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Opportunities for a Just Transition to environmental sustainability and COVID-19 recovery in the textile and garment sector in Asia

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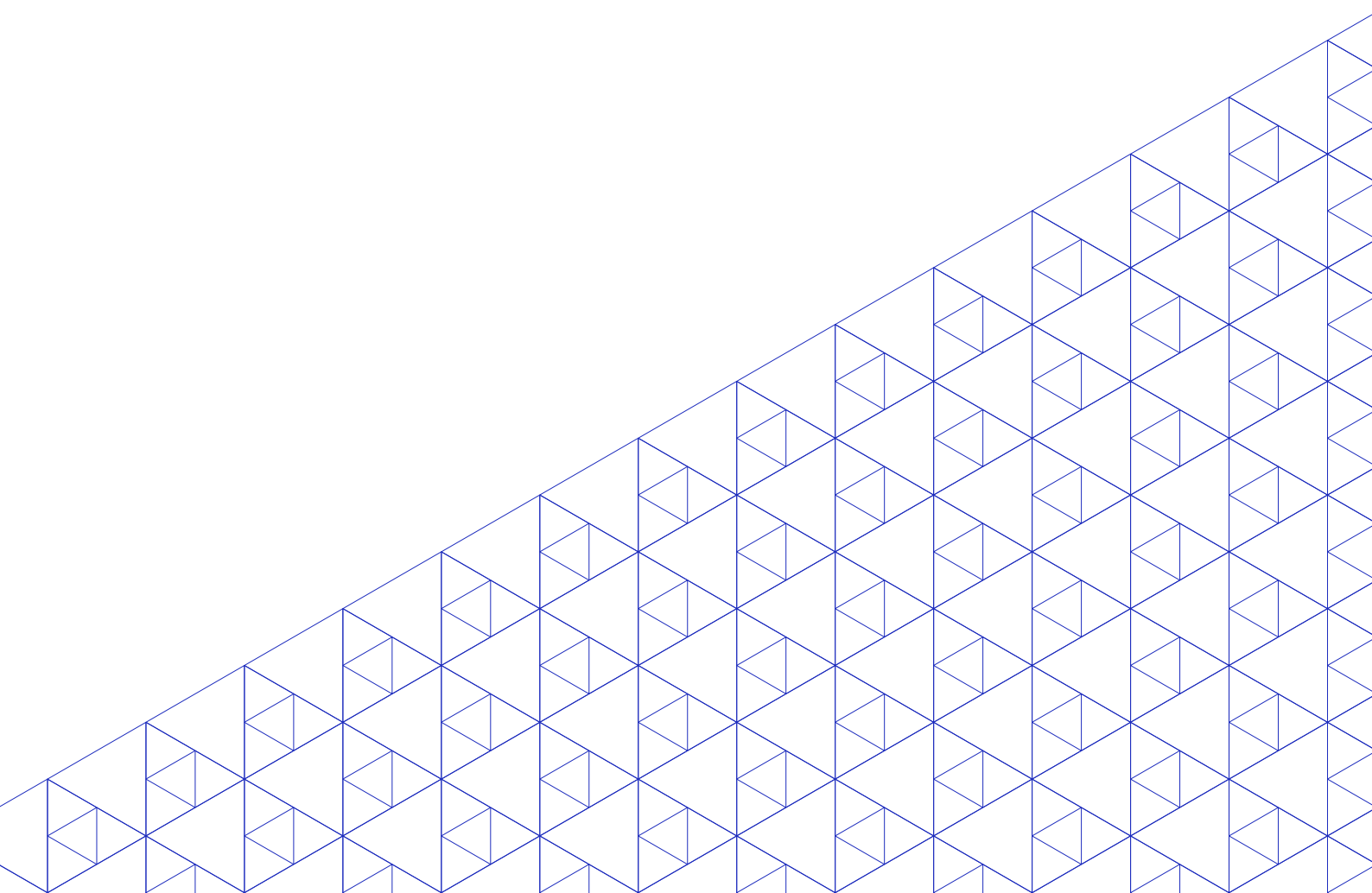


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Authors / Samantha Sharpe, Katarina Veem, Karina Kallio, Maria Cristina Martinez Fernandez





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Abstract

The impact of COVID-19 on the textile and garment sector in Asian countries has been and continues to be immense, and may last for a very long time. While countries in the West are emerging from the pandemic with some optimism that life will soon return to pre-pandemic levels, new COVID-19 outbreaks in Asia are pushing back hopes for a recovery in 2021 and the health and mental effects in communities are challenging pre-pandemic achievements related to the United Nations' Sustainable Development Goals. This paper examines the impact of the COVID-19 pandemic on the textile and garment sector, specifically the employment and enterprise impacts, and contextualizes these within the wider development impacts of the sector – social, economic and environmental; both positive and negative – to ask the question: how sustainable is the sector?

A Just Transition for the garment industry in Asia is critical as the sector seeks to recover from the impacts of COVID-19. This recovery comes also in a critical decade of action for achieving the Paris Agreement and the Sustainable Development Goals, both of which will also alter the future of work in the sector. The pandemic has highlighted that vulnerability is not equally shared across the supply chain, so too for carbon emissions, with emissions concentrating in specific production activities, and these activities geographically concentrated in certain hot-spots – areas that are both highly reliant on the textile and garment sector, but also highly vulnerable to supply chain disruptions and other impacts on the sector. This creates a strong spatial dimension to the need for planning for a Just Transition in the industry; hot spots in local areas can be turned into opportunities for accelerated community action to “build back better”.

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▶ Introduction - A sector that is calling for Just Transition action now

We are now in the third year of the COVID-19 pandemic, and the health impacts of the pandemic are showing no signs of abating. Many countries around the world are experiencing second and third waves of infections, and these are being followed by various forms of lockdowns, shutdowns and stay-at-home orders. The health impacts of the pandemic in Asia are more acute in this second year, and the economic and employment impacts continue to deepen.

This paper examines the impact of the COVID-19 pandemic on the textile and garment sector, specifically the employment and enterprise impacts and contextualizes these within the wider development impacts of the sector – social, economic, and environmental impacts; both positive and negative – and to ask the question: how sustainable is the sector?

Over the last 30 years the textile and garment sector has created millions of jobs, mostly for women and in the formal economy. The sector has provided opportunities for rapid industrialization with associated economic development and internationalization through trade, assisting low-income countries to become middle-income countries and bringing millions of people out of extreme poverty. However, the environmental impacts of the sector are pronounced, including the resource intensity of production – energy, land, water and chemicals – and the creation of waste streams – waste water, solid waste, toxic waste and air emissions. The social impacts are also mixed. Although the sector has provided employment, most of that employment is low-skilled and low-wage; the work is associated with high levels of overtime, poor working conditions, gender inequality and gender-based violence and harassment; and there are limited opportunities for career paths and skills development that could lead to more secure and better paid employment. The sector includes vast numbers of people in “working poverty”, that is, workers who cannot earn enough income to cover their basic household expenditure (Anner 2020a, United Nations 2020).

The precariousness of the sector was already being highlighted before the pandemic, but the employment and enterprise losses associated with COVID-19 are reversing the transformational history of socio-economic development and employment in the textile and garment sector. An industry that has stimulated employment and livelihoods across the world is crumbling, with opaque global supply chains where labour standards violations and modern slavery are widespread and where production activities cause significant land and water pollution in countries with extensive poverty and significant population density (Niinimäki, Peters et al. 2020, Cole and Shirgholami 2021, ILO 2021a, ILO 2021b, ILO 2021c).

After more than two years of COVID-19, there is significant evidence of workers and enterprises in the production links of the global supply chain bearing the heavy costs of losses and disruptions caused by the pandemic, highlighting once again the deep inequality and power asymmetries in the global supply chain. These COVID-19-triggered impacts are calling into question the sustainable development potential of the textile and garment sector and the possibility of an accelerated Just Transition in the sector. The need to reduce negative social and environmental impacts of the sector to address climate change, global resource constraints and meet the challenge of the Sustainable Development Goals (SDGs) has not diminished. In fact, prioritizing social and environmental sustainability as part of the COVID-19 recovery is critical. There is not sufficient time, or even the possibility of waiting for the sector to return to some semblance of pre-pandemic “normal” before acting on these issues.

This paper discusses how and why environmental sustainability should be a central component of our “build back better” strategies, and why we need to evolve our existing structures and mechanisms for supply chain governance to catalyse effective change to social and environmental sustainability across the sector. The existing structures are not delivering; recent analysis of the effectiveness of private regulation on labour standards in the sector shows little to no improvements over the past three decades (Kuruville 2021). Even

in the time period of the pandemic, the low price-point competitiveness that has driven the sector and led to excessive pressure on social and environmental sustainability standards has increased. Manufacturers surveyed in late 2020 from a range of production countries, including Bangladesh, Cambodia, India, Indonesia, Myanmar, Pakistan, and Viet Nam, state that, on average, prices received for the same items in 2019 have been reduced by 12 per cent in 2020 and payment times have been increased (Anner 2020a). This price reduction means manufacturers are likely accepting orders below cost, which has a direct impact on how they pay employees and comply with environmental regulations and standards.

Across Asia there is a pressing need for economies involved in production activities to seriously analyse the risks and opportunities presented by de-carbonization and increased social and environmental sustainability in the sector and to collaborate to actively shape the role the region will play in the sector going forward. The process of a Just Transition – achieving sustainability transitions in a way that is “just” to the workers and communities involved, ensuring no one is left behind – is a relevant concept in this current situation. The emerging policy and social dialogue surrounding the Just Transition process provides a useful guide for structuring recovery actions and investments to enable a sustainable recovery of the sector.

▶ 1 The globalized garment supply chain has Asia as its epicentre of production and exports, but environmental deficits are evident

The garment supply chain is one of the most complex and globalized supply chains of any merchandise or commodity. The sector was one of the earliest to globalize and textile and garment production has played a unique and defining role in the economic development of many nations. It was the critical industry that led to the first industrial revolution, and ever since, the development of a garment industry has signalled more sophisticated industrialization within national economies, most recently in Asia (ILO 2019). While the sector contributes to industrialization, internationalization and economic development in certain nations, it is also intensely competitive, with investors willing to move plants to other lower cost locations – leading to a “race to the bottom” scenario for garment exporting countries (IHRB and Chowdrey Centre at UC Berkeley 2021).

Globally, textiles and garments accounted for more than US\$798 billion in export trade in 2019, with world textile and apparel exports totalling US\$305 billion and US\$493 billion, respectively (WTO 2020). China, the European Union and India were the top three exporters of textiles in 2015, accounting for more than 70 per cent of global production. Based on these statistics, Asia plays a critical role in the textile and garment supply chain.

The sector also plays a critical role in employing people, and provides large amounts of low-skilled employment that offer opportunities for workers to move from informal to formal work. Before the pandemic there were various estimates that the sector employed 60–70 million people globally. The sector has seen substantial growth in employment in the last two decades; in 2000 the sector was estimated to employ 20 million people globally (Stotz and Kane 2015). Most of this employment growth has been in Asian countries. For example, in Bangladesh the ready-made-garment sector was employing 4 million people in 2014, up from just 300,000 in 2000 (ADB and ILO 2014).

The sector is an important source of employment for women. The Clean Clothes Campaign estimates that three-quarters of garment workers worldwide are female (ILO 2019). Textile and garment supply chains are highly gendered; most workers are women, and the further down the supply chain the more female the workforce becomes (CCC 2005).

The presence of textile and garment manufacturing in a country is seen as trigger for industrial development in related manufacturing activities, such as chemicals, as well as being a trigger for creating trade linkages. The sector brings significant foreign direct investment into production countries, and offers emerging economies an opportunity to participate in global trade, with textiles and garments making up 60–90 per cent of total merchandise exports in emerging economies in Asia (WTO 2020). All of this highlights the importance of the textile and garment industry for many countries, as well as for individual workers and businesses within these countries.

The textile and garment sector has significant negative environmental impacts. These impacts are concentrated at certain points in the supply chain, particularly in four areas:

- weaving, dyeing and finishing processes in textile manufacturing;
- energy use throughout the supply chain, but concentrated in textile manufacturing and to a lesser extent in garment assembly;
- textile waste associated with garment assembly; and
- 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 deriving from the intensity of water resources use, chemical use (including toxic chemicals), waste water discharges and lack of treatment processes, as well as energy use and the 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 2019). As textile production is prevalent in countries that already have insecure water supplies, water crises are forecast in several textile-producing countries.

The sector is also responsible for severe water pollution by discharging large volumes of wastewater 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).

Moreover, the increase of fast fashion has stimulated demand for fast, cheap and low-quality goods. Both the growing volume of garment production and how these garments are used and disposed of have resulted in increasing climate change impacts stemming from the garment sector. Between 2005 to 2016, the climate impact of various production stages in the apparel sector increased by 35 per cent and is projected to continue to increase under a business-as-usual scenario (Quantis 2018).

The carbon footprint from the sector is significant, with calculations estimating the sector accounts for 6–8 per cent of total global emissions (Niinimäki, Peters et al. 2020). The carbon intensity of production is directly related to the carbon intensity of electricity supply in production countries. Over 60 per cent of textiles are used in the garment sector, and a large proportion of garment manufacturing occurs in China and India. India relies heavily on hard coal and natural gas for electricity and heat production, sharply increasing the carbon footprint of each apparel product.

Decarbonization of the sector will be closely related to the clean energy transition. Encouraging energy efficiency and switching to renewable energy sources, such as solar, hydro or wind power, can significantly reduce emissions and improve the sustainability of textile production. Although there is growing pressure and scrutiny on major international brands and their decarbonization plans, it is national ambitions and strategies for clean energy transition, including energy efficiency incentives and standards, that will drive energy-related emissions reductions in the sector.

▶ 2 The impacts of COVID-19 in the sector are felt deeper in garment-producing Asia

Many sources have highlighted the employment, economic and health impacts of the COVID-19 pandemic (Berg, Haug et al. 2020, ILO 2020, CCC 2021). The pandemic has affected all parts of the textile and garment supply chain, and employment and enterprise impacts have occurred in most countries – both production and consumption countries. However, these impacts have been concentrated in production countries, and it is in these countries where employees receive less income and have little recourse to social protection measures, and governments in countries where the impacts have been most devastating are generally less able to provide assistance packages.

One of the impacts of these disruptions is that investment in more sustainable processes and equipment, sustainable materials sourcing and carbon emissions reduction – which were becoming more prominent before the pandemic – are now being relegated to a secondary consideration (Berg, Haug et al. 2020).

2.1. The employment and enterprise impacts from the pandemic are multidimensional

Global trade in garments declined sharply in the first half of 2020. Estimates suggest that exports from Asian garment producing countries to major markets dropped by more than 70 per cent (ILO 2020a). As the virus first emerged in China, the associated travel and production restrictions put into place to manage the pandemic created supply chain constraints for the sector in early 2020, long before lockdowns in many countries came into place (ILO 2020b). Demand side pressures soon compounded these impacts as lockdowns shut down most retail activity in Europe and the United States of America for large periods of time in 2020 and during the second wave in 2021. In Europe, the textile and garment sector experienced a 50 per cent drop in sales (BoF and McKinsey 2021). In 2020, as global retail activity slowed, international buyers and brands began cancelling orders as retail spending declined. Government mandated closures of production facilities further disrupted the sector. The economic impact of the pandemic on suppliers and manufacturers across Asia was multi-dimensional (Moazzem, Khatun et al. 2021), with these production businesses needing to manage cancelled orders and requirements to discount orders in response to falling retail demand experienced by international buyers and brands as a result of lockdowns overseas, and then the need for closure of factories as domestic lockdowns came into effect.

The ILO (2020a) estimates that one in two garment workers had been affected during the first phase of the pandemic, either through loss of pay, loss of working hours or complete job loss, and that on average, garment workers had lost between two and four weeks of work. At the end of 2020, among all the workers that had been furloughed, only three in five have been called back to work, and usually at reduced hours.

In the textile and garment sector it is common practice for payment for orders not to be received until after they are shipped. Therefore, cancelled orders have an immediate impact on the cashflow of the affected business, and also flow back up the supply chain, as these businesses are unable to pay their suppliers for the raw materials, labour and other inputs (ECCHR 2020).

Bangladesh

In the early months of the pandemic in 2020, Bangladesh manufacturers experienced more than US\$3.4 billion of cancelled or suspended orders, which in turn immediately affected some 2.17 million workers

(Anner 2020b). Exact employment losses are hard to determine. One study of Bangladesh at the end of 2020 estimated some 500,000 workers in the textile and readymade garments sectors were permanently unemployed, with many more workers in interrelated sectors, such as truck drivers, port workers and suppliers, also at risk of losing their jobs (*Textile Today* 2020). Another study estimated that in the period from December 2019 to September 2020 garment workers average earnings declined by 8 per cent, impacting workers ability to buy food and other household necessities (Moazzem, Khatun et al. 2021). When factories re-opened, order cancellations and price discounts requested from international buyers left many factories in a situation of either having to lay off workers or delay wage payments (HRB and Chowdrey Centre at UC Berkeley 2021).

At the end of 2020 readymade garment factories were operating at 55 per cent production capacity due to reduced number of orders and health safety guidelines (*Textile Today* 2020). The ongoing uncertainty and second and third waves of infections have also dampened forward orders by brands and other buyers.

Cambodia

During the first wave of COVID-19 infections Cambodia had relatively few cases, but the impact of cancelled orders and reduced demand in other countries had a significant impact on employment in Cambodian garment factories. In June 2020 some 230 garment factories had ceased operations, leaving hundreds of thousands of garment workers suspended from their jobs (Sothath, Leakhena et al. 2021). In a recent study of the impact of COVID-19 on various sectors in Cambodia, 98 per cent of surveyed garment workers had experienced work suspension between March and July 2020, with suspensions averaging 10 weeks at the time of the survey in July 2020. Fortunately, the same study reported some 95 per cent of suspended workers received their full financial entitlements, although these entitlements are less than the incomes workers would have otherwise earned. When workers returned to their jobs, in most cases it was not to the full level of employment they had been working prior to the pandemic, and many enterprises have since closed altogether (Sothath, Leakhena et al. 2021).

Cambodia has experienced a second wave of COVID-19 infections, and with this second wave there have been many more infections, which necessitated various lockdown and stay-at-home orders that have further disrupted production.

Indonesia

The textile and garment sector in Indonesia accounts for 11 per cent of manufacturing exports, 5 per cent of total exports and employs some 5.1 million people (Pane and Pasaribu 2020). The Indonesian sector was deeply impacted by the first wave of the pandemic with demand for textiles and garments falling sharply both for export and domestically (as demand from shopping malls declined with social distancing requirements). Textile and textile product exports reduced by 52 per cent in 2020 (compared to 2019 figures), and domestic retail sales of clothing declined by 74 per cent (Pane and Pasaribu 2020). Online sales in the domestic market provided some continuing source of demand, although Indonesian customers have not transitioned to online sales to the same extent as witnessed in other overseas markets (Meylinah 2020). The increased demand for personal protective equipment (PPE) also provided some additional demand for textiles in 2020. The Indonesian Chamber of Commerce highlighted that some 2.1 million workers in the textile and garment sector were unemployed because of the pandemic in July 2020 (Meylinah 2020). As the Indonesian sector is highly dependent on imported raw materials (such as US cotton) the continuing supply disruptions caused by fluctuating global demand and requirements for social distancing in production facilities make the sector and its workers highly vulnerable.

In 2021 Indonesia experienced a second and much larger wave of COVID-19 infections. This has required impositions of new restrictions, including lockdowns and closures of textile and garment factories – although the sector is defined as “essential”, it must operate within health protocols, including only allowing

50 per cent of production workers and 10 per cent of administrative workers into facilities at any one time (BetterWork 2021).

Viet Nam

Garment manufacturing firms in Viet Nam were also immediately impacted by the first wave of the pandemic. The Vietnamese sector is also strongly dependent on international markets for customers for the final product, as well as being reliant on imports for raw materials such as textiles. Viet Nam imports between 60–80 per cent of the materials and components for garment manufacturing (Chi 2020). This meant that earlier supply disruptions and lockdowns in China in late 2019, and then the closure of the Viet Nam–China border in late January 2020, significantly impacted the sector before the health impacts of the pandemic, which required various stay-at-home directives in Viet Nam from March 2020. A survey completed in May 2020 showed more than 74 per cent of firms had been impacted by declining demand (a more than 30 per cent decline on 2019 figures) and a similar amount had responded by furloughing workers (ILO 2020c). The most heavily impacted businesses have been micro, small and medium enterprises. Manufacturers also experienced cancelled orders and requests for large discounts on already produced garments or on those that were in the midst of production.

The disruption from continuing lockdowns in Europe and the US throughout the later parts of 2020 and into mid 2021 has added further to supply chain disruptions and overall demand reductions for production from Viet Nam. Viet Nam is experiencing a second wave of COVID-19 infections in mid-2021, this time at higher rates than in 2020. Many garment factories, especially around Ho Chi Minh City have been forced to close or implement social distancing requirements including reducing staffing levels to comply with health orders.

2.2. The pandemic is causing structural changes in the sector with lasting effects for small suppliers

As these country snapshots show, the impacts of COVID-19 have been immense and ongoing over the course of the pandemic – testing the resilience of even the most robust enterprises. Since the emergence of the pandemic, structural changes to how the sector operates have become visible. A process of bifurcation is occurring, with trends in the sector showing production facilities are moving in two directions.

The first trend is that larger, more resourced and productive manufacturers with direct customers in international brands and buyers are increasing the sophistication of their business operations through investment in more technology. These larger firms, which may have subcontracted part of their orders in the past, now process more or all these orders within their business to keep their workforce and production systems fully operational. There is also evidence that these larger manufacturers – which have a diverse portfolio of customers (fast fashion brands and more premium, higher-end brands) and service a mix of geographical locations (United States, Europe, the Republic of Korea, Japan, Taiwan (China) and Russia) – fared better during the pandemic, managing to sustain and even in some cases grow their orders (ILO 2020c). Diversification as a hedge against risk is an opportunity available to both suppliers and international brands, but it requires suppliers to be large and well-resourced enough to be able to select customers.

The second trend involves smaller and less resourced firms, who are struggling with continued declining demand and who are being forced to undercut prices further to get work, which in turn is placing pressure on their ability to adequately meet labour and environmental standards. This trend is highlighted in the practice of “pandemic sourcing” – essentially using suppliers’ desperation from low order volumes to press for discounts and longer payment schedules (Anner 2020a). These sourcing practices are having the impact of increasing unemployment and bankruptcy for those enterprises unable to cope, and also increasing the informalization of labour, as unemployed workers turn to home-work and piece work to earn income (Anner 2020a).

The pandemic is also impacting the ability of governments in countries highly reliant on textile and garment exports to provide business support and social protection for affected workers and enterprises. This means that not all countries can come out of this crisis in the same way. Moazzem et al. (2021) suggest a market-based solution to the ongoing impacts of the pandemic in these countries – with brands committing to ordering a certain percentage of goods from these countries and then these orders being shared among enterprises. Such commitments would enable some element of financial stability to return to the sector, without requiring further undercutting of costs. Further, the pandemic has also led to a deterioration in both public and private forms of supply chain governance. Both governments and multi-national corporations have failed to enforce labour standards in supply chains, leaving workers less protected and enabling a lowering of labour standards (LeBaron, Kyritsis et al. 2021).

The implications of these two different sets of impacts within the production links of the supply chain means not all firms will re-emerge from the pandemic, and the support required for recovery will need to be different in different sections of the supply chain. This is especially the case if we want the sector to “build back better” and use the disruption of the COVID-19 pandemic to drive change in the social and environmental sustainability of the sector. It is clear from the pandemic impacts discussed, that some firms will require greater financial and human resources to develop strategies to build back better. The diverging trends in supply chain transformation spurred by the pandemic also highlight the need to develop supply chain collaboration and governance models, and that these models need to be coordinated and integrated with domestic regulation, incentives and stimulus interventions.

▶ 3 The power unbalance among producers-suppliers needs refocusing for partnerships for a Just Transition

Already before the COVID-19 pandemic, the need for a robust sustainability agenda that includes both social and environmental imperatives was evident in Europe and North America. At the end of 2019, McKinsey and Company undertook a survey among 64 sourcing executives responsible for a total sourcing value of over USD 100 billion, and through that survey four areas were identified for sustainable-sourcing transformation, including: sustainable materials, transparency and traceability, supplier relationships transforming into strategic partnerships, and reinventing purchasing practices (McKinsey and Company 2019). Social and environmental sustainability were considered main drivers by two-thirds of Chief Purchasing Officers in encouraging garment manufacturers to invest proactively in environmental sustainability, worker well-being and fair wages.

However, while the sentiment for enhanced environmental sustainability exists, measures that can drive implementation at the scale and pace required for industrial transformation have not been developed or resourced. There are many initiatives and forms of private regulation that are focused on social sustainability (including decent work criteria such as adequate wages and compensation, non-discrimination, workplace safety and freedom of association) and environmental sustainability (environmental regulatory compliance, phase-out of hazardous chemicals, water efficiency and waste water treatment, and energy efficiency and carbon emissions reduction). Social sustainability efforts have had a longer period of operation, and recent analysis shows that these efforts have not translated into widespread improvements in the sector (Kuruville 2021). Environmental efforts have also been unable to stem widespread environmental damage in the sector (Ortmann 2017, Niinimäki, Peters et al. 2020, ILO 2021a).

To date, analysis and commentary on the impacts of the COVID-19 pandemic have largely focused on the failure of globalized supply chains to maintain minimum social sustainability standards, including pay and remuneration to workers (including redundancy payments), occupational safety and health standards (OSH), and advocacy to brands and buyers to insist they refrain from unsustainable business practices such as cancelling contracts, discounting in-progress orders and the use of *force majeure* in contracts. Many of these conditions were evident before the pandemic, including low wages, forced overtime, poor OSH practices, substandard working conditions, and threats of layoffs and harassment (Lipschutz 2004, Maria-Ariana 2017, Yawar and Seuring 2017, Majumdar and Sinha 2019).

The pandemic has had the effect of exacerbating these weaknesses. A prominent reason given for the intractability of addressing social sustainability is the dominant power of international brands and buyers to set prices, delivery terms and conditions – with suppliers operating in a highly competitive, price-driven market with low barriers to entry for transnational capital. Suppliers have little to no bargaining power, and feel that although brands highlight (social) sustainability criteria, their economic considerations were of higher importance (Majumdar and Sinha 2019).

The process of Just Transition involves a policy framework that places dialogue at the centre of activities (ILO 2015). In a development context, a Just Transition also includes that just and equitable socioeconomic transformations are required to meet both the 2030 Sustainable Development Goals and the Paris Agreement. It means a critical focus both on inclusive and quality employment (decent work), including for women and other marginalized groups; social protection systems; and poverty reduction alongside reducing carbon emissions and protecting and restoring ecosystems (Sharpe and Martinez-Fernandez 2021). The dominant historical patterns and models of development have been carbon-intensive, and have included persistent inequality, environmental degradation and failures in many other areas of human rights, such as

decent work, gender-based violence and harassment, discrimination, and forced and child labour. There is a need to create new development pathways that are also net zero carbon and environmentally restorative (Swilling 2019, Winkler 2020).

3.1. A Just Transition in the textile and garment sector can correct the imbalances exacerbated by COVID-19 and turn them into opportunities for Asian communities

As the UN Climate Action for Jobs Initiative – announced in September 2019 – highlights, the process of a Just Transition requires activities mapping of issues and actor roles, dialogue, and then the planning and implementation of strategic investments. Just Transition planning will actively bring employment and job creation goals into the structuring of actions and investments for a sustainable recovery post-COVID-19.

The ILO's 2015 Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All highlights that the greening of economies and work will require “a country-specific mix of macroeconomic, industrial, sectoral and labour policies that create an enabling environment for sustainable enterprises to prosper and create decent work opportunities by mobilizing and directing public and private investment towards environmentally sustainable activities” (ILO 2015, 6). The Guidelines identify the following nine interrelated policy areas that will each provide critical elements for achieving a Just Transition:

1. macroeconomic and growth policies;
2. industrial and sectoral policies;
3. enterprise policies;
4. skills development;
5. occupational safety and health;
6. social protection;
7. active labour market policies;
8. labour rights; and
9. social dialogue and tripartism.

Just Transition planning is a new skill set for policymakers (ILO and ASEAN 2021). Identifying and implementing a context-specific policy mix for sustainable supply chains, enterprises and decent work is an emerging challenge for nations. In globalized supply chains the challenges are multiplied in coordinating action, ambition and policy across multiple jurisdictions that encompass the supply chain, and ensuring the aligned incentives exist for communities and nations in planning and implementing a Just Transition.

Evidence suggests that implementing strategies for decarbonization alone will not necessarily bring about more work or work that is decent ¹ (ILO 2018). Similarly, there are also no guarantees that a transition will be “just” where existing inequalities are addressed and reduced, and no person or community is left behind in the transition, if the issue of sustainability is not adequately addressed (Swilling 2019). The decent work agenda has not been reduced in importance in the face of the sustainability challenge but has always been integral to it (ILO and ASEAN 2021). A sustainable society must be “socially just, environmentally friendly, and economically efficient” with governance to ensure decent lives for all (Olsen 2010 p.294).

¹ Decent work refers to work that meets the ILO decent work standard; that is, work that is fairly remunerated, safe, free of discrimination, and with freedom of association.

Just Transition planning in the textile and garment sector will map how the sector accomplishes decarbonization and achieves the SDGs. The planning processes identifies the workers, enterprises and communities that will be impacted. Analysis shows that carbon emissions occur along the value chain but are most significant in the yarn and fabric production phase, which is also consistent with other environmental impacts, such as water consumption and chemicals use (ILO 2021b). The scale and pace of systemwide change in garment manufacturing required to meet targets for climate action means that there will also be significant impacts on the world of work in these components of the supply chain. Reducing carbon emission will require changes to business models alongside technological and process innovation.

While the garment industry is structured through global value chains, there are production hotspots that are localized in Asian countries with communities heavily dependent on garment factories for their livelihood. For example, the Bangladesh economy is highly reliant on the textile and garment sector, with more than 80 per cent of the country's exports coming from it. In Pakistan more than 50 per cent of exports are from the textile and garment sector; in India it is 55 per cent (Niinimäki, Peters et al. 2020). Such high concentrations of specific links in supply chains in specific areas both concentrate the environmental impacts (such as the water pollution impacts from textile manufacturing in the outskirts of Dhaka region) and increase the vulnerability of these regions to supply chain shocks (such as the current shock being experienced due to the COVID-19 pandemic). The concentration of carbon-intensive activities associated with the sector is also a vulnerability – especially if the process of decarbonizations is not justly undertaken.

These communities, as well as the regions and nations within which they are situated, need to develop pathways to reduce these vulnerabilities. Social dialogue processes need to inform analysis of the costs and benefits of the sector in these places, with an ambition for a Just Transition as an alternative to continuing vulnerabilities. The COVID-19 pandemic has sharpened the need for formalized Just Transition processes that ensure realistic pathways to climate action and sustainability, and the need for an implementable framework that shares the burdens and opportunities across the sector so that no one, or no community, is left behind (ILO 2018). These “hotspot” areas should be prioritized for investments in Just Transition.

Enabling a Just Transition, and planning for this transition, means that the opportunity offered by sustainable development and green job creation from decarbonization and adaptation also results in better jobs and more decent jobs for women and men. It also means that those workers, firms, communities and sectors affected by the need to decarbonize and the need to adapt to the changes receive the support, information, training and capacity they need to successfully transition. Green jobs and decent jobs need to be planned for, as they will not necessarily occur automatically or in the volume required unless Just Transition planning takes place.

Any direct investment specifically targeting decarbonization and changes in the textile and garment sector also needs to explicitly consider the employment dimension, including the potential differing impacts on specific groups based on gender, migration status and disability. Changes and innovations include: investments in energy efficiency and renewable energy infrastructure; improved technologies and processes for textile processing; the phasing out of hazardous chemicals, micro-plastics, textile waste and untreated waste water being released into waterways; and behavioural and business model changes associated with more sustainable production and consumption systems, including the circular economy and other sustainable and regenerative business models.

A significant challenge to sustainability transformation of the textile industry in Asia is the limited awareness, competence and technical knowledge of environmental sustainability. This holds true for many factories, workers, communities, technical consultants, training organizations, agencies and local to national governments – the whole industry ecosystem (Tyler, Hall et al. 2018, ILO 2021b). To avoid overshoot of critical planetary boundaries and to address global commitments to climate change action, collective, purposeful

and just social transformation is needed, but what are the specific elements of a Just Transition in the textile and garment sector? Critical contributing factors include:

- **National environmental and regulatory frameworks** and the necessary monitoring and enforcement to encourage transformative investment in long-term environmental sustainability (ILO 2021a). Transformative environmental policy addresses on-going processes of societal change and utilizes them for achieving environmental sustainability. It assumes that governments react slowly to societal change and that there is a need for the development, support and innovation that have the most potential of redirecting societal trends towards sustainability (Schot and Steinmueller 2018).
- **Processes for gender-responsive social dialogue**, co-creation and use of knowledge of environmental sustainability and eco-innovations alongside strengthened labour and social rights for workers, which includes environmental sustainability elements such as knowledge co-creation. This is an effective way to educate and train workers, enabling them to improve basic environmental issues such as dripping taps in factories, as well as to transfer environmentally sustainable practices between their workplace and community, and vice versa.
- Workers and management working collectively, together with other stakeholders, provide a promising avenue for initiating and promoting local transitions and transformative adaptation. One example of this collaboration is in the form of **multi-stakeholder platforms (MSPs)**. One such MSP in operation in the textile and garment sector is the Sweden Textile Water Initiative (STWI). This MSP is a collaboration between Scandinavian brands and their Asian supply chain, and includes social dialogue and training of workers and management with local technical consultants. The interventions were of a capacity-building nature, and include detailed technical assessments followed by a variety of recommendations for technical improvements, including significant investments. Workers brought messages regarding topics such as toxic substances and water pollution to their communities and put these in their local and household context and shared with their neighbours. The documented successful results of the platform indicate that both inter- and transdisciplinary collaboration is needed to address the complex challenges facing the textile industry (STWI 2017). Today STWI works with COVID-19 training in the textile and leather supply chains in Bangladesh.
- **Strengthening the role and voice of women** in the textile and garment sector to achieve transformational changes and meet development objectives. Gender equality and environmental sustainability are intrinsically linked. Women make up most of the workforce in the sector, and they are also the most vulnerable to environmental damage caused by the sector and the broader impacts of climate change. Therefore, developing and implementing mechanisms and actions that address barriers and challenges to women's equal participation and success alongside achieving environmental sustainability will increase the overall sustainability of the sector.
- Sustainable development requires knowledge that strikes a balance between scientific and other forms of knowledge to meet the needs of society more effectively and to inform sustainable policy directions. The involvement of a **range of research actors in knowledge creation for governance and sustainability transformation** within the textile and garment industry is required because these actors bring new technical, organizational and behavioural insights into the collaborative process. Co-production of knowledge on the role of sustainability in the textile supply chain needs to engage the full range of stakeholders – including workers, management, practitioners, scientists, the private sector, civil society and policymakers – in stakeholder dialogues and collaborations to develop a common understanding and to clarify actions through shared insights within an interactive process.

► Conclusion and opportunities for change

There is clear evidence that the textile and garment sector has been irretrievably altered by the COVID-19 pandemic, and if business will not go back to what was it was, what will the “new normal” look like for the sector in Asia? This paper shows that the global textile and garment supply chain needs business models that place a greater focus on the interdependence of social, environmental, technical and economic conditions under which production occurs. The sector also requires fundamental changes to pricing and contracting practices, with resulting impacts on supply chain business models. Governments will need to develop and enforce gender-responsive policies that ensure sustainability and appropriate labour rights that support long-term industrial growth. The crisis provides an opportunity to build back better, and public policies will play a vital role in stimulating the economy to operate within the “safe and just” space between an ecological ceiling and a social foundation.

4.1. Building capacity for sustainable collaboration

COVID-19 has caused massive disruptions to the supply chain. The power asymmetries in the sector are such that this shock has been dealt with by shifting the economic burden of the supply chain disruptions onto the parts and people of the sector that are least resourced to cope. The cost and risk burdens between brands, suppliers and subcontractors need to be more equitably shared, and this requires collaboration to develop a way forward. Failure to share these burdens will mean that when the supply chain looks to re-start, it will be seriously impaired.

Collaboration and capacity-building has been described as an essential capability in the recovery period – as no company will be able to come through the crisis without collaborating and sharing strategies, data and insights, even between competitors (McKinsey and Company 2020 and BoF). Deep supply chain collaboration, especially when linked to new innovations and technologies that enable the visibility of each participant in the supply chain, can contribute to transparency and further sustainability innovations – but the question remains, how will the structure and governance for this collaboration work?

Collaboration is also a resource-intensive process, both in terms of human resources and time, and increased collaboration will not happen without direct interventions to support cross-sector networking and collaborative projects. Collaboration also requires a specific set of organizational capabilities – capabilities that are very similar to innovation capabilities – in that an organization needs to understand how they obtain and use new knowledge and how they can combine their knowledge with that of other organizations. These capabilities do not exist in all organizations, let alone in equal amounts; so for cross-sectoral collaborations to succeed, it will also be necessary to invest in activities that build collaborative capacities in organizations across the supply chain.

Since their more systematic use beginning in the early 2000s, MSPs have been geared towards improving stakeholder dialogues, aiming to reach agreements despite different baselines or views on a variety of topics. MSPs can be broadly defined as “ongoing working relationship[s] between organizations from different sectors, combining resources and competencies and sharing risks towards achieving agreed shared objectives whilst each also achieving their own individual objectives” (Hazelwood 2015, 2). Representatives from different interest groups jointly discuss shared challenges, opportunities, policy actions and advocacy strategies (Warner 2005). They have the potential to tackle complex development challenges and to assist in the scaling up of necessary innovations (Hermans et al. 2017; Tengberg et al. 2020).

Common for most MSPs is that they involve a preparation period where stakeholders define their positions in relation to the issues, discuss, analyse, share perspectives and co-create. The five-step process of initiation, mapping of key issues and actors, dialogue preparation, realization, and follow-up is typically overseen by a so-called facilitating agent responsible for convening and guiding the dialogue to ensure that

all voices are heard (Melo 2018). MSP activities can range from upholding rights, participatory democracy, training or capacity-building, to coordinating sectors or strengthening dialogue between levels of governance (Bäckstrand 2006).

In the textile and garment industry numerous MSPs have operated in Asia in the past decades, frequently supported by development aid donors or the multilateral institutions. PACT, Clean by Design and Sweden Textile Water Initiative are a few that have focused on providing training and capacity-building on numerous sustainability topics relevant for manufacturers. The programmes have been successful in building factory-level capacity. Regrettably the programmes have had time-limited funding, and therefore only had the opportunity to work with a limited number of manufacturers. As the sector recovers from COVID-19, MSPs that have the ambition and resources will need to scale up coverage to much more of the supply chain.

4.2. Promoting sustainable and regenerative business models

The COVID-19 pandemic has highlighted the fragility of the supply chain, and much of this can be traced back to buying and contracting practices and business models that effectively limit social and environmental compliance, particularly in the production links of the supply chain. In the future, truly equal partnerships between brands and suppliers are required. Such relationships cannot only be about price, as has been the focus of traditional practices and business models. Building revenue on the economic, social and environmental differences of developed and developing economies has to be addressed, as does the promotion and proliferation of sustainable and increasingly regenerative business models.

Changes in production and consumption systems – such as the circular economy, which calls for the slowing and closing of production and consumption cycles – can add to demands for near-shoring or on-shoring of textile and garment manufacturing closer to where consumers are located. This may especially be the case when production is coupled with increased after-sales services to consumers, such as repairs and second-hand sales. Collaborative partnerships are crucial to the development of sustainable business models for circular supply chain management that lead to reductions in raw material utilization and waste generation (Nosratabadi et al. 2019). This also requires a shift in mindset towards “designing out waste” and seeing “waste as a resource” (McDonough and Braungart 2002). Such a shift would offer many possibilities for adding value to material resources and support greater transparency throughout supply chains.

The COVID-19 pandemic has revealed the reality that textile and garment industry supply chains are deeply nested in complex, living social and ecological systems that are dynamic, interdependent and networked. Regeneratively sustainable business models are designed and developed in alignment with dynamic living systems awareness. This shift in perspective enables organizations to continuously develop their ability to respond appropriately to an ever-changing, complex environment by developing their relationships and responsibility through life-affirming, conscious leadership and agile organizational development. The focus shifts from the short-term, transactional interactions for economic gain that are commonplace in conventional compliance-based business models, to one that is value-adding and co-creates mutually beneficial partnerships with all stakeholders, including employees, customers, shareholders and local communities and natural ecosystems. This regenerative way of being and doing business aligns its values with ethical and sustainable practices, such as corporate social responsibility and circularity, and this reciprocal relationship with people and the planet helps ensure the long-term viability of the organization and surrounding ecosystems.

A necessary part of the regenerative sustainability perspective is to acknowledge and tend to the whole lifecycle of the system, including the decline of the system. This is particularly relevant for the garment and textile industry within the context of the current COVID-19 pandemic. There is little reason to go back to business-as-usual. The disruption of the textile and garment industry presents a once in a working lifetime opportunity to re-direct the industry so that it delivers the future we want – the future sketched by the United Nations’ SDGs. It is a time to reassess the role and potential of the garment and textile industry – its potential to develop better, more meaningful work and to transform communities through a Just Transition. This

regenerative and transformative time may allow space for structures and practices that are not fit-for-purpose to dissolve away and provide the nutrients needed for the emergence of new innovations that have the potential to catalyse a Just Transition to a regenerative and just system where all people and living systems engaged with the industry may flourish.

4.3. Representation for sustainable recovery

As we continue to make plans for recovery, we need to ensure all stakeholders are included in the planning. The realization of sustainability requires representation of a broader range of stakeholders (Beyers and Heinrichs 2020). Achieving enhanced environmental sustainability needs to include all stakeholders across the supply chain, from brands, buyers, associations, and large and small businesses. It also needs to include women, who have historically been underrepresented in decision-making in the textile and garment sector, despite accounting for the majority of the workforce. Including a wide cross-section of the supply chain in collaboration and ensuring all stakeholders have equal access and voice to participate are critical for success. Business size, place and role in the production system are all lenses that need to be applied to stakeholders. Also, there is a need to ensure recovery planning is done through a gender lens so that the recovery builds a more gender-equal sector, rather than deepening existing inequalities.

4.4. Prioritize investments in SMEs

Most companies in the textile and garment sector are small- and medium-sized enterprises (SMEs). SMEs have capacity constraints in terms of human, financial and knowledge resources, and often have difficulties in meeting the requirements of international buyers and brands in the supply chain in terms of volume of orders, timing of delivery, quality and sustainability standards, requiring them to subcontract orders from larger businesses. This is especially the case in export-oriented production activities. This means that SMEs operate as lower-tier suppliers, taking orders from vendors and for activities that are highly defined, add less value and therefore provide less opportunity for good or even adequate returns and the ability to meet social and environmental standards (ILO 2019). Well-acknowledged barriers to sustainability include access to finance and knowledge gaps (ILO, 2021b).

There are many initiatives across the sector that focus on either social or environmental sustainability, or both; however, these initiatives are usually brand-led, focused on larger businesses, and use audit or compliance mechanisms to achieve improvements. Capacity-building through multi-stakeholder initiatives can enable just knowledge and skills development, and investments focused on enhancing social and environmental improvement of SMEs are needed.

4.5. Refocus partnerships for sustainability in “hotspots” of local concentrated production

The impact of COVID-19 on the textile and garment sector in Asian countries has been and continues to be immense and may last for a very long time. New COVID-19 outbreaks in Asia pushed back hopes for a recovery in 2021, and the physical and mental health effects in communities are challenging the pre-pandemic achievements towards realizing the SDGs. At the beginning of this paper, we asked the question, how sustainable is the sector? The country-level snapshots and wider sector coverage above show how power asymmetries across the global supply chain have meant that the workers and enterprises in production centres – predominately in Asia – have carried the burdens related to supply chain losses and disruptions. This has resulted in continuing downward pressure on both social and environmental sustainability standards in the sector.

The pandemic has highlighted that vulnerability is not equally shared across the supply chain. This is true too for carbon emissions, with emissions concentrating in specific production activities, and these activities are geographically concentrated into certain hotspots – areas that are both highly reliant on the textile and garment sector but also highly vulnerable to supply chain disruptions and other impacts on the sector. This creates a strong spatial dimension to the need for planning for a Just Transition in the industry. Sector hotspots in local areas can be turned into opportunities for accelerated community action for building back better. When textile and garment communities work together to realize better places to live and work this can catalyse transformative changes across this important sector.

References

Acosta, Mariola, Edidah L. Ampaire, Perez Muchunguzi, John F. Okiror, Lucas Rutting, Caroline Mwongera, Jennifer Twyman, Kelvin M. Shikuku, Leigh Ann Winowiecki, Peter Läderach, Chris M. Mwangu, and Laurence Jassogne. 2018. "The Role of Multi-stakeholder Platforms for Creating an Enabling Climate Change Policy Environment in East Africa." In *The Climate-Smart Agriculture Papers*, edited by Todd S. Rosenstock, Andreea Nowak and Evan Girvetz, 267–276. Cham: Springer Open.

Anner, Mark. 2020a. "Leveraging Desperation: Apparel brands' Purchasing Practices during Covid-19", Penn State Center for Global Workers' Rights Research Report.

———. 2020b. "Abandoned? The Impact of Covid-19 on Workers and Businesses at the Bottom of Global Garment Supply Chains", Penn State Center for Global Workers' Rights Research Report.

ASEAN (Association of Southeast Asian Nations) and ILO. 2021. *Regional Study on Green Jobs Policy Readiness in ASEAN*.

Berg, Achim, Lara Haug, Saskia Hedrich and Karl-Henrik Magnus. 2020. *Time for a Change: How to Use the Crisis to Make Fashion Sourcing More Agile and Sustainable*. McKinsey and Company.

Bäckstrand, Karin. 2006. "Multi-stakeholder Partnerships for Sustainable Development: Rethinking Legitimacy, Accountability and Effectiveness." *Environmental Policy Governance* 16 (5): 290–306.

IHRB (Institute for Human Rights and Business) and UC Berkeley, Chowdrey Centre. 2021. *The Weakest Link in the Global Supply Chain: How the Pandemic Is Affecting Bangladesh's Garment Workers*.

BetterWork. n.d. "BetterWork Indonesia Covid-19 Resources", available at: <https://betterwork.org/better-work-indonesia-covid-19-resources/>.

Beyers, Felix, and Harald Heinrichs. 2020. "Global Partnerships for a Textile Transformation? A Systematic Literature Review on Inter- and Transnational Collaborative Governance of the Textile and Clothing Industry." *Journal of Cleaner Production* 261: 121131.

BOF (Business of Fashion) and McKinsey and Company. 2020. *The State of Fashion 2020*.

———. 2021. *The State of Fashion 2021*.

CCC (Clean Clothes Campaign). 2005. *Made by Women: Gender, the Global Garment Industry and the Movement for Women Workers' Rights*.

———. 2021. *Breaking Point: Wage Theft, Violence and Excessive Workloads Are Pushing Garment Workers to Breaking Point during the Pandemic*.

Cole, Rosanna, and Zahra Shirgholami. 2021. "The Outlook for Modern Slavery in the Apparel Sector in a Post-Lockdown Economy." *Supply Chain Management*.

Dror, Iddo, Jean-Joseph Cadilhon, Marc Schut, Michael Misiko, and Shreya Maheshwari (eds). 2016. *Innovation Platforms for Agricultural Development: Evaluating the Mature Innovation Platforms Landscape*. London: Routledge.

ECCHR (European Center for Constitutional and Human Rights). 2020. "Garment Supply Chains in Intensive Care? Human Rights Due Diligence in Times of (Economic) Crisis", ECCHR Policy Paper Series.

EMF (Ellen Macarthur Foundation). 2019. *A New-Textiles-Economy*.

Hazelwood, Peter. 2015. "Global Multi-stakeholder Partnerships: Scaling up Public-Private Collective Impact for the SDGs", IRF Background Paper No. 4.

Hermans, Frans, Murat Sartas, Boudy van Schagen, Piet van Asten, and Marc Schut. 2017. "Social Network Analysis of Multi-stakeholder Platforms in Agricultural Research for Development: Opportunities and Constraints for Innovation and Scaling." *PLoS One* 12 (2): e0169634.

ILO. 2015. *Guidelines for a Just Transition to Environmentally Sustainable Economies and Societies for All*.

———. 2018. *World Employment and Social Outlook: Greening with Jobs*.

———. 2019. "The Future of Work in Textiles, Clothing, Leather and Footwear", ILO Sectoral Policies Department Working Paper No. 326.

———. 2020a. "The Supply chain ripple effect: How Covid-19 is affecting garment workers and factories in Asia and the Pacific". *Research Brief*. Bangkok, Thailand, ILO

———. 2020b. "COVID-19 and the Textiles, Clothing, Leather, and Footwear Industries", ILO Sectoral Brief.

———. 2020c. *Quick Impact Assessment of COVID-19 Pandemic on the Key Economic Sectors: Responses, Adjustment and Resilience of Businesses and Workers*.

———. 2021a. *Effective Regulations? Environmental Impact Assessment in the Textile and Garment Sector in Bangladesh, Cambodia, Indonesia, and Viet Nam*.

———. 2021b. *Greener Clothes? Environmental Initiatives and Tools in the Garment Sector in Asia*.

———. 2021c. *Reducing the Footprint? How to Assess Carbon Emissions in the Garment Sector in Asia*.

ILO and ADB (Asian Development Bank). 2014. *Bangladesh: Looking beyond Garments – Employment Diagnostic Study*.

Kuruvilla, Sarosh. 2021. *Private Regulation of Labour Standards in Global Supply Chains*. Ithaca, NY: Cornell University Press.

LeBaron, Genevieve, Penelope Kyritsis, Perla P. Leal, and Michael Marshall. 2021. *The Unequal Impacts of Covid-19 on Global Garment Supply Chains: Evidence from Ethiopia, Honduras, India, and Myanmar*. University of Sheffield.

Lipschutz, Ronnie D. 2004. "Sweating It Out: NGO Campaigns and Trade Union Empowerment." *Development in Practice* 14 (1–2): 197–209.

McDonough, William, and Michael Braungart. 2002. *Cradle to Cradle: Remaking the Way We Make Things*. New York: North Point Press.

Majumdar, Abhijit, and Sanjib K. Sinha. 2019. "Analyzing the Barriers of Green Textile Supply Chain Management in Southeast Asia Using Interpretive Structural Modelling." *Sustainable Production and Consumption* 17: 176–187.

Maria-Ariana, Dociu. 2017. "Brief Considerations on the Rights and Working Conditions of Employees in the Textile and Clothing Industry Globally and in Romania." *Ann. Univ. Oradea Fascicle Text. Leatherwork XVIII*, 177e182.

McKinsey and Company. 2019. *Fashion's new must have: sustainable sourcing at scale*.

Melo, Veriene. 2018. *Collaborative Efforts for Sustainable Development: Surveying the Literature on Multistakeholder Initiatives to Realize the Sustainable Development Goals*. Task Team.

Meylinah, Sugiarti. 2020. "COVID-19 Sews Uncertainty for Textile Industry." US Department of Agriculture, Foreign Agricultural Service Voluntary Report.

Moazzem, Khondaker G., Fahmida Khatun, Kithmina Hewage, Tamim Ahmed, and Anjana Sandeepani. 2021. "Recovery of the Apparels Sectors of Bangladesh and Sri Lanka from the COVID-19 Crisis: Is a Value Chain-Based Solution Possible?", *Southern Voice Occasional Paper Series No. 70*.

Niinimäki, Kirsi, Greg Peters, Helena Dahlbo, Patsy Perry, Timo Rissanen, and Alison Gwilt. 2020. "The Environmental Price of Fast Fashion." *Nature Reviews Earth & Environment* 1 (4): 189–200.

Nosratabadi, Saeed, Amir Mosavi, Shahaboddin Shamshirband, Edmundas Kazimieras Zavadskas, Andry Rakotonirainy, and Kwok Wing Chau. 2019. "Sustainable Business Models: A Review" *Sustainability* 11, no. 6: 1663-1693.

Olsen, Lene. 2010. "Supporting a Just Transition: The Role of Labour Standards." *International Journal of Labour Research* 2 (2): 293–318.

Ortmann, Stephan. 2017. *Environmental Governance in Viet Nam: Institutional Reforms and Failures*. UK, Springer.

Pane, Deasy, Bappenas, and Donny Pasaribu. 2020. "Indonesia's Garment Industry in Crisis." *East Asia Forum*, 10 August.

Quantis. 2018. *Measuring Fashion: Environmental Impact of the Global Apparel and Footwear Industries Study – Full Report and Methodological Considerations*.

Schot, Johan, and W. Edward Steinmueller. 2018. "Three Frames for Innovation Policy: R&D, Systems of Innovation and Transformative Change." *Research Policy* 47 (9): 1554–1567.

Sharpe, Samantha A., and Cristina M. Martinez-Fernandez. 2021. "The Implications of Green Employment: Making a Just Transition in ASEAN." *Sustainability* 13: 7389.

Sothath, Ngo, Khon Leakhena, Sour Mengyou, Nuth Sovannarith, and Khun SokEng. 2021. "The COVID-19 Pandemic and Workers in Cambodia: Magnitude of Impacts on Suspended Workers and Implications for Policy and Programme Interventions", *Centre for Policy Studies Study Report No. 13*.

Stotz, Lina, and Gillian Kane. 2015. "Facts on the Global Garment Industry", *Clean Clothes Campaign Global Garment Industry Factsheet*.

Swilling, Mark. 2019. *The Age of Sustainability: Just Transitions in a Complex World*. Oxon and New York: Routledge.

Tengberg, Anna, Malin Gustafsson, Lotta Samuelson, and Elin Weyler. 2020. "Knowledge Production for Resilient Landscapes: Experiences from Multi-Stakeholder Dialogues on Water, Food, Forests, and Landscapes." *Forests* 12 (1).

Textiles Today. 2020. "Employment Trends in 2020 in Bangladesh Textile and Apparel Industry." 20 December.

Tyler, David, and Nicholas Hall. 2018. "Eco-system Services and the Circular Economy for Textiles", paper presented at the 91st Textile Institute World Conference, Leeds, 23–26 July.

United Kingdom, House of Commons, Environment Audit Committee. 2019. *Fixing Fashion: Clothing Consumption and Sustainability*, HC 1952.

United Nations. 2020. *Sustainable Development Goals Report 2020*.

Warner, Jeroen. 2005. "Multi-stakeholder Platforms: Integrating Society in Water Resource Management?" *Ambient Soc.* 8:4–28.

Winkler, Harald. 2020. "Towards a Theory of Just Transition: A Neo-Gramscian Understanding of How to Shift Development Pathways to Zero Poverty and Zero Carbon." *Energy Research and Social Science* 70: 101789.

WTO (World Trade Organization). 2020. *International Trade Statistics 2020 Textile and Apparel Sectors*.

Yawar, Sadaat Ali, and Stefan Seuring. 2017. "Management of Social Issues in Supply Chains: A Literature Review Exploring Social Issues, Actions and Performance Outcomes." *Journal of Business Ethics* 141 (3): 621–643.

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