

PROMOTING CIRCULAR ECONOMY AND SCP IN THE TECHNICAL TEXTILE SECTOR IN ASIA

17 OCTOBER 2022 | 14:00-16:00 (ICT) (GMT+7)

BACKGROUND

Technical textiles play an important role in our daily lives; they can be found in our homes, hospitals, sportswear, vehicles, buildings, and farms, among other places. A combination of technology and modern materials made technical textiles a viable option for a wide range of applications. However, the industry also has a negative social and environmental impact. The textile industry contributes roughly one-fifth of global industrial water pollution, employs a wide range of hazardous chemicals, and emits significant greenhouse gas emissions, particularly during the manufacturing and finishing stages. While the effects on the fashion industry are well documented, much less attention has been paid to technical textiles, which have seen rapid growth in recent years. This proposed webinar, co-hosted by the Asian Development Bank (ADB) and the EU SWITCH-Asia SCP Facility, will discuss current trends, drivers, challenges, and game changers for moving the technical textiles industry toward a circular and sustainable value chain, with a particular emphasis on identifying leverages and trigger points for sector-wide transformative change.

OBJECTIVES

The webinar aims to contribute to a deeper understanding of critical factors facilitating circularity of the technical textile sector in Asia. It will focus on the discussion of (a) circular-economy-related practices that contribute to the sustainability of materials and used in the region and (b) critical factors that influence the development of circular supply chains.

TECHNICAL BACKGROUND

Technical textiles often have greater performance characteristics than conventional textiles.¹ They are made from synthetic and natural fibers. The synthetic fibers used in these applications are produced by combining various natural fibers with special chemical processes to impart their new properties. These fibres have greater or different qualities than regular fibres, and as a result, they are widely used not only for clothing, but also for medical, automotive, home furnishings, construction, agriculture, and other applications.

¹ Yet, with development of textile technologies in apparel sector, this difference might be minimal or non-existent. In some cases, it is reasonable to talk about application of textile materials to different areas rather than differentiating between technical and non-technical textile.

The market for technical textiles is expanding rapidly as a result of rising demand from both developed and developing nations, technological advances, and government investments. Global consumption of technical textiles was approximately 42 million MT in 2021 and is expected to reach 67 million MT by 2032, an increase of 59%. The global technical textile market size is projected to grow from USD 164.6 billion in 2020 to USD 222.4 billion by 2025, at a Compound Annual Growth Rate (CAGR) of 6.2% between 2020 and 2025.² *Technical textiles are projected to account for about 43 percent of global textile sales by the end of this decade.*

Europe is the largest consumer of technical textiles, followed by North America, while consumption in large Asian markets, such as China and India, is primarily for medical, infrastructure, and construction applications. Medical applications are one of the primary drivers of demand and consumption of these textiles in the European Union countries and the Asia-Pacific Region. Since the onset of the Covid-19 pandemic, the demand for medical textiles has increased significantly, and this trend is anticipated to continue in the coming years (See Box 1).

Box 1. Impact of pandemic on growth in technical textile

The COVID-19 pandemic has affected the textile industry's demand and supply. The chemical industry supply chain has been severely disrupted, which has had a significant impact on the procurement of raw materials for technical textiles. However, the pandemic also caused a sudden increase in demand for gowns, masks, and others, which had a positive impact on the demand for medical textiles (Medtech). As a response to the pandemic, technical textile manufacturers around the world are increasing their production capacity and investing in machinery to produce healthcare essentials. Demand for disposable hospital supplies and nonwoven materials is projected to rise from 2020 to 2025 due to an increase in the number of cases worldwide and the need for more healthcare professionals. Hygiene is anticipated to be the largest application segment in the technical textile market over the coming years due to continuing COVID-19 spread. Nonwovens are used as an alternative to conventional textiles in hygiene products due to their superior absorbency, softness, smoothness, strength, comfort & fit, elasticity, and cost-effectiveness

The majority of technical textiles are made in the Asia Pacific Region. China is the largest producer of both woven and non-woven technical textiles in this region and is currently responsible for 30% of global production, followed by the Americas (19%), India (18%), EU (16%), and the rest of the world (17%). China's lead is supported by a large number of suppliers, access to advanced technology, and experiences, coupled with steady domestic demand. Governments of countries in the European Union (EU) and the Asia Pacific are also supporting the development and manufacturing of technical textiles, which will allow both

regions to increase production and give them access to more advanced technology and practices.

As a result of the sophisticated procedures used to manufacture technical textiles for specific purposes, post-consumer disposal and/or recycling are frequently viewed as highly difficult to almost impossible, leaving only incineration and landfill disposal as feasible possibilities. As a result of increasing pressure from the government and the society, including from the side of international buyers, stricter regulations are being imposed to reduce the high environmental impacts and resource consumption throughout the supply chain of technical textiles.

Given the anticipated rapid increase in demand for technical textile products over the next decade, it is crucial to implement transformative sustainable consumption and production models and circular business technologies in the non-apparel and technical textile industries. Sustainable Consumption and Production is viewed as a steppingstone for the transformation of the textile industry into a circular economy. Companies that are able to maintain their sustainability programs and commitments while managing the crisis will gain a long-lasting competitive advantage and be able to rebuild a more sustainable textile and apparel industry after COVID-19. The circular economy, which necessitates new relationships between natural resources, customers, and markets, paves the way for the development of new business models and technologies. Also required are policy frameworks that facilitate business innovation.

Box 2. Policy directions in the European Union

The European Union has already begun investigating the issue by introducing a series of directives, strategies, and guidelines to assist bloc members in achieving carbon neutrality by mid-century. Specifically, the EU Strategy for Circular and Sustainable Textiles provides guidance on how the textile industry, the fourth largest contributor to greenhouse gas emissions, can better respond to the situation. The strategy will inevitably affect countries that manufacture textile products for the European Union market. In addition, national government policies and regulations play a crucial role in leveling the playing field and facilitating manufacturers' compliance with social and environmental standards while remaining competitive on the global market.

SCOPE

The webinar aims to examine the extent to which 'circular strategies' (e.g., resource circularity, resource efficiency, and resource switch), 'innovation' (e.g., products, materials, technologies, business models, consumption patterns, and lifestyles), and 'enablers' (e.g., education/behavioural change, public policy, market) can facilitate development of the technical textile sector towards circularity.

Key initiatives supporting circular economy dimensions in the sector will be discussed, especially in the following areas:

- 1. Technology & Processing** including waterless dyeing, efficient dyeing solutions, circular textile (based on design of the fibre), less harmful dyes, recycling/upcycling, energy efficiency and switch, resource circularity, etc.
- 2. Business models** including the exchange of used items, the sharing model, and the collection and sorting systems for recovered materials.
- 3. Market & Behavioural Change** including awareness campaigns (for consumers and value change actors), market outlook, and sustainability trends.
- 4. Policies & Regulations** including sustainable programmes, global ambitions & commitments, international and national regulations, etc.

AGENDA

Time	Programme
14:00 (GMT+7)	Welcome
14:05 (10 min)	Overview of the technical textiles sector
14:15 (10 min)	Challenges, drivers, and trend setters in the technical textile sector
14:25 (10 min)	Circularity economy and sustainable production and consumption concepts explained
14:35 (35 min)	Panel Discussion I: Critical factors in technological innovation and business approaches toward a sustainable and circular technical textiles industry
15:10 (35 min)	Panel Discussion II: Policy framework and innovation ecosystems for more circular and sustainable technical textiles
15:45 (5 min)	Final Thoughts
15:50 (10 min)	Wrap and closing remarks
16:00	Event closes

OUTCOMES

Expected results of the webinar include:

- Better understanding of the critical factors and players facilitating circular technical textiles for Asian markets.
- Identified issues and factors for market transformation (policies, finance, technology development, etc.) towards sustainability and circularity in the technical textile value chains.
- Increased knowledge of key initiatives toward sustainable and circular value chain in the technical textile industry and understanding of how to scale up such initiatives through policy support and collaboration and partnerships.
- Increased collaboration between concerned partners.

TARGET PARTICIPANTS

Representatives from the manufacturers, brand owners, knowledge institutes, and development partners, SWITCH-Asia grantees, as well as EU delegations, staff of the Asian Development Bank and SWITCH-Asia Programme.