

It was used as a knowledge synthesis and foresighting tool later in the *Diagnose* phase of the IVC Project. Specifically, the tool was used to co-design with project actors during brainstorming sessions, to develop promising interventions.

Description

Three Horizons is a tool designed to help project collaborators (farmers, farmer organisations, downstream value chain actors, government, etc.) reflect on the future and to consider how to bring about transformation.[1,2] The output is commonly represented in a diagram with three curves, referred to as "Horizons" and they depict the shift, or rise and fall, of the prevailing situation that each horizon represents over time (Figure 1).

Horizon 1 (H1) represents the dominant (current) system with its established practices ('Business as Usual') and highlights the features that may (or may not) be desirable or sustainable into the future. Horizon 3 (H3a/b) represents a desired (often long-term) future, where the system has been transformed. While Horizon 2 (H2) is the transitional horizon in which disruptive innovations are needed to facilitate the emergence of Horizon 3.

Five key elements have been defined for the Three Horizons tool to structure dialogue with stakeholders,[2] shown in Figure 1 (with examples for a hypothetical case of community-led local water management).
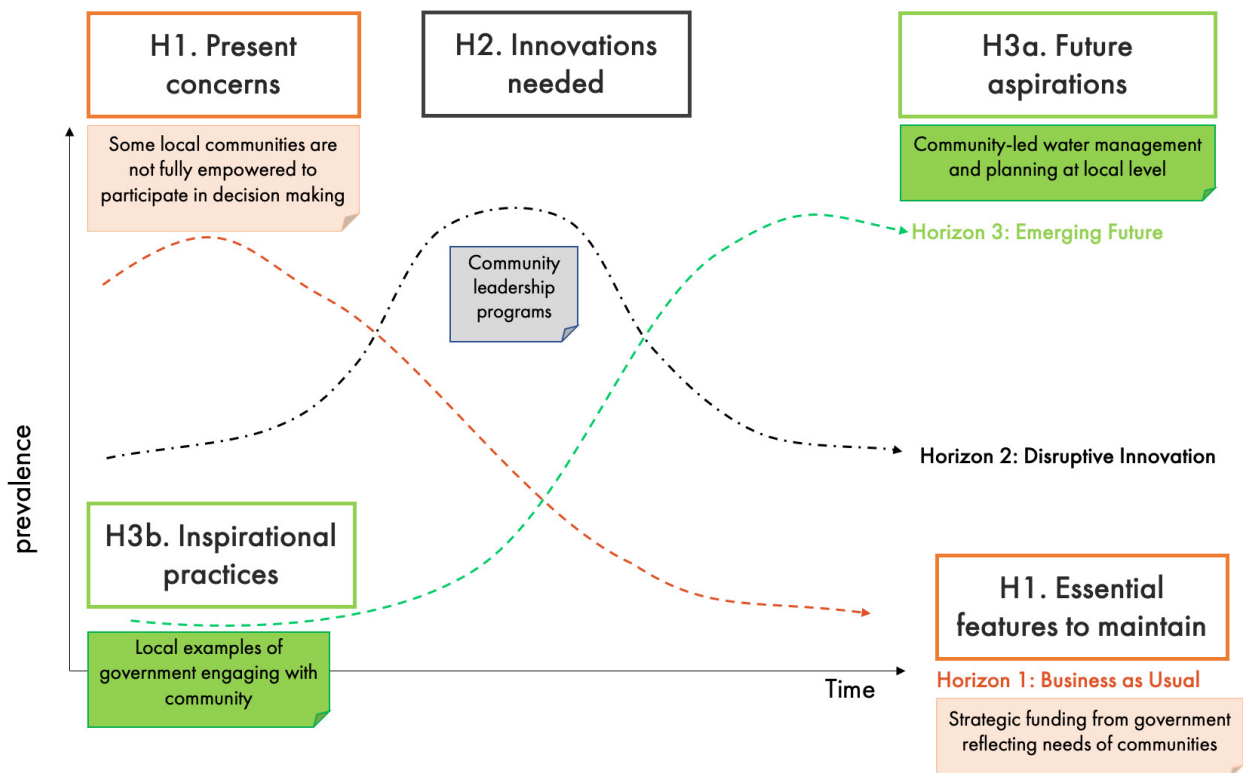

Figure 1: Three Horizons Framework Graphic (adapted from Sharpe et al. 2016)

How the IVC team used this tool in the Philippines project

The tool was used towards the end of the *Diagnose* phase of the IVC Project. The Three Horizons framework enabled the project team to reflect on their understanding of the system (the farming communities, the value chains and the enabling environment) and brainstorm which interventions or innovations had the potential to enhance inclusion in the value chain.

The Integrated Monitoring, Evaluation and Learning (I-MEL) team ran a workshop in June 2023 where horizons were framed in terms of the IVC case study value chains (coffee and vegetable) considering the timeframe from 2023-2033.

Drawing on the understanding gained from the project activities prior to June 2023, the coffee and vegetable case study teams were asked to describe the present concerns of the value chain from an inclusion perspective **(H1: Present concerns)**, guided by the following questions:

"What is the current state of the value chain?", and *"What aspects of the value chain are undesirable (e.g. exclusionary)?"*.

The groups were then asked to describe **Horizon 3** in two parts:

1. *"What is your vision for the future of the value chain?"* and *"What would an inclusive value chain look like?"* **(H3a. Future aspirations)** and

2. *"What changes/innovations are already happening that can be taken into the future scenario?"* and *"What are some examples of inclusiveness in the value chain?"* **(H3b. Inspirational practice).**

Finally, the case study teams were asked to describe Horizon 2:

"What innovations/interventions are needed in the transitional stage to create a shift from the current state to the desired future state?" **(H2. Innovations needed).**

Three ideas were selected as interventions to develop in a further workshop, during which participants explored: the opportunities offered by each idea; the interventions to prioritise; the possible collaborators to engage in their co-design and implementation of prioritised interventions; and, the potential enablers or constraints.

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

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1. Curry, A. & Hodgson, A. (2008) 'Seeing in multiple horizons: connecting futures to strategy', *Journal of Futures Studies,* 13(1), pp. 1–20.

2. Sharpe, B., Hodgson, A., Leicester, G., Lyon, A. & Fazey, I. (2016) ['Three horizons: A pathways practice for transformation'](#) , *Ecology and Society,* 21(2), Article 47. (Accessed: 3 August 2025).

Additional resources

• **International Labour Organization (ILO)** (n.d.) [*Foresight Toolkit: Three Horizons Framework*](#). International Training Centre of the International Labour Organization. (Accessed: 3 August 2025).

Value Network Mapping

Value Network Mapping is a method for visualising interactions between individuals and groups in a system and analysing the value that is assigned to these interactions and how the value is transformed. This process helps identify intervention points.

It was used as a synthesis tool in the *Diagnose* phase of the IVC Project to explicitly unpack the relational values created and shared by actors in the chain. This tool helped identify gaps in the IVC Team's knowledge that needed further investigation regarding various actors (e.g. traders, buyers, etc.) and what they valued.

Description

Value Network Mapping (VNM) is a method to visualise a system by identifying the interactions and transactions between roles or key groups of people (actors) and the value that these exchanges (or contributions) represent. Importantly, the value may be tangible (such as goods, services, or resources), or intangible in nature (knowledge, trust, political support, for example).

By recognising the unique combination of roles, relationships and value-creating outcomes of a particular system, a better understanding can be gained into how the system responds to change and impacts, as well as identifying practical constraints and opportunities for interventions.[1] The process also requires analysis of the map produced, such as via a Strengths Weaknesses Opportunities and Threats (SWOT) analysis.[2]

In the context of value chain analysis, VNM can also be used to map interrelationships between institutions and actors and how they share or shift resources amongst them.[3]

How the IVC team used this tool in the Philippines project

Value Network Mapping was used by the Integrated Monitoring, Evaluation and Learning (I-MEL) team to synthesise and visualise relational data collected from field visits and discussions with farmers and other value chain actors. The VNM tool was used in activities designed for project reflection and capacity building for systems thinking. The team drew upon learnings from prior activities, namely *Pangandoy*, Farming Systems Analysis and Inclusive Value Chain Analysis.

The simplified VNM in Figure 1 represents value chain relationships for the 'typical' vegetable farmer in Dalaguette, Cebu, with whom the field trip team spoke in August 2022:

- The typical farmer is a tenant farmer who is not a member of a cooperative.

- The landowner receives a percentage of the income gained from the sale of the farmer's produce as rent for the use of their land.

- Income from crop production was a large contributor to the family livelihood and production was a family affair with family members providing the manual labour on the steeply sloping lands.

- The commissioners play a key relational role in Dalaguette and they value the reliable supply that farmers provide. Their trust and knowledge are valued by farmers as the commissioners are key in marketing produce and negotiating prices with other registered commissioners. Farmers value price transparency and the convenience of the arrangements, as well as the tailored support that commissioners give them if needed.

- The Dalaguette Agri-Pinoy Trading Centre (DAPTC) provides the facilities where produce is aggregated and sold. The Centre plays an important role in the system, providing conflict resolution and, if necessary, price regulation if there are disagreements amongst registered commissioners about product pricing, as well as monitoring for theft and the presence of unregistered commissioners.
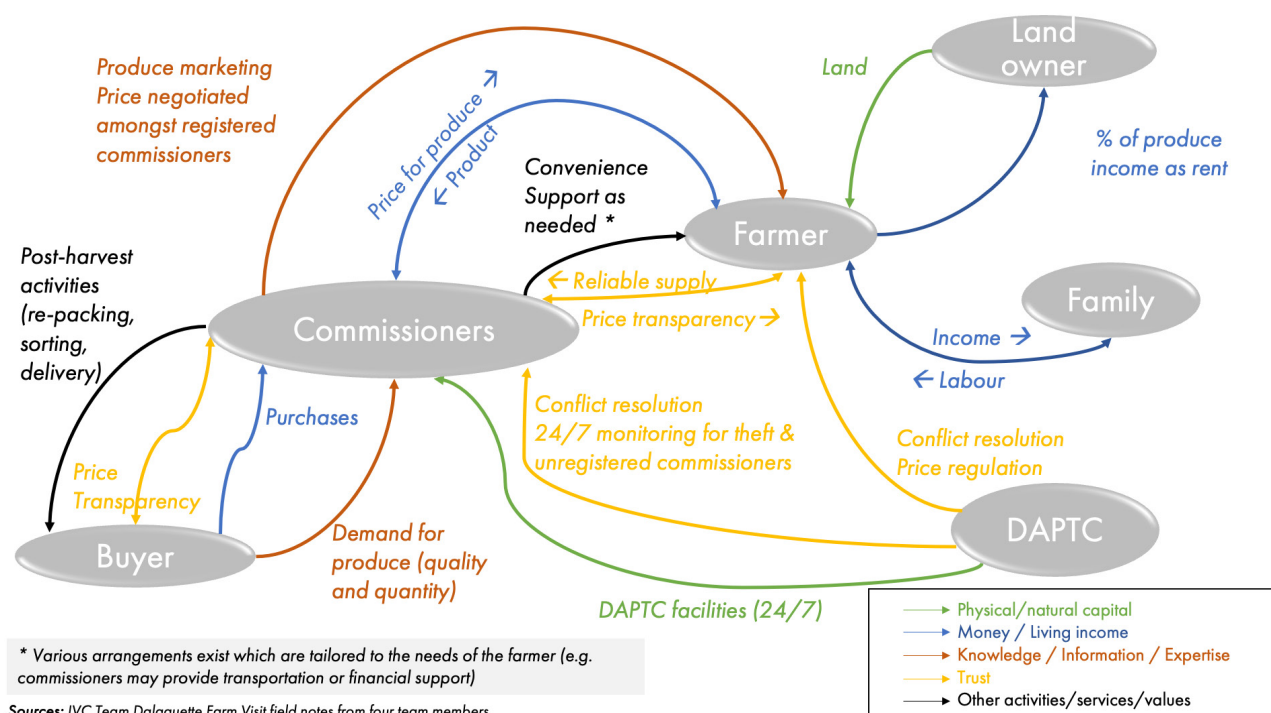

Figure 1: A simple Value Network Map following field visits and discussions with farmers in Dalaguette, Cebu, in August 2022

Complementary tools

- **Pangandoy:** Pangandoy is a participatory, community-oriented research method that is used to better understand the life journeys of the participants, particularly their aspirations, burdens and coping strategies.

- **Farming Systems Analysis:** Farming Systems Analysis is an approach that uses a package of participatory methods to build a system profile (natural, technical and socioeconomic) of a selected farming community and its resources.

- **Value Chains Analysis:** Value Chain Analysis is a process that draws on multiple data collection techniques to identify bottlenecks, barriers and opportunities to enhanced participation and benefit sharing among value chain stakeholders.

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1. **Allee, V.**, 2008. Value network analysis and value conversion of tangible and intangible assets. *Journal of Intellectual Capital*, 9(1), pp.5–24.

2. **Galle, W. & Matti, C.**, 2022. Value Network Mapping: A method for unravelling system relations. *VITO NEXUS and EIT Climate-KIC Transitions Hub*

3. **Dentoni, D. & Krussmann, F.**, 2015. Value network analysis of Malawian legume systems: implications for institutional entrepreneurship. *Food Supply and Distribution System Dynamics*. Italy: Food and Agriculture Organisation.

Additional resources

- **Dentoni, D., Cucchi, C., Roglic, M., Lubberink, R., Bender-Salazar, R. & Manyise, T.**, 2022. Systems thinking, mapping and change in food and agriculture. *Bio-based and Applied Economics*, 11(3), pp.277–301.

- **Schoneveld, G.C. & Weng, X.**, 2023. Smallholder value creation in agrifood chains: Value network approach. *Land Use Policy*, 131, p.106676.