



International
Labour
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**SAFETY
+ HEALTH
FOR ALL**

VISION ZERO FUND MYANMAR:

Outcomes and Practices Assessment 2017-2020





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DISCLAIMER

This publication is a product of the Vision Zero Fund project on Occupational Safety and Health in Myanmar Supply Chains. Beyond this, the findings in this report are expected to provide greater insights to ILO's Vision Zero Fund projects globally. The authors are solely responsible for the content and any opinions expressed in this publication, which do not reflect the official position of the ILO.

Executive Summary

The Vision Zero Fund (VZF), an initiative of the Group of Seven (G7) countries, aims to achieve zero severe or fatal work-related accidents, injuries and diseases in global supply chains (GSCs). Implemented by the International Labour Organization (ILO), VZF endorses a model of collective action with four critical components:

1. Facilitating industry-wide, systematic approaches that involve key public and private stakeholders;
2. Gaining visibility of the full scope and complexity of Occupational Safety and Health (OSH) challenges in each industry's entire supply chain;
3. Assessing the commitments required to address the most serious risks and problems; and
4. Facilitating cooperative approaches based on an equitable sharing of responsibility for action among the key stakeholders.¹

In Myanmar, ILO implemented the VZF project "Occupational Safety and Health (OSH) in Myanmar Supply Chains" from May 2017 to April 2020 (Phase I). VZF Myanmar aims to reduce the number of work-related fatalities and accidents and occupational diseases, and to support access to mechanisms to adequately compensate victims and their families in the garment and ginger value chains. An Outcomes and Practices Assessment (OPA) was commissioned in February 2020 to serve as a learning exercise to identify key internal and external factors influencing the adoption of good practices of beneficiaries at the workplace level in Phase I of the project. The study was conducted from February to October 2020² in close consultation with VZF and key stakeholders to ensure maximal learning and results on impact to help inform the upcoming Phase II.

Through mixed methods of collecting data from primary and secondary sources, the OPA gained insight into the main research questions, on the top factors (both internal and external) involved in successful adoption of OSH measures and those hampering adoption at the workplace level. Through focus group discussions and key informant interviews with key stakeholder groups, the study uncovered four key themes present in the work of VZF: Productivity, Service Delivery, Institutional Development and Multi-Stakeholder Engagement. Through a series of case studies within the ginger and the garment GSCs, the study was able to identify best practices and lessons learnt on which to build recommendations to support the development of Phase II.

The OPA measured changes in adoption through both quantitative and qualitative methods, to understand changes resulting from the VZF project and factors influencing them. Through the follow-up Dot Survey (adapted from the baseline survey), the study was able to capture changes in knowledge, attitude and perceptions (KAP) and adoption among farmers over the course of the project. Overall, farmers' KAP from baseline has improved since the start of the VZF project. Across key OSH measures, farmers' level of adoption ranges from 61% to 88% (from 60% to 83% among females and from 63% to 94% among males). Positive impact is evident within the garment GSC, from the perspective of key stakeholders interviewed, including factory workers, employers/supervisors, union representatives (Confederation of Trade Unions Myanmar) and the Union of Myanmar Federation of Chambers of Commerce and Industry. Of the 11 key OSH measures covered, two are considered to have seen a high level of adoption, five a medium level and four a low level.

¹VZF Strategy 2017–2021: Shared Responsibility for Safer Supply Chains. June 2019

²Originally planned completion in April was delayed as a result of COVID-19.

Through analysis of the case studies by theme, the OPA was able to gain deeper insights into the factors influencing adoption and into the high-level results emerging from the VZF project. The four themes guiding each case study are described as follows:

Productivity: The business case for improved productivity is observed through both GSCs, resulting in greater and sustained impact of OSH measures. Stakeholders are more likely to adopt measures to a greater extent and in a more sustained manner if they believe this is helping their business/farm/factory in positive ways beyond just health and safety. Improvements in productivity, translating to savings in cost and time, are changes that beneficiaries are more committed to investing in in the long term. Various examples of this were observed in each GSC.

Service Delivery: Use of the most effective methods and channels for disseminating knowledge and services leads to changes in attitude and behaviour relating to OSH in the GSCs, and the role and responsibilities of different actors within the newly developing structure of OSH standards and compliance.

Institutional Development: Institutional capacity within committees, groups and organizations is key to the building of a new OSH framework for greater adoption and compliance (ginger COOPs and garment tripartite and OSH committees).

Multi-Stakeholder Engagement: Greater sustainability and impact are achieved through the engagement of multiple stakeholder groups within the new OSH structure, including government, the private sector, workers' organizations, employers and workers, thus facilitating greater standardization, harmonization and collaboration resulting in greater impact at all levels.

This study concludes with a review of the key factors influencing adoption (internal and external) and of factors inhibiting adoption. It provides a series of recommendations to reinforce and strengthen VZF's approach and to address key shortcomings and opportunities identified within each case study and across themes. Targeted recommendations are provided for both GSCs within the following summary recommendations:

- ▶ Strengthen embedding and mainstreaming of OSH adoption across supply chains through productivity enhancements and economic benefits;
- ▶ Strengthen capacity of service providers to disseminate OSH knowledge and promote behaviour change through local leadership, follow-up and support mechanisms to track adoption;
- ▶ Further institutionalize organizational structures to build a comprehensive OSH system across supply chains, as part of a growing OSH framework and culture;
- ▶ Recognize and encourage the important role of female leadership in driving OSH adoption and impact at the workplace level;
- ▶ Optimize programme monitoring and enhanced data collection in VZF Phase II.

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Acronyms

CTUM	Confederation of Trade Unions Myanmar
DOA	Department of Agriculture
EII	Employment Injury Insurance
EOD	Employer Organization Department
EWG	Employment Working Group
FGD	Focus Group Discussion
FGLLID	Factories and General Labour Laws Inspection Department
G7	Group of Seven Countries
GAP	Good Agriculture Practices
GEA	Green Eastern Agri
GMP	Good Manufacturing Practices
GSC	Global Supply Chain
ICS	Internal Control System
ILO	International Labour Organization
ILO-GIP	ILO Garment Industry Project
KAP	Knowledge, Attitude and Perception
KII	Key Informant Interview
LFA	Local Field Assistant
M&E	Monitoring & Evaluation
MGMA	Myanmar Garment Manufacturers Association
MIID	Myanmar Institute for Integrated Development
MOLIP	Ministry of Labour, Immigration and Population
NIOSHA	National Institute of Occupational Safety and Health of Malaysia
NOSHTC	National Occupational Safety and Health Training Centre
OPA	Outcomes and Practices Assessment
OSH	Occupational Safety and Health
PCC	Project Consultative Committee
PHI	Pre-Harvest Interval
PPE	Personal Protective Equipment
REI	Re-Entry Interval
SDG	Sustainable Development Goal
SOP	Standard Operating Procedure
SSB	Social Security Board
TOR	Terms of Reference
TOT	Training of Trainers
UMFCCI	Union of Myanmar Federation of Chambers of Commerce and Industry
UNIDO	United Nations Industrial Development Organization
USAID	United States Agency for International Development
VCRD	Value Chains for Rural Development (USAID)
VZF	Vision Zero Fund

Background

▶ Vision Zero Fund (VZF)

The Vision Zero Fund (VZF), an initiative of the Group of Seven (G7) countries, aims to achieve zero severe or fatal work-related accidents, injuries and diseases in global supply chains (GSCs). Implemented by the International Labour Organization (ILO), VZF endorses a model of collective action with four critical components:

- ▶ Facilitating industry-wide, systematic approaches that involve key public and private stakeholders;
- ▶ Gaining visibility of the full scope and complexity of Occupational Safety and Health (OSH) challenges in each industry's entire supply chain;
- ▶ Assessing the commitments required to address the most serious risks and problems; and
- ▶ Facilitating cooperative approaches based on an equitable sharing of responsibility for action among the key stakeholders.³

"Occupational Safety and Health in Myanmar Supply Chains: A Vision Zero Fund (VZF) Project" was a three-year project implemented by the ILO Liaison Office, Yangon, from May 2017 to April 2020. VZF is rooted in the concept that injuries, accidents and diseases at the workplace are preventable and that, consequently, the primary objective of public and private action is to ensure that adequate prevention mechanisms are in place.⁴

VZF Myanmar aims to reduce the number of work-related fatalities and accidents and occupational diseases and to support access to mechanisms to adequately compensate victims and their families in the garment and ginger value chains. The project does so through activities that enhance prevention, protection and compensation of work-related injuries, diseases and deaths in these GSCs. In 2017, VZF Myanmar carried out an assessment of drivers of and constraints to OSH improvements in garments and ginger. Research findings were then used to design interventions to improve OSH, labour inspection and employment injury insurance schemes at national (policy and government systems) and workplace (workplace and workplace services) levels.

OSH-related activities implemented by VZF in the ginger value chain during Phase I include the following targeted interventions:

- ▶ Awareness-raising among farmers on the use of agrochemicals and OSH hazards and control measures (e.g. physical and ergonomics) through trainings and other dissemination methods (e.g. Green Way mobile application);
- ▶ Capacity-building of input retailers and the Department of Agriculture (DOA) on effective information-sharing on the safe use of agrochemicals;
- ▶ Supporting the creation of farmer groups and capacity-building to perform relevant OSH functions;
- ▶ Promoting training and compliance with certification processes that help eliminate hazards or reduce risks (organic and Good Agricultural Practices, GAP);
- ▶ Promoting OSH management systems and lean factory design that encourage worker safety and prevent damage to inventory in ginger processing facilities;
- ▶ Promoting productivity enhancements among traders in Aung Ban Market to improve working conditions and inventory management.

³VZF Strategy 2017–2021: Shared Responsibility for Safer Supply Chains. June 2019

⁴Call for Expression of Interest: Assessing Outcomes and Practices

OSH-related activities implemented by VZF in the garment value chain during Phase I include the following targeted interventions:

- ▶ OSH risk assessment in the garment and textile sector;
- ▶ The business case for OSH investments in the garment and textile sector;
- ▶ Awareness-raising in garment factories and in industrial zones with a high concentration of garment factories on OSH hazards prevalent in the industry, as well as on options to eliminate or control such hazards, in collaboration with the Factories and General Labour Laws Inspection Department (FGLLID), Ministry of Labour, Immigration and Population (MOLIP), and partners;
- ▶ Integration of OSH messages, tools and training materials developed by VZF for the garment sector into trainings that employers and workers' organizations deliver to their members;
- ▶ Support to employers and workers' associations in strengthening their capacity to disseminate OSH information;
- ▶ Facilitation of access to, and improved efficiency of, the Employment Injury Insurance (EII) scheme administered by the Social Security Board (SSB), MOLIP, which in turn has benefited garment workers directly.

A mid-term evaluation conducted in August 2019, at the end of Phase I, concluded that, "The project certainly remains highly relevant for Myanmar as well as for the donor countries and other international frameworks (including SDGs [Sustainable Development Goals]). Progress in the development of Myanmar's legal framework makes the project all the more relevant for its upcoming Phase II (2020-2023)."⁵ Passage in Parliament of the OSH Law in March 2019 was a critical milestone in the development of Myanmar's national OSH system. The Law sets out an overarching national framework, addressing several elements of the historical legal fragmentation and promoting bipartite OSH management at the workplace, to include sectors previously excluded from earlier legislation (the Factories Act 1951), such as agriculture and construction.⁶

▶ Outcomes and Practices Assessment

With the completion of Phase I, the project began to reflect on its achievements, lessons learnt and best practices, so as to be able to inform the evidence-based implementation of Phase II. To help achieve this, ILO commissioned an Outcomes and Practices Assessment (OPA), to inform the design and implementation of Phase II through providing the project team with information and evidence to allow for better understanding of the factors, successes and shortcomings in the adoption of good OSH practices during Phase I.⁷

ILO VZF commissioned this OPA study in February 2020 to serve as a learning exercise to identify key internal and external factors influencing the adoption of good practices by direct and indirect and beneficiaries at the workplace level in Phase I of the project. The study was conducted from February to October 2020⁸ in close consultation with VZF and key stakeholders to ensure maximal learning and results on impact to help inform the upcoming Phase II.

The OPA follows ILO's definition of good practice, described in ILO's Evaluation Unit Guidance Note 3: "Evaluation Lessons Learned and Emerging Good Practices", as a positive change in practices (i) that represents successful strategies or interventions that have performed well; (ii) that, through establishing a clear cause-effect relationship,

⁵Independent Mid-Term Evaluation: Occupational Safety and Health (OSH) in Myanmar Supply Chains. August 2019

⁶Call for Expression of Interest: ILI/YGN/19/52: Outcomes and Practices on Occupational Safety and Health. ILO VZF Myanmar Phase I, 2017-2020. December 2019

⁷Call for Expression of Interest: Assessing Outcomes and Practices

⁸Completion of the garment case studies was delayed as a result of COVID-19; the study was thus extended to October 2020.

has achieved marked and measurable results or benefits; and c) whose related strategies are determined to be specifically useful for replication or up-scaling.

The OPA was developed to complement the findings of the independent mid-term evaluation conducted in August 2019 by focusing on activities at the workplace and workplace service level, pertaining to VZF Outcome 3: Increased application of effective OSH prevention, protection and compensation mechanisms for women and men working in selected GSCs.

The main research questions of the study were:

- ▶ What are the factors (internal and external to the project) behind adoption of good OSH practices in VZF-supported activities and how can the project maximize the effectiveness of activities to promote adoption in its next phase?
- ▶ What are the factors (internal and external to the project) hampering adoption of good OSH practices in VZF-supported activities and how can the project help address these remaining bottlenecks in its next phase?

Additional research questions included:

- ▶ What internal factors have been found to be the most successful ones in promoting adoption of good OSH practices by project beneficiaries? Why? How can the project further or capitalize on these factors?
- ▶ What internal factors have been found to be the least successful in promoting good OSH practices? Why? How can the project address them?
- ▶ What external factors have been found to be the most successful ones in promotion adoption of good OSH practices by project beneficiaries? Can these external factors be internalized by the project or are they outside its sphere of control or influence?
- ▶ What has been the cause-effect relationship between the desired outcome and project activities?
- ▶ What has been the measurable impact of good OSH practices in terms of awareness, exposure, risk level and other relevant OSH indicators?
- ▶ What is the potential for replication of good OSH practices identified? What would be the best replication channels?

The OPA covers the entirety of Phase I of the project, looking at activities in both the ginger and the garment GSCs, including assessments, design of interventions, implementation of interventions, monitoring, and adoption of materials, tools and practices.

Methodology

▶ Study Methodology

The overall OPA study methodology had three main phases, as detailed below:

Phase I: Desk Review and Research Tool Development

The OPA study kicked off in February 2020 with initial meetings with ILO and consultants, and a comprehensive desk review of relevant documents, including, but not limited to, project documents, baseline data from the project's inception phase in 2017, project monitoring plans, progress reports, government documents, policy frameworks, workshop and mission reports, and other documents, materials and publications that were produced through the project or by relevant stakeholders. These interviews and materials were used to develop additional research questions, a detailed research framework and survey instruments (see Research Framework and Plan).

Phase II: Field Research

The OPA used various methods to capture a comprehensive review of lessons learnt and best practices achieved through VZF Myanmar Phase I. The data collection strategy was designed to use mixed methods and triangulation of data from key stakeholder groups, to gain a deeper measure of outcomes, lessons and best practices. Through capturing evidence of changes, the study was able to trace outcomes and impact back to the intervention to help establish a causal relationship. To collect information for this technique, the study utilized various survey methods (focus group discussions, FGDs, key informant interviews, KIIs, in-depth case studies) and targeted research questions across key stakeholder groups, to develop a strong plausible connection between intervention and outcomes. In this way, it could identify the factors (both internal and external) that have influenced adoption of good OSH practices. Furthermore, data was collected, presented and analysed with appropriate gender disaggregation and with special attention to the identification of potential transformative elements.

Field research was carried out for each GSC with key stakeholders in the most relevant location: Yangon (garments) and Southern Shan (ginger). Interviews were conducted by a dedicated research team with the support of ILO. While data collection for ginger was completed on schedule, the COVID-19 pandemic meant the study had to put some meetings on hold for garments. In consultation with ILO, the study readjusted its data collection strategy and was able to capture sufficient information to inform its case studies by October 2020. However, it was not possible to conduct in-person factory visits, owing to widespread factory closures relating to COVID-19 safety and containment measures.

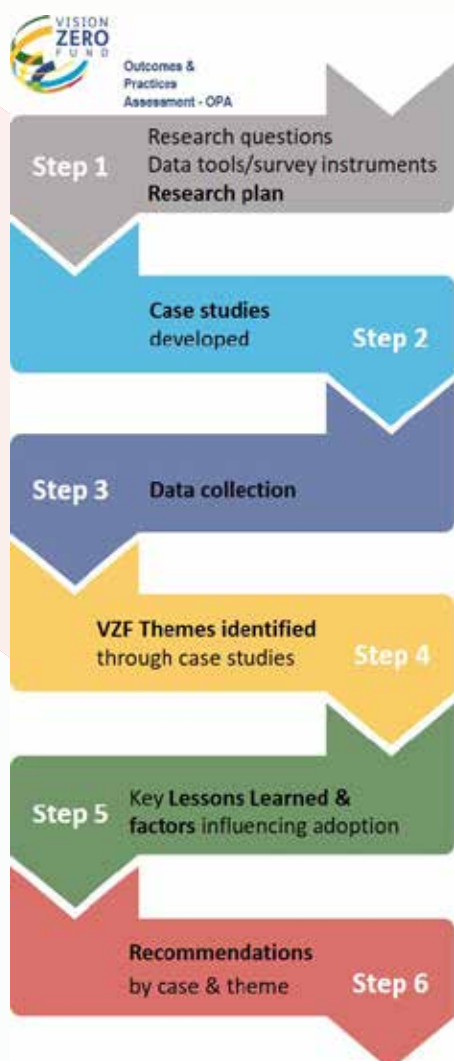
Phase III: Analysis and Report

Given the exploratory nature of the study, analysis was conducted throughout the field research phase, to make it possible to adapt and further deepen data collection based on findings and themes as they emerged. Throughout the development of each case study, the OPA was able to identify key themes that helped guide the report and its recommendations. Additionally, the OPA study prepared a quantitative data collection strategy for VZF Phase

II, including recommendations on improvements to the monitoring system and potential partnerships for data collection purposes. Based on initial discussions with ILO and the review of current monitoring materials, the assessment and recommendations suggest a more systematic monitoring system for ginger and a more effective way to measure impact at the factory level for garments. Innovative monitoring systems are explored, such as the use of digital data collection tools.

► OPA Approach

The OPA should serve as a learning document to guide the project in uncovering its greatest strengths and shortcomings, to be addressed in the design and implementation of later phases. It was an evolving exercise: while the OPA was provided with a series of initial guiding research questions, additional questions were generated that helped identify the case studies that form the basis of the study.



In terms of the thinking and analytical process, the OPA had six main steps, as detailed below:

The study developed around a set of overarching research questions pertaining to the factors – internal and external – behind adoption of good OSH practices through the VZF project.

Step 1 expanded these research questions to answer more specific questions and variables around the project's Outcome 3, focused on increased application of effective OSH prevention, protection and compensation mechanisms for women and men working in selected GSCs (at the workplace level), and corresponding outputs. Based on these research questions, case studies were drafted for each GSC.

Step 2 involved a strategizing of research methods to develop each case study. Steps 1 and 2 led to the creation of a detailed research plan and survey instruments for use in collecting data.

In **Step 3**, the research team collected data on both GSCs in Southern Shan and Yangon, to complete the case studies, and carried out a dedicated survey to measure adoption within the ginger GSC. Throughout the analysis of each case study, a few themes emerged highlighting positive attributes and impacts from the VZF project thus far.

In **Step 4**, the research was further developed around the four identified themes (Productivity, Service Delivery, Institutional Development and Multi-Stakeholder Engagement). At this stage, the framework of the report was developed in discussion with ILO, and the case studies were organized to support each theme (as outlined in the report).

By means of all data collection methods, and in analysing each case study and via the thematic findings, the OPA uncovered key lessons learnt and factors influencing adoption – internal and external

(**Step 5**), to fulfil the purpose of the OPA: To provide ILO evidence on the factors that have influenced adoption of good OSH practices by the project's direct and indirect beneficiaries during Phase I and to inform the design of and underpin the recommendations for Phase II (**Step 6**).

Research Framework and Plan

A comprehensive desk review and interviews with the ILO project team and consultants led to the development of a detailed Research Framework, used to structure the assessment and framework for analysis. The Research Framework includes the following:

- ▶ Research questions: General and specific research questions, quantitative and qualitative indicators and variables, methods and sources for both ginger and garments;
- ▶ Survey instruments: FGDs and KIIs/semi-structured surveys designed for the ginger and garment GSCs, to capture the variables and research questions outlined in the study. The survey instruments are a combination of existing surveys (used as a follow-up on baseline data collected) and new questionnaires developed for the purposes of the OPA;
- ▶ Research plan and field schedule: Data collection plan and field schedule for both ginger and garment FGDs and KIIs;
- ▶ Case studies: Proposed case studies, including structure, methodology and expected lessons to be validated through the study;
- ▶ Framework outline: Key themes underpinning the framework of the study, with corresponding case studies to support the analysis of VZF's outcomes and impact.

▶ Research Questions and Instruments

Specific research questions, key indicators and variables, data collection methods and sources were mapped out at the start of the study. The study developed additional research questions, beyond those presented in the terms of reference (TOR), pertaining to Immediate Outcome 3 of the VZF project: Increased application of effective OSH prevention, protection and compensation mechanisms for women and men working in selected GSCs. For each key outcome, a series of questions were formulated, with corresponding quantitative and qualitative indicators and variables to be captured by the study. These variables can be used to continue monitoring progress of the project as it transitions into Phase II.

Table 1 shows the survey instruments developed for each GSC, in line with the research questions and key indicators:

▶ **Table 1 - OPA Survey Instruments (Ginger and Garment GSCs)**

GSC	Key informant interview	Focus group discussion
Ginger	Training facilitators (VCRD and DOA)	Farmer (Dot Survey)
	Trading house	COOP groups
	Input retailer	
	Processing facility	
Garments	Training partners (UMFCCI and CTUM)	Garment workers
	NOSHTC (FGLLID)	
	Factories	
	SSB and client(s)	

► Research Plan and Field Schedule

A mixed methods approach was used to collect data from GSCs, primarily through FGDs and KIIs or semi-structured interviews. Primary data collection in the ginger GSC was more time-intensive than that in garments, extending over 10 days and covering seven key locations in Southern Shan state. Interviews were conducted using an adapted Dot Survey⁹ (see Findings on OSH Adoption) to measure knowledge, attitudes and perceptions (KAP) and the degree of adoption across expected high-, medium- and low-adoption villages that are supported by the following partners: the Department of Agriculture (DOA), the United States Agency for International Development (USAID) Value Chains for Rural Development (VCRD) project (Winrock International) (2018–2019) and the United Nations Industrial Development Organization (UNIDO) (2019 onwards). Each of these programmes/partners has provided training via a training of trainers (TOT) method, working with lead farmer assistants and field coordinators. Furthermore, interviews were held across selected locations with TOT farmers, COOPs, input retailers, traders and processors, and DOA.

Garment interviews and case study inputs were developed over a longer period of time, with some interruptions and adjustments, as a result of COVID-19. Nonetheless, the study was able to address its originally developed research questions and case studies for both GSCs.

Ginger GSC

Interviews were conducted from 11 to 18 March 2020 in the following locations in Southern Shan State: Kalaw, Lawksawk, Taunggyi, Pindaya, Pinlaung, Hopong and Namsang. The ginger GSC included 11 FGDs across expected high-, medium- and low-adoption villages that had been trained by both VCRD and DOA using the Dot Survey, as a way to follow up on previously captured knowledge, attitudes and behaviour relating to key OSH messages and measures. The villages were selected purposively to be able to measure changes across a range of expected low- to high-adoption locations. A total of 95 farmers (50 female) were interviewed through FGDs. Furthermore, FGDs were conducted with three COOP groups – Shwe Gin Sein, Naung Ta Yar and Kyone Yatanar – which represent both successes and challenges to be further explored. A total of 21 (seven female) farmer COOP group representatives were interviewed.

► Table 2 - Ginger GSC Focus Group Discussions

Source	Village			COOP		
	High adoption	Medium adoption	Low adoption	Shwe Gin Sein	Naung Ta Yar	Kyone Yatanar
Methodology	FGD	FGD	FGD	FGD	FGD	FGD
Target location	VCRD village	VCRD village	VCRD village	Lawksawk	Pinlaung	Kalaw
	DOA village	DOA village	DOA village			
FGD/KII	2	4	2	1	1	1
Target sample	20	20	20	10	10	10
Total sample	23	50	22	7	12	2
Total FGDs = 11/Total respondents = 116						

⁹ The Dot Survey was developed and utilized in the baseline study to capture farmers' KAP on key OSH measures and practices. The OPA adapted the Dot Survey to include measures of adoption/behaviour change to be able to quantify a change from baseline and to measure impact from Phase I of the VZF project.

Beyond the FGDs, KIIs were conducted with various stakeholders, including ILO and VCRD staff, DOA and its extension agents in Yangon and Taunggyi, TOT farmers, processing facility staff, traders and input retailers. This information was used largely to guide qualitative analysis and the development of case studies, as outlined in preceding sections.

► **Table 3 - Ginger GSC Key Informant Interviews (KII)**

Source	Project		Facilitator				Processor		Trader		Retailer
	ILO	ILO consultant	TOT farmer	VCRD	DOA	DOA extension staff	Processor 1	Processor 2	Trader 1	Trader 2	Input retailer
Methodology	KII	KII	KII	KII	KII	KII	KII	KII	KII	KII	KII
Location	YGN	YGN	All	TGY	TGY	TGY	Heho	Aung Ban	Aung Ban	Aung Ban	Aung Ban, Nang Thein
FGD/KII	2	1	2	2	1	2	1	1	1	1	3
Total sample	2	1	2	2	1	2	3	1	2	1	3
Total KIIs = 20/Total respondents = 20											

Garment GSC

Data collection for the garment GSC began on 7 March and was put on hold as a result of the global COVID-19 pandemic and its corresponding restrictions in movement. Remaining interviews were conducted throughout September and October 2020, via remote methods (online and telephone).

► **Table 4 - Garment GSC Focus Group Discussions**

Source	UMFCCI trainees	CTUM trainees
Methodology	FGD	FGD
Target location	YGN	YGN
FGD	1	1
Total sample	2	12
Total FGDs = 2/Total respondents = 14		

The study conducted one FGD each with trainees of the Union of Myanmar Federation of Chambers of Commerce and Industry (UMFCCI) and the Confederation of Trade Unions Myanmar (CTUM) to address research questions presented by the case studies. An additional 10 KIIs were held with 13 respondents, including factory owners/managers; representatives of CTUM, the Factories and General Labour Laws Inspection Department (FGLLID) National Occupational Safety and Health Training Centre (NOSHTC) and ILO; and a Social Security Board (SSB) officer and claimant (Table 5). All originally planned interviews were conducted; however, the research team was unable to visit the factories because of ongoing COVID-19-related restrictions.

► **Table 5 - Garment GSC Key Informant Interviews (KII)**

Source	ILO M&E	SSB officer YGN	SSB claimant	CTUM	UMFCCI	Factory 1	Factory 2	Factory 3	Factory 4	NOSHTC (FGLLID)
Methodology	KII	KII	KII	KII	KII	KII	KII	KII	KII	KII
Location	YGN	YGN	YGN	YGN	YGN	YGN	YGN	YGN	YGN	YGN
FGD/KII	1	1	1	2	1	1	1	1	1	2
Total Sample	1	1	1	3	1	1	1	1	1	2
Total KIIs = 10/Total respondents = 13										

Findings on OSH Adoption

This section aims to provide a review of current adoption at the workplace level within both the ginger and the garment GSCs, resulting from the VZF project. These findings are also used to underpin the thematic findings on the overall project, and to inform the factors with an impact on adoption and later recommendations for future project developments in Phase II.

The section on adoption in the ginger GSC serves as a follow-up to baseline findings on adoption from the start of the project. The OPA study followed the original Dot Survey methodology used at baseline, with additional components to measure changes in the knowledge, attitudes, perceptions and behaviours of workers. The original baseline Dot Survey covered only KAP; the follow-up OPA survey included measures of adoption/behaviour change. The aim was to establish a causal link between the project's activities and changes in behaviour resulting in a positive impact on OSH.

The section on adoption in the garment GSC includes data from both workers (via CTUM members) and employers (UMFCCI members) representatives. As there is no baseline data, the goal is to capture more qualitative assessment of the impact of trainings on the adoption of various measures, and to identify areas of potential best practice and lessons learnt to better inform the next phase of the project. It was also interesting to explore any differences in the perceptions of workers versus those of employers and tripartite members.

► Ginger: Dot Survey Results (for Workers)

The Dot Survey was originally conducted in September 2017 by VZF among ginger farmers in Southern Shan to support a baseline OSH assessment of knowledge, attitudes, perceptions and risk across functions in the ginger GSC. The Dot Survey method involved displaying close-ended questions on posters, with targeted participants invited to answer these "self-service" or by using "dots" (round colourful stickers). The research team provided an explanation at the start of each section and question, and carefully guided participants through each question to ensure they understood. Sessions were held at the end of each section to further probe participants and to provide qualitative support to their answers, as outlined in the survey methodology. The research team paid close attention to respondents to ensure individual responses were based on personal experience and not on the "bandwagon" effect. Females and males were grouped separately and responses were coded through different coloured dots. The Dot Survey is considered an informative and meaningful data collection strategy as it engages participants through an interactive process, whereby they can see the results immediately and reflect openly in discussions to gain a deeper level of understanding of the results.

► Image 1 - Dot Survey participants, War Pyar village, Kalaw



The Dot Survey was conducted as part of the OPA to gain first-hand knowledge of the outcomes and impact of the project on farmers in key targeted villages with expected low to high adoption. Furthermore, the results will be used as a follow-up to the baseline survey conducted in 2017 and serve as an assessment of the outcomes and impact of Phase I of the project to guide the development of Phase II. The Dot Survey was conducted among both male and female farmers and farm workers from eight villages that received OSH training through the VZF project. A total of 95 farmers were interviewed in FGDs, 50 of whom were female (53%).

► **Table 6 - Breakdown of Dot Survey Respondents by Sex**

Village no.	Village/township	Female	Male	Total
Village 1	War Pyar, Kalaw	3	6	9
Village 2	Sin Kyune, Pindaya	6	10	16
Village 3	Taw Yar, Lawksawk	9	5	14
Village 4	Pha Yar Phyu, Pinlaung	12	5	17
Village 5	Ho Hway, Hopong	9	2	11
Village 6	Ho Oo, Namsang	6	5	11
Village 7	Ton Tee, Namsang	3	5	8
Village 8	Loi Hsai, Namsang	2	7	9
Total		50	45	95

The newly adapted Dot Survey (for the OPA) includes four sections, to test farmers' current knowledge, attitudes, perception and behaviour relating to OSH measures across the following subjects: Heat Safety; Materials Handling and Storage/Ergonomics; Safe Use and Handling of Agricultural Inputs; and Safe Use and Handling of Farm Tools. The original Dot Survey did not include measures related to behaviour (adoption), since interventions were in the planning stage, but the OPA does provide an analysis of changes in knowledge, attitudes and perceptions as a follow-up to the baseline. The goal of collecting data in this way is to be able to assess factors leading to or preventing adoption, such as lack of knowledge or beliefs that influence behaviour change.

An additional qualitative assessment was added to each question in the behaviour section, further probing farmers to explain the factors behind their adoption or lack of change, including the following questions:

- Why or why do you not practise (the following OSH measure)?
- Was this OSH practice something you did before the training or after the training?
- How has adopting this practice affected your productivity? What changes have you experienced?
- If you practised this before the training, where did this knowledge come from?
- Are there any negative outcomes, unintended consequences or additional factors from adopting this practice?

VZF OSH Training Objectives

The VZF project has led OSH trainings for ginger farming communities across Southern Shan State via a TOT model, to increase farmers' knowledge and awareness on the meaning of a safe and healthy workplace and how this can contribute to improving farm productivity and access to markets. Through this dissemination of information via trainings and the establishment of farmer group COOPs, the project seeks to influence farmers' knowledge and attitudes leading to positive behaviour change that adheres to the suggested OSH measures relating to farming. Table 7 presents the expected key outcomes for each training module.

► Table 7 - VZF OSH Training Modules and Learning Objectives

Training session	Learning objectives
Safe and Healthy Workplace = Good Business	<ul style="list-style-type: none"> • Gain a better understanding of what is meant by a safe and healthy workplace • Obtain insights into how a safe and healthy workplace can contribute to improving farm productivity and access to markets
Hazards and Risk	<ul style="list-style-type: none"> • Understand what is meant by hazards and risks • Learn how to identify hazards • Gain a working understanding on how to identify risks and on a hazard control system
Materials Handling and Storage	<ul style="list-style-type: none"> • Understand health and safety issues on materials handling and storage • Learn/gather insights on simple and practical solutions for improving methods of storing and handling these materials • Gain practical solutions to address hazards facing ginger farmers • Become familiar with the use of the action checklist
Use and Handling of Farm Tools and Equipment	<ul style="list-style-type: none"> • Increase awareness and consciousness of hazards related to tools and equipment commonly used on the farm • Gain practical solutions to address hazards facing ginger farmers • Become familiar with the use of the action checklist
Use and Handling of Pesticides	<ul style="list-style-type: none"> • Understand the importance of safe input use • Identify ways to minimize exposure to hazardous substances
Heat Safety	<ul style="list-style-type: none"> • Understand effects of heat exposure on health • Learn safety measures to prevent heat stress and other heat-related illness

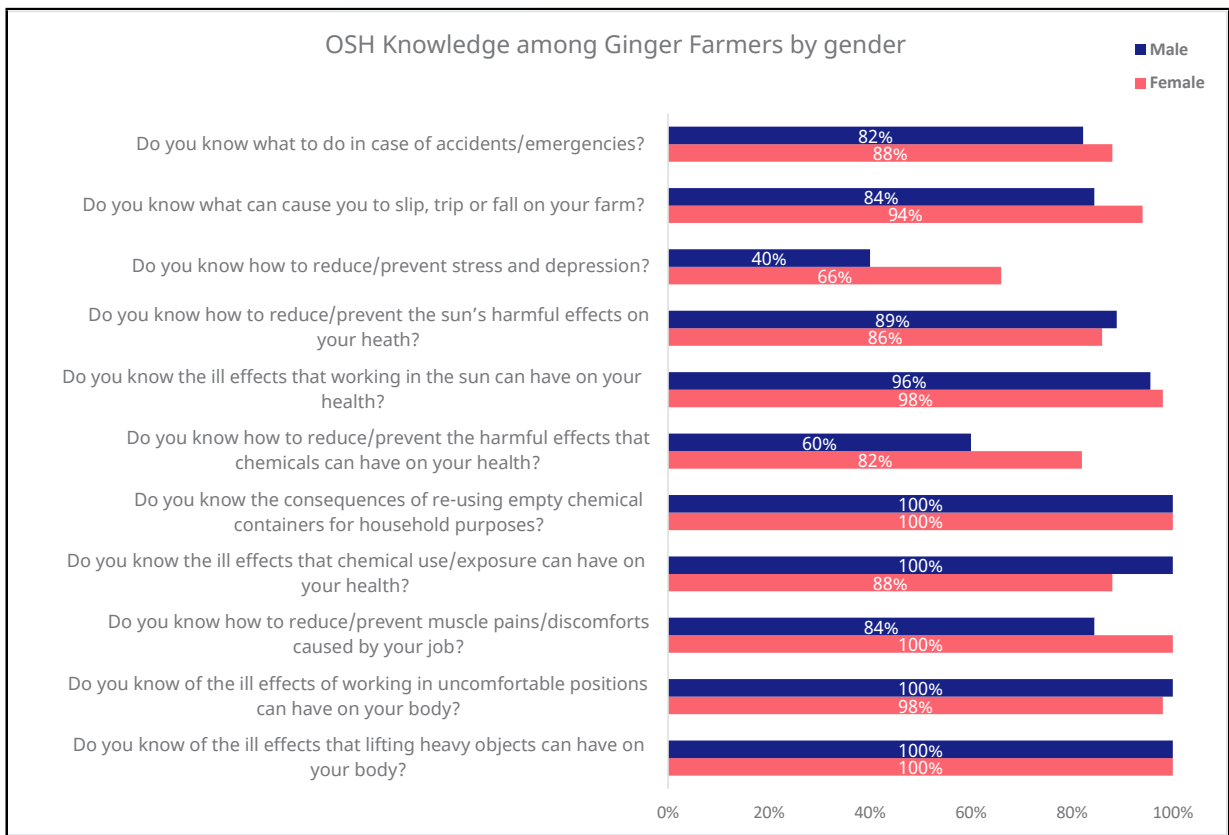
Farmers’ OSH Knowledge

The first stage in assessing farmers’ uptake of OSH practices is to measure their level of knowledge and understanding. Farmers were asked questions relating to their knowledge of each of the topics in Table 7; the responses can be used as a comparative measure against the original Dot Survey conducted at the inception of the project, which serves as a baseline. Figure 1 provides a breakdown of knowledge among ginger farmers after the project intervention, whereas Figure 2 presents the baseline.

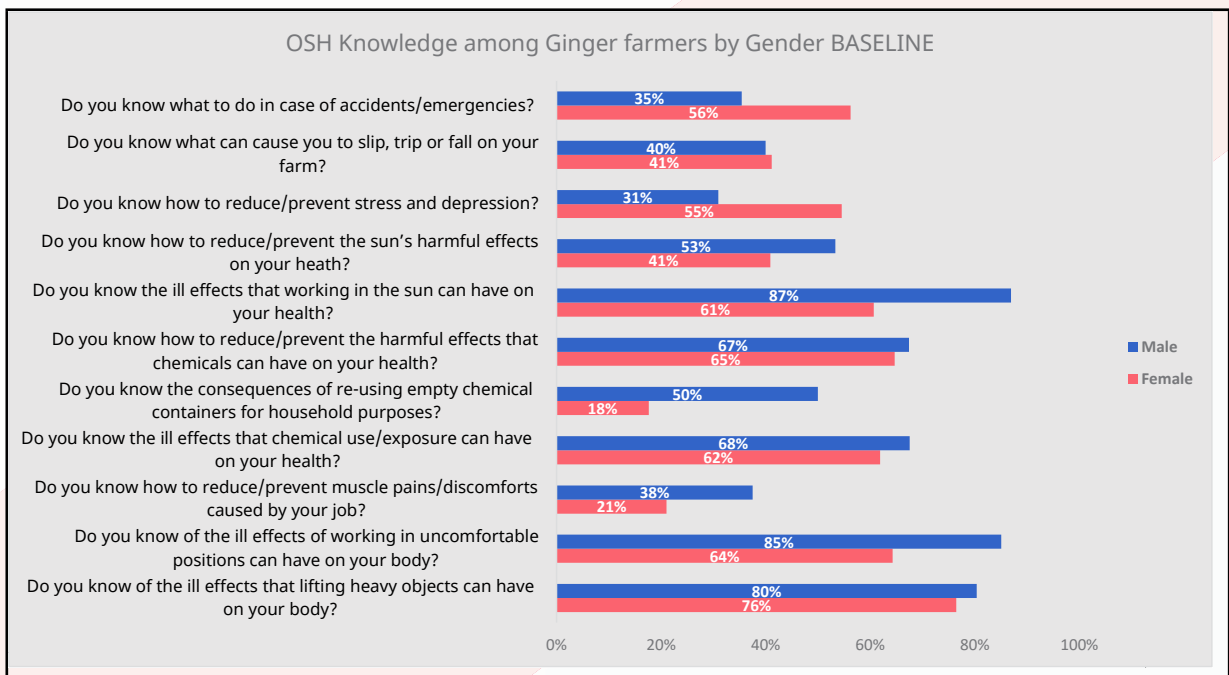
Overall, farmers across the eight villages exhibit a high degree of knowledge related to the OSH measures included in the Dot Survey, based on information disseminated through OSH trainings delivered by the project. In all questions, female farmers interviewed (N=50) have a reported 91% awareness of selected OSH measures and male farmers (N=45) an overall rate of 85%. In comparison with the baseline (Figure 2), knowledge has risen significantly, from 51% among female farmers and 58% among male farmers, with a combined overall awareness rate of 55%. All farmers (both female and male) are aware of the ill-effects of chemical use and exposure on health, and specifically the consequences of reusing empty chemical containers in the household; this result of 100% represents a drastic increase from a previous 50% among males and 18% among females at baseline.

However, fewer farmers (60%) are aware of how to actually reduce or prevent the harmful effects of chemicals. Farmers are fully aware of ergonomics relating to their job (100% response rate), such as the ill-effects of lifting heavy objects and working in uncomfortable positions, but, again, less aware of how to reduce or prevent muscle pains and discomfort caused on the job (84% awareness). In the FGDs, it came out that, while most workers are aware of the issues, they may choose not to follow instructions because they are more interested in completing the job as quickly as possible.

► **Figure 1 - OSH Knowledge among Ginger Farmers by Gender**



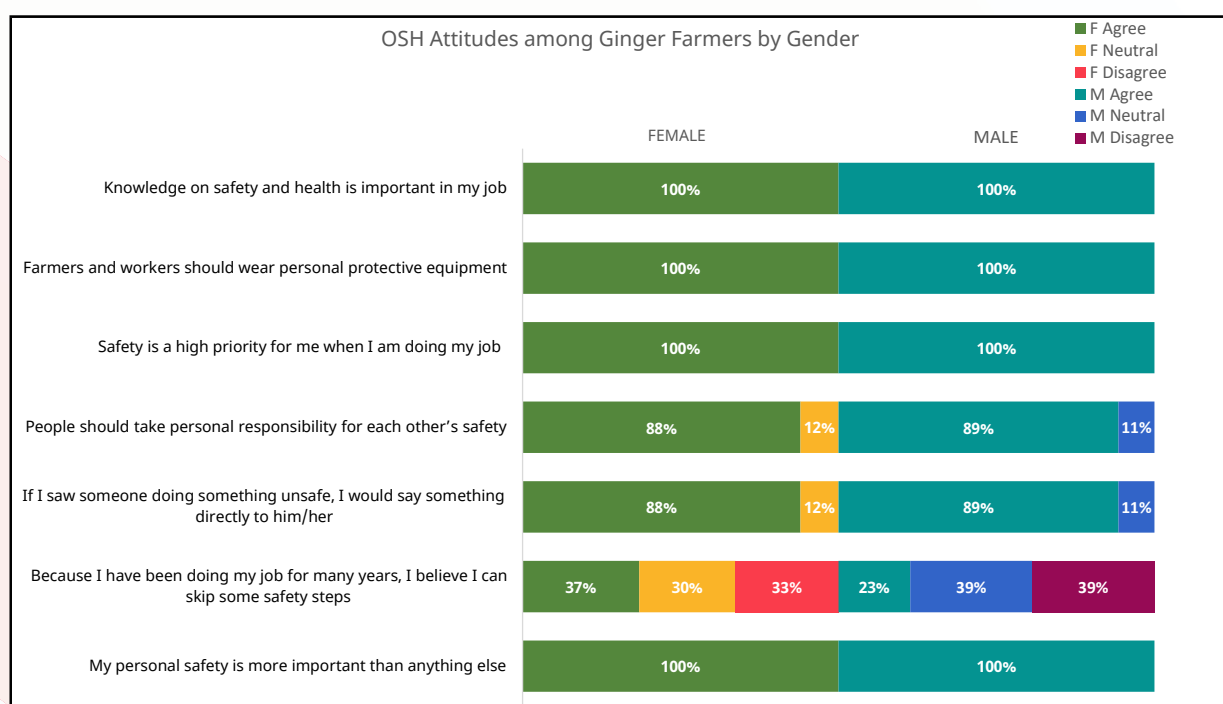
► **Figure 2 - OSH Knowledge among Ginger Farmers by Gender BASELINE**



Farmers' OSH Attitudes and Perceptions

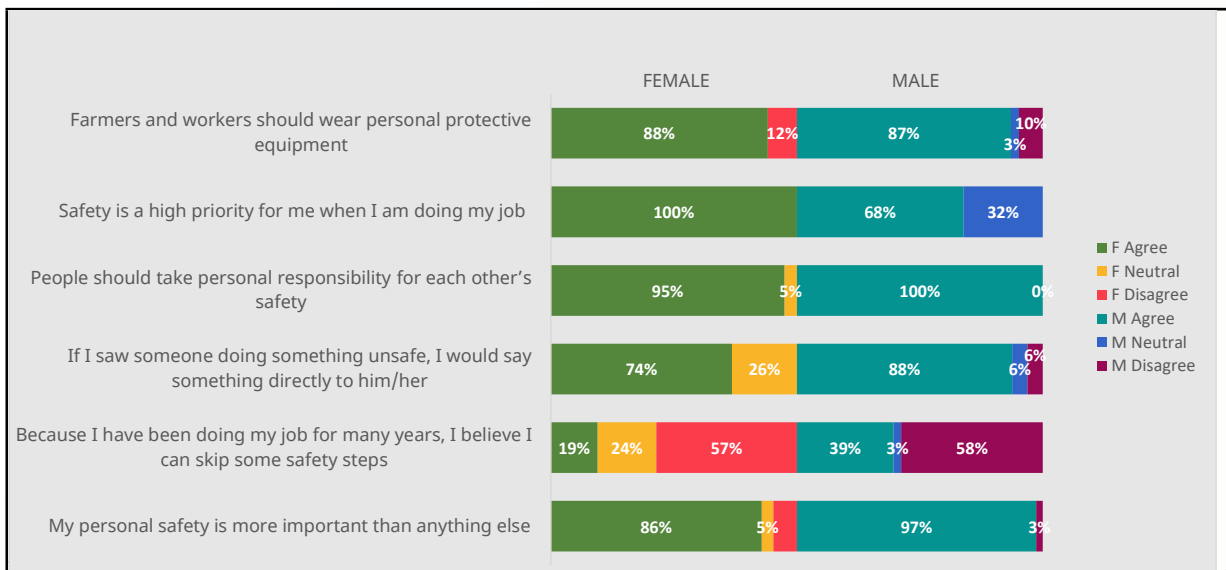
Gaining a measure of farmers' attitudes relating to OSH practices is the next key stage to understanding the factors behind adoption. The attitudes and perceptions component of the Dot Survey was designed to obtain a deeper measure of how farmers view each OSH measure, which can then be used to better understand the decisions behind adoption or a lack thereof. For the most part, farmers interviewed in the Dot Survey agreed on the importance of knowledge on safety and health and taking protective measures for themselves as a high priority while working in the field (as depicted in light blue and yellow responses for females and males, respectively). However, approximately one-third of both females and males believe it is acceptable to skip some safety steps for more experienced farmers, which demonstrates a need for a potentially adapted implementation strategy to further encourage farmers to recognize the importance of such measures and change their behaviour.

► **Figure 3 - OSH Attitudes among Ginger Farmers by Gender**



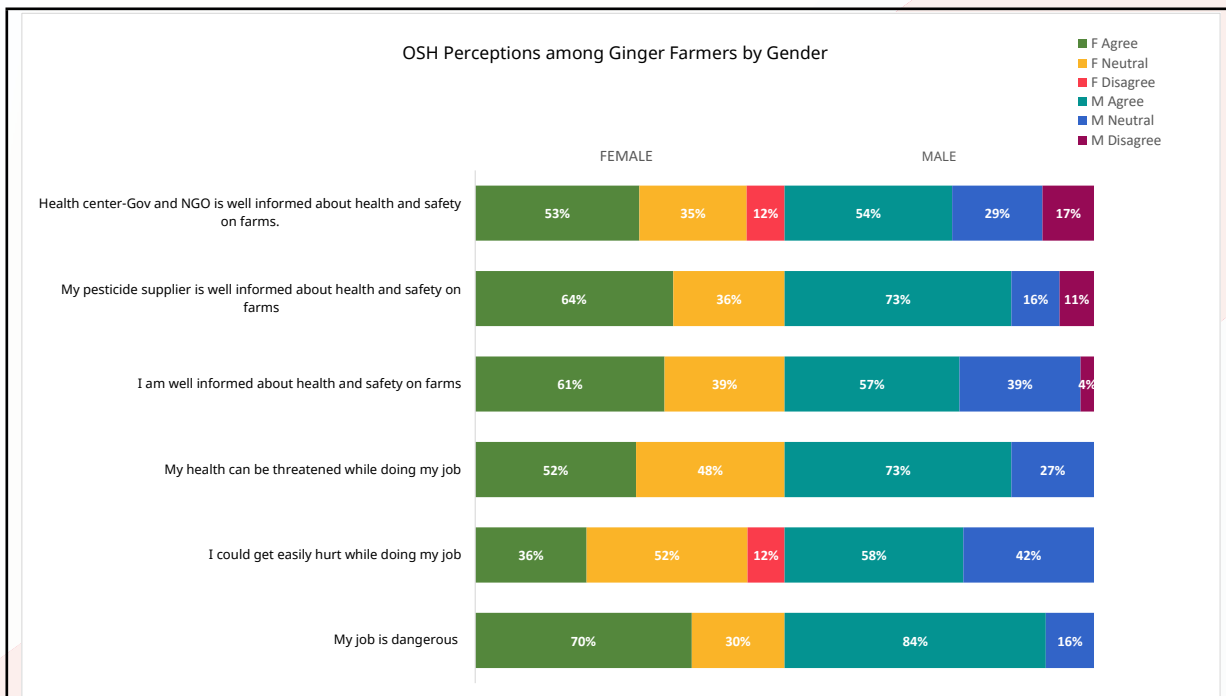
As Figure 4 shows, there has been an observed improvement in general attitudes across each question from the baseline.

► **Figure 4 - OSH Attitudes among Ginger Farmers BASELINE**



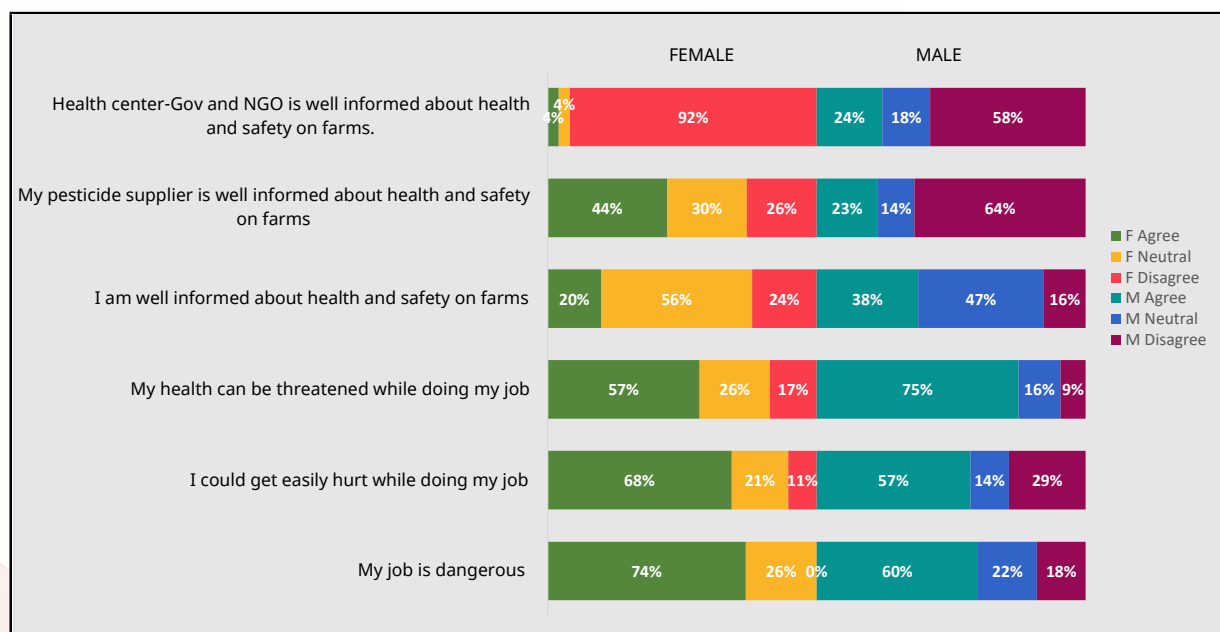
A total of 71% of female farmers and 85% of male farmers believe their job is dangerous. However, the majority of farmers also report being well informed about safety and health on the farm, and that their pesticide suppliers are also well informed. Furthermore, it may be important to note that, typically, females do not perform the more dangerous tasks on the farm, such as handling pesticides and heavy equipment, which are reserved for men.

► **Figure 5 - OSH Perceptions among Ginger Farmers by Gender**



As Figure 6 shows, farmers at baseline held greater negative perceptions on the importance and capacities of stakeholders in OSH (depicted in disagreement responses to the following questions in grey for females and green for males). These improvements are a testament to the positive impact of VZF's work directly supporting pesticide/ input suppliers and other key stakeholders within the OSH system in partnership with DOA.

► **Figure 6 - OSH Perceptions among Ginger Farmers BASELINE**



Farmers’ OSH Behaviour – Adoption Overview

Ginger case studies 1 and 2 are addressed through the Dot Survey results, which provide insights into adoption rates and degree across measures in villages trained through various methods, as well as factors (internal and external) influencing this. These results also support the thematic findings on Productivity and Service Delivery (see Thematic Findings).

Since the inception of the project, VCRD lead farmers and DOA extension staff have trained farmers in 57 villages through TOT trainings. At the start of the project, farmers were instructed to conduct risk assessments on their farms, covering chemical, physical, biological and ergonomic hazards, as well as the hierarchy of control for each type of hazard. It is important that farmers are aware not only of the hazards but also of the means by which risks can be controlled. The newly added behaviours section of the Dot Survey was designed to capture the resulting outcomes and impact of the trainings and the dissemination of OSH knowledge through various outlets, particularly among farmers and communities. Follow-up qualitative questions were added to each question to gauge farmers’ level of understanding of each measure and factors behind adoption or lack thereof.

Through the FGDs, the study sought to highlight the most significant OSH measures for farmers and farming communities, and benchmarks of success for each measure. The benchmarks of success are based on the degree of adoption needed to experience and benefit from the intended impact of the measure. For example, the safe use and handling of pesticides may need to be followed to a maximal degree (all the time), whereas the clothing a farmer wears to reduce sun exposure may be considered a success if the farmer is adopting the change in practice most of the time (not always). The following results highlight the most significant OSH measures in each category – Heat Safety; Materials Handling and Storage/Ergonomics; Safe Use and Handling of Agricultural Inputs; and Safe Use and Handling of Farm Tools – as well as the benchmarks for success for each practice.

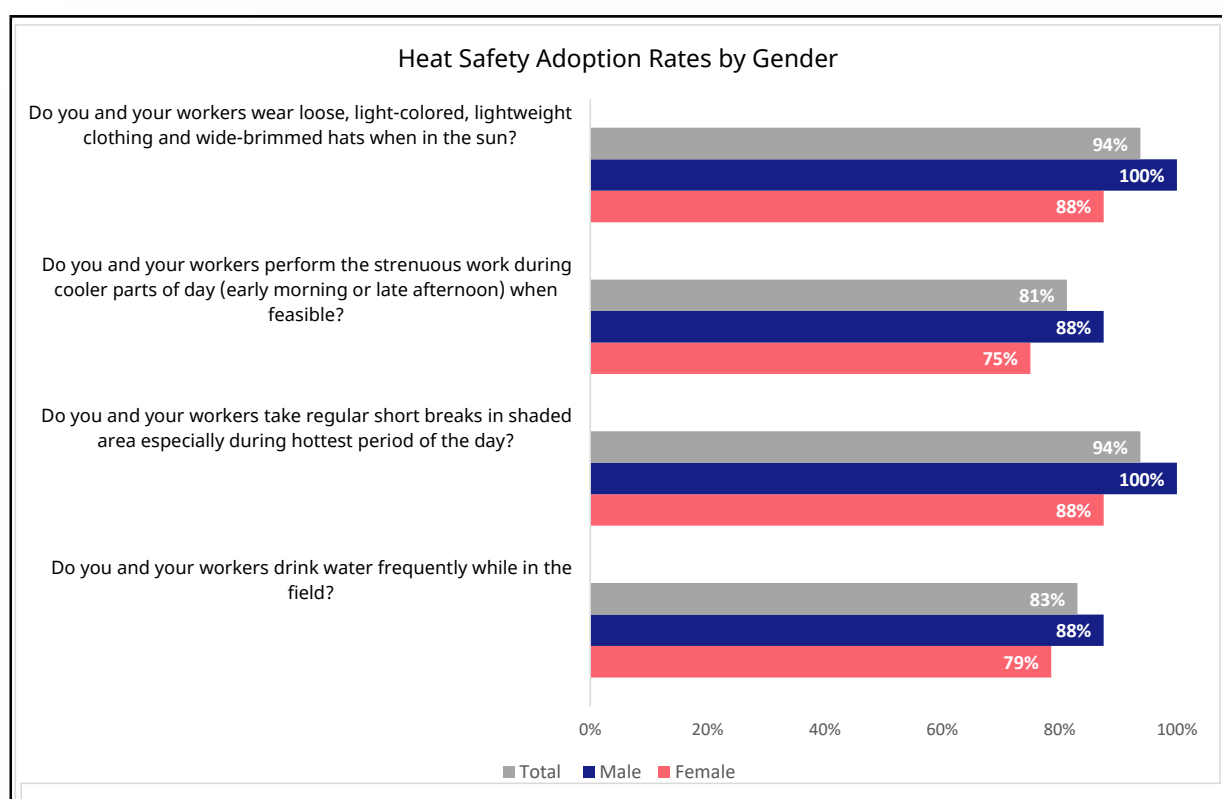
Measures related to heat safety are considered a key element of ensuring a safe and healthy work environment for farmers. The project has trained farmers on some key yet very practical ways to better protect themselves, such as wearing protective clothing, drinking water frequently, taking short breaks during the hottest period of the day and performing the most strenuous tasks in the cooler parts of the day. The study considers each of these measures important to a farmer’s overall OSH; however, achieving these measures a majority of the time should be

considered the benchmark of success. The reason for this is that, even if a farmer is unable to wear a hat every day or to take breaks all of the time, he or she will still have made a significant transition towards ensuring a safer and healthy work environment if they are able to conduct these practices most of the time. The goal is to work towards full integration of each practice within the daily work schedule.

All farmers interviewed have achieved a high degree of adoption of heat safety practices, including both female and male farmers, with adoption ranging from 75% to 100%. When it comes to wearing protective clothing, while 100% of male farmers report wearing appropriate clothing most of the time, female farmers tend to cover themselves more often than men. In follow-up discussions, farmers remarked on the benefits of adopting these practices:

“It is necessary for us to take a break for our safety. This allows us to improve our availability to work the next day... Working in cooler temperatures allows us to be more productive as well.”

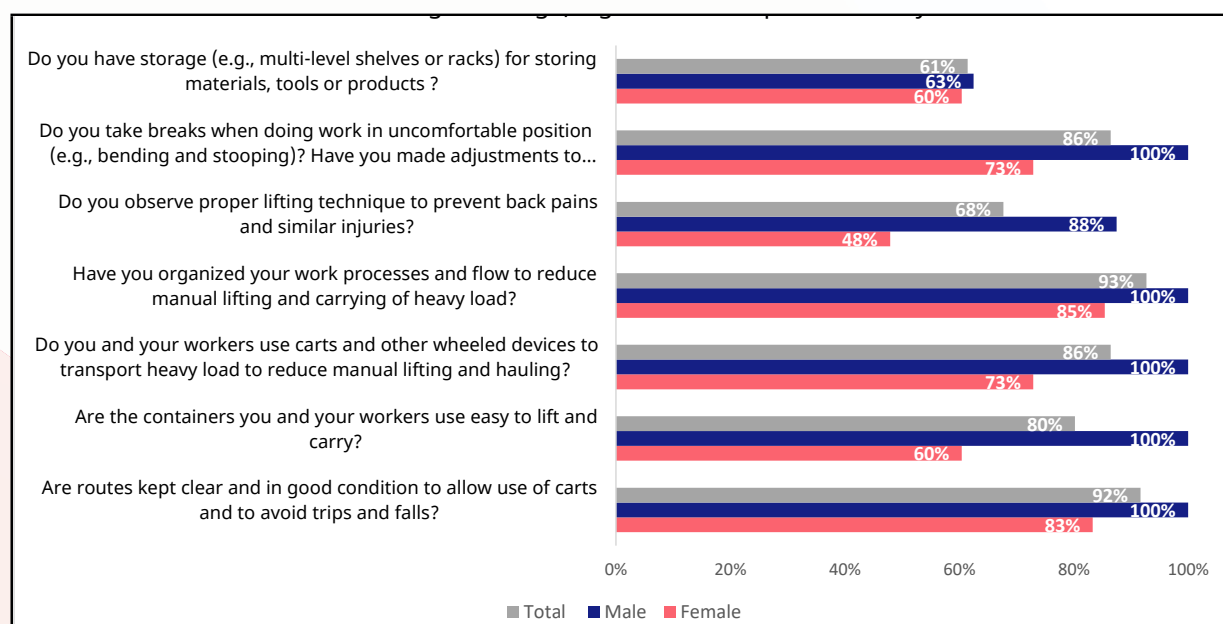
► **Figure 7 - Heat Safety Adoption Rates by Gender**



Proper handling and storage of materials and ergonomics is considered a key element of creating a safe and healthy work environment for farmers. This includes developing more effective preventive measures to control, reduce and eliminate material handling and storage hazards. In trainings, farmers are taught how to recognize and identify different types of hazards and those specific to women and men, to help better protect themselves against possible illness and/or injury on the job. Relating to materials handling and storage, male farmers report a higher level of adoption than do female farmers in terms of observing proper lifting and working positions to reduce body pains and injury, including organizing work processes to reduce manual lifting and carrying of heavy loads. However, overall, the majority of farmers have adopted safety measures and improved work processes to reduce body pains and injury. In some cases, farmers are unable to use carts or wheeled devices to help carry heavy loads, but most agree that carrying heavy loads is not good and adjust by reducing the basket size or carrying with two people. However, in follow-up discussion, farmers are split in their belief as to what is more efficient: some feel carrying smaller baskets reduces work efficiency whereas others believe that, in carrying lighter loads, they are able to work longer hours and fatigue less quickly. Several villages also report making smaller basket sizes for women to carry.

Approximately 60% of farmers have storage (e.g. multi-level shelves or racks) for keeping materials and tools. Farmers who have made this change remark that keeping the tools in one place is not only safer but also improves productivity because they do not need to gather tools across several locations, as was the case previously. Not all farmers have adopted the multi-level shelves as demonstrated in the training; however, they have adapted the storage to a corner of the house out of the reach of children. Farmers have made additional adjustments to store ginger away from other chemicals and pesticides.

► **Figure 8 - Materials Handling and Storage/Ergonomics Adoption Rates by Gender**



The safe use and handling of agricultural inputs is a third key component of OSH for farmers, and potentially one of the most critical, as it involves handling of hazardous chemicals. Training was developed to enhance awareness and understanding of hazards relating to use and handling of and exposure to agricultural inputs. Furthermore, farmers were trained on how to identify practical solutions to control, reduce or eliminate hazards related to the use of inputs. Most farmers say they had little knowledge of safe use and handling of agricultural inputs before the training, and, while some measures are not fully adopted, they generally now realize the importance of practising safety when using and storing chemicals.

In terms of making the choice to use chemical fertilizer over non-chemical methods, only 58% of farmers report having fully explored non-chemical controls to address pests and weeds. Eighty-six percent of farmers report reading and following information on the label when selecting, mixing, applying, storing and disposing of agrochemicals. In terms of proper storage, nearly all farmers (98%) keep pesticides and fertilizers away from food and drinking water, and store them in their original containers with labelling. One hundred percent report storing pesticides in a secure location away from children. However, only 50% of farmers keep the safety information sheet to refer back to in case of an emergency. Farmers claim this is because they often cannot read the label as it is not in Myanmar language, or their local language, and say they would go to the clinic in case of an accident.

When mixing and applying pesticides, nearly no farmers (13%) prepare and load only the amount needed for the task according to the instructions on the label. Farmers are still generally unclear on how to read labelling and carry out proper mixing for use. Some farmers follow instructions from other farmers or their input supplier because they are unable to read the instructions. The farmers who report following the instructions on the label for mixing are all female, from one village in Kalaw. Sixty-nine percent of farmers report cleaning nozzle tips of chemical bottles with a soft material and not by blowing on it with their mouth. Over 90% of farmers ensure that the application route does not pass through spray or vapour drift, and carry clean water with them to the application site (this is normally for drinking but farmers would use it for washing eyes in the event of contamination).

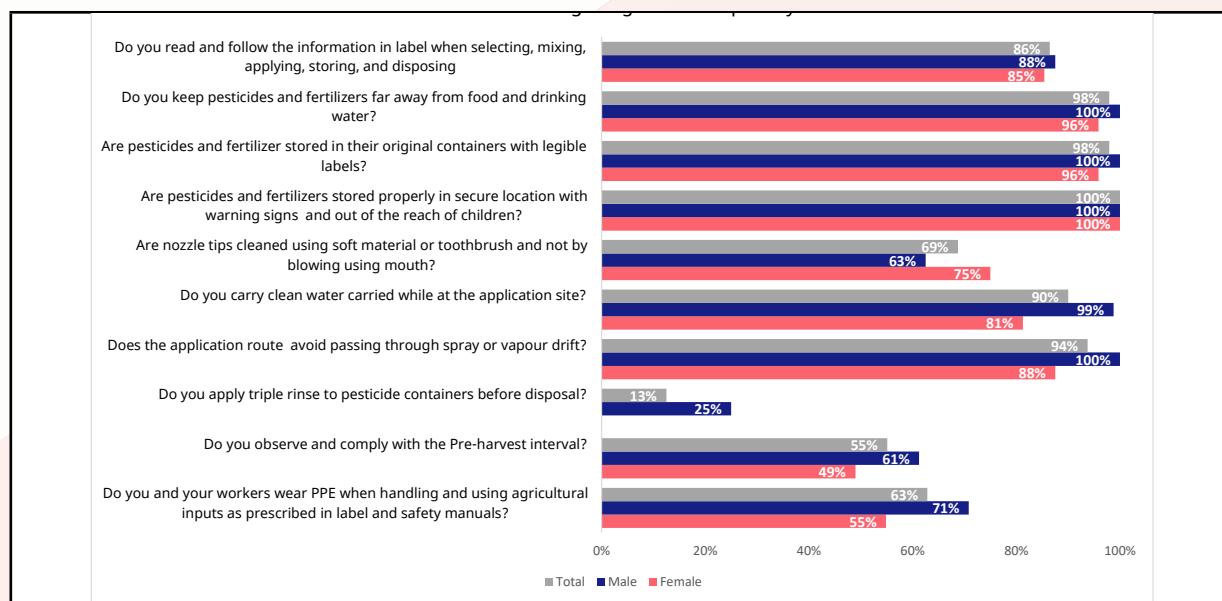
Regarding personal protective equipment (PPE), 100% of farmers wash clothing worn during pesticide use (females do the washing) and keep it separate from other clothing; however, a lower share of farmers (63%) report wearing PPE. Further discussion revealed that, while farmers are not wearing full PPE as described in training, owing to issues related to cost and availability, most are wearing masks, hats, long-sleeved shirts and long boots. Eighty percent of farmers (72% female, 88% male) follow proper handwashing practices after handling agricultural inputs, which they learned from the training. In the event where they do not have water in the field, farmers wash their hands at the end of the day. Unfortunately, nearly no farmers have first aid equipment kept nearby in case of an accident. They claim to understand the need for first aid but are not adopting it because they do not think it is necessary.

The recommended re-entry interval (REI) – the length of time required after the spraying of pesticides before a person can safely re-enter the field without PPE – is observed by approximately 44% of farmers (38% female, 50% male). Farmers say they warn people to stay out of the field when they spray but that they do not have the means to control the movement of animals. Warnings are usually by mouth, and not through signage. A majority of the farmers who use chemicals observe the pre-harvest interval (PHI) – the time that must pass between the last pesticide application and any use of the crop – which they learned as a result of the training.

Regarding proper clean-up after application, only 13% of farmers (25% male, 0% female) apply a triple rinse to pesticide containers before disposing of them. Female farmers report not adopting this practice because they are typically not the ones handling agricultural inputs after use; it is therefore more useful to consider the total adoption at 25% among males. Some farmers report not having enough water on the farm to do the triple rinse, even though they are aware of its importance. However, some farmers from Namsang believe it is not necessary, and farmers from Lawksawk report burying containers in the ground instead of cleaning them. Oddly enough, when farmers are asked if they follow proper disposal of empty pesticide containers and prohibit reuse, 100% of farmers across all villages report adoption. Follow-up discussions revealed that farmers believe they are correctly adapting their behaviour since the training. Previously, they threw the containers in a remote location; now, they are washing them and burying them in the ground. It appears the recommendation to set up a community disposal site has not yet been established; this requires follow-up consultation.

Pertaining to the safe use and handling of manure, 86% of farmers use properly composted manure, and 61% use tools for manure handling that are not used for crop harvesting. In cases where farmers do not use separate tools, they claim not to have enough tools to have differentiated sets.

► **Figure 9 - Safe Use and Handling of Agriculture Inputs by Gender**

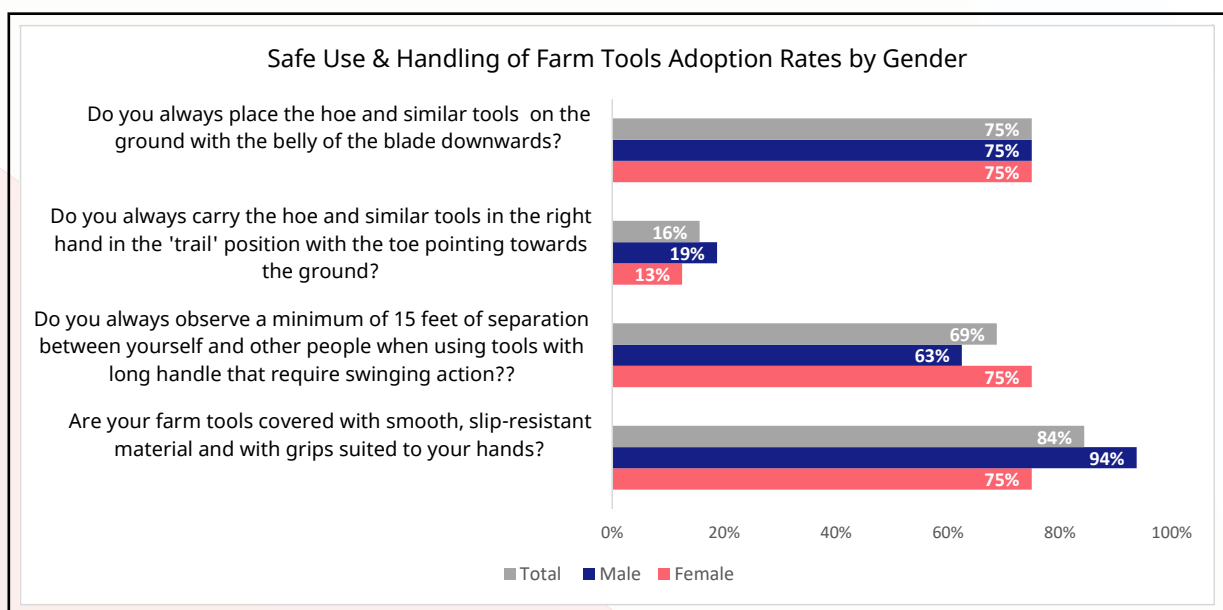


The safe use and handling of farm tools is another key component of OSH for farmers. Training was developed to help ginger farmers increase awareness of hazards related to tools and equipment, to identify practical

solutions to control, reduce or eliminate hazards related to the use of tools and to monitor their own progress. Furthermore, farmers were asked to identify additional risk factors for women in using tools not designed for a female work population.

In particular, handling of the scythe is important as the device presents a potential safety hazard to farmers and other bystanders in close proximity. While the majority of farmers place tools safely on the ground and observe a safe distance between other people, most farmers do not carry the hoe in the “trail” position because, according to farmers interviewed, this carrying method signifies going to a funeral and is culturally frowned upon. Therefore, farmers do not intend to change their carrying practice to the suggested method. It may be advised to find another safer carrying position that does not conflict with cultural beliefs. Most farmers also report not keeping a full 15 feet away from others but they do maintain what they believe is a safe distance. The majority have covered their tools with smooth surfaces, which some had done prior to the training.

► **Figure 10 - Safe Use and Handling of Farm Tools Adoption Rates by Gender**



► Garment: Factory Results

While there was no baseline survey conducted on OSH knowledge, attitudes and perceptions/behaviour within the garment GSC, the study was able to capture some valuable information on this after Phase I of the project. Two tools were used: FGDs with factory workers (organized through CTUM, in person) who had attended OSH trainings and the resulting impact on adoption, perspectives and concerns as well as results on specific OSH measures; and KIIs (by phone) to assess adoption from the managerial/employer perspective at factories involved in the project, including OSH measures (ranked low to high in adoption) and what has changed as a result of the project.

The study met 13 garment factory workers and operators representing seven factories at CTUM (prior to COVID-19), all of whom were training participants in the ILO-supported OSH trainings. Table 8 shows the total number of factory workers who attended OSH trainings in relation to the size of the factory.

► **Table 8 - Garment FGD and OSH Training Participants**

Factory survey #	OSH training participants	Position	Total factory workforce size (n)
1	50	Worker/operator	2,000
2	20	Worker/operator	900+
3	7	Worker/operator	2,800
4	5	Worker/operator	1,300
5	10	Worker/operator	800
6	7	Worker/operator	800
7	5	Worker/operator	800

OSH Training Results and Impact

The above-mentioned participants were involved in 13 trainings led by the CTUM Women's Centre and two trainings by UMFCCI. In terms of what was most useful in the trainings, workers mention learning how to identify hazards, especially open socket wires that can lead to fire hazards, and how to report these hazards to supervisors. They understand that they must start an OSH committee. Since the training, workers have been going to the factory owner or supervisor and sharing information, and helping make plans to set up an OSH committee. Each training participant received handouts and a poster for the factory, which have been hung on the notice board. They feel the handout is especially useful for them to explain what they have learnt to other employees and are using these materials as a teaching resource at their respective factories. Overall, the workers have had positive experiences in reporting hazards to employers. They typically inform their bosses if they identify a hazard, although employers are not always responsive in addressing these hazards.

When asked what was least useful in the training, all respondents agree that they found everything to be useful and would like more information, training and resources. It was noteworthy how empowered workers are in terms of their rights and role in creating a safe workplace. The workers unanimously understand the importance of OSH; this may be because these individuals are involved in the workers' union (CTUM) and are already active. However, it seems everyone agrees that, if trainings involve more employers and additional workers, this could lead to far greater adoption at the workplace level. It was suggested to train one TOT trainer for each factory and have one owner/employer representative attend the trainings (i.e. one CTUM member and one owner representative per training).

All seven factories have conducted risk assessments, in line with the training. Typically, the assessment is conducted weekly from a checklist, and reported in the employer meetings as well as the worker union meetings. These results are also shared with other workers, either in meetings or through other events; it is common for workers to meet during lunch break, when they ask for inputs from other workers to add to the report to the employer. Respondents report that they do this because they were trained to but also it is in their own interest to improve safety. In some cases, the risk assessment is too technical or advanced and outside help is required, such as in

checking voltage. Workers report that owners are reluctant to call in this outside help; however, the workers then ask the appropriate government inspection office (i.e. the electrical department) to come. These workers may feel empowered to do this because they are part of the workers' union; it is important to note that this may not be the case for other workers. However, if a workers' union representative is provided with further training, support and legitimacy as part of the process, it could be quite effective in terms of continuing enacting change at the factory level. One element of risk assessment that could be developed is clarification on which measures require outside expert assessment and what can be done internally.

When asked if hazards can be prevented or removed, workers respond that they believe that most OSH risks can be solved but usually the owners do not address these issues. They tend to focus on the simple fixes and risks that are potentially detrimental to the business, such as fire hazards. It is important that both workers and employers are involved in the process of assessing and addressing risk. Where this is not occurring, CTUM trainings provide workers with information on how to report issues and what to do if the factory owner/employer does not respond.

In terms of overall adoption, based on interview with these 13 workers from seven factories, when workers are not adopting OSH measures this is largely because of a lack of cooperation from employers in the provision of resources (i.e. PPE) and support (such as training workers to use PPE).

In terms of impact, factory workers claim that adopting OSH measures makes them feel happier and less stressed at work. These changes directly improve productivity by fixing issues that slow down or impede their work. Overall, more safety makes them happy at work. For example, a female worker described how a broken wire at her work station had caused her to constantly worry that something would happen, thus distracting her from her job. Another common example relates to clearing pathways that are used to transport materials; when it is hard to push carts, workers' arms tire and this slows the workflow. In solving these hazards, workers can focus more on their work and productivity.

A safe workplace = a happy and productive workplace

In future trainings and workshops, workers would like more practical training where they have the opportunity to practise identifying risks instead of learning by theory. Work stations could be set up with hazards to identify and address in practice scenarios. Workers feel it is more effective for them to learn by doing. To involve more workers in trainings, they suggest training TOT trainers to send back to factories to train more people. Currently, CTUM has only three TOT trainers. Additionally, it would be effective to hold the trainings in the factory and have them supported by the owner/supervisor, to ensure a common understanding of risk assessment and remediation, including shared roles and responsibilities.

OSH Adoption by Measure

The following is a breakdown of key findings from factory owners/employers and garment workers in terms of adoption by OSH measure. Results are provided from both workers and representatives from two garment factories, one manufacturing factory and union leaders from seven garment factories. Next to each measure is an adoption score of high, medium or low. High to medium means that the measure has been adopted completely or for the most part, and is being taken seriously based on the training; low signifies that little to no adoption has occurred, that the measure was already in place before the training or that the measure is not considered an issue of concern (if there is no perceived risk), according to both factory owners and workers.

Fire safety – high

Employers report a high level of adoption of OSH measures relating to fire and electrical hazards, for three key reasons: (i) very high potential for damage and loss through fire safety risks; (ii) buyer audit compliance requirements; and (iii) the need for compliance with factory inspections. However, adoption has also improved since the OSH training. Factories report that they used to keep a fire extinguisher and to conduct a fire drill once per year. Since the training, factories claim, they conduct regular fire drill exercises, have a fire drill plan, keep enough

fire extinguishers (according to the plan), check expiration dates on extinguishers, keep pathways clear and display clear signs with directions to exits.

From the worker perspective, they understand that walkways need to be kept clear but also report that employers will often use this space for materials storage. Workers understand that loose sockets can cause electrical issues and present potentially dangerous fire hazards. They report both issues to employers; in some cases the issues have been addressed and in others they have not. Workers also understand how to check expiration dates on fire extinguishers and will report any expired devices to employers. Another concern for workers is water leaking from the roof. The workers interviewed report that the majority of their concerns are addressed because owners take fire safety and risks seriously.

Maintenance of electrical systems – high

Similar to fire safety, employers report high compliance and adoption with regard to maintenance of electrical systems, which can cause fire hazards. Prior to the training, workers reported most risks and the employer took action. However, the new OSH committees conduct risk assessments, report risk and adopt control measures at the factory. According to employers interviewed, OSH measures are adopted as a process flow with regular follow-up.

Factory workers remark that the assessment and maintenance of electrical systems requires outside support but workers are aware of the potential hazards (e.g. overuse of electrical current, open sockets, water, etc.) and can notify the employer. Workers report that these issues are harder to get the owner to fix but they also take them very seriously as they could cause a fire hazard and resulting damage.

Worker movement/slips and trips – medium

Worker movement and safety from obstacles is related to fire safety in terms of keeping pathways clear to avoid slips and trips and safe movement in emergency situations. Since the training, employers report conducting risk assessments, reporting risk and adopting control measures such as signs for areas that are prone to a high volume of slips and trips.

Workers report that this has been an issue at all factories but it is one that is easy to fix. Workers report that some pathways are uneven and that leakages can often occur inside the building along the walls (given the presence of water storage cooling mechanisms on the roof), which can lead to slips. It is unclear the degree to which each factory is addressing such issues; however, both workers and employers well understand the importance of this risk and methods to address it.

Guarding of machinery – medium

Prior to the training, employers state that issues relating to guarding of machinery (sewing machines) were reported or addressed only in the event of an accident. However, now they understand the importance of prevention, conducting risk assessments and then making improvements.

Workers interviewed fully understand the need to protect the needle holder with a cover; however, some workers report not practising this as the employer has asked them to remove the needle guard as it can destroy the clothes. It would be beneficial to follow up on this safety measure in future trainings to ensure the importance of guarding machinery is well understood to prevent injuries, and perhaps to explore methods to protect workers without risking damage to products or slowing down productivity.

Personal protective equipment – medium

According to factory owners, PPE is provided to workers, including protection goggles and masks, but most workers do not wear it. Workers do wear masks in dusty areas, according to factory owners.

Workers interviewed all now understand the importance of PPE but they claim that owners usually provide them with gloves only when an auditor is coming to inspect the facility. All seven factories have gloves on site but do not provide them to workers unless they are being audited.

There appears to be a discrepancy in findings on the provision and use of PPE from the perspective of factory owners/employers and workers. It will be interesting to observe how the effects of COVID-19 and related OSH measures, such as wearing masks, unroll in the future.

Ergonomics – posture and manual handling – medium

Two factory owners report following new measures relating to ergonomics, including conducting risk assessment, identifying workers sitting in unsafe positions and making corrections. In terms of manual handling, employers feel this is not relevant as most factories use trolleys and fork lifts to carry and move heavy objects.

Workers responses are in alignment with those of owners, in that they are not required to carry heavy objects, so this is less of an issue. Materials are placed in a box at the side of the work station and picked up by someone using a trolley.

Working at height – medium

One factory owner reports adopting a new measure of keeping a maximum height of 1.3 m to store raw materials, and installation of a ladder with a handle for easier use.

Factory workers report having to climb to high shelves (six levels) without a ladder, using stools. Workers claim not to have received safety instruction on this.

Dust – low

Related to PPE, workers understand that they need to wear masks (this was prior to COVID-19) to protect them from dust in high-exposure areas (such as filling stations) and that this is not generally required for workers on the operation floor as there is no exposure to particles. However, some workers report not wearing masks even in high-exposure areas, despite requesting these from the employer, except for during audit visits, when all employees are given surgical masks (which may not be effective to stop smaller particles). Employers seem to emphasize other OSH measures such as fire safety over PPE. However, it is important to note that this data was collected prior to the COVID-19 pandemic and the situation regarding PPE and widespread usage of masks has certainly changed (although it is unclear whether these measures will be maintained after the current situation improves).

Access to water, toilets and rest facilities – low

According to employers, accessibility to water, toilets and rest facilities was not an issue before and few changes have been needed.

However, workers report that they have access to water stations but these are not clean, and toilets have no proper lighting. They have asked owners to fix such problems, and in some cases there has been a response. Workers are requested to drink at the water station and not bring water back to the work station, for safety reasons. Generally, workers feel they have enough access to water but are not encouraged to take drink breaks as often as they are needed.

Noise – low

From conversations with both employers and workers, discussions on minimizing exposure (e.g. removing workers who do not need to be around noisy machinery) or accurately measuring noise levels to assess the risk do not seem to have taken place.

Employers claim there are few changes to be made with regard to noise protection, and that they have already addressed this by providing earplugs to workers using high press machinery.

Workers report that there was more information on this in the UMFCCI training than in other trainings. Some workers request earplugs from their supervisor; generally, these are provided only to workers who request them.

Chemical storage and use – low

Employers interviewed believe chemical storage is not relevant to them as their factories do not use a high amount of dangerous chemicals. The only chemical reportedly used is thinner to remove stains from clothing.

Some workers interviewed are at factories using chemicals. They are aware that this work needs to be done wearing PPE but all they use is gloves and a basic mask. Workers have requested an exhaust fan to ventilate the room, as well as better masks, but they have yet to receive this support (prior to COVID-19). Based on interviews, it is apparent that there is a greater need for conversation between employers and workers on the nature and risks posed by using chemicals in the factory.

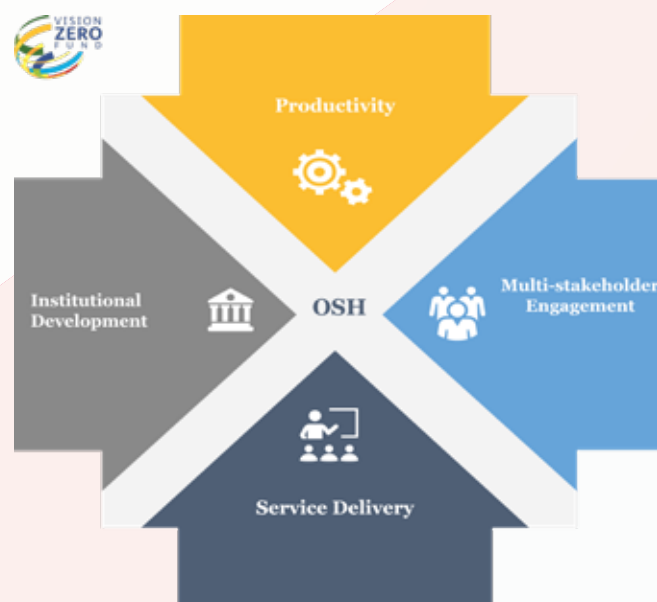
Research Framework and Case Studies

The research framework for the OPA was developed in two key stages. First, a series of case studies was developed, drawing on research questions to illustrate the factors promoting or hampering adoption of good OSH practices in both GSCs. Throughout the research to develop each case study, the OPA identified a few key themes that underpin the VZF project and help further illustrate best practices and factors that have influenced adoption. The OPA is developed around these themes (outlined below), which the case studies support, leading to a summary of most significant factors behind adoption and recommendations for further strengthening the VZF approach to promoting adoption of good OSH practices across its programming.

► Emerging Themes of VZF Phase I

Nine case studies were developed to underpin the OPA, with the aim of exploring key aspects of the project, identifying the most significant factors influencing objectives and outcomes of VZF in Phase I and pinpointing recommendations to continue improvements into the next phase (see Case Studies). Throughout the development of the case studies, both as individual resources and through collective analysis, the OPA was able to uncover some central themes that Phase I of the VZF project embodied. By presenting these findings, the OPA seeks to help guide decision-makers, project staff/management and all other stakeholders in conceptualizing the purpose and impact of the VZF project in Myanmar, as it transitions from Phase I to II in the coming period.

The four main emerging themes are Productivity, Service Delivery, Institutional Development and Multi-Stakeholder Engagement. While these themes are not exhaustive, they represent the most significant aspects that emerged in the assessment of the VZF project in the two GSCs.



Definition of themes emerging from ILO VZF in Myanmar

Productivity:

The business case for improved productivity is observed through both GSCs, resulting in greater and sustained impact of OSH measures. Stakeholders are more likely to adopt measures to a greater extent and in a more sustained manner if they believe this is helping their business/farm/factory in positive ways beyond just health and safety. Improvements in productivity, translating to savings in cost and time, are changes that beneficiaries are more committed to investing in in the long term. Various examples of this were observed in each GSC.

Service Delivery:

Use of the most effective methods and channels for disseminating knowledge and services leads to changes in attitude and behaviour relating to OSH in the GSCs, and the role and responsibilities of different actors within the newly developing structure of OSH standards and compliance.

Institutional Development:

Institutional capacity within committees, groups and organizations is key to the building of a new OSH framework for greater adoption and compliance (ginger COOPs and garment tripartite and OSH committees).

Multi-Stakeholder Engagement:

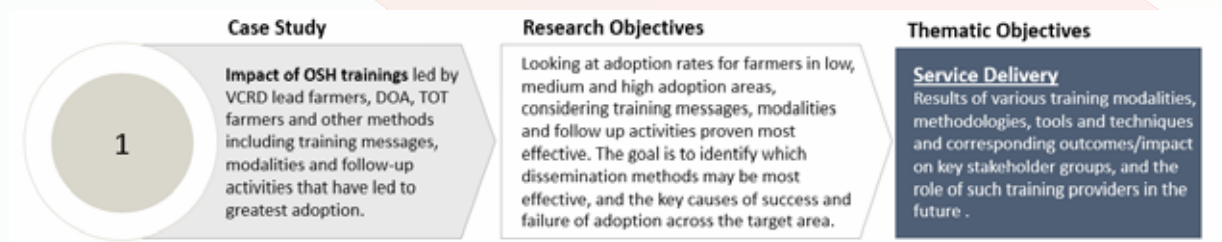
Greater sustainability and impact are achieved through the engagement of multiple stakeholder groups within the new OSH structure, including government, the private sector, workers' organizations, employers and workers, thus facilitating greater standardization, harmonization and collaboration resulting in greater impact at all levels.

Case Studies

The case studies were mapped out at the start of the study, with six covering ginger and three on the garment GSC, to guide the study in developing more specific research questions to explore factors behind adoption. The case studies are used to support the above themes and are presented in such a way as to develop a story behind each theme, highlighting the key significance of VZF in its first phase and the impact achieved thus far. As detailed below, each case study has a main research objective, as well as thematic objectives that support the overarching themes in the study. The graphics detail for each case study the key research objectives and corresponding thematic objectives, as further explored in the preceding section (Thematic Findings).

Ginger GSC Case Studies

Case Study 1: OSH impact and training methodologies

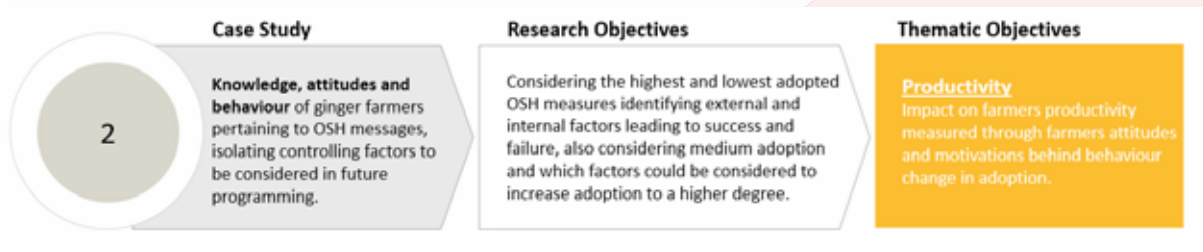


Case Study 1 in the ginger GSC was developed to review the project's various training and information-sharing methodologies to promote adoption of OSH messages among ginger farmers, so as to identify best practices and areas of improvement for the next phase and areas of replication for other value chains. The study sought to explore various training modalities used by each training facilitator, primarily VCRD lead farmers and DOA extension staff trained via a TOT model.

Data was collected through the Dot Survey, with additional qualitative and behaviour (adoption) change questions included to further assess impact of the project thus far. Additional factors were considered, such as possible spill-over effects, looking at how information is further shared beyond direct beneficiaries to gain a deeper measure of impact. Interviews were conducted with representatives from each training provider (VCRD staff and DOA), to better understand the rollout of each training approach, feedback from farmers and trainers, and factors influencing the information-sharing process and its impact on farmers behaviour change.

The biggest theme that emerged from this case study is that VZF is using more effective service delivery methods to promote sustainable behaviour change among farmers and communities pertaining to OSH messaging, such as involvement of key stakeholders, including the private sector. The study examined the training modalities and materials used (such as pamphlets and posters) mainly via the TOT model, and its impact on communities, including more vulnerable, hard-to-reach areas. The study examined gender in greater depth to understand the differences for female farmers, wives of farmers and female household heads. A common remark throughout interviews with traders, training facilitators, farmers and other stakeholders was that VZF's approach involving the private sector and other key stakeholders in mainstreaming OSH is more effective than unilateral trainings between a project and its beneficiaries. By training traders, processors, warehouses, input retailers and COOP group, OSH measures are more effectively integrated within the entire supply chain and do not remain just at the farmer level. To better understand the role of each of these actors along the supply chain, the study developed further case studies, as described below, and their role in mainstreaming OSH as the facility and in information-sharing to farmers. Case Study 1 is further described in Thematic Findings – Service Delivery.

Case Study 2: OSH adoption (knowledge, attitude and behaviour)



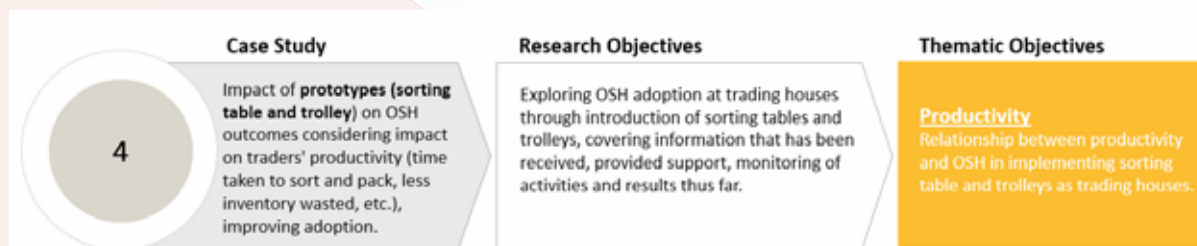
Case Study 2 in the ginger GSC was developed as a follow-up measure on changes in the knowledge, attitudes, perceptions and behaviour of ginger farmers since the start of the project, with the goal of establishing a causal relationship between project activities and impact on farmers' adoption of OSH measures. The Dot Survey was adapted for the OPA, maintaining the same KAP questions with a new section on adoption/behaviour change and additional qualitative questions to understand the factors behind adoption. This case study is especially important as it provides the basis from which the key research questions pertaining to the ginger GSC are answered, regarding factors influencing and hampering adoption of OSH measures (at the workplace level). Additionally, the study is used to support the theme of Productivity, with regard to which it examined the motivations behind behaviour change. A key finding on adoption is that farmers change behaviour, in a sustainable way, if they not only understand the safety benefits but also believe the measures will have economics benefits for their farm/business and livelihood. This is key to further promoting sustainable adoption at all levels. Case Study 2 is fully detailed in Findings on OSH Adoption (for Workers) – Ginger Dot Survey Results. With regard to the themes, Case Study 2 also supports the section on Productivity under Thematic Findings.

Case Study 3: Farmer COOP groups



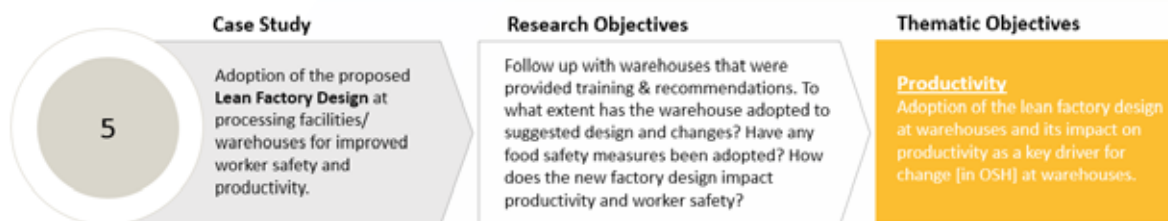
Case Study 3 in the ginger GSC was developed to examine the establishment, role and functioning of farmer COOP groups and their role in promoting and supporting sustained OSH adoption among farmers. The case study was set up to explore the formation of the groups, linkages to markets and embedding of OSH via internal control systems (ICS) to achieve sustainability and support compliance with quantity, quality and certifications. At the start of the study, three farmers COOP groups were identified for inclusion in the study; however, it was later found that only two are still functioning. One, Shwe Gin Sein, is far more developed because of its connection to a major buyer – Snack Mandalay. The study further explored the factors behind success via the farmer COOP group model and ways to further embed OSH measures. Findings emerged under three themes – Productivity, Service Delivery and Institutional Development – with the role of COOPs examined and recommendations made for Phase II. Specifically, these were findings on the COOP groups' adoption of measures connected to quality control and greater sales value to higher markets under Productivity; the role of COOP groups in further disseminating and encouraging sustained adoption among farmers as a Service Delivery method; and the role and significance of COOP groups in pushing reforms at the farmer level through institutional capacities (via ICS) under Institutional Development. Case Study 3 is further presented within the three respective Thematic Findings sections.

Case Study 4: Mainstreaming OSH prototypes at trading houses (sorting table and trolley)



Case Study 4 in the ginger GSC examines the proposed OSH measures introduced at trading houses to help develop a safer and more productive workplace. After initial consultation and assessment of the facilities, the project identified methods to improve OSH, largely pertaining to workers' ergonomics and exposure to large amounts of dust and debris in sorting crops. A prototype sorting table and trolley carrying system was provided at two facilities. The study followed up with both facilities to gain a measure of the current status of the measures, their impact on workers' safety and health, and the relationship between productivity and OSH. The study conducted site visits and held interviews with the owner and supervisors at each facility to follow up on measures put in place. Detailed questions were asked relating to the sorting, ergonomics and movement of workers, dust reduction measures and use of the sorting table. A key emerging theme was the importance of worker productivity in mainstreaming OSH at the workplace level, for employers and workers alike. A strong link was identified between productivity and OSH measures put in place, and additional factors influencing these measures were found to support recommendations for further improvements. Case Study 4 is outlined under the Thematic Findings section – Productivity.

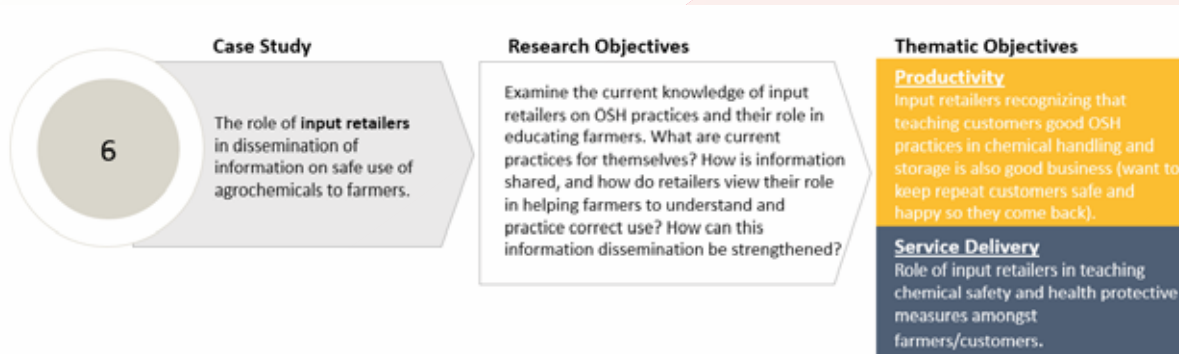
Case Study 5: Warehouse Lean Factory Design



Case Study 5 in the ginger GSC followed up with processing facilities that had been given consultation and recommendations regarding OSH improvements via a Lean Factory Design. In partnership, VZF and Kaizen Institute develop targeted recommendations for processing factories and warehouses with the aim of helping design “waste-free, visual, easily managed factory layouts, processing centres, assembly workstations and supporting material management and handling infrastructure in order to minimize recurring costs.” According to Kaizen, with proper implementation, the need for floor space can reduce by 50% and that for person power by 30–50%, alongside waste elimination.¹⁰

In late 2017, VZF, with support from Kaizen Institute, provided an introductory course on the 5S methodology and a session on food safety by a local consultant to local traders and processors. The inputs were well received and the processors requested further support on productivity enhancements through mainstreaming Lean Factory Design, Good Manufacturing Practices (GMP) and food safety. The OPA followed up with the two processing facilities that were provided training and support from the VZF project in 2018 – Heho Potato and Green Eastern Agri (GEA) – to observe the extent to which the warehouse had adopted the suggested design and food safety measures, and how this had affected productivity and worker safety. While the study expected to see limited impact at this stage from the warehouses, considering the recommended suggestions are ambitious and require investments, the results exceeded expectations and were encouraging. Largely, the adoption of such measures was brought about because of their impact on productivity and the good business case that the project promoted. Case Study 5 is used to support the Thematic Finding on Productivity, which provides a full description of the changes made at each facility, existing challenges and areas for continued growth.

Case Study 6: Input retailers and agrochemical safety awareness



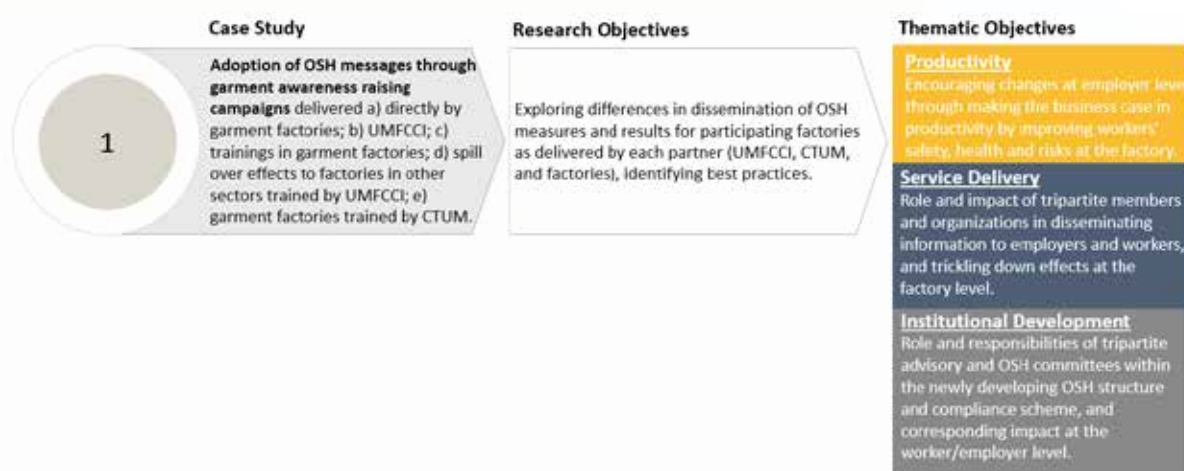
Case Study 6 in the ginger GSC examines the role of input retailers in the sharing of critical knowledge to farmers, especially pertaining to safe use of agrochemicals. The project provided targeted training to input retailers and materials to put on display at shops, to cover the various contact points where farmers get information on agrochemical risks and safety. The study explored how information is shared between retailer and farmers and the greater community, and the importance of retailers as what is often the only source of information for some farmers using chemicals, given that many farmers purchase their products from one source and are unable to read the labelling themselves. The study interviewed three input retailers who had participated in OSH training, to gauge

¹⁰ Kaizen Institute Lead Factory Design Proposal (Project Code: SPSH-001-KEN). 4 January 2018

their level of knowledge and self-practice on OSH measures relating to safe use of agrochemicals, and how this information is being disseminated to farmers/buyers. Beyond the role of input retailers in delivering information on chemical safety and health protective measures to farmers (supporting Service Delivery), an additional important element came out pertaining to Productivity. Input retailers believe that keeping their customer base healthy and satisfied (via practising safety measures) will result in better business outcomes, and are committed to sharing information (at the shop and in village-based trainings) to further promote their business and the safety of their customers. Case Study 6 is presented within the Thematic Findings on Productivity and Service Delivery.

Garment GSC Case Studies

Case Study 1: Adoption of OSH messages at factories

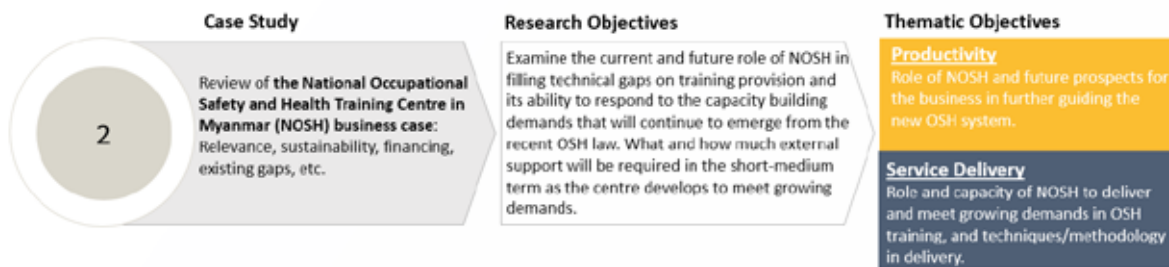


Case Study 1 in the garment GSC examines the adoption of OSH messages through garment awareness-raising campaigns delivered through the following: (i) directly by participating garment factories; (ii) by UMFCFI; (iii) indirectly through UMFCFI trainings in garment factories; (iv) through spill-over effects to factories in other sectors trained by UMFCFI; (v) through garment factories trained by CTUM (including garment, plastics, manufacturing, etc.). The strategy of VZF is not to deliver training at the factory level or to individual partners, and rather to directly mainstream messages in partners' trainings, so as to drive sustainability and employers' engagement in mainstreaming OSH awareness in the workplace. As such, this case study seeks to explore any differences, and identify potential best practices, within each dissemination channel that could be used to enhance partner trainings and VZF support to the process.

The study interviewed the head of the Employment Organization Development Unit (UMFCFI), the head of CTUM and representatives from CTUM's Women Centre. The study also interviewed training participants from both the UMFCFI Training Centre and CTUM Women's Centre, specifically garment workers, to understand the nature and impact of the trainings, progress on adoption of OSH messages at the workplace level and existing challenges. In addition, the study was able to interview several factory owners and employers, asking similar questions to those posed to the workers regarding adoption and factors influencing adoption or lack thereof, and to observe any gaps. Originally, the study had planned to conduct follow-up visits at factories with high adoption to observe best practices; this was not possible because of the COVID-19 pandemic.

Three important themes arose in this case study: Productivity, Service Delivery and Institutional Development. Under Productivity, the study highlights how the project is encouraging changes at the employer level through making the case for improved productivity as a direct result of mainstreaming OSH measures at the factory. The case study further highlights the importance of Service Delivery through the role and impact of tripartite members and partner organizations in disseminating information to employers and workers. Lastly, the case highlights the significance of Institutional Development in mainstreaming OSH at the workplace level, and the roles and responsibilities of tripartite advisory and OSH committees within the newly developing OSH structure and compliance scheme.

Case Study 2: National Occupational Safety and Health Training Centre business case



Case Study 2 in the garment GSC reviews the National Occupational Safety and Health Training Centre (NOSH) as a business case, in terms of its relevance, sustainability, financing and gaps. The objective is to examine the current and future role of NOSH in terms of filling technical gaps on training provision and its ability to adapt to meet demands under the recent OSH Law. The study reviewed the NOSH business plan (drafted in June 2019) and interviewed the director and trainer from FGLID to gain further insights on current progress according to the originally conceived business plan, and how the centre may develop to meet growing demands for training. Interviews with NOSH representatives covered the following topics: capacity to meet training demand; TOT training and trainers' role and capacities; training tools and methods; adoption and gaps; financing; OSH committees; linking performance standards and OSH to supervisor checks; involvement of females; tripartite advisory of NOSH; and the role of the private sector. Two key themes are highlighted: Productivity and Service Delivery. Under Productivity, the case reviews the role of NOSH and future prospects for the business in further building the new OSH system. Regarding Service Delivery, the case examines the role and capacity of NOSH to meet growing demand for OSH training and techniques/methodology in delivery.

Case Study 3: Social Security Board



Case Study 3 in the garment GSC examines VZF's reform process in changing the mentality and structures of the Social Security Board (SSB) to a client-centred approach, which is expected to have a great impact on service delivery for clients. This includes a review of ongoing reforms in social security delivery to a more client-centric model, with efforts in developing Standard Operation Procedures (SOPs) to streamline, facilitate and speed up the benefit application, approval and payment processes, and enhanced communications with clients (workers, employers and internal SSB staff).

VZF Myanmar has worked to introduce reforms to improve the inclusiveness of Employment Injury Insurance (EII) schemes for 198,000 workers (141,000 garment) in two pilot townships. The project has been supporting the SSB since 2017 in its administrative reform component, through research and recommendations on awareness and access to social security (survey conducted in September–December 2018), a Communication Outlook (finished December 2018), the analysis and mainstreaming of business processes (completed in December 2018) and the SOPs (completed in February 2019) of a pilot project that tests a subset of the streamlined procedures as well as enhanced communication with clients (workers, employers and internal SSB staff). A recent report (October 2020) on the scale-up strategy for the EII scheme provides some useful findings to support the research objectives of this case.

Overall, this case supports the Institutional Development theme, as it explores the impact of promoting changes within the SSB to a more client-centred approach for clients and for the SSB as an institution. To capture a real story from the client perspective, the study met with a client who had recently received benefits, to better understand how the process was for them and areas for further improvement. Additionally, the study met with a representative of the SSB to understand if any identified gaps owed to lack of understanding/awareness of the new model, reluctance (and why) or other challenges (both internal and external). The objective was to capture the process as it is currently, and to understand where further improvements or amendments to the model can be made.

Thematic Findings

VZF in Myanmar in its initial phase has come to represent a key driver for change in OSH. The new OSH Law is helping further institutionalize and embed OSH measures across value chains within industries, but VZF has also developed some key modalities in which OSH can be further mainstreamed, at the workplace level and beyond. The following sections describe the OPA's main findings in terms of best practices in both the ginger and the garment GSCs, and how to strengthen these approaches to continue ongoing efforts to promote safer supply chains in Myanmar, and perhaps globally.

► Productivity

The VZF project in Myanmar has used productivity as an entry point for engaging with employers on OSH improvements and investments in GSCs. The project has been quite successful in making the 'business case' linking OSH to increased productivity across both value chains, down to the workplace level, as demonstrated by each of the case studies detailed below. As a result, greater and more sustained impact of OSH measures can be observed across both GSCs at the completion of Phase I of the project. Stakeholders are more likely to adopt measures to a greater extent and more sustained if they believe it is helping their business/farm/factory in positive ways beyond just health and safety. Improvements in productivity, translating to savings in cost and time, are changes that beneficiaries are more committed to investing in in the long term. The theme of productivity was highlighted throughout most cases of the study and to a high degree of importance in its role in promoting improvements in OSH across targeted supply chains.

Ginger GSC

Case Study 2 – Knowledge attitudes and behavior of ginger farmers pertaining to OSH messages, isolating controlling factors to be considered in future programming.

Thematic Objective: impact on farmers' productivity measured through farmers' attitudes behind behaviour change in adoption

As the Dot Survey results demonstrate (see Findings on OSH Adoption), farmers have adopted a variety of new practices within their work to improve OSH. FGDs revealed that farmers who have implemented such changes have done so for two prevailing reasons: to improve their safety and the safety of others; and to enhance productivity on the farm. The OSH measures that have been adopted to the highest degree are those under which farmers believe strongly in the impact on both safety and productivity. For example, the study found some OSH measures that farmers believe are very important to safety; however, they do not prioritize making these changes because they feel it slows down their productivity. While the project cannot expect that farmers will fully adopt all specific OSH measures presented in training, it is important to identify the most significant measures in terms of promoting a safer work environment and ensuring farmers realize the potential cost- and time-saving benefits.

In consultation with ILO, beneficiaries and other key stakeholders, the OPA has identified the most significant OSH measures in terms of impact on health and safety, and productivity, and has established benchmarks for success to help guide the project in continued efforts to promote adoption (a complete report on adoption across all measures can be found in Findings on OSH Adoption).

► **Table 9 - Most Significant Identified Agricultural OSH Measures and Benchmarks**

Top identified OSH measures	Benchmark for success (according to farmers)	Degree of current adoption (findings)	Adoption rates (total, M/F)
Reading and following the information on the label when selecting, mixing, applying, storing and disposing of chemicals	Read the label for selecting, mixing, applying, storing and disposing	Read the label to look for (i) mixing, (ii) expiration date, (iii) level of danger; other information is generally understood	86% (M88%/F85%)
Keeping pesticides and fertilizers far away from food and drinking water	Keep chemicals away from food and drinking water	Keep chemicals away from food storage such as for ginger, rice, common storage	98% (M100%/F96%)
Storing pesticides and fertilizer in original containers with legible labels	Keep in the original container	Keep in the original container	98% (M100%/F96%)
Storing pesticides and fertilizers properly in a secure location with warning signs and out of the reach of children	Secure location out of reach of children/keep warning sign	Keep out of reach of children but there is no proper signage	100% (M&F100%)
Cleaning nozzle tips using soft material or toothbrush and not by blowing using mouth	Clean nozzle without blowing with mouth	Clean nozzle by washing the tips with brush, and giving pressure at the tips	69% (M63%/F75%)
Bringing clean water to the application site (farm)	Bring clean water to the field most of the time	Bring water during spraying	90% (M99%/F81%)
Ensuring the application route avoids passing through spray or vapour drifts	Not to spray against the air or vapour drift	Spray against the wind	94% (M100%/F88%)
Applying triple rinse to pesticide containers before disposal	Triple rinse before disposal	Rinse and dispose (but not triple rinse, usually one time)	13% (M25%/F0%)
Observing and complying with the PHI	Comply with PHI	Farmers harvest 3-4 months after spraying, PHI is not an issue	55% (M61%/F49%)
Wearing PPE when handling and using agricultural inputs as prescribed in label and safety manuals	Wear full PPE	Farmers use PPE but not like in the picture, most agree they have mask, hat, long sleeves, high shoes and long longyi or pants	63% (M71%/F55%)

Beyond the top identified OSH measures, the OPA found additional measures to be especially relevant to farmers in terms of enhancing productivity, alongside safety and health. Testimonies from the field demonstrate the role of productivity in farmers' motivations to change behaviour and adopt OSH measures. Pertaining to heat safety measures, farmers believe that adjusting their work around the hotter times of day is more productive. While some farmers believe that staying in the shade slows down progress, they still believe it is necessary for safety and will allow for more productive work the following day. Overall, farmers understand that, by prioritizing safety and organizing work to fall during cooler parts of the day, they will be more proficient and healthy workers.

Regarding materials handling, farmers also believe that organizing work processes and flow to reduce manual lifting and carrying of heavy loads will improve productivity and reduce risks, similarly to heat safety measures. Farmers now believe that carrying ginger in smaller baskets, while it may seem to slow down transportation, allows them to sustain energy for longer working hours to be able to accomplish more and not suffer pain. Additionally, the COOP group farmers (discussed further in Case Study 3) have realized that keeping tools organized saves time, taking away the need to collect tools from multiple locations each day, further adding to productivity. The greatest levels of adoption and results can be observed within the safe use and handling of agricultural inputs. In terms of productivity, farmers are aware of the cost savings from not using chemicals or from the responsible use of chemicals, as well as the financial rewards of producing chemical-free crops for higher-end markets. Farmers also realize the importance of safe use and protection from agrochemicals, which results in fewer accidents and a more productive work environment. The lowest adoption occurs in relation to the application of triple rinsing of pesticide containers after use and before disposal. The study found that male farmers are the ones handling the pesticides and that they are unable to carry sufficient water to the field to triple rinse, as they also need drinking water, so they bury or burn the empty containers instead of cleaning and disposing of them.

Case Study 3 – The difference farmer groups (COOP) make for OSH adoption among members/host communities, particularly those linked to Snack Mandalay (buyer)

Thematic Objective: Farmer COOP groups' adoption of measures connected to quality control and greater sales value to higher markets (Snack Mandalay)

At the onset of the project, and in selecting its initial focus GSCs, VZF identified high potential in ginger revenues for communities in Myanmar, particularly in the growing region of Southern Shan. The potential to compete in global markets is great. However, farmers have traditionally often traded their produce individually, thereby reducing their ability to secure higher prices. Initial assessments found that trading of premium prices for high-quality ginger, including certified organic products, to farmers is rare. Currently, certifications are provided to registered processors and not individual farmers. Therefore, the role of farmer groups, referred to as COOPs, is significant, as they provide a collective bargaining mechanism and support network for farmers. Furthermore, the rationale for creating and training farmer groups is to help farmers develop internal control systems that mainstream OSH within quality control systems. This will allow farmers to meet certification standards and buyers' quality requirements, in addition to other conditions. The goal is to link farmers via COOP groups to new, and more premium, markets, to improve quality and sales value, therefore upgrading the value chain. Through Case Study 3, the OPA analysed the role of COOPs across the above objectives, and in particular the success stories of the groups that are currently linked to a premium buyer, and how this has affected adoption of OSH measures connected to quality control and greater sales value.

The OPA followed up with three COOP groups established through the project, each of which sells to different buyers, to be able to measure factors leading to success and/or failure. In interviews, members were asked to share their experiences and impressions regarding the relative success and/or failure of the group with respective to OSH adoption, to make it possible to identify variation in the groups based on their respective buyers and the corresponding impact on adoption of OSH measures.

This case study highlights the successful example of adoption of the Shwe Gin Sein COOP, which is selling products to a premium buyer, Snack Mandalay, in comparison with selling ginger to local traders. The main difference relates to the buyer's requirements pertaining to quality standards (which are also connected to OSH measures), linked to higher pricing. Shwe Gin Sein, located in Lawksawk township, was established at the end of 2018 with support from ILO and VCRD partners. With a total of seven executive members (four female) and 85 regular members (70% female), the group spans four villages covering a total of more than 80 acres of ginger farm. Based on interviews, members believe that, while the initial purpose of the COOP was to serve as a collective sales platform to reduce risks of exploitation by buyers and ensure access to better markets, this mandate expanded once the partnership was formed with Snack Mandalay. This market linkage shifted the group's objectives to a longer-term goal, to search for more sustainable markets and ensure production for the future. In turn, this long-term perspective has shifted the COOP's focus to place greater value on OSH measures to improve worker and farmer safety, safety for consumers and OSH compliance to be able to sell in international markets in the future.

Pertaining to OSH adoption among members, 100% of Shwe Gin Sein COOP members report adhering to the following: use of organic inputs for production (free from chemicals); reading labels and applying as per instructions (if necessary); wearing PPE in handling and applying chemicals; proper storage (of chemicals) away from children; and disposal of containers (if necessary) and not reusing containers. An estimated 30–40% of members follow OSH practices on heat safety and farm tools storage (as outlined in the Dot Survey). Other OSH practices adopted by members, based on buyer demand, include using a reduced basket size of 20 viss (35.86 kg) for carrying, which protects ginger from damage through transportation in excessive volumes, and also increases workers' safety by improving the workflow.

Given the COOP's new mandate to improve OSH measures, the study identified a few factors further influencing successful OSH adoption by Shwe Gin Sein. In terms of external factors, the most significant driving force behind adoption has been demand for compliance on OSH by the buyer. This pertains not only to health and safety but also to quality and productivity across the production, storage and transportation process. The most common OSH compliance requirement is to reduce (or fully prevent) the use of agrochemicals and to replace these with organic farm inputs, for food safety, and to reduce basket sizing to prevent contamination during transport from farm to the factory and worker injury during transportation. Additional measures may be required for the group based on the individualized ICS of each COOP, which are in the process of being developed with support from VZF. Adoption within COOPs may be amplified, as in most cases the buyer's restrictions are strict and require full compliance across products. For example, if one farmer were to use chemicals or attempt to sell damaged products, the entire lot may be contaminated and then rejected by the buyer. This encourages the group to enforce stricter measures within it to follow all requirements, with the agreement that farmers in compliance will be financially rewarded by higher returns on their products. As OSH measures are linked and actually embedded within the buyer's requirements, COOP groups must ensure consistent improvements in adoption among current members and set requisites for entry into the group. According to the Executive Committee of Shwe Gin Sein, such restrictions are discussed with all new members and reinforced in monthly meetings to ensure ongoing compliance.

The benefits in terms of improved productivity, compliance and sales have been enormous for Shwe Gin Sein. In its first year (2018), the group sold a total volume of 3,000 viss (4,896 kg) of ginger to Snack Mandalay. The following year, the group sold a remarkable 32,000 viss (52,224 kg) of ginger and 14,000 viss (22,848 kg) of turmeric to the same buyer, with a commitment to 40,000 viss (65,280 kg) of ginger in the following year (2020). This partnership has marked a significant success for the COOP group model in terms of adoption of the above OSH measures based on market demand, and the beginning of a standardization of OSH policies. This model also demonstrates improvements in productivity and quality of products, linked to improvements in OSH compliance. Improvements in productivity can be measured through the volume of rejected products (those not in compliance), whereby a lower volume rejected equates to higher productivity and sales volume. In its first year of sales to Snack Mandalay, with no prior experience in following compliance, Shwe Gin Sein saw 10–15% of its products rejected. The following year, this figure dropped to less than 2% of total volume sold, and the group claims to be working hard to further educate and encourage its members to maintain high levels of compliance.

The relationship built between the COOP group and the buyer extends beyond just ginger crops, once trust is established in the group's ability to meet requirements consistently. Members of Shwe Gin Sein are now selling other products, such as root ginger and seeds, which require a high level of quality. These farmers (70% of whom are female) report selling their ginger roots at an increase in sales value of 300 kyat per viss in comparison with before. Farmers are seeing a significant increase in income as a result of higher profit margins, as ginger root makes up around 60% of their total agriculture production. Beyond productivity, as further highlighted in the section on Service Delivery, COOP members are realizing the benefits of implementing OSH measures beyond better quality and sales. In reducing chemicals, the farmers remark, they have created a safer and more productive working environment. Previously, the farmers did not realize the multiple benefits and importance of not using chemicals.

The study further examined the circumstances of the less and non-functioning COOP groups, to be able to identify internal and external factors behind success and failure, and how the COOP model can be strengthened and replicated for other groups. Another COOP group was established at the same time as Shwe Gin Sein, and is currently made up of seven executive members (two female), with 30 members in total (57% female), covering 195 acres of ginger farmland. Similar to Shwe Gin Sein, the group established a contract with Snack Mandalay, selling 5,300 viss of organic ginger in 2018 and 4,000 viss in 2019. Initially, the group adhered to the strict OSH compliance measures to produce chemical-free ginger; however, a lack of proper monitoring and follow-up with its members

led to rejection of some products by the buyer. As a result, Snack Mandalay demanded less in 2020. However, the group is still motivated to improve its quality control for future. Further strengthening the ICS should help support this group to reach a level similar to that of Shwe Gin Sein.

Another similar COOP was established in Pindaya township in 2018. The group has seven executive members and 20 members in total (all male). This group has far less structure than the other two, in terms of organization and group management. Although the group was also introduced to Snack Mandalay, the majority of its members have continued to sell their own products through local markets. In this particular market, the price of ginger rose and the farmers were not incentivized to make the changes required to sell their products to the organic buyer. This case demonstrates that the farmers seem to be motivated foremost by the promise of financial reward. If they are able to obtain the same or a higher price in a market that does not require any restrictions, they will likely choose to do so.

Case Study 4 – Impact of prototypes (sorting table and trolley) on OSH outcomes, considering impact on trader's productivity (time taken to sort and pack, less inventory wasted, etc.), thus improving adoption.

Thematic Objective: Relationship between productivity and OSH in implementing sorting table and trolleys at trading houses

VZF identified that ginger traders are exposed to several OSH hazards, and facilities have a high-level risk of exposure to ergonomic and biological hazards (e.g. dust, debris, chemicals). Porters (male workers) carry baskets of produce on their backs, shoulder or head from the warehouse to load on trucks, and are paid based on the amount carried/loaded on a daily basis (see Image 2 below). This creates a situation whereby workers are motivated by the speed at which they can carry loads, and often carry heavy loads that compromise their bodies. Sorters (mostly female workers) are also exposed to ergonomic hazards, from squatting all day, high levels of dust in the air and in the workspace, and poor sanitary conditions. These conditions not only affect the health and safety of workers but also compromise the food safety of products traded at the facility. In addition, porters and sorters are not entitled to social security benefits and financial assistance in the event of injury or illness, which further points to the importance of prevention and the need to adapt the system to protect all workers.

VZF assessed these conditions at trading houses and mapped out innovative ways to address the challenges in a way that not only improves health and safety but also intrinsically improves productivity and the quality of products. VZF has worked with both traders and processors on productivity enhancements that mainstream OSH into operations, including prototype testing of a sorting table and trolley to improve workers' ergonomics, food safety and quality, and productivity.

In early 2019, VZF supported three ginger trading warehouses in Aung Ban township, through training and provision (to one of the warehouses) of equipment to mainstream OSH, with the objective of supporting trading houses to improve productivity, workers' ergonomics and overall OSH in the warehouse environment. With the support of Kaizen Institute, the project conducted a feasibility assessment at each trading house, looking to understand the workflow and work environment (safety and hazards) and to explore ways to improve productivity based on available space, resources and workers. The project drafted recommendations for the facilities and provided prototypes (a sorting table and trolley) and training to supervisors and workers on how to mainstream the suggested improvements. The objectives of the training were as follows: (i) introduce a ginger processing table and trolley for more efficient sorting and packing of ginger and other products; (ii) improve productivity through use of the sorting table; and (iii) improve ergonomics of workers (mainly female) by reducing their movement and producing less dust in processing.

The OPA visited two trading warehouses that had been supported by the project, Mon Ywar Trading and Shan Htate Tan Trading, to follow up on adoption at the facility and identify the perceived impact of the prototypes (sorting table and trolley) on OSH outcomes, and factors influencing or inhibiting the full adoption of proposed improvements. Through direct interviews with trading house management, the case study explored the relationship between productivity and the mainstreaming of OSH prototypes and improvements at trading houses, and how such improvements may be quantified (i.e. inventory management, packaging times vs. ergonomics, dust inhaling, hygiene risks). The case serves as an example of the strength of VZF's strategy to build a business case as an entry point for further OSH services and/or changes in production processes.

While the ginger season was not underway at the time of the study, the research team was able to observe changes made at participating facilities and speak directly with trading house management and supervisory staff to discuss the benefits of adjusting the workflow processes in mainstreaming OSH and its role in increasing productivity. The trading houses that were provided with sorting tables remarked on the benefits for productivity and quality. The owner of Mon Ywar Trading claims that the sorting table is very convenient for ginger. Workers complete all tasks at once station, including sorting, dusting, bagging and weighing, saving time and effort. The design of the table reduces the production of dust throughout the sorting process, and collects any dust to be discarded automatically, thus saving time on cleaning up afterwards. The facility sold about 160 tons of ginger last year, 90 tons of which needed to be sorted before being sold. The remaining ginger is sold to local markets and does not require sorting. Of the 90 tons, 50 tons were sorted at the facility using the sorting table and the remaining 40 tons were sorted at another warehouse nearby. All of the ginger that needed to be sorted at the facility was sorted using the sorting table.

► Image 2 - OSH Adapted Sorting Table (left) vs. Traditional Sorting (right)



The trading house owner estimates that approximately 40% of time is saved by using the sorting table versus traditional methods, and would like to invest in a second table to cover demands at a second location.

While there are additional benefits to using the sorting table, such as worker ergonomics and safety, use of the table based on customer demands demonstrates the trader's belief in its productivity benefits. The 40 tons that was sorted at another warehouse was conducted using traditional methods because the facility has only one sorting table. However, the owner believes it would be good to invest in a second sorting table at the second location. He would also like to modify the existing sorting table to better meet needs at the facility.

A supervisor interviewed also believes in the sorting table's impact on productivity, claiming it is faster and cleaner and improves worker ergonomics. Typically, sorting is done by female workers, who are used to crouching to sort in the traditional way – thus standing at the table has required some adjustment. However, the supervisor claims productivity has improved and dust has reduced and is easier to collect, thus saving more time. The trading house measured the time it took for workers to sort using the traditional method versus the table, to be able to see the difference in productivity. It took about 30 minutes to complete two 40 viss bags using the sorting table – about the same time as under traditional sorting but with a significant time saving on dust clearance afterwards.

While traditional sorting takes about the same time, using the table reduces dust throughout the process, which is collected and discarded systematically within the 30-minute timeframe. The traditional practice requires an additional 30 minutes to clean and discard the remaining dust. Therefore, the facility was able to demonstrate a time saving of 50% using the table.

The study also explored side-effects of increasing productivity, such as the need for fewer workers, potentially resulting in a loss of jobs. However, this seems not to be an issue: Mon Ywar Trading is currently struggling to recruit workers, as many local workers migrate to work in Malaysia and Thailand. The trading house is seeking to adapt the table to increase productivity to be able to fill this gap. The owner would like to modify the table so as to require three rather than the normal five workers. To improve productivity, he cannot rely solely on the table, as there are other crops beyond ginger at the facility. Meanwhile, he would like to purchase more tables as well as a machine for loading and unloading, to further expedite the process. As customers can require processing in one to two days, it is a top priority for the trading house to invest in productivity tools and methods.

The supervisor at Shan Htate Tan Trading has found the sorting table to be very effective for both ginger and potatoes, allowing more visibility and control during sorting. According to the owner, the trading house's reputation would suffer badly in the event of a mix-up in sorting sizes (especially with potatoes), which use of the table can prevent. The supervisor remarked that the table would be more effective if it were adapted so that the side covers were higher, to prevent smaller potatoes from rolling off, so that all sizes can be sorted. He believes that two additional sorting tables would be best to improve the warehouse, to better meet urgent orders and to sort specific sizes for orders.

Table 10 presents estimated productivity before and after introduction of the prototype, measured according to the workflow, from ginger sorting to packaging.

► **Table 10 - Performance with/without Sorting Table**

	Before intervention	After intervention
Time	30 minutes + 20 minutes	30 minutes
Tasks completed	<ul style="list-style-type: none"> ► Complete sorting, dusting, weighing, packaging for one bag of ginger (40 viss) Other remaining items are not included, such as collecting of dust and defective ginger, which require around an extra 15–20 minutes to complete each day 	<ul style="list-style-type: none"> ► Complete sorting, dusting, weighing, packaging for one bag of ginger (40 viss) ► Complete collection of dust ► Complete collection of defective ginger/crops
Time to completion	50 minutes	30 min

Beyond improvements in productivity, the trading houses have experienced demonstrated benefits in workers' health and safety. The owner of Mon Ywar Trading believes that worker ergonomics have improved through standing versus squatting. However, the workers would like chairs at the table so that they do not have to stand all day.¹⁰ Women workers at Shan Htate Tan Trading prefer to sit to sort ginger but, overall, sorting at the table is preferred to squatting. These changes are required at both facilities interviewed, as requested by the workers. Overall, the owner believes that standing or sitting working at the table is more efficient than squatting. Additional benefits include less worker stress from having to bend down, less movement and less dust in the air resulting in better health.

From the workers' perspective, they are happy to change their behaviour to use the table; however, they feel it is difficult to carry the products from the ground to the table, which is located at the back of the facility. The trolley has not been fully adopted within the facilities, which demonstrates a missing link between adoption and realization of the benefits of the table. After discussion with the owner, it was agreed that the trolley should be set up alongside the table for a fully functioning system.

Traditional sorting using the baskets stirs up a lot of dust in the air, which falls to the ground. This makes it necessary to clear up dust at the end of the day or when a large amount has been produced. On average, about 600 viss of dust is collected each year (according to Mon Ywar Trading), which is taken out of the facility by truck. The sorting table captures dust in a bin as it is produced, for easy removal, while also throwing up less dust in the air. The owner also remarks that the air quality is much better than before they started to use the sorting table. The ginger also has less dust in it when sold to the market, which the facility hopes to be able to get higher prices for. The supervisor at Mon Ywar Trading says both the facility and the ginger are cleaner, and productivity is improved.

The improved air quality also helps the female workers and their breathing.

While traders have not yet been able to obtain a higher price for this better-quality, less dusty, ginger that is sorted using the table, owners still believe the business is improving its reputation for producing high-quality products. Both facilities believe that it would be beneficial to invest in more tables, and Mon Ywar Trading has plans to build another table to fully mainstream these OSH measures at the facility. To fully integrate use of the trolley, meanwhile, the facilities will need to prepare the floor space to allow unobstructed movement. Mon Ywar is in the process of building and plans to use the trolley for unloading directly from a side door. Currently, 10 workers unload and carry bags to the table, which the owner believes is much faster than the trolley, which can carry only four bags at a time. However, he does agree that the trolley is safer for workers.

The study found some additional factors to consider that could further enhance productivity. The supervisor at Mon Ywar Trading believes the current table is small (fitting four people and two bags), and would like to expand it to fit four bags, to be able to double the output. Mon Ywar Trading has a space issue, which was less problematic with workers sorting ginger on the ground. However, a new extension is being built that should address this challenge. Second, lack of use of the trolley makes the sorting table more challenging for workers, who need to carry the ginger over to the table before sorting it. Full integration of both the table and the trolley will maximize the benefits at both facilities.

Since women are the primary workers in the sorting of ginger, mainstreaming these practices will have a great effect on their health and safety. The women at Shan Htate Tan Trading say they like to sort ginger using the table because of the impacts on the dust, and they feel the table is better and safer. An additional point raised is that the sorting table requires teamwork, with the women working in teams of four and the output split between them at the end of the day. This may present issue for workers if they feel not everyone is working equally. Nonetheless, the owner believes the benefits of the table in terms of productivity are great enough that the workers will appreciate the changes.

Case Study 5 – Adoption of the proposed Lean Factory Design at processing facilities/warehouses for improved worker safety and productivity

Thematic Objective: *Adoption of the Lean Factory Design at warehouses and its impact on productivity as a key driver of change (in OSH) in warehouses*

VZF identified processing facilities as another significant workplace environment to target mainstreaming OSH measures to improve worker safety and productivity. Within processing warehouses, workers are exposed to a variety of hazards, as cleaners, sorters and machine operators. Machine operators are mostly male, whereas cleaners, sorters and washers are mainly female. As informal workers, they have less capacity to cope with consequences in the event of a workplace injury or disease, as they lack access to social protection and employment injury benefits. The process of sorting, cleaning and washing ginger and other products in the absence of proper ventilation can cause serious health issues. Serious injuries can also be caused through the use of machinery that is not carefully set up and attended to. To tackle these issues, VZF and Kaizen Institute partnered to develop a Lean Factory Design for processing factories and warehouses, to help in designing “waste-free, visual, easily managed factory layouts, processing centres, assembly workstations and supporting material management and handling infrastructure in order to minimize recurring costs.” According to Kaizen, with proper implementation, the need for floor space can reduce by 50% and that for person power by 30–50%, alongside waste elimination.¹²

¹¹ Originally, it was thought that chairs would impede the workflow process; however, given this feedback, the model will be explored and revised to be ergonomically safe, efficient and of a reasonable cost.

¹² Kaizen Institute Lead Factory Design Proposal (Project Code: SPSH-001-KEN). 4 January 2018

In late 2017, VZF, with support from Kaizen Institute, provided an introductory course on the 5S. This is a structured programme to implement workplace organization and standardization through developing a culture of a “Right Workplace” involving five steps to maintaining a visual workplace (Sort, Set in order, Shine, Standardize, Sustain), with the goal of reducing waste, variations and overburdening.¹³ The inputs were well received and the processors have requested further support on productivity enhancements through mainstreaming Lean Factory Design, GMP and food safety.

In early 2018, VZF collaborated with two processing factories, GEA in Aung Ban township and Heho Potato in Heho township, to conduct a five-day Lean Factory Design training, with a total of 20 participants including owners. The goal was to provide key recommendations for processors and traders to improve productivity through improving OSH and food safety measures and implementation of the Lean Factory Design. The training saw various simulations to capture information on the amount of time required to complete each step (weighing, cleaning, drying, packaging), and how to improve these steps through changes to workflow design, the introduction of new tools to improve productivity and ergonomics and the division of each department to enable food safety and to follow food GMPs. As a result of the training and consultations, a Lean Factory Design and improved tools were designed with the help of participants.

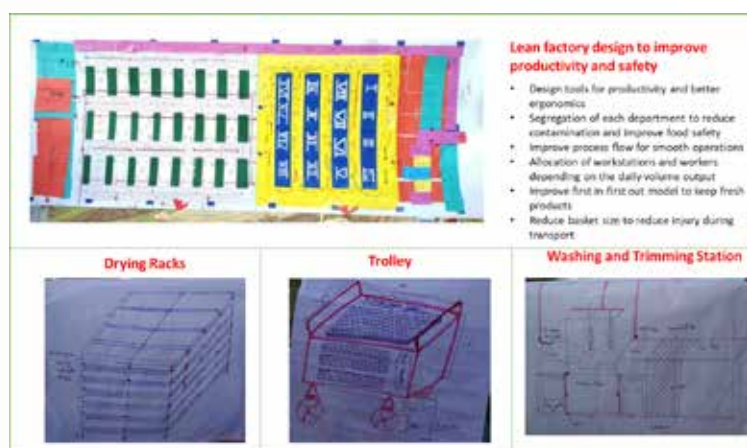
The following key recommendations were provided through the training:

- ▶ **GMPs:** These are standards related to the methods, equipment, facilities and controls required to produce human and veterinary products, medical devices and processed food. They entail the procedures or universal steps to ensure the basic environmental conditions and management system structure for the production of safe and wholesome foods.
- ▶ **Food safety and sanitation:** All food products must be protected from contamination, from when they are received (and before) through distribution. Industrial cleaning is critical to safe and efficient factory management. This simple management tool allows for the separation or removal of dangerous substances (germs, diseases, objects) from the products before they are transported to customers. It requires separate in and out doors; installation of a separator (dividing wall); workers to be prevented from moving from one place to another; wearing of PPE full time to protect the product from human particles; and workers to disinfect themselves before entering the work station.

In terms of productivity, the improved workflow process requires a basic strategy to reduce unnecessary movement of workers from one place to another. Improving workflow efficiencies will help workers complete tasks more efficiently, and is designed to create a safer work environment at all stages of processing. Image 4 presents the design developed in a consultative process through the training.

¹³ The 5S is based on Henry Ford's CAN DO: Cleaning up, Arranging, Neatness, Discipline and Ongoing Improvement.

► Image 3 - Lean Factory Design model with Factory/Worker Inputs



The OPA conducted follow-up visits and interviews with the owners of the processing factories to understand the extent to which recommendations have been implemented. If changes had been made, the study sought to understand if improvements had been made to embed OSH and food security within productivity enhancements.

There were initial challenges in the warehouses adopting the recommended improvements, owing to a lack of resources at the onset and following the training. The ginger season following the training was especially challenging, and both facilities were unable to run a full operation because of a lack of quality supply and demand. However, both warehouses have taken measures to implement the design changes, starting with the recommendations that are most critical to buyer demand. GEA has built a processing factory to wash, clean, dry and pack fresh ginger for export with the capacity to process 5–6 tons daily and the potential to reach 7 tons if needed. Before the training, the factory setup was based on group processing, with work stations of groups completing all tasks, from carrying in raw materials to packaging and transportation. The consultative process was able to demonstrate to GEA the inefficiencies of this model, as well as food safety issues that are difficult to control owing to a lack of proper workflow and control procedures, which are built into the new workflow design.

While GEA's factory was not fully functioning at the time of the OPA site visit, the research team was able to observe some changes made in accordance with the Lean Factory Design OSH recommendations, with hopes of ongoing commitment:

- Manufacturing and use of washing station, trolley and drying racks (productivity enhancement);
- Design improvement to have separate in and out doors (GMP food safety enhancement);
- Addition of emergency exit doors for workers (GMP and OSH enhancement);
- Adaption of smaller basket sizes to 20 kg for transportation (OSH and productivity/quality enhancement);
- Improved ventilation and air flow inside the factory (GMP and OSH enhancement).

The remaining recommendations have not yet been adopted, owing to a lack of resources, according to the management, and are pending:

- Installation of food-grade steel for all equipment (knives, brush, workstation, drying racks, trolley);
- Establishment of a standard workflow process with visible signage and marks on floors and walls;
- Installation of a washing station and changing room for sanitation and decontamination;
- A separate work place for each task, and a partition with thick walls, to adapt GMP standards;
- Installation of first safety instruments (fire extinguisher, fire alarm, etc.);
- SOPs to reduce hazards and accidents in the factory.

The prioritization of improvements pertaining to GMP, OSH and food safety have been in accordance with what the owner believes is most relevant to the productivity of the warehouse, to be able to meet current market demand without stretching the business' limited resources too far. Further follow-up and consultation is needed to support the warehouse to fully adapt to the Lean Factory Design system.

► **Image 4 - GEA Factory Implementing Washing Station and Drying Rack (Post Training)**



The second warehouse, Heho Potato, has invested a great deal of resources in building a new factory in line with the recommended measures. The warehouse was provided similar recommendations as GEA, and at the time of the training had no measures in place. The factory was still in the design phase and lacked expertise to provide guidance on the design. The timing of VZF's support was therefore opportune, and it has since been adopted to a high degree. The owner of Heho Potato proudly unveiled to the OPA research team the changes the factory had made, including the following:

- Design improvement to have separate in and out doors (GMP food safety enhancement);
- Adaption of smaller basket sizes to 20 kg for transportation (OSH and productivity/quality enhancement);
- Installation of changing room (male and female) and hand-washing station (GMP food safety enhancement);
- Improved workflow process (productivity enhancement), but not fully incorporating the recommendations;
- Manufacturing of tools (drying racks, trolley) and installation of the work station as recommended;
- Installation of a dividing wall for each workflow process (accepting of raw materials, changing room, washing stations, drying, packaging, cargo out station).

► **Image 5 - Newly Built Factory at Heho Potato in Accordance with Lean Factory Design**



The owner of Heho Potato was asked to remark on the perceived and/or measured impact of the adopted changes on productivity, health and safety and food safety at the facility. The owner claims that the training provided by VZF was quite useful, and he has chosen to implement these large changes in building a new facility because he believes it will enhance productivity and improve his business. While productivity was a top factor in this adoption, the owner believes that the safety and health of his workers is very important and he is committed to making improvements. Furthermore, the new factory will comply with international standards according to the GMP, which he is hopeful will be an opportunity for the business when the market improves. According to the owner, the most significant barrier to processing factories is a lack of market demand for higher-quality products. Market prices do not quite match the investment. Currently, the average price of ginger is 1,000 kyat per viss, whereas the local market price is now reaching 2,000 kyat per viss, thus farmers are not willing to produce higher-quality ginger to sell to the factory because the low-end market price is quite high. It is easier for a farmer to sell his or her entire crop (unsorted) to the market. The owner suspects the market price will go down, and hopes that, by tapping into international markets, the facility can invest in the remaining changes to be made at the facility.

Case Study 6 – The role of input retailers in dissemination of information on safe use of agrochemicals to farmers

Thematic Objective: *Input retailers recognizing that teaching customers good OSH practices in chemical handling and storage is also good business (keep repeat customers safe and happy so they come back)*

The study interviewed three input retailers who had participated in OSH training, to gauge their level of knowledge and self-practice on OSH measures relating to safe use of agrochemicals, and how this information is being disseminated to farmers/buyers. The role of input retailers can be quite significant in terms of getting information to farmers so they can practise safer use of agrochemicals, since many farmers purchase their products from one source and are unable to read the labelling themselves. Furthermore, input retailers believe that keeping their customer base healthy and satisfied (via practising safety measures) will result in better business outcomes.

The input retailers interviewed felt the OSH training was useful in that it provided structured information on how to practise safe use in various situations. Input retailers often provide advisory services to farmers looking to purchase agrochemicals, including what type to use based on the problem and the risks to be avoided. Input retailers believe farmers will utilize their shop over another if they can provide good advice. Typically, village residents will all go to one input retailer for their supplies so trust is also established. While there is often little time and space to demonstrate the safety measures, the farmers are referred to the posters on the wall provided by VZF. The images in the posters are helpful as many farmers are illiterate.

► **Image 6 - ILO VZF Posters on Display at Retailer**



The two input retailers interviewed both own their shops (one small and one medium-sized), and are committed to sharing safe agrochemical use to their customers, both for their safety and to promote good business practices. However, they believe most farmers do not really care about their own safety when using chemicals: they are looking for the strongest dosage to address the problem. Therefore, the input retailer starts the conversation by talking about the risks of using unregistered products because they are illegal and can cause more damage to the field, and instructs them to use registered products. They then segue into discussing protection. Part of the sales pitch involves explaining the negatives of using unregistered products and the benefits of correctly using the right products. Both input retailers believe it is in the best interests of both the supplier and the customer to be using registered agrochemicals in a safe and responsible manner. Essentially, input retailers believe that a well-informed and well-protected consumer is good for business in the long term. The retailers interviewed are knowledgeable on the importance of selling registered products and urging consumers to use them in a safe way. A fuller description of the role of input retailers in the dissemination of OSH measures to farmers is outlined in the section on Service Delivery.

Garment GSC

Case Study 1 - Adoption of OSH messages through garment awareness raising campaigns, delivered i) directly by garment factories; ii) UMFCCL; iii) trainings in factories; iv) spill over effects in other sectors trained by UMFCCL; v) factories trained by CTUM.

Thematic Objective: Encouraging changes at the employer level through making the business case for productivity by improving workers' safety and health and diminishing risks at factory.

A report on OSH in garments in 2019 identified several business cases that demonstrate that certain OSH investments can have a positive impact on turnover and absenteeism. According to the report, investments such as improving ergonomics or providing improved health care services would be affordable and cost-effective ways to support OSH improvements in the sector. The following immediate low-cost interventions were recommended:¹⁴

- ▶ Improving the ergonomics of existing work stations, which has the potential to bring positive returns at virtually no cost to the manufacturers;
- ▶ Training supervisors to increase their oversight and knowledge on the use of PPE and machine guards;
- ▶ Improving OSH management systems, which includes:
 - ▶ Appointing OSH staff within factories;
 - ▶ Establishing internal OSH committees;
 - ▶ Conducting risk and hazards assessments within factories;
- ▶ Collecting human resources and production data in a way that allows for analysis of turnover and absenteeism, as well as OSH investment returns;
- ▶ Providing improved health and sanitation services to the workforce, which has the potential to decrease turnover and absenteeism;
- ▶ Consider providing childcare facilities for working mothers in collaboration with local government departments.

The OPA explored how to strengthen the business case to further encourage employers and owners to comply with risk assessments and make changes to develop a safer and more productive workplace. As highlighted throughout the ginger GSC results, a key element of promoting mainstreaming of OSH at the workplace level lies in

¹⁴ VZF, Occupational Safety and Health in the Myanmar Garment Sector. Market Assessment, OSH Risk Assessment and Business Case Analysis. 2019

understanding that OSH and productivity are intrinsically linked. Through interviews with both employers/owners and workers, the study sought to identify how the project is encouraging changes at the employer level through making the case for improved productivity as a direct result of mainstreaming OSH measures at the factory.

The study met employer representatives (human resources/administration manager, safety officer) who had attended UMFCCI trainings, to gain a better understanding of their perceptions of OSH and its impact on business. Most participants explain that, while OSH is a relatively new term for them, safety at the workplace is their priority. Primarily, the goal is to reduce expensive risks. Therefore, most factory owners are most concerned with high-risk issues, such as controlling electrical and chemical hazards and fire safety. However, after the trainings, the employers began to understand that OSH encompasses a much wider range of risks that are also important to the workplace. Training participants were able to explain the various OSH measures that were trained on as part of a well-developed OSH system, including ergonomics (posture); heat safety; workers' movement (slips and trips); guarding of machinery; movement of person/vehicles (reducing time and

movement of workers, improving paths, road ways, visible signs, safety for workers in frequent movement); and fire safety (not only installation of fire extinguishers but also other measures such as keeping walk-paths clear from any obstacles, ensuring exit doors are unlocked at all times, keeping enough fire extinguishers and checking the expiry dates and conducting regular fire drills). These measures were relatively new to them, and, based on the responses from factory workers, there is still progress to be made in their mainstreaming.

Employer representatives who had attended UMFCCI trainings seem still to lack understanding of how OSH measures can be linked to priorities in the core business goals. However, this is well understood from the workers' perspective. In interviews with the 13 factory workers from seven factories (as detailed earlier), workers believe they are more efficient in their work when they feel safe and protected at the workplace. A range of hazards

including water leakage, exposed cords, lack of appropriate PPE and cluttered walkways, cause stress to workers and negatively affect their ability to focus and be productive. The workers also describe a feeling of happiness when they feel safe, which makes them want to work harder. These issues must be well understood at the owner/ employer level also, which may occur over time as the OSH system develops. The role of the OSH committee may be essential here in bridging the gap. Most employers do agree that operational improvements should be integrated with safety priorities and that these will become requirements with the new OSH Law. Other suggestions are to involve employers in training with workers, to promote shared knowledge and collaboration towards the same goal – a healthy and productive workplace. There is also the potential to develop tools (through the Myanmar Garment Manufacturers Association, MGMA) to help quantify losses from accidents and/or the return on particular OSH measures, which would help make the business case for adoption for employers.

In terms of forming OSH committees, most employers understood the importance of this in driving OSH improvements at the workplace. Most have informed their owners of the need to set up an OSH committee in accordance with the new OSH Law. One of the garment employer representatives interviewed said her factory had formed an OSH committee since the training, and that the owner was in agreement with it. In terms of risk assessment, prior to the training employers did not view this as a priority. However, the employers interviewed express that risk assessments are a top priority to make it possible to develop a plan to improve OSH measures in the workplace. In the past, risk assessments were not formally conducted, and risk was identified mostly through workers' reports or during inspections by factory inspectors. However, employers now seem to understand that proper risk assessments are required for overall safety in the workplace. The link between safety and productivity must be further solidified, to ensure employers and owners are fully adopting these new systems.

Some specific examples of improvements in productivity related to OSH include the following:

Improvements in ergonomics: Sewing machine operators report greater productivity when they have better ergonomics at their workstations. In the past, they claim, employers did not pay attention to workers' position at each station. However, recent risk assessments have found that some workers are not working in the correct position, resulting in their expending extra energy to complete tasks, thereby reducing productivity, and also causing pain. Through improvements to ergonomics, workers feel they are less tired and can work more efficiently.

Reduced movement: A reduction in distance between cutting and production areas was observed. As a result, workers report feeling less fatigue, as less effort to move is required. Similarly, with regard to their sitting position, they are able to work harder and longer without getting tired, thus improving productivity and overall health and well-being at work.

Better worker engagement and participation, through the establishment of OSH committees, will continue to help facilitate improvements in OSH and productivity at the workplace level. Strong participation from both sides may further increase workers' participation in exploring the rules and regulations that affect them most.

To reiterate the findings in the section on Findings on OSH Adoption, factory workers claim that adopting OSH measures makes them feel happier and less stressed at work. These changes directly improve productivity by fixing issues that slow down or impede their work. Overall, safety makes workers happy at work. For example, a female worker describes how a broken wire at her work station caused her to constantly worry that something would happen, thus distracting her from her job. Another common example relates to clearing pathways that are used to transport materials; workers have to push carts over uneven surfaces with many obstacles, causing fatigue and slowing the workflow, and solving these hazards means they can focus more on their work and productivity.

Overall, there are several examples of how improvements in OSH at the workplace directly influence productivity, but gaps remain as to the perspectives of workers and employers in terms of priorities and how to continue to make improvements continuously.

Case Study 2 - Review of the National Occupational Safety and Health Training Centre in Myanmar (NOSH) business case: Relevance, sustainability, financing, existing gaps, etc.

Thematic Objective: Role of NOSH and future prospects for the business in further guiding the new OSH system

The National Occupational Safety and Health Training Centre (NOSH) was conceived during the 2nd Employment Working Group (EWG) Meeting of the G7 in Hamburg, Germany, on 15–17 February 2017, by a tripartite delegation headed by the director general of the FGLID, and comprising the Joint Secretary General of UMFCI and the president of CTUM. The delegation, whose participation in the Hamburg event was supported by ILO VZF, visited the Institute for Health and Safety of the German Accident Insurance Organization, and obtained inspiration to develop a similar tripartite training centre in Myanmar. Upon its return, the delegation pursued funding for the construction of the building to host the NOSH, obtaining support from the Japanese Grassroots Grant programme. Construction was completed in Hlaing Tharyar by December 2018, and arrangements for equipment and the development of training curricula and schedules are underway.

The mission of NOSH is to become a tripartite national centre of excellence on OSH through the provision of practical OSH knowledge, promoting behavioural change and becoming a hub for managing this change and a stepping-stone for building a modern workforce.¹⁵ NOSH is overseen by an FGLID assistant director, who is supported by a tripartite advisory body providing technical (and financial, as possible) resources at a first stage to kick-start its operations, according to the business plan. It is envisioned that NOSH will become the reference point on OSH training standards, knowledge and partnership-building in Myanmar.

In terms of productivity, the case on NOSH looks more broadly at the conceived business plan, financial sustainability, current progress and its role and importance in further guiding the OSH system.

- ▶ According to the business plan, NOSH is to be developed to provide the following services and products:
- ▶ Policy discussions with OSH council members and parliamentarians;
- ▶ Comprehensive courses for new inspectors and refresher courses for all inspectors;
- ▶ Risk assessment training with OSH committee members (Yangon);
- ▶ TOT to employers and workers (nationwide);
- ▶ Seminars and research to OSH professionals;
- ▶ Seminars and training on demand on specialized topics to general workers.

¹⁵ Business Plan for the National Occupational Safety and Health Training Centre in Myanmar (Draft 1), June 2019

The study interviewed the FGLLID director in his leadership role at NOSHTC to gain a sense of understanding on current progress, any existing gaps or challenges (i.e. to sustainability, ability to meet training capacity demands) and impressions on the most recent business plan. According to the director, the business plan has been drafted with agreement from the tripartite advisory body but has not yet been confirmed. However, according to its short-term implementation plan, six risk management trainings have already been delivered to 290 trainees, including members of CTUM (79), the Yangon Managers Association (104) and factories and industries (107), with the support of nine government trainers. Furthermore, specialist guests have been invited to train the 10 inspector officers in FGLLID regarding the construction of scaffolding, which presents many risks.

Implementation of NOSHTC is still in its early stages, and the unforeseen COVID-19 crisis has caused some delays. With regard to financing and sustainability, the director mentions the following key points:

- ▶ It is unclear how the cost of maintenance, water and electricity will be covered. Currently, the main revenue comes from training fees (at 30,000 kyat per participant), which covers the costs of materials, meals and refreshments. Therefore, funding for building maintenance is urgently needed.
- ▶ Increasing the amount of training will bring in additional revenue, given that a premium is built into the training fee to cover additional costs, but training has halted as a result of COVID-19. Additionally, there are not enough TOT trainers at present. Some external support has been provided (the donation of vehicles for mobile training by the Korea OSH Agency).
- ▶ National budget funding will be granted only if the government has ownership of the buildings. However, workers and employers' organizations would prefer NOSHTC to continue to be tripartite.
- ▶ Tripartite discussion is needed to implement the draft business plan for the budget and the training programmes.
- ▶ Sustainability of the centre is of major concern, as commitment from all parties is required to run the centre.

▶ Service Delivery

VZF in Myanmar has developed a multifaceted approach to knowledge-sharing and training on OSH measures to promote greater adoption in the workplace in both GSCs. In exploring the effectiveness of various methods and channels for disseminating knowledge leading to behaviour change, the study considered the roles and responsibilities of different actors within the newly developing structure of OSH standards and compliance. The following cases examine the strengths and potential shortcomings within the TOT system, including various training modalities, tools and techniques, the role of COOP groups in further disseminating and encouraging sustained adoption among farmers and the role of input retailers in teaching chemical safety and health protective measures to farmers/customers.

Ginger GSC

Case Study 1 – Impact of OSH trainings led by VCRD lead farmers, DOA, TOT farmers and other methods, including training messages, modalities and follow-up activities that have led to greatest adoption

Thematic Objective: *Results of various training modalities/methodologies, tools and techniques and corresponding outcomes/impact on key stakeholder groups, and the role of such training providers in the future*

In Myanmar's Shan State, ginger represents a significant means of livelihood for thousands of farmers. Farmers work long hours under the blazing sun and seldom protect themselves from the risks of exposure to harsh

working conditions. Additionally, major safety and health risks are associated with the misuse and unprotected use of harmful chemicals, lifting of heavy loads without support, working long hours in extreme heat and other ergonomics issues related to intense manual labour.

While the VZF project is addressing mainstreaming of OSH across policy and institutional levels, its work on the ground at the workplace level is where the direct impact is most evident. In order to address the various health risks associated with agricultural practices and to support farmers to improve productivity, VZF has been working with farmers and communities to equip them with information on OSH and the safe use of agrochemicals, and methods to use to make practical changes. It is expected that, through these workplace-level OSH activities, farmers (starting with the ginger GSC and extending beyond to other crops) will experience enhanced knowledge, attitudes and behaviour change relating to the critical safe use of agrochemicals and other OSH-related measures, therefore mitigating risks and ensuring a safer and more productive work environment.

In collaboration with DOA (Plant Protection Division of Shan State) and the previous VCRD programme (now with partners the United Nations Industrial Development Organization, UNIDO, and Myanmar Institute for Integrated Development, MIID), VZF has been directly supporting farmers within the ginger value chain across six townships in Southern Shan state. The primary objective of these activities is to increase farmers' awareness of the safe and proper use of agrochemicals and of other OSH hazards (e.g. physical and ergonomics) in the workplace. DOA trained a total of 25 villages and VCRD 32. These village-based OSH trainings involved various training modalities including a TOT approach, awareness-raising in the village, mentoring by lead farmers, the use of visual aids (vinyl) for sharing information to a wider audience and monitoring/follow-up. Activities began with providing OSH TOT training to DOA extension staff, local field assistants from VCRD and other lead farmers from various townships. The goal of the TOT training was to prepare a team of TOT trainers to present information effectively to farmers, to be able to respond to questions and to lead activities that reinforce the learning process. TOT trainers were then expected to deliver OSH awareness training at the village level and facilitate the promotion of farmers' engagement in adopting OSH measures. The OPA explores the various training methodologies and tools used, cross referencing analysis with adoption findings to be able to identify best practices and offer areas of improvement in future knowledge-sharing initiatives.

Each training partner's training methodology was unique. Within VCRD, local field assistants (LFAs) are primarily responsible for disseminating information at the village level. Since LFAs are from the communities themselves, they are closely connected to the farmers they are training, speak the same language and are typically well respected. This affords them a greater advantage to enact changes among farmers. LFAs are also training in effective teaching methods, beyond the content they are sharing. DOA extension workers are also trained specifically in TOT methods; however, they are not native to the communities in which they are training and therefore may have less of an effect in promoting sustained behaviour change. The OPA has identified that the role of a local well-respected leader is significant in farmers' adoption. Based on interviews with both VCRD and DOA representatives, the OSH TOT training is perceived as relevant and interesting. Covering six modules over five days, it involves exercises, role play and awareness activities to engage farmers in the learning process.¹⁶

In FGDs, lead farmers remarked that OSH TOT and awareness trainings are very important for individual farmers and others to improve knowledge and skills needed for safe work and to avoid creating hazards that could place themselves or others at risk.

The TOT trainers have adapted the training to cover three sections across three days. However, most TOT trainers stress that the trainings attempt to cover too much information within the allotted timeframe. Farmers are also often unable to attend all three sections because they are busy and the opportunity costs are too high for them to miss three days of work. Approximately 70–80% of participants do not complete the entire LFA training and 50% do not complete the DOA-led trainings. It is therefore safe to assume that the majority of farmers are not receiving the second or third day of training, and may be familiar with only the first module, shared on Day 1.

The LFAs are able to carefully select the villagers they feel would be most engaged to attend the training and to act as leaders for the remaining farmers in the village. The local connection within the community is again key. While the DOA has a well-established extension programme, the nature of its staff as more official authority holders may affect their ability to deeply embed changes within the community through local connections and leadership. Additionally, limited resources further restrict the DOA extension staff from following up regularly with each village, especially in the harder-to-reach areas. The LFAs interviewed have completed two to three monitoring visits,

whereas the DOA staff have been able to follow up one time, or not at all in some cases. As the OSH knowledge and information is often new for farmers, follow-up and monitoring are essential to sustained adoption.

Across all training methods, the role of social influence is significant in promoting behaviour change among farmers. Sharing knowledge is not sufficient to bring about lasting change; a change agent or leader from the community is critical to encouraging farmers to bring about changes. In FGDs, farmers were what social factors were most impactful for them. The majority of farmers responded that having a good role model farmer who is highly respected and influential in the village was very important at the early stage of learning and trying something new. Many farmers are reluctant to try anything new unless they believe, and can

observe, that it has worked well for someone else similar to them. The role of demonstrations is also key to changing farmers' attitudes on OSH practices. For many, seeing is believing. Furthermore, the farmers learn more effectively through hands-on methods. Peer encouragement and collective responsibility is also very impactful for farmers, especially with higher-risk hazards such as spraying chemicals, which can have impacts on surrounding areas.

The role of the TOT trainer remains highly relevant to the process of bringing about change at the workplace level, across agriculture supply chains. However, as stated above, there are details that can further strengthen this approach. The cascade effect of such trainings is most impactful when driven through building the capacity of local leaders/change agents. Furthermore, trainings can be adapted to cover shorter periods of time, or be divided up so that farmers are more willing to attend and meaningfully engage, allowing them the time to absorb information and be prepared to implement it for themselves. Investing in the capacity of local leadership's ability to disseminate critical information in a practical and engaging way may have more lasting impact.

Proper follow-up and engagement with communities does require sufficient resources and time, which are limited at DOA. This is especially the case for the more remote villages, which require a longer intervention period in adopting changes and addressing additional challenges posed by a lack of markets, road accessibility, etc. A sustainability plan should be developed early on to ensure sufficient resources can be allocated in an efficient way to deliver the most effective training and follow-up across villages serviced by the partners. LFAs may be less active now that VCRD has been completed, and these responsibilities may further burden the overstretched resources at DOA. DOA has suggested that the importance of these contributions to the success of the TOT programme cannot be understated but it also cannot be assumed that these activities will be covered by outside funding. DOA will continue to support interventions targeted at more remote villages that are struggling but is interested to work to find more effective solutions during the project period to be able to sustain efforts long term. The programme is now collaborating with partners UNIDO and MIID in Phase II to support OSH training and monitoring across villages previously serviced by both VCRD and DOA.

Case Study 3 – The difference between farmer groups (COOPs) make for OSH adoption among members/host communities, particularly those linked to Snack Mandalay (buyer)

Thematic Objective: *Role of farmer COOP groups in further disseminating and encouraging sustained adoption among farmers*

The OPA explored the various elements of the COOP group model and the factors behind greater adoption of OSH measures among farmer members. As described under Productivity, the link to a buyer has played a significant role in the collective success of the group and the compliance of individual members pertaining to OSH and food safety standards. The mainstreaming of OSH at the farmer level requires a systematic approach and continual monitoring, and a relatively high degree of organization and institutional capacity within the group. Key elements for mainstreaming OSH through the COOP group model include an institutional setup of OSH policies (via ICS and SOPs), planning and delegation of authority, training and communication, risk

¹⁶ Module 1, 2 – Basic OSH and the Risks, Module 3 – Materials Handling, Module – 4 Safe Use of Tools, Module 5 – Safe Use of Farm Inputs, Module 6 – Heat Safety

management and monitoring, and corrective and preventive actions. In interviews with Shwe Gin Sein, the group expressed that OSH adoption among its members owed to the adoption and implementation of a group OSH system and policies, which provides members with the most essential information, corrective measures enforced through market incentives and ways to sustain these practices. They believe that, although their system is not perfect, it provides guidance for members to be able to achieve the required outputs. The linkage to Snack Mandalay has helped further institutionalize these policies and encourage members to adhere to the group's policies. Previously, the group was not aware of the importance of mainstreaming OSH or the connection to improved productivity and higher sales. These matters are now considered a priority.

Adoption has reached the highest levels among farmers engaged in a COOP with strong leadership. Shwe Gin Sein's Executive Committee members, most of whom are female, are highly motivated to ensure the success of the group and are well respected in their communities. In comparison, only three of the seven Executive Committee members of the second COOP group are active and committed to the group, based on interviews. The third COOP group has only one strong leader in its management committee, and remaining members are no longer actively involved: without leadership, they are less incentivized to commit to the changes needed to reap the benefits in terms of productivity, quality, sales value and health and safety. The market-driven approach further promotes the COOP structure, to monitor and control OSH compliance among members. In addition, external pressure from strict market requirements pertaining to health and safety has a strong impact on participating farmers. In the less functioning COOP groups, a demonstrated lack of management to support adoption of and compliance with OSH is a significant factor hampering adoption and the success of the COOP group model.

Case Study 6 – The role of input retailers in dissemination of information of safe use of agrochemicals to farmers

Thematic Objective: Role of input retailers in teaching chemical safety and health protective measures among farmers/customers

As described in the previous section on Productivity, input retailers can play an important role in the sharing of OSH information to farmers, particularly around the most significant identified measures on safe use and handling of agrochemicals. Input retailers are often the only method of information-sharing for farmers on correct and safe use of chemicals. While the retailers attempt to speak with everyone who comes to the shop, they prioritize customers who are buying red label products that have a higher hazard level. One of the retailers gives free masks to her customers who purchase chemicals, and teaches them about proper protection, storage and handling, both on and off the farm.

Beyond the hundreds of customers who come to the shop, retailers are also well connected in the surrounding villages that they serve, providing additional events in the community to educate farmers on their products as well as protective measures. Each year, one owner runs an event in new villages as a way to attract new customers. The event typically has 50–100 farmers in attendance, and she shares information on safe use. The retailers feel it would be beneficial to have more materials to share with farmers, beyond what is on display at the shop, and written on the label. However, these materials should be very visual, to take into account the illiteracy of many farmers. Retailers believe that repetition is key to change the behaviour of farmers, so in sharing this information regularly and giving the farmer something to remember when they go home, the retailers hope that farmers will begin to understand the importance. Distributing educational materials, such as leaflets, with the chemicals is also important in the event a farmer sends someone else to pick up the materials for them. The leaflet may be the only source of information the farmer will receive regarding safe use of chemicals, and it is something they can refer back to once at home. While some behaviours may be slow to change, the role of local shops and suppliers is important in promoting this. In comparison with OSH trainings, farmers come into contact with their suppliers on a regular basis and often rely on their supplier to explain to them how to use the product, and which product to purchase.

While input retailers are unable to follow up with each customer on their safe use practices, they sometimes go to homes to collect on loans and are able to observe if a farmer has chemicals stored unsafely, in which case they would give advice. When handling the chemicals at the shop, the retailers practise safety measures for themselves, because they understand the importance of doing so and to set a good example for customers. If chemicals need to be repacked for sale, they will use gloves, eyewear and a mask to protect themselves.

Regarding future training and support, the retailers would like to receive more information on the dissemination of training at key times of the season to be more effective in changing farmers' behaviour. An example might be a knowledge-sharing guide based on crops and common chemicals farmers are buying that season. One input retailer mentioned the idea of having a mobile application to share OSH information with farmers in an efficient and effective way. Another idea was to set up demonstrations at the farm, since farmers are low in literacy and are visual learners. This could be set up on the company sales trips hosted in the villages each year.

Overall, the input retailers trained through VZF's activities feel their role is important to protect the safety of farmers to whom they sell chemicals, and the villages they serve. Previously, they viewed their role as one of salesperson, but now their view is broader and more impactful. Farmers come to them for advice, and they believe it is in their mandate to ensure the farmers are aware of what chemicals to buy and how best to protect themselves and their family and community.

"Farmers not only look to us to buy chemicals but also want to get information on how to use it. We are playing a crucial role to educate them for their safety. Of course, we care about their safety, if they are not following safety measures, they can get killed or injured, or have crop failure for wrong chemical usage. Any failure or damage for farmers is not good for us. No client will want to buy our products, so we are really happy to make sure they are safe in using chemicals," Input retailer, Aung Ban.

Garment GSC

Case Study 1 - Adoption of OSH messages through garment awareness raising campaigns, delivered i) directly by garment factories; ii) UMFCCI; iii) trainings in factories; iv) spill over effects in other sectors trained by UMFCCI; v) factories trained by CTUM.

Thematic Objective: Role and impact of tripartite members and organizations in disseminating information to employers and workers, and trickle-down effects at the factory level

Case Study 1 in the garment GSC further highlights the importance of service delivery through the role and impact of tripartite members and partner organizations in disseminating information to employers and workers. VZF is not delivering training at the factory level directly, but rather mainstreaming messages in partners' trainings to foster sustainability and engagement through the tripartite structure. The ILO Garment Industry Project (ILO-GIP) has mainstreamed messages developed by VZF in its training curriculum for OSH committees and safety officers. To deliver OSH messages directly to worker representatives, ILO has supported OSH awareness materials and tools to be used at CTUM's OSH awareness training targeted at union leaders and worker representatives. The study met with representatives and participants in trainings guided by both UMFCCI and CTUM, to understand how the trainings were conducted in practice, what materials were used and how factories and workers were mainstreaming efforts at the workplace.

UMFCCI began providing OSH trainings in 2019, focusing on the OSH Law, awareness and chemical safety. A new department was established, the Employer Organization Department (EOD), with the purpose of promoting a decent workplace. Through support from VZF, the EOD began providing OSH awareness trainings, which had not been done previously. It is working to prepare employers to be ready to comply with the new OSH Law once this is required. UMFCCI is providing four trainings, the OSH Law; OSH committee roles and responsibilities; risk assessment; and chemical safety. Employer representatives from various sectors attend, including those from the construction sector, manufacturing (including garments), service providers, livestock companies and others.

In terms of training materials, the department head is using those produced during his own experience working in the National Institute of Occupational Safety and Health (NIOSH) of Malaysia, and also in Korea, where he received training on OSH messaging and started to design his own trainings before being supported by ILO. However, he remarks that there is still no standard OSH messaging being taught across organizations (UMFCCI, CTUM, NOSHTC), and he believes this could be improved. There needs to be a more unified messaging and approach to training in

OSH. UMFCCI has used posters and pamphlets provided by VZF, but these are specific to garments, and not entirely transferable to other industries. Feedback from training participants (such as in construction and mining) feel these materials are not as useful to them. The department head believes there should be standardized targeted materials provided to all training partners. He also remarks from his experience in other countries how effective posters are in disseminating information, especially when targeted to different audiences, such as management, workers, etc., based on their respective levels of risk and exposure.

The department head at UMFCCI is highly committed to continuing pushing OSH but the organization's ability to do so is limited by three key challenges: Limited human resources at UMFCCI; limited communication with employers (lack of knowledge and use of email, for example); and lack of standardization (in materials and trainings). The head recommended developing a mobile application to serve as a standard platform to gather information on OSH. As most operation workers are younger and using phones, this could be a good opportunity to connect with them directly. According to UMFCCI, most people are uninterested in using Gmail for communication and prefer visuals, so the use of imagery and technology via a knowledge- and communication-sharing platform could be quite useful. UMFCCI representatives were quite passionate also about the potential of developing online trainings, especially given COVID-19 and the increased need for online, blended and distance learning.

CTUM, a nationwide workers' union of approximately 60,000 members, is also delivering OSH trainings to garment factories. The study met with the heads of two groups/departments under CTUM – the Women's Centre and the Education Department – to understand how these trainings are conducted. The CTUM organizer attended an ILO TOT training delivered over the course of three to four months in 2018–2019 covering the OSH Law, dispute resolution, labour organization, minimum wages and the National Skills Standard Authority. Resulting from this, CTUM has delivered seven OSH Law trainings, covering garments, mining, food processing and agriculture. The trainings include a mixture of people from various sectors and are held on off days (typically Sunday), to make them more accessible. The information from the ILO training has been divided into five modules, each to be covered in a half day of training. Some participants attend all five modules but not all. The content includes all of the information provided by ILO but presented through examples of the construction sector, which is felt to be not very helpful for those from other sectors, such as garments. Similar to UMFCCI, CTUM would like materials developed for each key industry, to be more relevant for workers, especially in identifying hazards, which may differ in a construction site to those in a garment factory. Currently, CTUM is doing its best to adapt the materials based on the construction sample.

In terms of distributed materials, CTUM provided posters and pamphlets supplied by ILO VZF to factories in December 2019 and February 2020: one poster per factory (to 43 factories, larger factories receiving two) and one pamphlet to each participant (220 factory workers). The factories place the posters on the employee notice board for better visibility. They feel the materials are quite useful but suggest reducing the amount of text in the pamphlet and using more infographics to make it easier to follow.

Of the 43 factories that CTUM is working with, one has formed an OSH committee (at the time of the interview in March 2020). CTUM continues to share information with factories regarding the purpose and processes of setting up an OSH committee. CTUM recognizes that some factories may be setting up committees out of legal obligation and they are not properly functioning, so it works to ensure factory owners understand the importance and functions of the committee while setting it up.

CTUM seems to be doing a good job at coaching and empowering workers to identify risks and hazards on their own and ways to share this information with employers to bring about changes. The workers interviewed at CTUM, representing seven factories, all expressed feeling empowered to hold their employers accountable for any identified hazards, and what to do in case the issue is not addressed.

In terms of adoption at the factory, CTUM believes that workers now understand their role in the OSH system; workers are better able to report issues to employers because they understand the risks and implications (both legal and in terms of safety) better themselves. CTUM believes employers will remain reluctant to adopt changes and mainstream OSH unless they are incentivized to do so. The new OSH Law is a good step towards making this happen.

CTUM is eager to send more members to future TOT trainings, and would like to see trainings organized that combine both workers and employers.

Case Study 2 - Review of NOSH business case: Relevance, sustainability, financing, existing gaps, etc.

Thematic Objective: *Role and capacity of NOSH to deliver and meet growing demands in OSH training and techniques/methodology in delivery*

Establishment of NOSHTC is seen as an important milestone that will strengthen tripartite cooperation on OSH and fill technical gaps on training provision at an auspicious time. The passage of the OSH Law and its focus on prevention and OSH management at the workplace point to the need to raise awareness of employers and workers on the new OSH Law and to strengthen the capacity of workplace structures such as OSH committees and safety professionals. It is therefore important to clarify the extent to which NOSHTC can respond to the capacity-building demands derived from the OSH Law in the short and medium terms and facilitate compliance with the OSH Law's provisions.¹⁷

A key research question of the study relates to examining the current and future capacity of NOSHTC to fill technical gaps on training provision and its ability to respond to the growing demands that will arise post passage of the OSH Law, requiring OSH committee members to attend training. The study explored these questions in interviews with the NOSHTC director (FGLLID assistant director), UMFCCI and CTUM.

According to the business plan, NOSHTC is to be run as a not-for-profit institution with the following objectives:

Short-term objectives

1. Organize awareness-raising events for workers and employers on the new OSH Law (at industrial zone level);
2. Provide training that facilitates compliance with the provisions of the OSH Law related to the formation and training of OSH committees.

Medium-term goals

1. Develop tailor-made trainings ("on demand") for particular sectors or hazards in response to other needs identified by workplaces in order to facilitate compliance with upcoming sectoral regulations of the OSH Law;
2. Design seminars and knowledge exchanges for OSH professionals;
3. Conduct research, data collection and analysis on the changing nature of risks and hazards and effective prevention.

The scope of NOSHTC: involves the following:

1. Subject matter: NOSHTC will deal exclusively with OSH in all its activities on training, awareness-raising and research.
2. Sectors: Although the OSH Law expands the scope of inspection to sectors other than manufacturing, this will be the priority in the short term, with gradual expansion to other sectors as regulations become available. Then there will be a need to adapt the teaching content and methods depending on the sector. Priority sectors for further expansion once regulations are developed are agriculture, construction and mining. Part of the objective of "building a culture of prevention" is to be able to mainstream OSH into competency standards for particular positions in manufacturing and later in other sectors.

¹⁷ Business Plan for the National Occupational Safety and Health Training Centre in Myanmar (Draft 1), June 2019

The business plan envisions that NOSHTC will meet the gaps that were identified in interviews with UMFCCI and CTUM. Beyond the need for NOSHTC to meet training capacity demands, a key element both identified is a need for standardization and sector-specific content.

The head of the Education Department at CTUM shared his thoughts regarding the establishment and prospects of NOSHTC. Overall, he is quite pleased by the concept of the OSH training centre, which UMFCCI and CTUM have needed for some time. Currently, CTUM is referring trainees to NOSHTC from four sectors: industry, construction, agriculture and mining. He also remarked that CTUM plans to continue its own trainings as well. If possible, CTUM is interested in obtaining accreditation to reproduce trainings, with permission from FGLLID. He felt that, with the passing of the OSH Law and the establishment of OSH committees, there will be great demand for training and NOSHTC is currently limited: factories will need to train many people, beyond NOSHTC's current abilities. He believed that factories will not want to pay the 30,000 kyat fee plus accommodation and food to send workers to the training. Overall, it is important to produce more worker representatives with certificates from the government in OSH. CTUM could attend NOSHTC TOT trainings and then provide additional trainings. Its target is to train 4,000 garment workers in OSH and certify one person per factory. Through the ILO-GIP project, CTUM has already trained 67 trainers to further disseminate OSH information at the factory level. It can send these 67 people to NOSHTC for further training and would like to be able to offer certified training (which it says would be free of charge to members). According to CTUM, NOSHTC has the capacity to train approximately 20 people at a time.

The study met with the director of FGLLID and inquired about the current progress of the centre in terms of service delivery, capacity and potential spill-over effects. As mentioned in an earlier section, the centre has delivered six trainings in risk management to 290 trainees. Ongoing trainings have been postponed as a result of COVID-19. Regarding the training methodology, the director believes that the courses are well structured and practical.

The director believes it will be possible to meet training demand in the future through contributions by private schools to the delivery of trainings. At present, demand is not high but it will certainly increase once the OSH Law is officially enacted. Another point the OPA raised was the whether the TOT training would interfere with the work of the FGLLID trainers, who are also inspectors. Based on this interview, it seems this is not yet an issue, as training demand is still low; however, as it increases, it may not be possible for all 24 TOT trainers to work in both jobs. Another concern is the lack of administrative and operational support for the TOT trainers. As the facilities are not yet established, trainers are required to clean, copy and print materials, prepare all course work and organize the training room and all other logistical tasks required to host the training. This can be quite a lot of work, especially for someone already engaged full time in another job. The centre is well aware of these issues and the need to address them to be able to run a functioning and sustainable centre.

The director made some suggestions to further improve the training methodology offered at NOSHTC. The OSH training materials that NOSHTC uses are related mostly to the construction sector, and have been used to train in all other sectors (including garments). As such, the TOT training should be made sector-specific: instead of combining all sectors, it would be better to group relevant sectors within the training, such as garments, manufacturing and construction. Similarly, information, education and communication materials should also be designed for specific sectors.

The director believes there is high spill-over for training to other industries beyond garments, including construction, manufacturing and food and beverages. However, monitoring efforts on this have been postponed as a result of COVID-19.

With regard to CTUM's desire to acquire accreditation for training, the director remarked that NOSHTC would not provide this, as it is something only the government department (FGLLID) can permit.

► Institutional Development

A major component of VZF lies in building the institutional capacities of actors within the newly developing system to support OSH improvements in targeted supply chains. Alongside the strengthening of legal and policy frameworks, to provide the environment to support changes, the project is actively addressing change at the workplace level through empowering key drivers of change to build networks and institutional capacity to

mainstream OSH. Pertaining to the ginger GSC, the OPA examined the roles of COOP groups in pushing reforms at the farmer level in OSH, and their own structural development to support this via ICS and SOPs. Within the garment GSC, institutional development is also key; the OPA reviewed the role and responsibilities of tripartite advisory and OSH committees in the newly developing OSH structure and compliance scheme and assessed the corresponding impact at the worker/employer level. Additionally, it explored the impact in promoting changes within the SSB to a more client-centred approach. The following case studies analyse the role and importance of building institutional capacity of committees/groups/organizations to lead the building a new OSH framework for greater adoption and compliance (ginger COOPs and garment tripartite and OSH committees).

Ginger GSC

Case Study 3 –The difference between farmer groups (COOPs) make for OSH adoption among members/host communities, particularly those linked to Snack Mandalay (buyer)

Thematic Objective: Role and significance of farmer COOP groups in pushing reforms at the farmer level in OSH (examining institutional capacity of groups)

The OPA further assessed the embedding of OSH within farmer COOP groups through the setup of ICS to achieve greater sustainability and to support compliance with the quantity, quality and certifications of ginger exports. VZF conducted training on SOPs for ICS with each COOP group to build the institutional capacity of COOPs to mainstream OSH. The trained ICS includes application of OSH policy within the group; formation of OSH and audit committees to enforce policies, product and process compliance standards; selection and accreditation of ginger suppliers; ginger deliveries and payment; storage and release of ginger stocks; workplace inspection system; and a reporting system for accidents and illness.

Members of COOP groups were asked which of the above initiatives had been set up as part of the newly developing ICS. Shwe Gin Sein has a well-established organizational setup whereby each Executive Committee member has his or her own respective roles and responsibilities, including registration of inventories and sales; inspection of products prior to being sent to the buyer; weekly monitoring of members; OSH awareness training for new members; and sharing farming technology (e.g. Bokashi production). The delegation of authority has been very successful for this group, with clearly allocated responsibilities for individual members to monitor and improve the organization's rules and regulations. While the organization has its own organizational policies and procedures that it believes is working well, these SOPs are not documented (on paper). All procedures are articulated informally by the Executive Committee members and have evolved over time as needed. New policies added include required OSH measures;¹⁸ mandatory monthly meetings for members; penalties for not following regulations (such as rejection from the group); assigned roles and responsibilities of Executive Committee members; and policies on members' monetary contributions as a percentage of sales. Furthermore, the group's informal control system has been guided largely by the demands of its main buyer, Snack Mandalay, which also helps the group continue to enforce its policies.

Although the internalizing of the ICS and SOPs has not fully taken place, it is important to note that the training was held right before data collection in February 2020 and the COOP had not had the time to bring members together to discuss this further. The Executive Committee is aware of the importance of internalizing the ICS as it has been in contact with another buyer that would require GAP certification of farmers and records of OSH compliance. However, this has not yet taken shape and should be followed up on within the coming months. Members of Shwe Gin Sein said that the ICS/SOP training was very useful to the COOP but that they did not have the capacity to develop these procedures on their own without additional support. The group may need mentorship or further guidance from VZF to continue to internalize this system. The group is hoping to sell fresh ginger in international markets and recognizes the importance of setting up systems to gain the proper certifications.

¹⁸ Use of organic inputs for production (free from chemicals), reading labels and applying as per instructions, wearing PPE in handling and applying chemicals, proper storage (of chemicals) away from children and disposal of containers, not reusing containers, reducing basket sizes in carrying and transportation

The other COOP groups suffer from less developed organizational management, starting with the Executive Committee. This institutional weakness has inhibited their ability to push reforms at the farmer level in the adoption of OSH practices. At present, there is a lack of clear regulations and delegation of authority to encourage members to follow practices; there is no proper documentation; regular meetings for discussion and inputs are not held; and monitoring mechanisms are poor. In FGDs, members reported an absence of proper policy and monitoring mechanisms at all levels, from growing to transportation. Weak monitoring had led to some members using chemical inputs that were not effectively tracked for Snack Mandalay, resulting in rejection and damage to the group's reputation. Therefore, it is essential to prioritize the strengthening of the institutional capacity of COOPs.

Garment GSC

Case Study 1 - Adoption of OSH messages through garment awareness raising campaigns, delivered i) directly by garment factories; ii) UMFCCI; iii) trainings in factories; iv) spill over effects in other sectors trained by UMFCCI; v) factories trained by CTUM.

Thematic Objective: Role and responsibility of tripartite advisory and OSH committees within the newly developing OSH structure and compliance scheme, and corresponding impact at the worker/employer level

Prior to the VZF project (Phase I) and the new OSH Law, research identified a lack of structured attention to OSH in factories.¹⁹ For example, while factories had clearly invested in specific items such as fire safety equipment and ventilation systems, there did not appear to be a systematic approach to OSH.²⁰ It was found

OSH committees and the development of OSH management systems are expected to contribute significantly to mainstreaming OSH. The OSH Law is expected to require factories to comply with a list of OSH provisions, including:

- ▶ Establishing a workplace safety and health committee;
- ▶ Appointing safety and health officers;
- ▶ Conduct in-depth risk assessment within their workplace;
- ▶ Providing adequate PPE;
- ▶ Developing preventive and emergency plans;
- ▶ Hiring a certified doctor;
- ▶ Providing workers' trainings on safety and health practices, plans and systems;
- ▶ Collecting data on accidents.

Interviewees, including representatives of the tripartite group, in the current study seemed to understand clearly the significance and role of OSH committees. The establishment of OSH committees is still quite nascent and therefore the impacts at the worker/employer level are perhaps yet to be fully observed. However, existing gaps in both GSCs further reinforce the importance of developing the institutional capacity of committees/groups/organizations to lead the implementation of an OSH framework for greater adoption and compliance (as observed in ginger COOP groups and garment tripartite advisory and OSH committees). As mentioned in the Garment Sector Report, a first step to implement OSH improvements in Myanmar garment factories is for factory owners to understand the concept of an OSH management system, its advantages and the need to integrate it into the factory's management strategy.²¹

¹⁹ VZF, Occupational Safety and Health in the Myanmar Garment Sector. Market Assessment, OSH Risk Assessment and Business Case Analysis. 2019

²⁰ Ibid.

²¹ Ibid.

As highlighted in the mid-term evaluation and the VZF Phase II document, the project's support for the new tripartite NOSHTC has been significant, contributing to the establishment of an important technical resource to assist employers and workers to comply with the provisions of the OSH Law, and, importantly, to further strengthen tripartism and social dialogue in Myanmar.²² Furthermore, development of the OSH system, including through components like NOSHTC, has provided opportunities for Myanmar to strengthen tripartism. Facilitating greater social dialogue will further improve knowledge, attitudes and behaviour within the industry and across other GSCs in terms of OSH.

The OPA also found that Phase I of the project has perhaps achieved results beyond the immediate ones, as its overarching institutional-level support to FGLLID, the SSB, the Directorate of Industrial Supervision and Inspection and the Ministry of Health and Sports has likely resulted in impacts across industries beyond the garment sector. This further highlights the significance of institutional development.

Case Study 3 - Changing mentality of SSB to client centred approach: Change in mentality and impact on service delivery to clients. Impact of the EII pilot in changing social security service delivery

Thematic Objective: Impact in promoting changes within SSB to a more client centred approach, for clients and for the SSB as an institution

The SSB is in the process of strengthening its role as an organization that provides value-for-money services to its plan members and effectively insures them against risk. In this context, it is embarking on comprehensive legal, administrative and IT reform to make its procedures more efficient and client-centric, including strengthening EII, with the support of ILO and VZF. Specifically, ILO has been working with the SSB to modernize its administration and operations across several areas, as part of a scale-up strategy.

At the operational level, the enhanced EII will follow the following principles (consistent with the approach recommended in the Business Process Review and tested in the EII pilot):

“Client-centric” approach – that is, ensuring the pilot has a positive impact on insured workers and registered employers in terms of understanding and ease of use;

Efficiency and simplicity – that is, minimizing “hand-offs” and “touches” within all processes to reduce workload on SSB staff; and

Operational feasibility and scalability – that is, ensuring the proposed enhancements are consistent with overall administration and process reforms and the new IT system to be introduced in the coming years and that these enhancements leverage other pilots and support to the SSB for maximum impact.

The OPA sought to assess recent reforms to transform the SSB to a client-centred approach, such as the change in mentality and impact on service delivery to clients. The study intended to set up a meeting with a beneficiary of a recent EII claim, in particular the funeral grant and survivor benefits. The key element for observation would be time taken to fully process a claim and get the family or injured worker the benefits owed. Unfortunately, the COVID-19 crisis and restrictions put all in-person meetings on hold, and the study was able to connect with the beneficiary only via telephone.

A family that had recently lost their son in a tragic work accident filed a claim on his behalf in July 2019. This family had no prior experience claiming social security benefits and said they were unsure of what to expect from the process. However, their overall impression was that it was very efficient and easy to follow, even for a first-time applicant. The SSB staff involved were very friendly and helpful throughout the claims process. Initially, the beneficiary's father expected that visiting a government department would not be a particularly friendly or comfortable event. However, he was quite pleased with the SSB staff, who provided extra help in supporting him in his late son's claim. In terms of the process, the family did not process the claim themselves; the employer of the factory in which their son worked gave support and information was shared from the SSB regarding the claims process.

²² Occupational Safety and Health in Myanmar Global Supply Chains – A Vision Zero Fund Project – Phase II

It took a total of two months to complete the claim, after which the family received a total of 4 million kyat (approximately US\$3,111) in benefits. The paperwork and verification process took less than a month to complete. Previously, the same claims process would take approximately four months (as recorded at baseline). Discussions with the SSB and the staff handling the claim revealed that the delay beyond the paperwork and verification processes owed to the batch approach in the processing system. Typically, claims are completed in batches of 15, which may add time to each individual payment. Nonetheless, the family is pleased to have received their benefits.

A public benefits award ceremony is conducted after completion of each batch processing. The purpose of this is to raise awareness among families, future beneficiaries and employers on the process of submitting claims and getting the benefits owed to them. The SSB representative claims that this process is helpful to educate workers and their families on the benefits and how these can help their families in a tragic situation, as most are unaware of the SSB registration and benefits process. During the ceremony, leaflets and information are shared. However, the beneficiary interviewed would have preferred to receive the benefit earlier and not wait for an award ceremony, which added to the delay.

A report on the scale-up strategy²³ for the enhanced EII scheme was produced in October 2020, which provides some useful data beyond the in-depth qualitative assessment of the OPA.

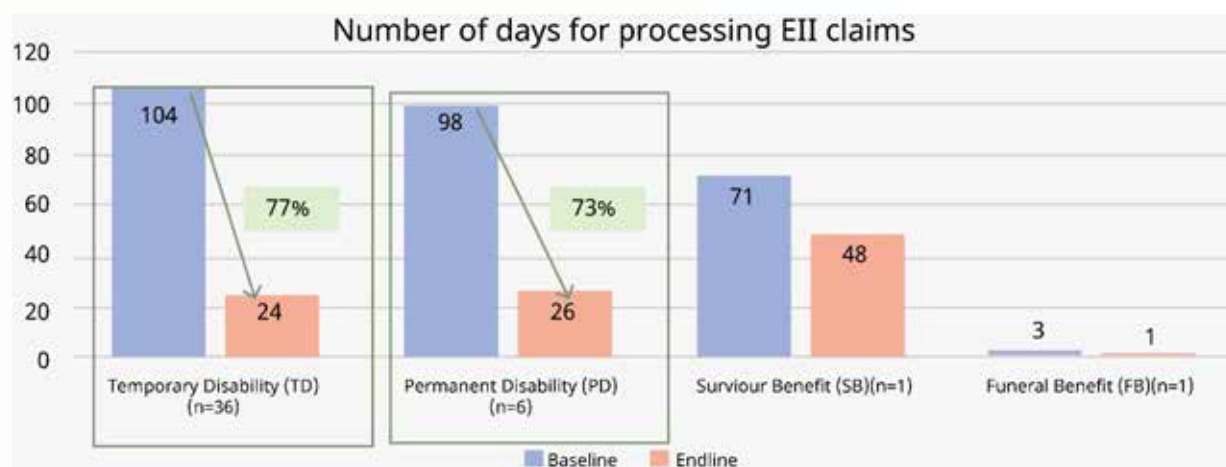
The SSB undertook an EII pilot to test selected aspects of the enhanced EII during June to November 2019. The pilot focused primarily on addressing the constraints faced by two sets of stakeholders – workers and SSB township staff. For workers, the pilot established a direct interaction between the SSB township office and workers, reducing the dependence of workers on the cooperation of employers in the case of accidents. The pilot empowered SSB staff to do their job well through the following changes:

- ▶ An SOP was developed to provide step-by-step guidelines for implementing EII in the two pilot townships during the pilot. Designed for township office staff, these aimed to provide clarity at every step and ensure standardized and efficient service delivery across townships.
- ▶ The SOP simplified and streamlined processes and forms; increased delegation to the township office to resolve most cases, with only exceptions (complex, controversial or high-value cases) going up to headquarters; streamlined reporting by enabling the township officer and headquarters to monitor key indicators; and streamlined record-keeping and file-tracking at township level.
- ▶ The SOP reordered the workflow to increase efficiency and improve the workload distribution at the township office. This required the reallocation of tasks across staff to enable them to carry out the revised procedures efficiently. It was complemented by a reordered physical layout of the office to streamline operational flows (of people and documents).
- ▶ The SOP streamlined record-keeping through the creation of a single EII case records for each case as a single point of reference and of EII case ledgers (by type of EII), to provide a single point of reference for reporting and to enable easier tracking of case records.
- ▶ The SSB ensured adequate staffing, training and budget support from headquarters to the pilot townships, including a courier for secure and speedy document transfer.

According to the report, the pilot has had a substantial positive impact on workers and SSB staff. For workers, the pilot has resulted in better service and substantially faster benefit payment, with temporary disability claim processing time reduced by 77% and permanent disability claim processing time by 73% (see Figure 11). For SSB staff, the pilot increased efficiency through streamlined processes, and improved service orientation, as indicated by the staff themselves and a small sample of workers and employers interviewed.

²³ Scale Up Strategy for the Enhanced Employment Injury Insurance Scheme, SSB. 5 October 5 2020 (draft for discussion)

► Figure 11 – Impacts on the Time Taken to Process EII Claims ²⁴



The report provides a series of lessons from the pilot; however, a few recommendations regarding institutional strengthening are of interest here and are reinforced by this case study, and should be considered in Phase II:

- Ensure adequate resources to Phase I townships;
- Support SSB staff at all levels to be more service-oriented;
- Strengthen coordination between SSB Insurance and Medical Departments;
- Strengthen M&E.

Multi-Stakeholder Engagement (Collective Action Model)

Throughout the OPA, a major prevailing theme was the effectiveness of ILO's Collective Action for Safe and Healthy Supply Chains approach. The research revealed at the workplace level that greater sustainability and impact are achieved through the engagement of multiple stakeholder groups within the new OSH structure, including the government, the private sector, workers' organizations, employers and workers, which facilitates greater standardization, harmonization and collaboration resulting in greater impact at all levels. The mid-term evaluation also found that the establishment and strengthening of tripartite coordination mechanisms on OSH had been "one of the most important achievements of the project, and... ensured ownership and the commitment of the government and social partners towards the advancement of ILO OSH standards in Myanmar."

In March 2020, the VZF Steering Committee met to discuss the current strategy around how to facilitate joint responsibility and promote collective action for safer supply chains.

Achieving the Fund's vision requires the strong commitment, collective action, influence and resources of a wide range of stakeholders, including global companies, employer organisations, workers and trade unions, national- and transnational- level suppliers, governments in developed and developing countries, international financial and labour organizations, civil society, private philanthropy, and development agencies. (VZF revised strategy document)

²⁴ Scale Up Strategy for the Enhanced Employment Injury Insurance Scheme, SSB. 5 October 5 2020 (draft for discussion)

In previous consultations, the VZF Steering Committee remarked the following main learnings from its global programmes thus far, pertaining to shared responsibility:

- ▶ A consultative approach to programme initiation is key to ensure stakeholders' commitment;
- ▶ A study to map out OSH challenges and drivers is key to create a common and transparent knowledge base among constituents, to invigorate interest and to start a process to build joint responsibility for collective action;
- ▶ Private sector/international buyers are interested in and have joined the dialogue for collective action and want to be engaged as of the start of the project;
- ▶ The way joint dialogue, priority-setting, ownership and local leadership lead to collective action is determined by local circumstances (and thus key variables);
- ▶ Agricultural subsectors have their own specific challenges related to informality, more complex buyer/producer relationships and traceability of the product;
- ▶ Building for sustainability through local leadership from the start is key, and will look different depending on key variables;
- ▶ VZF's key role and values are developing a common knowledge base, providing technical support, supporting local leadership and facilitating dialogue.²⁵

The OPA further identified lessons pertaining to the learnings above, which may be considered informative lessons from the workplace level to further strengthen VZF's approach in engaging multiple stakeholder groups across and within the supply chains it targets.

Within the ginger GSC, VZF has worked to strengthen collaboration across the supply chain. Two ginger stakeholder events, in October 2017 and May 2019, brought together various key actors, including farmers, input retailers, traders, processors, buyers and government, to discuss a long-term vision for the ginger subsector and the role of OSH in achieving greater collective objectives. The themes above (Productivity, Service Delivery and Institutional Development) and the case studies woven into them further highlight the remarkable efforts and successes of the project in targeting stakeholders across the targeted supply chains from the workplace level to the private sector, government and the international landscape. This has resulted in the further strengthening of the benefits at each level and the sustainable development of an embedded OSH system.

The OPA found the greatest adoption at the workplace level had occurred as a result of many of the main learnings listed above. The partnership forged with major buyer Snack Mandalay demonstrates the success and potential of the farmer COOP group model, and has resulted in direct impact among members in terms of improved quality, productivity and health and safety through the adoption of OSH measures. This partnership, and other future partnerships, could continue to strengthen the embedding of OSH at the workplace level while further promoting an OSH compliance system, in a sustainable, market-driven way.

The study also found that the main challenges in the ginger GSC owed to the informality of the agriculture sector; however, efforts to further institutionalize the COOP groups will support the capacity of the sector to mainstream OSH via ICS. While at this stage it may be difficult to predict the measure of sustainability of the project's efforts, the current level of adoption, driven by local leadership, is a positive sign. Continued efforts might be geared towards building the capacity of local leadership and "change agents" from across the supply chain, including lead farmers, COOP committee members and TOT trainers, as well as the private sector and employers (input retailers, traders, processing facility management). A well-thought-out multi-stakeholder model has formed the basis for the efficient development of the OSH system across ginger, for replication in other supply chains and industries.

Furthermore, the establishment and strengthening of tripartite coordination mechanisms on OSH appears to be one of the project's greatest strengths, in terms of ensuring commitment and ownership of government and social partners to advancing ILO OSH standards in Myanmar. The project has supported the establishment and

²⁵ Joint Responsibility and Collective Action for Safer Supply Chains. VZF Steering Committee Meeting, Geneva. March 2020

coordination of the ILO OSH Project Portfolio with its own tripartite Project Consultative Committee (PCC), chaired by FGLID in MOLIP, which includes relevant line ministries as well as employers and workers' organizations. The PCC has become an important venue not only for project guidance and ownership but also for the discussion of policy and technical topics related to the drafting, enactment and implementation of the OSH Law; occupational health and the updating of the list of occupational diseases; the development of OSH management systems at the workplace and their relationship to provisions in the OSH Law; the construction, governance and operation of NOSHTC; and the development and adoption of 31 new OSH Standards.²⁶

²⁶ILO VZF Phase II Document

Conclusions

► Key Factors Influencing Adoption

Through the various layers of data collected, the OPA was able to identify the most significant internal and external factors behind adoption of good OSH practices. It used these to develop recommendations to support VZF to further maximize its activities and promote adoption in the next phase.

Internal factors promoting adoption

1) The role of advocates in promoting sustained adoption

Throughout the FGDs, lead farmers (typically leaders in the village, better-off/higher-educated farmers and/or COOP leaders) said that the traditional approach of educating farmers through training and information-sharing was not sufficient to change the behaviour of all farmers. While this may be effective at improving farmers' knowledge and attitude or desire to change, further intervention is needed to enact this change for a longer period of time. Farmers do appreciate the newfound OSH knowledge and believe it is useful; however, the role of lead farmer has proven more impactful to get farmers to take the steps to change and continue this for themselves.

The study asked farmers what social factors they found most influential in their decision-making process to change behaviour relating to agricultural practices. The majority of farmers said that a good role model to demonstrate the claimed benefits was most important in the early stages of getting information. Most farmers are unwilling to make a change unless they have observed the success of another farmer whom they trust. Furthermore, farmers are encouraged to change behaviour if asked to do so by their peers, especially pertaining to chemical usage, since they recognize that the effects can be damaging to the surrounding environment. The TOT training model and COOP group models were both strengthened through the advocacy, leadership and demonstration efforts of a lead farmer at the workplace level.

Additionally, farmers reported that they are encouraged to continue adoption of OSH compliance because they have already observed the benefits either for themselves or from another farmer. Beyond improvements in productivity and workflow, farmers from Lawksawk village reported noticing improvements in health and safety from chemical-free production. These farmers expect that these changes will encourage other farmers to adopt OSH practices as well.

2) The importance of building the capacity of workers' organization members

Similar to the role of lead advocates in disseminating information and promoting behaviour change in the ginger GSC, the role of workers' organizations was highlighted as key to driving and sustaining OSH changes in the workplace. As outlined in the Garment Sector Report, workers' organizations have an important role to play in improving OSH compliance in Myanmar. They can raise workers' awareness of their rights and responsibilities under the new OSH Law, provide information on social security benefits, in particular injury benefits, and clarify for workers what constitutes a safe working environment.²⁷ CTUM's training is quite effective in that it is designed to

²⁷ VZF, Occupational Safety and Health in the Myanmar Garment Sector. Market Assessment, OSH Risk Assessment and Business Case Analysis. 2019

empower and instil leadership among union workers, who are already familiar with sharing information with the workforce, and are respected among their peers. Further, CTUM has a follow-up mechanism in place with its trainees, and provides support to further encourage them in their roles in enacting changes at the workplace level. The SSB has also shared its belief in the role of the union worker and the importance of building the capacity of workers' organizations to strengthen the OSH system. As a unionized workers' association, it is committed to looking after workers' welfare, and therefore well positioned to play an active role in the development, implementation and monitoring of OSH management systems at the factory level as an integral component of the OSH.

3) The relative significance of OSH TOT and awareness trainings in driving OSH adoption

The TOT training model has demonstrated positive and sustainable results in embedding OSH practices at the village level through empowering lead farmers and COOP management to continue to drive changes from within. Building the capacity of these local leadership systems has been a highly successful aspect of the project, a finding that emerged throughout the FGDs and KIIs. The TOT training provides essential information to farmers about workplace hazards and a variety of tools and methods they can use to create a safer and more productive workplace. In FGDs, lead farmers remarked that the OSH TOT and awareness trainings were very important for individual farmers and others, to improve knowledge and skills they need to work safely and avoid putting themselves or others at risk. The study identified some areas for further strengthening the approach, as detailed in the preceding recommendations.

Within the garment GSC, OSH TOT and awareness training through various partners and tripartite constituents (UMFCCI, CTUM and NOSHTCTC) has reached a wider audience. CTUM's model provides encouragement and follow-up with workers to support knowledge-sharing at the workplace. The role of organizations with strong technical skills and capacity to provide advice and support after trainings has been very helpful to improve workers' understanding and ability to disseminate information effectively.

4) COOP group leadership via the Executive Committee as a driver of the success of the entire group

Adoption was observed to be stronger and more embedded in villages and among farmers engaged in a COOP group with a strong Executive Committee, or in villages with highly committed lead farmers who have adopted OSH measures themselves and encourage member farmers to do the same. The seven Executive Committee members of Shwe Gin Sein COOP demonstrate a high level of commitment to the group and a positive influence on other members, who are now willing to follow OSH practices such as chemical-free ginger production, use of 20 viss baskets for transportation, prevention of chemically contaminated baskets/bags for carrying ginger, and monitoring and reporting of chemical usage in other nearby farms through a mutual accountability system. While COOP groups have not fully developed ICS, the development of informal policies on OSH compliance among members has resulted in greater adoption, through demanding members adhere with the group's OSH policies.

5) Formation of OSH committees

The establishment of OSH committees, while still in the early stages, will only continue to advance OSH management and mainstreaming across factory and workplace settings. Interviews in one factory with an established OSH committee revealed that having a committee means there is more authority to drive OSH measures, in collaboration with both workers and employers. This then promotes greater synergy among various stakeholders to take action and sustain progress. With the new OSH Law, it is expected that OSH committees will only strengthen over time, in capacity and relevance.

6) Factory ownership

Another factor, identified in the Garment Sector Report and supported by the OPA, is factory ownership as a strong driver of OSH compliance in Myanmar. Internationally owned factories have been found to be located in newer, safer buildings, and are more likely to have acceptable working conditions. Locally owned factories tend to struggle to comply with OSH standards, as a result of limited knowledge and access to finance, among other reasons.²⁸ Additionally, exporting factories are more likely to have established OSH management systems

and appointed safety staff, and to monitor and track accidents at the workplace. Factories exporting to western buyers tend to be subjected to higher requirements than factories exporting to regional foreign buyers from Korea and Japan. The Garment Sector Report finds that promoting vertical and horizontal learning across factories can support Myanmar factories to further adopt the OSH practices of foreign factories.

External factors promoting adoption

1) The role of market requirements and certification standards in OSH adoption at group and individual level

OSH issues have become a major concern for many market players, including buyers such as Snack Mandalay, in selling ginger products to international markets. High-end and export markets require stricter regulations, in production, manufacturing and transporting to end consumer, including compliance with OSH measures. The connection with a large buyer, Snack Mandalay, has proven a key driver of adoption among participating farmers. Beyond the buyer's requirements on size and quality, and the need for ginger to be chemical-free, farmers are more aware of the importance of OSH compliance to be able to sell to a higher market. This partnership has encouraged farmers to develop internal controls and follow compliance procedures to be able to continue to sell to Snack Mandalay.

External factors set by the buyer include requirements for chemical-free products of high quality (at least 250 g in size per piece) and strict packaging and transportation rules to ensure high food safety standards. Internal factors set by the group include regulations on practices based on the safe use and handling of chemicals; required use of a smaller basket size to protect ginger and reduce injury during transportation; chemical-free products to ensure workers' safety and food safety; and environmental safety and sustainability. Members are also encouraged to follow other OSH practices, such as heat safety and safe use of farm tools. Most farmers are following OSH practices related to agrochemicals, but less priority is placed on practices such as heat safety and tools handling. The market-driven approach further promotes the COOP group structure, to monitor and control OSH compliance among members. In addition, external pressure as a result of strict market requirements pertaining to health and safety has a strong impact on participating farmers.

Market requirements are especially relevant in the garment industry, where buyers, in particular international buyers, are among the strongest drivers of OSH improvements and compliance.²⁹ However, while buyers have been a positive influence in establishing and promoting OSH standards in Myanmar, they have largely followed a "checklist" or "audit-driven" approach to OSH. Therefore, a more comprehensive OSH management system can further encourage employers to go beyond basic compliance (with the goal of passing audits) to full integration of OSH at the workplace. The integration of an OSH management system in the overall management strategy of factories, coupled with functioning OSH committees of both worker and management representatives, can ensure market and legal requirements are met (at a minimum) and promote a safer and more productive workplace.

2) Improved local markets and increased incentives for farmers through OSH compliance

Farmers' adoption of OSH measures through the COOP and as a result of trainings has had positive impacts in local markets as well. Farmers selling to Snack Mandalay via the COOP are selling approximately 10–20% of their annual volume, with the rest sold to local markets. However, the entire crop is produced using higher production standards (without pesticides). As a result, local markets have come to favour villages producing pesticide-free ginger and are now offering higher prices for the seeds, given their high quality. Farmers are now more incentivized to continue to grow chemical-free ginger and move to the next step of organic production, further embedding OSH measures.

²⁸ VZF, Occupational Safety and Health in the Myanmar Garment Sector. Market Assessment, OSH Risk Assessment and Business Case Analysis. 2019

²⁹ Ibid.

3) Legal implications reinforcing adoption and OSH management systems

The timing of the new OSH Law in Myanmar is well aligned with the VZF project and its objectives, and will only further cement impact across industries. Regulations for the new law are expected to be drafted by 2020 and implemented in 2023 (according to FGLLID).³⁰ The law is intended to address the current legal fragmentation regarding OSH. Its objectives are to implement measures related to safety and health in related industries; to establish the duties and responsibilities of different stakeholders; to prevent workplace accidents and occupational diseases and increase productivity as a result; to set OSH standards and create safe and health workplaces; and to support research activities.³¹

4) The COVID-19 pandemic

During the course of the OPA, the COVID-19 pandemic swept the world, bringing about unprecedented changes at a rapid pace, testing the resilience and preparedness of systems and industries. The systems and structures relating to OSH developments may be facing unexpected delays but as a whole the crisis has seemed to further reinforce the significance of having OSH management systems in place to address immediate crises and to drive improvements in the long term. In particular, the use of PPE (especially face masks) has increased exponentially during the months of the pandemic, and it is unclear what long-term impacts this will have in terms of OSH measures taken on a business and personal level. This study has identified the significant advantages of working as a system in conducting effective and efficient risk assessments during this time. While the pandemic has brought many challenges, at least it has taught everyone just how important OSH can be, and the dire implications if it is not handled well in terms of human health and safety and business risk (i.e. shutdowns and essential regulation compliance).

Factors inhibiting adoption

1) Lack of management or strong leadership at the workplace level

The contribution of lead farmers towards promoting OSH measures and influencing other farmers to adopt these is important to the sustained embedding of OSH at the workplace level, as detailed above. COOP groups and villages with the lowest adoption have one thing in common: weak management or lack of a strong local leader. Farmers are more receptive to their peers and well-respected leaders in the community when it comes to decisions on the farm and their livelihood source. According to FGDs, over 85% of villagers believe they currently do not have such a kind of lead farmer. Only a few select villages have a leader with the demonstrated ability to influence others.

In the garment GSC, continued lack of leadership at the employer level is stunting progress, according to interviews. This further highlights the need for OSH committees and tripartite support and collaboration to ensure a well-functioning OSH management system and mainstreaming at the workplace.

2) Lack of market drivers to adopt OSH

The study found that villages in more remote and harder-to-reach areas struggle more to reach the same level of integration. These villages lack access to markets and therefore are less able to tap into partnerships such as the buyer connection to Snack Mandalay. Buyers are less interested in engaging with these communities, as it requires more effort and resources to coordinate, monitor and transport products. Additionally, TOT trainings and follow-up are more difficult in these areas and as a result the impacts of the training have been less visible. In interviews, these farmers felt less inclined to adopt OSH measures because they do not have any pressure from the market to do so. Further efforts must be made to access more remote areas and adapt interventions to address these challenges.

³⁰ It is unclear how the COVID-19 crisis has impacted this timeline, if at all.

³¹ VZF, Occupational Safety and Health in the Myanmar Garment Sector. Market Assessment, OSH Risk Assessment and Business Case Analysis. 2019

3) Lack of resources to provide continue support

DOA is limited in its capacity and resources to continue ongoing monitoring services in villages, especially those in more remote locations. This lack of follow-up and support has resulted in poor adoption rates in these areas. Furthermore, COOP groups have struggled owing to a lack of market-driven support. DOA has resources to support four of the eight villages interviewed in FGDs, which are located near Aung Ban, a major market. The remaining villages were visited once during the OSH awareness training, without follow-up afterwards to continue to encourage adoption. The project did monitor these locations through the VCRD LFA; however, a new plan will need to be put in place to support the sustainability of this system.

4) Lack of standardization in training and materials

A key factor highlighted by all tripartite constituents was the need for standardization of OSH-related training and communication materials, designed specifically for each key industry. Currently, the already limited resources at UMFCFI and CTUM are being stretched to develop, adapt and share materials, which they feel would be far more effective if streamlined and provided from one source. As NOSHTC develops in its role, it is anticipated that these concerns will be addressed.

Recommendations

The OPA sought to provide insights into the conditions that need to be in place for sustainable adoption of OSH measures and improvement for each target group, and priorities to enhance the project's positive impact on OSH outcomes. To further reinforce and strengthen VZF's approach across each theme, the following recommendations are provided to address key shortcomings and opportunities identified within each case study and across themes.

Strengthen embedding and mainstreaming of OSH adoption across supply chains through productivity enhancements and economic benefits

Ginger GSC

Pertaining to OSH adoption at the workplace level among farmers, the study found a strong correlation between sustained adoption rates and improvements in productivity. Farmers are most likely to adopt an OSH-related measure or practice, and for a longer period, if they see the benefit in terms of their productivity on the farm. The link to quality is only relevant if there is a connected buyer committed to pay a higher price for better quality. However, farmers are willing to adapt if they are able to work more efficiently. Whether OSH knowledge and practices are being shared via TOT, COOP group management, input retailers, etc., it is essential to focus first on the benefits of productivity. Safety and health, GMP and food safety and quality are benefits that the farmer will recognize once the measures have been put in place, and should add to the sustainability of adoption. Emphasizing productivity and other benefits is most impactful with farmers if done through demonstration, through hands-on practical training and visual aids. Farmers are also eager for more information and support beyond trainings, through materials and follow-up measures.

The farmer COOP group model can be further strengthened and institutionalized via enhancements in productivity within the group and individual members. The success story of Shwe Gin Sein should be shared and there should be replication of best practices with other villages and potential new groups. However, without the connection to a buyer, groups are not likely to materialize in a sustained way. A combination of factors has led to the success of Shwe Gin Sein, including proximity and connection to a key buyer, strong leadership and commitment at the management level and the development of internal procedures to promote and ensure ongoing compliance among members. While the group may have initially been motivated by a desire to sell to higher markets, over time members came to realize the added benefit of adopting measures to improve OSH, food safety, GMP and overall productivity. Locally driven advocacy and leadership from the successful group/s could be mobilized to encourage other groups. The project could facilitate these connections across groups and communities via awareness-raising events and through the support of Snack Mandalay.

Trading houses have great potential to mainstream OSH according to the recommendations laid out by VZF; however, the system must be set up in combination with all prototypes, including the sorting table and the trolley. The study found that the sorting table was not fully beneficial without the trolley, as workers do not want to hand-carry bags further to the sorting table, which is often located in the back of the facility. The trolley was introduced as a viable method for carrying heavy loads, which until now did not have any alternatives. While the sorting table does greatly improve productivity, it must be implemented as part of a complete system, from unpacking to bagging. Additionally, trading houses may adapt the system to their individual needs, as is already the case in the two trading houses visited. Once this system is properly implemented, the next step is to further support facilities to adopt the 5S warehouse recommendations. Additional support is needed to push these advancements to ensure a more clean, safe and sustainable workplace. The facilities would also benefit from a documentation system to be able to track and record improvements in productivity and performance.

While warehouses have made marked improvements in terms of taking steps towards the Lean Factory Design, additional support is needed from outside to fully implement the system. Once factories start to operationalize in the coming season, it is recommended to run simulations through Kaizen and ILO to further

improve the design. It is suggested that a consultant visit the site for a period of five days to observe how the measures are working and to make further adjustments and recommendations to improve the system and address any challenges. It is essential to do this early on, so the warehouse can experience maximal benefit from the improved system. Furthermore, all workers at the facility should be trained in the new OSH management elements stated in the OSH Law and its accompanying regulations once enacted, including on OSH committee setup. As in trading houses, an in-house monitoring system can be set up to help warehouses document and measure improvements and incidents to be able to quantify changes in productivity, performance and worker safety.

Garment GSC

Continue to reinforce the business case for employers and industry to go beyond compliance to an integrated OSH management system that recognizes the economic benefits of a safe workplace. Beyond existing commitments and plans, consider developing tools (i.e. through MGMA) to help quantify losses from accidents and/or returns on particular OSH measures, which would help solidify the business case for adoption for employers.

Strengthen the capacity of service providers to disseminate OSH knowledge and behaviour change through local leadership, follow-up and support mechanisms to track adoption

Ginger GSC

Knowledge-sharing and education on OSH measures via a TOT training model is an effective dissemination method that could be further strengthened through the following:

- ▶ **Break down the training into shorter sections that can be delivered at opportune moments in the season for farmers.** For example, during the spraying period, trainings and demonstrations can be held before farmers begin doing so, so the information is fresh and farmers are able to visually observe the practice through a hands-on approach.
- ▶ **Adapt the language used in training and dissemination materials into other common languages, with greater use of visuals.** Many farmers are illiterate and do not speak Myanmar language, and are thus unable to make use of the information as it is presented. The farmers have asked for more materials to be left with them to refer back to, especially pertaining to critical information on chemical usage, storage and handling.
- ▶ **Identify and mobilize a local champion to be the leader in the village, to further embed adoption by demonstration.** Farmers are most willing to adopt changes if they believe it is working for someone whom they identify with and trust, locally. This leader could be a focal person in connection to the project, and their capacity could be built to be able to continue to support changes into the future. The focal person should be trained and supported to provide ongoing monitoring and feedback.
- ▶ **Implement a unique approach and additional support in remote and hard-to-reach villages with a lack of market access, especially at the onset of the project.** For COOP groups to be successful, they need to be able to link to markets, which is a challenge for those unable to travel longer distances. Further consultations may be required for more vulnerable villages, with the support of local leaders. Without sufficient follow-up and in the absence of market drivers, it is unlikely that these farmers will adopt new measures to a high degree.
- ▶ **Put in place a sustainability plan early on, with DOA, to maintain training efforts, support and monitoring over time to continue to promote sustained adoption at the farmer level.** This can be done through building capacity of the local leader to partner with DOA and other training providers, and where relevant in connection with the COOP.
- ▶ **Improve monitoring systems at the field level, supported by local leaders, to track compliance and address challenges to help farmers achieve higher levels of sustainable adoption.** Monitoring can be built into a mentorship model via trainings to support farmers to further embed practices and make improvements.

The farmer COOP group model could be further strengthened and adapted to more remote areas through the initiative of local leaders/the Executive Committee. If leadership does not exist, it might be set up. However, the model has proven most effective where a strong local leadership was already present. Additionally, the model could be pushed from the buyer side, although this would require a buyer that is interested and committed to a longer process of building capacity of the group.

Input retailers can play a key role in sharing important information with farmers on safe and correct use of agrochemicals; however, to be more effective, they need additional support and materials. Specifically, input retailers have asked for more demonstration materials and handouts that can be given to farmers either in the village or when they visit the shop. Once again, these materials must be highly visual and available in more than one language (if possible). Often, the retailer does not have much time to explain everything to their customers; however, there is a real opportunity for them to share knowledge when the farmer is purchasing chemicals. Therefore, they would like to be able to give their customers something to take home with them. Furthermore, there is potential to partner with and support input retailers in the village sharing sessions held once per year, in which they provide awareness to the community on the products they sell and include OSH knowledge and chemical safety.

Garment GSC

Develop standardized materials (through NOSHTC) targeted to each sector, also targeting various roles (manager, worker) based on respective risk and exposure.

Bring employers and workers together in trainings, to promote shared knowledge and collaboration towards the same goal – a healthy and productive workplace. Continue to support the excellent work being done to empower workers' union members to share information and help drive change at the workplace level.

In future trainings and workshops, **workers would like more practical training where they have the opportunity to practise identifying risks instead of learning by theory.** Workstations could be set up with hazards to be identified and addressed in practice scenarios. Workers feel it is more effective for them to learn by doing. To expand knowledge and impact in the factory, it is suggested to train more TOT trainers to deliver trainings back at the factory. Currently, CTUM has only three TOT trainers. Additionally, it would be effective to hold the trainings in the factory and have them supported by the owner/supervisor, to ensure a common understanding of risk assessment and remediation, including shared roles and responsibilities.

As suggested by UMFCCI, consider **developing a mobile application to serve as a standard platform for partners to gather information on OSH.** As most operation workers are younger and using mobile phones, there could be an opportunity to connect with them directly via a standard platform. According to UMFCCI, most people are visual learners, so the use of imagery and technology via a platform they are comfortable with is very important. Additionally, UMFCCI representatives were quite passionate about the potential of developing online trainings, which could be further explored, especially given the context of COVID-19 and the increased need for online, blended and distance learning.

It was requested by CTUM for NOSHTC, or the most appropriate government body, to **grant accreditation or certification to other training providers, who are already proving trainings but will need certification to meet growing demand resulting from the new OSH Law.**

Further institutionalize organizational structures to build a comprehensive OSH system across supply chains, as part of a growing OSH framework and culture

Ginger GSC

COOP groups require additional support and mentorship to institutionalize internal OSH systems via ICS and SOPs. In interviews, COOP group leaders said they needed the help of a consultant to support them in each step of formalizing their ICS, through a participatory process that can include their inputs in the design, and to provide training on how to develop such a system for themselves. Effective ICS will further support the group to clarify its roles and responsibilities and communicate these to members. This process can be co-led by an external consultant and the Executive Committee within the COOP, and could be designed to empower the strongest local leaders within the group to promote and monitor members' compliance with and growth in OSH standards.

The market-driven approach has also had a large impact on groups' ability to develop the internal workflow and compliance system in accordance with buyer requirements. The right buyer will be committed to providing coaching and mentorship to support the group to establish a system that meets its needs and those of the group. Buyers could provide information and training (presentations) on the importance of OSH for business and the long-term benefits for both partners. An incentives programme may be set up between the buyer and the COOP, whereby additional support, equipment and certifications are provided if milestones are met, giving the group a vision for future development. Together, buyers and VZF partners can further support the certification process for export-oriented ginger farmers through subsidies or grants. Farmers are not currently able or willing to fully invest in this. A subsidy programme could be set up to provide support in the initial two years, with renewal options, to allow farmers to build their own market and be able to sustain this growth financially. Competitive grants could also be provided, through a contest model, to facilitate the establishment of sanitary and first aid facilities on farms to further encourage OSH measures beyond just the buyer's requirements. Currently, Snack Mandalay sends buyers directly to the village to purchase, where they talk to farmers and further encourage compliance. VZF could partner with buyers to be involved in the TOT trainings and other dissemination events. The study found that buyers had strong leverage over farmers to encourage them to make changes that would directly affect their ability to sell and at higher prices. Buyers can help emphasize the importance of OSH compliance from a market perspective.

Garment GSC

Re-evaluate the financing scheme of NOSHTC to cover costs, as currently the centre is concerned with how to cover building maintenance fees. If this is built into the model, consider additional capacity-building around implementation of the budget and business plan in the short, medium and long term.

A recent report on the scale-up strategy for the enhanced EII scheme provides several recommendations, some of which the OPA further reinforces in its findings:

- ▶ **Hold additional awareness-raising activities:** The success of the pilot relates mainly to pilot design, focused on decentralized decision-making and SOPs. The scale-up report found that many workers and employers had very limited knowledge on the SSB and EII benefits. Using various channels of awareness-raising, individually, in groups (mobile clinic operations, visits to factories, training sessions) and in the public (communication materials, pamphlets, posters and campaigns), can add to the sustainability of the SSB towards the envisioned client-centric model. While the OPA identified a positive example in its case study, it is important to recognize that institutional development takes time, and consistency may be key to developing lasting reforms within the SSB.
- ▶ **Increase collaboration with all stakeholders:** The approach of increased collaboration among the SSB, workers' organizations and employers' organizations in selecting scaled-up townships and awareness-raising, may enhance the meaningful participation of all stakeholders and the sustainability of the initiative. It is therefore recommended to continue building the capacity of workers' organization members, as unionized workers' associations are dedicated to the welfare of workers. This was also a key finding in the OPA, which uncovered the power of union workers trained in OSH and their significant role in driving changes at the factory.
- ▶ **Continue supporting the SSB in its expanded efforts to raise awareness among workers and in the community:** The SSB has highlighted the need for greater awareness among employers and workers on the

importance of registering with the SSB (i.e. with registration comes exemption from penalties). To address this, the SSB plans to hold more awareness-raising events and activities. It will distribute communication materials to workers and encourage peer-to-peer learning, which is considered more efficient in reaching a greater scale. Furthermore, it will disseminate information via multiple platforms, including TV, videos on display in the office, stickers posted on Yangon Bus Service and information in hospitals/clinics, markets and GP clinics. Concerns raised by the SSB included that staff are not fully aware of the laws, rules and regulations, and that it will need sufficient time to conduct proper awareness-raising, and hopes that employers will grant them access to do so in the factories.

Recognize and encourage the importance of female leadership in driving OSH adoption and impact at the workplace level

Gender has been an important cross-cutting theme within VZF's work in agriculture, with special considerations put in place in warehouses and processing facilities to ensure a safer and more productive working environment for females. **To further mainstream gender in OSH improvements, engaging women in leadership roles and in discussions analysing risk and improvements is key.** In trainings, it is important to ensure women are not only present but also involved in the monitoring systems put in place. The study found that, in many cases, farmers' wives check farmers before they go to the field. Females were found to be more motivated to adopt changes for the safety and health of the family. Furthermore, the strongest COOP group is led by a female-dominated Executive Committee; this finding should be further explored in terms of the role of women in driving the successful management and promotion of OSH adoption and compliance. In interviews, the group attributed its relative success to its female leadership, saying women share more information with each another and other families across the village.

Optimize programme monitoring and enhance data collection in VZF Phase II

The OPA was asked to prepare a quantitative data collection strategy for VZF Phase II, including recommendations on improvements to the monitoring system and potential partnerships for data collection purposes. Based on initial discussions with ILO and the review of current monitoring materials, the assessment and recommendations are geared to develop a more systematic monitoring system for ginger and a more effective way to measure impact at the factory level for garments.

Overall, the OPA underlines the importance of involving multiple stakeholders across the supply chain in reporting information on expected outcomes and outputs. The key is to align M&E data collection with monitoring frameworks that must be set up and improved within the industry. It is recommended to establish a regular feedback cycle whereby information is shared with employers and project staff, including factors that promote or inhibit progress that can be addressed in real time.

Ginger GSC

The ginger GSC has previously relied on data from the VCRD programme, training mission reports and monitoring sheets to assess changes in adoption. Through a deeper understanding of the project, the OPA was able to identify some gaps in existing data collection processes to make it possible to capture more standardized and reliable data on a regular basis. Beyond measurement of impact, the project could benefit from a monitoring system that can identify factors influencing adoption at various levels and that can transmit this information to management in a timely manner. The hope is that Phase II can adapt and make adjustments to its activities in a responsive way, to ensure greater results in a shorter period of time.

The use of digital platforms in Myanmar has proven very effective in various programmes and settings. The recent telecommunications boom has resulted in smartphone penetration of over 80%,³² reaching even the most remote parts of the country. In other projects, there has been an increase in the use of digital technology to obtain information and monitor progress. Data can be collected digitally using applications such as the Greenway App³³ or existing communication platforms such as Facebook, both for M&E purposes and as a management tool. VZF could benefit from both aspects, through developing its own tool or in partnership with an existing application.

The first stage of this process should be to identify the most important data to be collected and the purpose and timeline for collecting this information. The way the application or data collection tool is set up should be based on the method of collection. A key representative should be identified and made responsible for collecting the information, such as a lead farmer or COOP group representative. The tool could be designed to be simple and direct, with options for both quantitative and qualitative capture of information. Data validation measures can be set up to ensure answers are valid and adequate. There will need to be regular meetings, perhaps monthly, with these representatives to ensure active participation and proper usage of the tool. The same process can be carried out on paper, if desired. The goal of the regular meetings is to develop a regular feedback loop whereby critical information is recorded and shared with project management.

If a mobile application is integrated within the ginger/agriculture GSC as a means to support OSH adoption, compliance and tracking, it could involve various components to address the needs of each actor, including farmers, retailers, traders, processors, buyers and COOP groups. If the leadership of a COOP is comfortable using the technology, a digital platform may help support the group to institutionalize its policies and keep track of members. Traders and processors may find it useful to be able to access training materials, tutorials and further guidance via an application available to them post training. This could also be quite useful in expanding training to all workers as well. If an application is too complicated to set up or for the end user, Facebook is an extremely information-sharing effective platform in Myanmar. Knowledge-sharing platforms and groups could be established between farmers, COOPS and buyers and linked to VZF and DOA for ongoing, real-time support.

Garment GSC

A key gap identified in existing efforts within the garment GSC is the need for follow-up on trainings conducted at the factory or elsewhere pertaining to OSH. As trainings develop and expand through NOSHTC and other partners, it would be beneficial to support the development of a tracking and feedback system for workers and trainers to be able to access information, obtain answers to questions (for themselves or trainees) and report trainings. This would ideally be developed within a mobile application platform that includes digital training materials, to be used during dissemination or in training events, trainer guidelines, the OSH Law and regulations and perhaps a form to fill out each time a training is completed. This information could initially be co-managed by the project alongside NOSHTC, and perhaps other tripartite constituents and training partners, linking in with or even managed by OSH committees. Eventually, this could feed into a larger database covering the scale-up of OSH training and support. Currently, training partners UMFCCI and CTUM are utilizing already strained resources to capture information and provide follow-up to workers; this process could be optimized. All tripartite members spoke of such a system in interviews.

In both GSCs, it is recommended that Phase II of the project continue monitoring efforts on the basis of results-based management, so as to be able to enhance positive aspects identified in Phase I and improve and adapt where necessary. In this effort, it is far more effective to have data in real time, using which key project staff, management and partners can make informed decisions. This further supports the use of digital data collection platforms, which could be designed as an output of the project for use by stakeholders as part of OSH management systems in the future. Consultation with experts in M&E and digital platform development is advisable.

³² Realising Digital Myanmar: Leapfrogging to an Inclusive Digital Economy, The Telenor Group. 2018

³³ <https://www.mmgreenovator.com/greenway-app>





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