

National Technical Textiles Mission

Main Syllabus: GS II - Government policies and interventions for development in various sectors

Why in News?

It has been 5 years since the launch of the National Technical Textiles Mission.

What are technical textiles?

- **Technical textiles** - These are fabrics made for specific functions and performance, focusing on function over appearance.
- **Specialized properties** - They are engineered to possess unique characteristics like breathability, water resistance, UV protection, flame retardance, chemical resistance, and moisture management.
- **High-performance materials** - Technical textiles often utilize specialized materials like Nomex, Kevlar, Spandex, and Twaron, which exhibit enhanced properties like tenacity, insulation, and thermal resistance.
- **Types** - They are divided into different categories, each serving a different purpose.

USAGE OF TECHNICAL TEXTILES IN 12 SEGMENTS (BASED ON APPLICATION)

MEDITECH

Diapers, Sanitary
Napkins, Disposables,
Contact Lens, Artificial
Implants

MOBILTECH

Airbags, Helmets,
Nylon Tyre Cords,
Airline Disposables

OEKOTECH

Recycling,
Waste Disposal,
Environmental
Protection

PACKTECH

Wrapping Fabrics,
Polyolefin Woven
Sacks, Leno Bags,
Jute Sacks

PROTECH

Bullet Proof Jackets,
Fire Retardant
Apparels, High Visibility
Clothing

SPORTECH

Sports Net, Artificial
Turf, Parachute
Fabrics, Tents,
Swimwear

AGROTECH

Shadenets, Fishing
Nets, Mulch Mats, Ant
Hail Nets

BUILDTECH

Cotton Canvas
Tarpaulins, Floor and
Wall Coverings,
Canopies

CLOTHTECH

Zip Fasteners,
Garments, Umbrella
Cloth, Shoelaces

GEOTECH

Geogrids, Geonets,
Geocomposites

HOMECH

Mattress and Pillow
Fillings, Stuffed Toys,
Blinds, Carpets

GEOTECH

Conveyer Belts, Vehicle
Seat Belts, Bolting
Cloth

- **Applications** - These textiles are designed to meet the needs of various industries like cars, construction, farming, healthcare, and safety.
- They are used in products that help protect people, improve machinery, and solve practical problems, such as in car parts, building materials, medical equipment, and safety gear.

Status of India's Textile Industry

- **India's textile industry** - It is important to the economy and makes some of the most innovative fabrics globally.
- **Export** - India is the 6th largest exporter of textiles globally, with a 3.9% share in world textile exports.
- **GDP contribution** - It contributes nearly 2% to the country's GDP.
- **Potential of textile sector** - The sector is set to grow to US\$350 billion by 2030 and create 3.5 crore jobs further strengthening India's position in the global market.

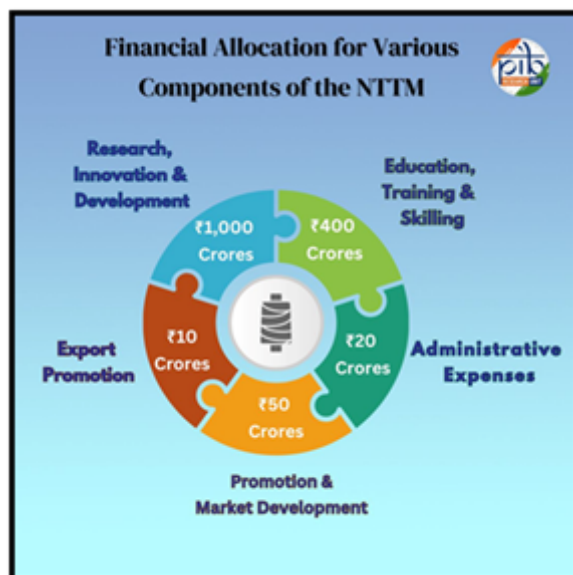
What is the National Technical Textiles Mission?

- **National Technical Textiles Mission (NTTM)** - It was launched in 2020 by the Ministry of Textiles to boost technical textiles in India for a period from 2020-21 to 2025-26.
- **Aim** - To make India a global leader in Technical Textiles with a budget of Rs. 1,480 crore till 2025-26 and to train 50,000 individuals in technical textiles.

- **Focus areas** - Research, market growth, exports and skill development.

Four key components of National Technical Textiles Mission (NTTM)

Component I Research, Innovation and Development	Supports R&D in technical textiles, inviting proposals to develop new materials and processes.
Component II Promotion and Market Development	Aims to increase technical textile adoption in India through market promotion and international collaborations.
Component III Export Promotion	Focuses on boosting exports of technical textiles with a dedicated export council.
Component IV Education, Training, and Skill Development	Promotes technical textiles education, skill training, and internships in top institutes and industries.



Research Areas Supported: Carbon fiber, aramid fiber, nylon fiber, composites, geotextiles, agro-textiles, medical textiles, mobile textiles, sports textiles, and biodegradable textiles.

Quality Control Orders (QCOs): 68 QCOs issued across various segments (20 Geotech, 12 Protective Textiles, 20 Agro Textiles, 6 Medical Textiles, 9 Ropes & Cordages, 1 Indutech textiles).

Export Promotion: The Synthetic & Rayon Textiles Export Promotion Council (SRTEPC) (now MATEXIL) assigned to promote technical textiles exports.

BIS Standards: Over 600 standards developed for technical textiles, including 200+ since NTTM's launch.

Academic Support: 38 proposals approved worth ₹191 crore for lab upgrades and faculty training in technical textiles.

How is NTTM strengthening the textile industry with other initiatives?

- The National Technical Textiles Mission (NTTM) is driving the transformation of India's textile sector with a range of initiatives focused on innovation, skill development and promoting indigenous production.
- **Grant for Internship Support for Technical Textiles (GIST 2.0)** - Launched under NTTM, GIST 2.0 bridges the gap between industry and academia by offering hands-on learning opportunities in technical textiles.
- It fosters local innovation, supports the Make in India initiative and helps empower young talent to drive growth in the textile sector.
- **Grant for Research & Entrepreneurship across Aspiring Innovators in Technical Textiles (GREAT) Scheme** - Launched in August 2023, the program provides funding to help translate prototypes into technologies and products for commercialization.
- **Skill Development Programs** - To meet the growing demand in the technical textiles sector, NTTM aims to train 50,000 individuals, including undergraduate students, unskilled workers, and professionals.
- **Technotex 2024** - Held as part of Bharat Tex 2024, showcased the strength of India's technical textiles sector, offering a platform to explore global investment opportunities.



Conclusion

- India's journey to becoming a global leader in technical textiles is well underway.
- Initiatives like GIST 2.0, along with cutting-edge technology and research, are paving the way for this vision.
- With continued effort and innovation, India is set to lead the global technical textiles market, driving both economic growth and global competitiveness.

Reference

[PIB | 5 Years of National Technical Textiles Mission](#)



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