

► Knowledge intensive business services (KIBS) gaps in environmental management in the textile and garment sector

Project highlights: Viet Nam

February 2022

► Introduction

The [Decent Work in the Garment Supply Chains in Asia](#) (DWGSCA) project funded by the Swedish International Development Corporation Agency (SIDA) aims to support decent work and sustainability in the garment sector. The project focuses, in part, on environmental sustainability with the overall objective that industry stakeholders can more effectively apply knowledge and tools to promote environmental sustainability across the sector.

As part of this, the ILO organized a consultation in Viet Nam on knowledge and skills gaps on environmental management in the textile and garment sector. The activity was conducted in partnership with Associate Professor Samantha Sharpe from the University of Technology Sydney's Institute of Sustainable Futures; Professor Ian Miles, Emeritus Professor (Technological Innovation and Social Change) at the University of Manchester (Manchester Institute of Innovation Research, Alliance Manchester Business School); and the ILO and Better Work country office in Viet Nam.

The activity used a combination of stakeholder mapping, interviews, and a facilitated workshop with knowledge intensive business services (KIBS) to better characterise technical skill deficits and learning processes for environmental impact assessment and management. This highlight note summarises the activity and key findings, as well as proposing recommendations for future interventions.

► Background

The report *Effective regulations? Environmental impact assessment in the textile and garment sector in Bangladesh, Cambodia, Indonesia, and Viet Nam*, which was written under the Decent Work in Garment Supply Chains Asia project, focused on one of the critical mechanisms of environmental regulation – Environmental Impact Assessment (EIA). The report found that while there were varying strengths and weaknesses in environmental impact assessment in each of the four countries analysed, each of the EIA systems was supported by a strong legal framework with clear delineation of EIA processes and decision-making. Further the report highlighted that weakness in EIA systems were more evident in:

- access to the professionals with technical skills and experience required for the conduct and approval of EIA;
- the availability and quality of baseline data to identify and quantify environmental impacts;
- the lack of awareness and experience of industrial proponents, on the importance of EIA and the need to mitigate environmental impacts, and how this links to sustainable development;
- enforcement activities and enforcement systems; and
- the overall knowledge sharing and learning systems to support the improvement of practices based on past experiences.

These weakness highlight capacity gaps in specific occupations and business services to support high level, technical expertise and services in environmental impact assessment and management. These types of knowledge activities and services are referred to as knowledge intensive business services (KIBS), and are critical in supporting innovation and new knowledge acquisition in workplaces and sectors and are discussed further in section 3.

KIBS help other organisations access needed external knowledge sources, and they are important conduits of knowledge in both developed and emerging economies. KIBS have been shown as important in environmental innovation, as they help client organisations access and integrate complex new knowledge, associated with eco-innovations, that is often outside the bounds of the organisation’s own internal knowledge base (Pace and Miles, 2020).

KIBS are important conduits for knowledge and innovation in emerging economies, although in these economies they may not be as prevalent as in developed economies. Developing markets for KIBS can be an important avenue for increasing innovation (including eco-innovation) and knowledge intensity in sectors and economies. The lack of KIBS, or the lack of quality services from KIBS, can impede progress towards sustainability in these economies, by not bringing and circulating relevant knowledge into the economy, and in the case of this project, into the sector.

The *Investigating KIBS in environmental management in the textile and garment sector* project was initiated in Bangladesh, Cambodia, Indonesia, and Viet Nam to further investigate and understand the presence and the role of KIBS in enhancing environmental management in the textile and garment sectors. This report provides project highlights of the work undertaken in Viet Nam.

The project used a mixed method approach involving desk-based research to map relevant organisations that could be defined by KIBS, and further organisations that provide training, skills development, and accreditation for KIBS. After this initial mapping, a series of scoping interviews with both KIBS and KIBS users was undertaken. The purpose of these interviews was to map the current involvement of KIBS in providing environmental management services for the textile and garment sector, the quality, and outcomes of interactions with KIBS

and their client firms, as well as an understanding of how skill and expertise is developed within KIBS and if and how this expertise is transferred to client firms.

Overview of environmental impacts of the textile and garment sector

Environmental impacts are concentrated at certain points in the supply chain, particularly in four areas:

- the weaving, dyeing and finishing processes in textile manufacturing;
- energy use;
- textile waste associated with garment assembly; and
- the transport emissions throughout the supply chain as materials and then final products are shipped globally.

The most significant impacts, however, are within the first two areas, with the main impacts stemming from the use intensity of water resources, chemical use including toxic chemicals, wastewater discharges and lack of treatment processes, and energy use and high carbon intensity of electricity.

Textile manufacturing is very water- and chemical-intensive. The growth and sustainability of the sector is highly dependent on how resources are managed. The textile industry in general has an enormous water footprint - ranging from agricultural water consumption for cotton farming, to water consumption in textile printing, dyeing, and finishing. The sector is one of the largest users of fresh water in the world, consuming an estimated 79 billion cubic meters of fresh water annually across the entire value chain (United Kingdom Parliament, 2019). The sector is also responsible for severe water pollution by discharging large volumes of waste water containing hazardous substances into rivers and water courses without appropriate treatment. It is reported that 20 per cent of industrial water pollution globally is attributable to the dyeing and treatment of textiles (EMF 2017).

The carbon footprint from the sector is also significant, accounting for 6–8 per cent of total global emissions (Niinimäki et al. 2020). In 2015 this equated to emissions of 1.7 billion tons of carbon dioxide (United Kingdom Parliament, 2019), which is more than all international flights and maritime shipping combined (Sumner 2019). The numbers are not surprising given the fact that over 60 per cent of textiles are used in the apparel industry and a large proportion of apparel manufacturing occurs in China and India. India relies heavily on hard coal and natural gas for electricity and heat production, sharply increasing the footprint of each apparel product. Switching to renewable energy, such as solar, hydro or wind power, can significantly reduce emissions and improve sustainability linked to textile production.

Importance of environmental management activities

Environmental management is one of the ways we manage resources for sustainable development. Environmental management activities usually consist of two main sets of activities: impact assessment, assessing how a new activity going to affect the environment; and ongoing monitoring and performance improvement, assessing how an ongoing activity or industrial process impacts the environment, in terms of the resources it uses and the products it creates both physical commercial products but also waste products – waste water, emissions, solid waste and so on. There is also a third group of activities – how we rehabilitate sites or change land use patterns – these activities are not often considered with the same level of attention, and usually become the concerns of generations in the future. Climate change and the need to achieve the sustainable development goals are further emphasising the critical need for effective environmental assessment and management.

Environmental management involves many actors. In the textile and garment sector there are a range of actors involved – government departments and agencies responsible for setting up the laws and regulations

for environmental impact and monitoring assessment; industrial enterprises that develop their proposals for sites, and must understand how they will impact the environment, and then develop strategies to mitigate and monitor these impacts. Other actors include civil society actors and citizens who play a role in identifying whether existing rules and regulations are strong enough and include all the relevant facets needed for effective environmental management. KIBS also play an important role in this system – providing technical expertise in environmental management, identifying solutions and innovations that help us mitigate environmental impacts and improve performance, and monitoring and certifying environmental management practices.

How well industrial and the natural environments can exist, is affected by the environmental management system in many ways. Weaknesses in any part of the system can weaken the whole system. This makes it critical to understand the role of KIBS in the textile and garment sector, and how KIBS and the environmental management services provided by professionals within KIBS businesses can be strengthened to support the wider adoption of enhanced environmental sustainability practices in enterprises across the sector.

Overview of environmental regulations including environmental impact assessment in Viet Nam

Environmental regulation and policy exist at multiple levels of government in Viet Nam and have rapidly evolved in the country over the last 30 years. The Law on Environment Protection 2020, which came into effect on 1 Jan 2022, serves as an overall legal framework. It has increased the country's commitments by matching environmental policies and regulations with international rules and standards. The Law has rapidly evolved this century, with the initial 2005 version representing a significant evolution in the environmental management of industrial development in Viet Nam (BetterWork, 2019). The Law was further revised in 2014.

The Law is the legislative foundation and central tool for environmental management of industrial development and the impacts of such development on Viet Nam's natural resource base. It provides for both EIA of planned proposals as well as regulations for environmental management systems (EMSs) for different stages of operation, and it links to other legislative frameworks and international agreements, including the Law on Water Resources, the Law on Chemicals and Viet Nam's progress in implementing the Basel and Stockholm Conventions 7.

There are two pathways for considering the environmental impacts of proposed projects and developments in Viet Nam. For projects that are deemed to have high levels of environmental impact or are in sensitive areas, a comprehensive EIA is required. For smaller projects a simpler process, including the preparation of a Commitment to Environment Protection statement is required. In the textile and garment sector, all wet processing activities and all organizations undertaking washing and bleaching processes are required to complete a full EIA. Larger non-dyeing facilities, such as weaving factories, are also required to complete full EIAs.

When required, the EIA is carried out by an independent consultant or KIBS paid for by the proponent. There is a small pool of consultants/KIBS able to complete EIAs; and the fact that the same pool of experts is also drawn upon to be members of the EIA appraisal committee that assesses these reports means there is a high risk of conflict on interest in this process, despite being undertaken by independent experts (Clausen, Vu, and Pedrono 2011).

Other stakeholders highlight that EIAs are not undertaken at a stage of project development when they could meaningfully contribute to reducing or mitigating environmental impacts as the requirement for EIA comes after several critical decisions have been made such as land allocation, financing, and in-principle agreement for development in a particular type of location. Among stakeholders, the capacity and skills of practitioners is also considered an issue in the effective undertaking of EIA. The capacity of practitioners has impacts on the effective scoping of issues for consideration in an EIA, quantitative impact assessment methods, coordination

of public participation activities and development of environmental management plans.

An important addition to EIA policy in Viet Nam with the introduction of the Law on Environmental Protection in 2005 was the extension of EIA to all stages of industrial activity, from project proposal and pre- construction, through to operation, and then closure (Clausen, Vu, and Pedrono 2011). This represented a strong legislative advance, but available evidence suggests weaknesses in the monitoring and enforcement of this requirement, particularly in the case of retrospective EMS requirements for businesses that are already operating. For example, in a recent study of several large factories that are part of the Better Work programme, non-compliance with environmental regulation was as high as 70 per cent (Better Work 2019).

► The role of knowledge intensive business services (KIBS) in environmental management and eco-innovation

What are KIBS?

Knowledge-Intensive Business Services firms, KIBS, are private businesses, whose main function is to apply their expertise to help with problems that other firms (and, often, organizations in the public sector and charitable foundations) encounter in their business processes. National accounts and similar statistical systems place most KIBS firms within the category of “professional, scientific and technical services”. This category includes classical professional services such as legal and accountancy services, along with relative newcomers such as management consultancy, advertising, and marketing services. It also includes other KIBS with much more emphasis on sciences and technologies such as engineering, technical testing, industrial design, computer, and R&D services. Within these broad categories, there are usually some KIBS firms offering a wide spectrum of relevant services, while other specialize in one or a few activities. While practically all types of KIBS have shown steady growth in terms of employment and value-added in Western economies over the last fifty years, it is the more technology-oriented KIBS that have displayed rapid growth in recent years. KIBS are also rapidly developing in prevalence and importance in the global south (Andersen et al, 2018).

Unlike some other knowledge-intensive services, such as telecommunications, financial or insurance services, most KIBS have few individual consumers and households as customers. (Legal services are the main exception here, since many lawyers and notaries serve individuals, though the sector has a large business orientation in many countries.) KIBS firms’ workforce features very high shares of professional employees, typically with higher education credentials and in receipt of relatively high wages. (In contrast, other knowledge-intensive private sector services also frequently employ large numbers of less skilled operational and sales staff.)

KIBS firms are mostly located in large urban centres, near to their clients’ head offices. (The exceptions are mainly those based in regions where a particular client industry is active, or smaller KIBS firms providing routine services to local markets). Most KIBS are fairly small businesses, with the exception of subsectors requiring extensive and expensive equipment (such as R&D services). KIBS firms are often microbusinesses of one or very few professionals supported by a small office staff; sometimes these are supplying some extremely specialised or novel service, but more often they are mainly offering more basic knowledge intensive service activities (KISA) inputs to local markets. Clients will often prefer to use a local service supplier, for reasons of convenience, cost, and trust. However, a small number of KIBS are large firms, and these may make up a large share of KIBS’ employment. Most KIBS sectors feature a few very large firms, and these are often transnational businesses. These large KIBS firms mainly service large business clients.

KIBS in general can be valuable agents disseminating knowledge of best practices and new approaches across the economy. Transnational KIBS can play a global role here and put effort into keeping up-to-date and aware of emerging trends. Transnational KIBS are active even in areas where the problems confronted vary a great deal according to national circumstances (such as, where they have to do with local laws and regulations, with distinct cultures and languages, and so on).

Why use KIBS?

The professionals that constitute large shares of KIBS firms’ workforce are experts in management, accounting, engineering, marketing, environmental management, computing, and other specialist services. Of course, such skills also exist within all sectors of the economy including government and public services. All but the smallest businesses have managers, and larger firms can feature several levels of management. Many firms

employ their accountants and engineers, their own marketing and computer staff, and so on. These personnel provide knowledge-intensive services on an in-house basis for their employers. But when problems require external inputs, organizations become clients of KIBS firms, who are specialised in these service activities. (The term KISA is used to describe knowledge-intensive service activities, that can be purchased from KIBS or supplied in-house.) This can be undertaken purely for efficiency reasons, outsourcing KISAs to KIBS in order to save costs - such as when services are required infrequently, there is less logic in having relevant employees on a full-time basis. The "outsourcing" of business processes often reflects clients deciding that they can get better, or cheaper, or more flexible services from external sources than from their in-house staff. They may also use KIBS to complement existing in-house capabilities, for example when there is a sudden intensification of a problem, or when external legitimation is required (as in auditing company accounts). Often, too, there are new challenges confronting clients, which they cannot tackle solely with in-house expertise. KIBS can provide clients with help in dealing with new or rapidly evolving problems - for example, in how to make effective use of new technologies. KIBS may be more familiar with rapidly evolving bodies of knowledge and have experience of emerging best practice across other organizations.

In complex and/or rapidly changing economic circumstances, new knowledge is required by many organizations, to enable them to confront new challenges and opportunities. KIBS thus help clients deal with their evolving operating environments. As economies and technologies undergo rapid change, demand for such specialized knowledge can only grow. Furthermore, as already noted, KIBS may also be enlisted where external inputs are required as providing independent viewpoints and assessments. Such external inputs may be needed to meet regulatory requirements, or to satisfy stakeholders (ranging from the general public to representatives of different branches of a large organization).

How are KIBS used?

KIBS produce their service outputs for their clients in a process; their contact with clients extends over the course of this process. This contact varies across the process (often it is greater near the beginning and end of the process), and may be more or less intense for different types of service. Some KIBS can provide services with relatively little input other than the supply of data from the client; they process this data (and relate it to material derived from other sources) and prepare a report or complete a standard template for the client's use. Such relatively hands-off activity, with limited interaction between KIBS and client, is common in areas where the problem is a standard one, and one which the client confronts in a fairly standard way - for example, an accountancy service prepares a set of annual tax returns, or verifies the company accounts, for the firm to provide these to authorities or shareholders.

Where problems are more complex and unique, KIBS and the client firm can work extensively together. In these cases, significant knowledge generation and transfer can occur between the two businesses and personnel involved. These interactions can be innovative intensive and can generate new novel solutions - whether processes, products, and services, that can have value beyond the initial project/ problem the KIBS were engaged to address.

► Empirical findings from Viet Nam

Mapping the role of KIBS in the current system

The textile and garment sector is a significant sector in Viet Nam in terms of industrial output, exports and employment, and has rapidly grown over the past decade. Vietnam's export volume doubled in the past 5 years. In 2020 it became the world's second largest garment exporter, with the export value rising continuously. The textile and garment sector is one of the major beneficiaries from Viet Nam's free trade agreements (FTAs).

At CoP 26, the Vietnamese Prime Minister announced the country's net zero target by 2050. Vietnam aims to reduce emissions by 9 per cent by 2030 with national effort (domestic resources) and 27 per cent with additional assistance. The move towards net zero will significantly change Viet Nam's environmental policies.

A series of interviews were undertaken with key stakeholders in textile and garment sector and KIBS sector in Viet Nam to assess the current state of environmental management services working in the textile and garment sector. A workshop with relevant stakeholders and ILO constituents was held on the 23 November 2021. These are the high-level findings of the interviews and workshop:

- The current environmental regulatory system has rapidly evolved but it is highly complex, with different types of legal regulations and overlapping license types. In some instances, regulations are fragmentary and unclear, so it takes a long time to work out what are individual enterprises' responsibilities and how they can comply with these regulations.
- Environmental management is strongly influenced by the industrial park in which individual enterprises are located, with the ambitions, regulations, and infrastructure available in these industrial parks impacting the sustainability options available for individual firms.
- For the firms' interviewed, environmental management is mainly undertaken with internal firm human resources, with many enterprises having an environmental or CSR unit within the business. Where external environmental services are purchased, these are usually for monitoring services, and on an ad hoc or periodic basis. However, in the workshop discussions, the differences between small and large firms were highlighted, with smaller firms seen as not having access to specialist in-house human resources for environmental management, or regular monitoring activities.
- EIA and ongoing environmental management activities are seen as critical elements of environmental regulations, but interviewees also highlighted that current EIA practices do not yet support continuing improvements/efforts for environmental sustainability but are seen as a minimum step that businesses are required to take.
- The availability of skilled personnel to undertake and improve environmental management was identified as a major barrier in enhancing the sustainability of the sector. Expertise in inputs such as textile chemistry and chemicals management, and materials selection was mentioned. Workshop discussions emphasised that government and firms, service suppliers and manufacturers, require different sets of capabilities to communicate what is going on in the regulatory environment and what changes are required in the future.
- In terms of developing internal environmental management capabilities and procuring external expertise, enterprises relied on a range of strategies. Some enterprises use external expertise and develop internal capacity building strategies, including through staff self-education, collaboration, and cooperation with other agencies, and learning from other colleagues. Other, larger, firms can directly recruit these resources into the business. Building awareness and knowledge of environmental sustainability, as well as the expertise for environmental management will take time, and investments in skill and enterprise development at multiple levels throughout the sector and workforce. Interviewees highlighted that these skills, and the demand for them, will rapidly increase in the short to medium term (5 years).

Project highlights: Viet Nam

- Brands and customers were seen as key drivers in motivating increased environmental sustainability. Together with other actors, such as NGOs, they are playing a key role in building awareness of environmental impacts and effectiveness of current environmental regulatory systems.

► Emerging issues from the workshop

During the workshop, participants were asked to list down all the various drivers of change that could be expected to drive change for environmental services in the textile and garment sector over the coming decade. These change drivers were categorised using the PESTLE matrix, where PESTLE stands for Political, Economic, Social/ Organisational, Legal, and Regulatory, and Environmental factors. The full list of drivers of change are listed in the Figure 1 drawn from the workshop results.

There was high degree of agreement regarding the importance of political drivers in enhancing the importance of environmental sustainability in the sector, especially at a time when the sector is considering further vertical integration and more textile manufacturing, which has a higher environmental impact. The main identified Political drivers were Viet Nam's recently announced emissions reduction target and the consequential impact of this target into domestic energy and energy efficiency requirements for industry, but also environmental sustainability requirements under free-trade agreements.

Supply and demand factors were identified in the Economic drivers, including increasing process of raw material and supplies, but also increased willingness by brand and consumers to pay more for environmentally sustainable garment production, and incentives to increase the availability and accessibility of new equipment and processes; and the impacts of other sector-wide trends including requirements for increased circularity. Social and organisational drivers of change include increased awareness and action on environmental sustainability by key decision makers, including policy makers; and increased internal capacity for environmental management within factories through their bringing more specialists into permanent staff.

Key technology drivers included more access to renewable energy and energy efficiency equipment, and also the creation of enabling environments for energy transition through the adoption of new national policy frameworks for renewable energy and emissions reduction. The availability of recycling technologies and new fibres and materials with recycled content was also a driver of change.

Legal and regulatory drivers were focused in two directions: enhanced policy to support environmental management, monitoring and compliance at both individual factory level and at industrial park level. This includes a focus on developing appropriate metrics for monitoring and reporting. Another identified driver was enhancing the quality and availability of environmental service providers.

Three Environmental drivers were identified climate change, and climate action, but also the role of major disaster events such as an industrial accident or natural disaster that can trigger major change in environmental management in the sector.

Workshop participants were then asked to categorise these drivers of change into a quadrant that considered the likelihood of the driver occurring (high likelihood vs low likelihood) and the impact of the driver on the demand for environmental management services (high impact vs low impact). Some new drivers were added, and others augmented, in this process. Figure 2 provides a summary of this categorisation by stakeholder participants.

PESTLE - DRIVERS OF CHANGE

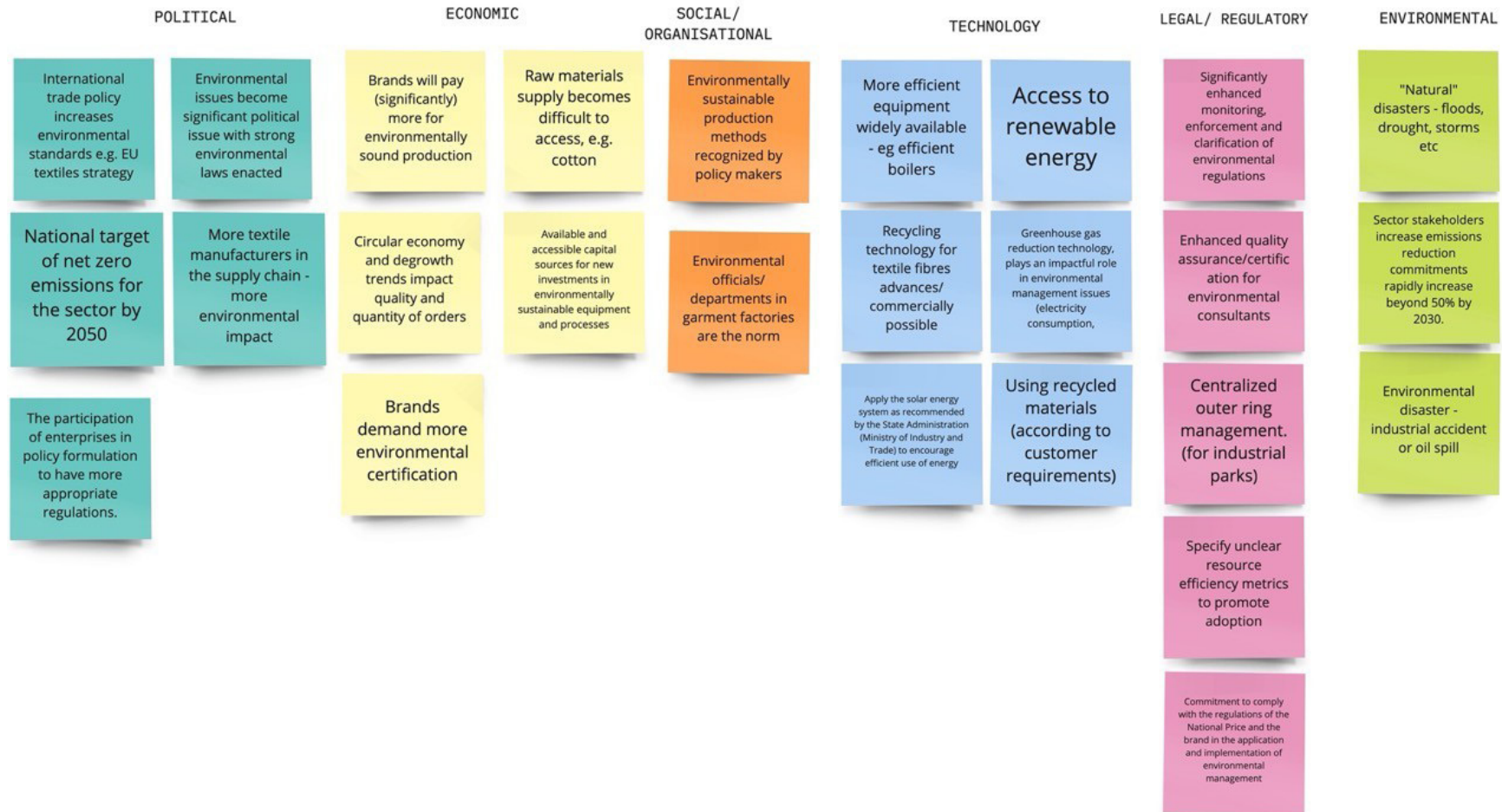


Figure 1. Drivers of change for environmental management services as identified by workshop participants

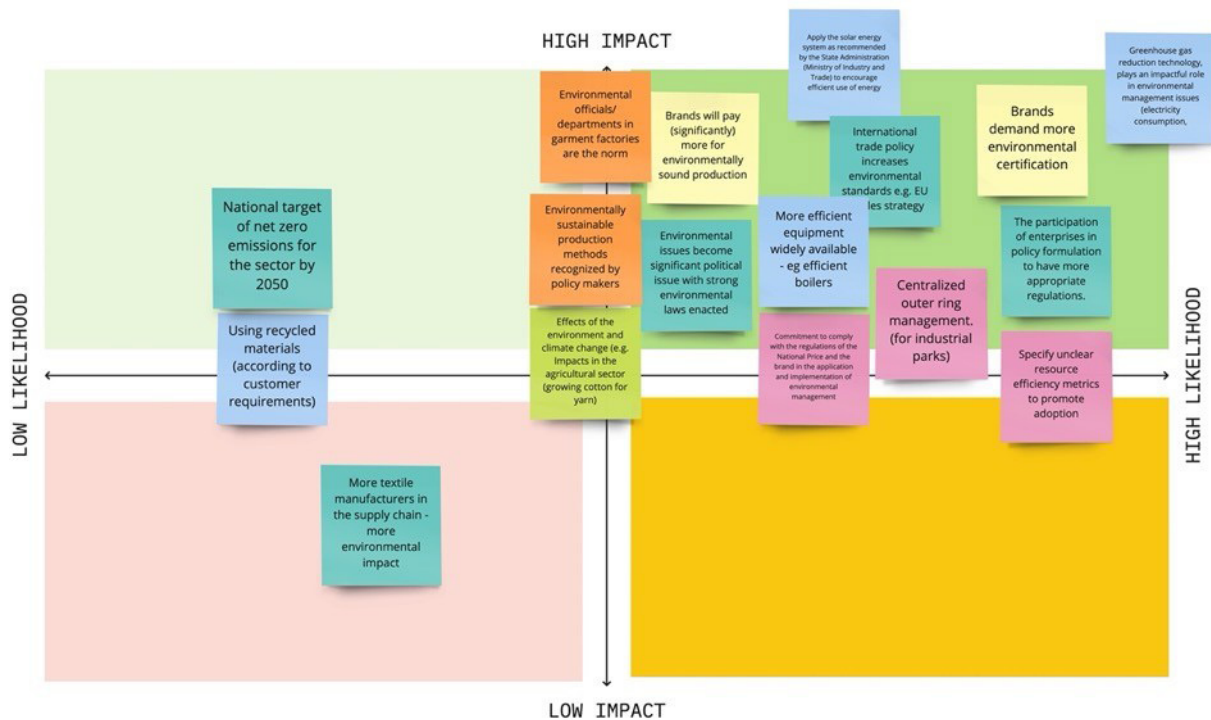


Figure 2. Prioritisation of high likelihood and high impact changes by workshop participants

The drivers of change that workshop participants identified as having the highest impact and highest likelihood of occurring over the coming decade emerge from several sources. The strengthening of environmental policy - both as a political priority and in practice with the implementation of new policy frameworks to support energy transition and energy efficiency opportunity uptake - emerged as a pair of drivers with high impact and high likelihood. This was also linked to strengthening requirements for the environmental sustainability of exported products under various free trade agreements as well as through brand-led activities for more stringent environmental certification, and willingness to pay a price premium for environmentally sustainable products. Overall, awareness raising of the importance of environmental regulations and practices as well as their adoption and implementation by stakeholders in the sector was seen as high impact and high likelihood change that would increase the demand for environmental management services.

Drivers of change that were seen as less likely or less impactful include the implementation of a net zero target for the sector by 2050. This driver was identified as high impact, but of low likelihood, perhaps a signal of uncertainty around pathways for decarbonisation in the sector. Increasing use of recycled materials was also seen as impactful, but again of low likelihood, and as tied into technological uncertainties about the use and availability of recycled fibres and materials for textile and garment production. Overall, the fact that Viet Nam was progressing into more textile manufacturing - where the environmental impacts are higher - was not seen of itself, as likely or as a high impact driver of additional environmental management services.

► Conclusions and next steps

This work has highlighted important factors and drivers of change specific to the use and availability of environmental services in the Vietnamese textile and garment sector. As a next step this work is being replicated in three other Asian textile and garment producing countries – Bangladesh, Cambodia, and Indonesia. This replication will allow us to understand regional and national level drivers and needs and highlight where and how collaborative and context-specific assistance can be provided by ILO, other international organisations, and industry sector actors more broadly in strengthening the environmental management systems and practices of the sector.

It is inevitable that the focus of environmental management activities will change in the decades ahead, and it appears to be quite likely that the pace of change will be greater than has been the case in earlier years. Two factors linked to climate change seem particularly important here. Both climate action – and Viet Nam’s recent 2030 carbon emissions targets were identified as a significant change driver – and the physical impacts of climate change, will result in significant change in the composition and demand for environmental management services. Indeed, these two factors will drive change in the volume and type of textiles and garments produced globally, as well as how they are produced.

A shift to more sustainability offers considerable opportunities as well as creating huge challenges. Nevertheless, specific firms and industries will find the transition process problematic. Some of the problems are associated with uncertainty and lack of clarity –the clarity and ease of compliance with environmental regulations was highlighted as an issue for the sector in Viet Nam. It is important that the regulatory process itself evolves to engage and respond to industry stakeholders, informing them both of its broad ambitions, and of the emerging sequence of rules, regulations, and practical measures.

The textile and garment industries can communicate as to where better information and messaging is required and inform government of the challenges faced by the industry, and policies that could make transition easier to achieve, and more rapid. KIBS can play many roles in working with businesses to develop solutions to the new problems they confront, and it is thus important that the country can access high- quality KIBS professionals.

Government will need to empower regulators to define and enforce standards, to communicate these standards to industries, and to be able to ensure substantive rather than superficial compliance. Systemic change is liable to involve not only encouragement of individual actors to fund much more sustainable activities, but also to provide support for infrastructures (water and water filtration systems, and transport systems, and so on.) that are both resilient (not least to extreme weather) and themselves facilitating the transition process. For longer-term progress, research and development activities aimed at improving production and distribution systems will be vital. More immediately, the developments discussed above will require the training of skilled personnel capable of implementing upgraded environmental management systems, both in their technical and organizational dimensions. Such skills will be required both within the garment sector businesses, and in the external consultancies (KIBS) servicing them and helping them deal with the problems of change. Similar skills will be also required among regulatory bodies, and a basic knowledge of such tools as environmental impact assessment will be required among a widening range of managers and policymakers.

External (international) actors may play important roles, too, not least the various international brands and buyers that are major purchasers of products from the garment and textiles businesses, and that are increasingly requiring high environmental management standards on the part of their suppliers. These actors can help bring knowledge of international best practice to bear, including overseas and head-office practices in terms of environmental management and monitoring and reporting of environmental performance and

transition towards more sustainable activities. Similar roles may be played by international organizations, including (but not only) those associated with UN agencies.

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► Annex

► Participant profiles



	<h4>Professor Ian Miles</h4>
	<h4>Dr Cristina Martinez</h4>
	<h4>Dr Samantha Sharpe</h4>
	<h4>Ms Laurel Anderson Hoffner</h4>

Ian Miles is Emeritus Professor (Technological Innovation and Social Change) at the University of Manchester (Manchester Institute of Innovation Research, Alliance Manchester Business School). He was trained as a social psychologist, but has worked for some decades on issues of innovation and foresight, conducting numerous research studies and teaching at postgraduate and professional levels. In innovation studies he has focused especially on information technologies, innovation in service activities, and in the social and economic roles of KIBS (knowledge intensive business services). He has published extensively, both with commercial publishers and academic journals, and much material is available as open source (various public domain reports, and so on.).

Dr Cristina Martinez is the ILO's Senior Specialist in Environment and Decent Work. She is part of the ILO Global Team on Green Jobs and the Green Initiative. Previously she has worked at the following organizations: (i) the Asian Development Bank (ADB) as an Education Specialist (skills and employment); (ii) the Organisation for Economic Cooperation and Development (OECD) where she held positions as Advisor of the Knowledge Sharing Alliance at the Secretary General Office and Senior Policy Analyst at the OECD Centre for Entrepreneurship, SMEs and Local Development (CFE); and (iii) Western Sydney University as an Associate Professor.

Dr Samantha Sharpe is a Research Director at the Institute for Sustainable Futures - University of Technology Sydney. She is a highly experienced social scientist and policy analyst. Her research focuses on the intersect of the 'world of work' and climate change. This includes research understanding the process of business and industrial transition to sustainability, at the firm, sector, and labour market levels, as well as industrial and occupational change associated with the green economy.

Ms Laurel Anderson Hoffner is an ILO consultant who focuses on gender equality and environmental sustainability. In her work with the ILO, she provides technical inputs and partnership support for projects and initiatives that support Just Transition, green jobs, and improved sustainability in international supply chains. She has a master's degree in International Development from King's College London. Her background includes roles in non-governmental and international organizations, where she has been responsible for program management, partnerships, research, coordination, and technical review.

	<p>Mr David Williams</p> <p>David is the project manager for the ILO-Sweden Decent Work in Garment Supply Chains Asia project, a regional initiative launched in 2019 aimed at strengthening industry knowledge and coordination to promote decent work and sustainability in the apparel supply chain.</p> <p>An economist by training, David has almost 15 years' experience in the labour and supply chains field, having worked in a variety of technical and managerial roles for the ILO in Geneva, Bangkok, Phnom Penh and Ho Chi Minh City.</p> <p>Between 2014 and 2018, David was the Deputy Programme Manager for Better Work Vietnam, a UN-World Bank programme supporting labour standards and trade competitiveness in the apparel sector. Part of a 50- strong team advising more than 500 factories, he oversaw a variety of portfolios including strategic planning, compliance reporting, training services, and organizational sustainability.</p> <p>David holds an MA in International Politics and Development from the University of Leeds and BSc in Economics from the University of Birmingham.</p>
	<p>Ms Nguyen Ha</p> <p>Ms. Nguyen Hong Ha is the Programme Manager of Better Work Viet Nam. She joined Better Work Programme in 2013 and was the Head of Better Work in Asia from 2018 to 2021. Better Work is part of a unique global partnership programme between the International Labour Organization (ILO) and International Finance Corporation (IFC). It aims to support garment and footwear businesses to boost competitiveness through improved working conditions and compliance with the international labour standards and national labour law.</p> <p>Before Better Work, Ha worked for the Vietnam Chamber of Commerce and Industry (VCCI), where she held position of Deputy General Director of VCCI Hochiminh city cum the Rector of the College for Business Administrative Managers of VCCI. Ha was the official member of the Labor Arbitration Council of Hochiminh city.</p> <p>Ha has a master's degree in international business from the University of New South Wales, Australia and a B.A. from the Hochiminh city University of Economics.</p>
	<p>Ms Thanh Nguyen</p> <p>Thanh Nguyen is an Enterprise Advisor at ILO/Better Work Viet Nam. Her works are concentrated on improving working conditions and boost the competitiveness of apparel businesses through core services of assessment, advisory and training. She also coordinates several environmental projects under collaboration between Better Work Viet Nam, IFC, ILO. She also spent more than 15 years working in corporate responsible compliance (CSR) field where she has rooted with sustainability and compliance works in apparel, footwear, and food processing.</p> <p>Thanh also has passion working on environmental protection and conservation. Prior to ILO/BWV, she was a project coordinator for a 4- year Climate Change Adaptation project at International Union for Conservation of Nature (IUCN). Thanh holds a master's degree in Environmental Management from the Viet Nam National University, HCMC University of Technology, and a BS.c in Biology from Viet Nam National University, HCMC University of Science.</p>

	<p>Ms Anh Tran</p> <p>Anh Tran works for Better Work Viet Nam as Enterprise Advisor. Anh Tran is an experienced CSR consultant and qualified auditor (SA8000 and ISO 9001:2015) with experience in the footwear, apparel, wood, ceramics, and agriculture sectors, she has also worked on assessment, advisory and training initiatives for a number of leading audit firms in Vietnam since 2010. Prior to this, she also worked as a legal advisor to multinational company and law firm in Vietnam. Anh Tran holds a BA in Law from HCMC University of Law, and a Master Degree in International Management Consulting from University of Applied Sciences and Arts North-western Switzerland & HCMC University of Technology.</p>
	<p>Mr Minh-Quang Nguyen</p> <p>Mr Minh-Quang Nguyen is an ILO consultant and PhD student in Economics at the Université de Toulon, France. His PhD thesis is on the topic of Green growth in emerging countries. He was previously a lecturer at the Vietnam University of Commerce where he taught economics courses for eight years.</p>

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