

SUSTAINABILITY

ENVIRONMENT MANAGEMENT

REPORT 2022

Prepared by CSR TEAM

2023/02/07

A close-up photograph of industrial machinery, possibly a textile loom, featuring metal frames and orange components. A large, white, bold number '01' is centered over the image, which is framed by a blue-outlined diamond shape.

01

ABOUT TOP STAR

Three concentric, semi-circular orange lines are positioned in the bottom right corner of the slide, adding a decorative element to the background.

ABOUT | DEVELOPMENT HISTORY TOP STAR & SUPPLY CHAIN DEPLOYMENT

We have high-quality cooperative factories in China and wholly owned weaving and dyeing integrated factories in Cambodia and Vietnam. We have established a complete and flexible supply chain system, which can provide fast, high-quality, stable supply services according to customer needs.

Time	Development History
1995	Hongkong, Top Star Textile Ltd. (HQ)
1995	Guangzhou, Branch Office
2003	Shanghai, Branch Office
2005	Ningbo, Invest Yingxing Textile Ltd.
2006	Shanghai, Chintex Enterprises LTD
2011	Cambodia, Top Sports Textile Ltd.
2019	Vietnam, Top Star Textile Vietnam Company Ltd.
2019	Taiwan, Branch Office
2019	Listed on the Taiwan Stock Exchange
2022	Vietnam, Top Sports Textile Vietnam Co.,Ltd started construction





A B O U T
T O P S T A R

G E N E R A L S I T U A T I O N
O F P R O D U C T I O N B A S E S

CAMBODIA



Svay Rieng



Founded in 2011



≈ 5 M yds / M



The first knitting & dyeing integrated factory in Cambodia

CHINA



Guangdong



Founded in 2002



≈ 4 M yds / M



Guangdong 2020
Specialized, New & High-tech SMEs

VIETNAM



Tay Ninh



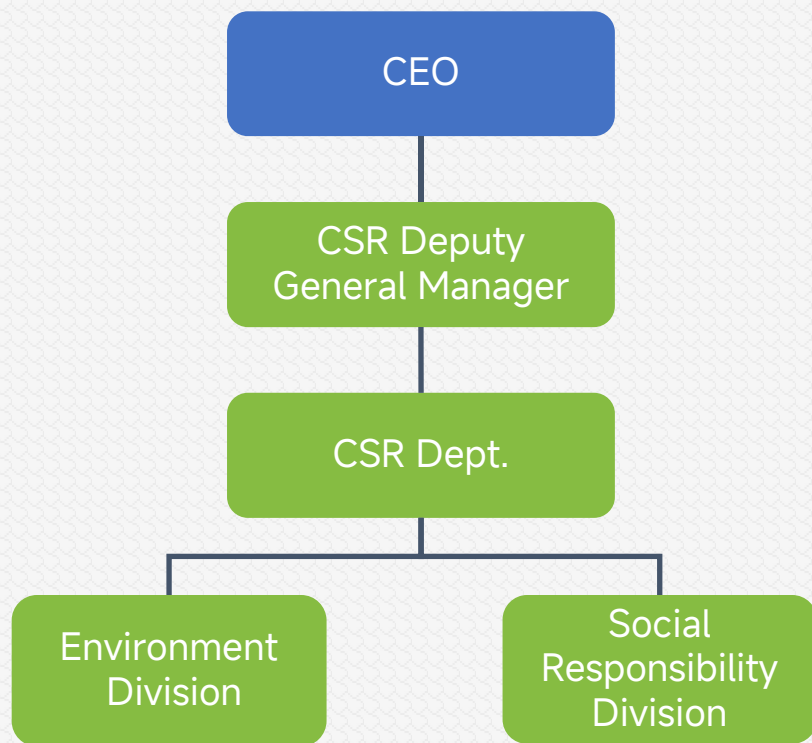
Start-up in 2023



73,000 m²



Planned
5 M yds / M



Top Management Support & Direct

- Sustainable development affairs are supervised by the Group CEO, managed by CSR Deputy General Manager and Corporate Social Responsibility (CSR) Department;

We Evaluate/Advise/Supervise

- Identify, evaluate and manage the impact of the company's operating activities on sustainable development issues, and regularly report the project progress and performance;
- Supervise the sustainable practices of factories, and carry out evaluation and audit.

Transparent & Credible

We attach importance to communication and dialogue, understand stakeholders' concerns, and show the company's efforts in sustainable production to stakeholders

Stakeholder	Focus	Communication
Employees & Families	<ul style="list-style-type: none"> employee-employer relations Occupational health and safety Labor rights and interests Training and Career Development 	Staff communication meetings, employee congress, trade union, complaint box
Shareholders & Investors	<ul style="list-style-type: none"> corporate governance business performance 	The Board of Directors and the Shareholders' Meeting Legal person presentation Public information
Client	<ul style="list-style-type: none"> Product quality & production efficiency Innovative products & technologies Customer communication & complaint management 	Email, phone calls, offline meetings Visit & inspect the factory regularly Exhibition & promotion activities
Supplier	<ul style="list-style-type: none"> Product price, quality, & service Supplier management 	Telephone, email, offline meetings Visit & inspect factories Contract contract
Government	<ul style="list-style-type: none"> Local regulations follow Environmental Management & Assessment Workplace health and Safety 	Telephone, official document, mail traffic Government meetings, government public website Factory visit, supervision and inspection
Community	<ul style="list-style-type: none"> Protect the environment against pollution Support community development 	Energy conservation and emission reduction, charitable donations, and participation in volunteer activities
Media & NGO	<ul style="list-style-type: none"> Governance transparency Environmental protection production 	Participate in trade association meetings Public platform disclosure
Academy	<ul style="list-style-type: none"> Promote industry development Provide employment opportunities 	Industry-university-research, internship, education





A B O U T
T O P S T A R

C L I M A T E - R E L A T E D
F I N A N C I A L R I S K C O N T R O L



Physical Risk

- Climate change and its secondary disasters will cause great damage to factory operation and supply chain circulation.

HOW TST
REACT

•



Environment Emergency Management

•



Coal Phase-out



Roof Top Solar



Sustainable Products



Transformation Risk

- The transformation of the industry will pose great challenges to the factory's compliance, technical level, business environment and corporate image.

HOW TST
REACT

•



Identification & Follow-up of Laws

•



Exploration of Green Energy Market



Energy-saving Equipment



ESG Disclosure



ABOUT | CLIMATE-RELATED TOP STAR | FINANCIAL RISK CONTROL

TYPE	CLIMATE-RELATED RISK	POTENTIAL FINANCIAL IMPACT	CONTROL MEASURES/PLANS
Physical Risk	Acute Risk		
	Extreme weather events (Such as typhoon, flood)	Threaten personal and property safety, supply chain and logistics interruption	Incorporate adaptations into business strategies and plant emergency plans; Diversified origin and material sources
	Chronic Risk		
	Frequent extreme heat temperatures	Energy cost, high temperature subsidy cost increases; personnel production enthusiasm decreases	Promote RTS and other carbon reduction projects; heat prevention and cooling measures in the factory
	Sea level rise	Threaten personal and property safety, supply chain and logistics interruption	Include risk considerations into infrastructure planning and supplier management procedures
	Freshwater salinity rises	The cost of fresh water supply is rising	Increase the construction of recycling water facilities, improve the efficient water-saving process; Sustainable raw materials, such as GOTS, GRS, OCS, RCS, etc
	Persistent and severe drought	Supply costs of raw materials and fresh water are rising	



ABOUT TOP STAR

CLIMATE-RELATED FINANCIAL RISK CONTROL

TYPE	CLIMATE-RELATED RISK	POTENTIAL FINANCIAL IMPACT	CONTROL MEASURES/PLANS
Transformation Risk	Policies & Laws		
	Stricter Policies & Regulation	Compliance costs rise; Risk of stopped production	Following the policy and legal norms, continuous technical update
	Technology		
	Low Carbon Technology	Cost spending increased	Group carbon reduction strategy
	Market House		
	Supply Chain & Logistics Disruptions	Delay in raw material supply and cost logistics	Adopt sustainable raw materials; seek product localization supply chain
	Green Electricity Market	Increase electricity purchase expenses	Seek cooperation with professional green electricity trading institutions; seek other energy markets
	Industry Restructuring	Investment in low-emission production has shifted to on-demand production	Global partnership with customers and institutions, Industry 4.0 and outstanding intelligent manufacturing factory and smart warehouse
	Reputation		
	Customer Requirements for Improvement	Orders fell due to failure to meet customer requirements	Working with customers to promote various sustainability initiatives;
	Investor Attention Increases, and increasingly stringent ESG ratings	The capital supply is affected	Participation of the stakeholders and evaluation of important topics; The Group sustainability Report discloses important ESG information



02

SUSTAINABLE TOP STAR

Sustainable
Products



Climate
Action



Energy
Efficiency



Water
Efficiency



For TST, sustainability is not independent from production, but integrated into all development strategies.



We are committed to improving the following **7 fields**, making them part of our corporate culture & the responsibilities of each employee and department.

Chemical
Management

Wastewater
Exhaust Gas

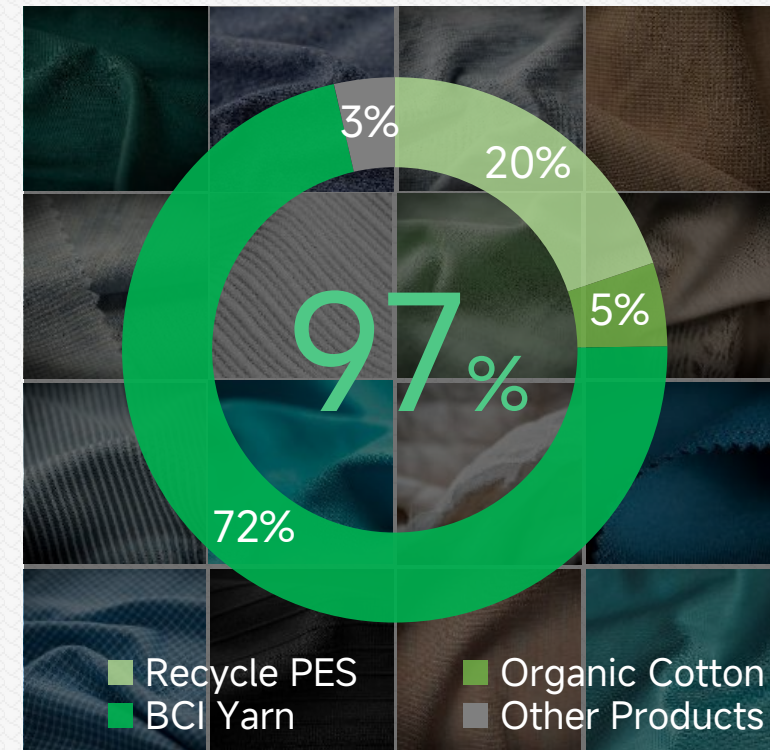
Waste
Management



MAKE TEXTILE MAKE GREEN LIFE

- Recycled Polyester
- Organic Cotton
- BCI Yarn

* We infer our sustainable products composition by analysing our yarn procurement





SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

- Global Recycle Standard (GRS)
- Recycled Claimed Standard (RCS)
- Global Organic Textile Standard (GOTS)
- Organic Content Standard (OCS)
- Better Cotton Initiative (BCI)
- U.S. Cotton Trust Protocol (USCTP)



Commitment & Ability

to purchase sustainable raw materials, and produce sustainable products

Overall & Responsible

management system to
reduce the environmental
footprint of
raw materials & products



- ISO45001 Occupational Health & Safety Management System
- ISO14001 Environment Management System
- ISO 9001 Quality Management System



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

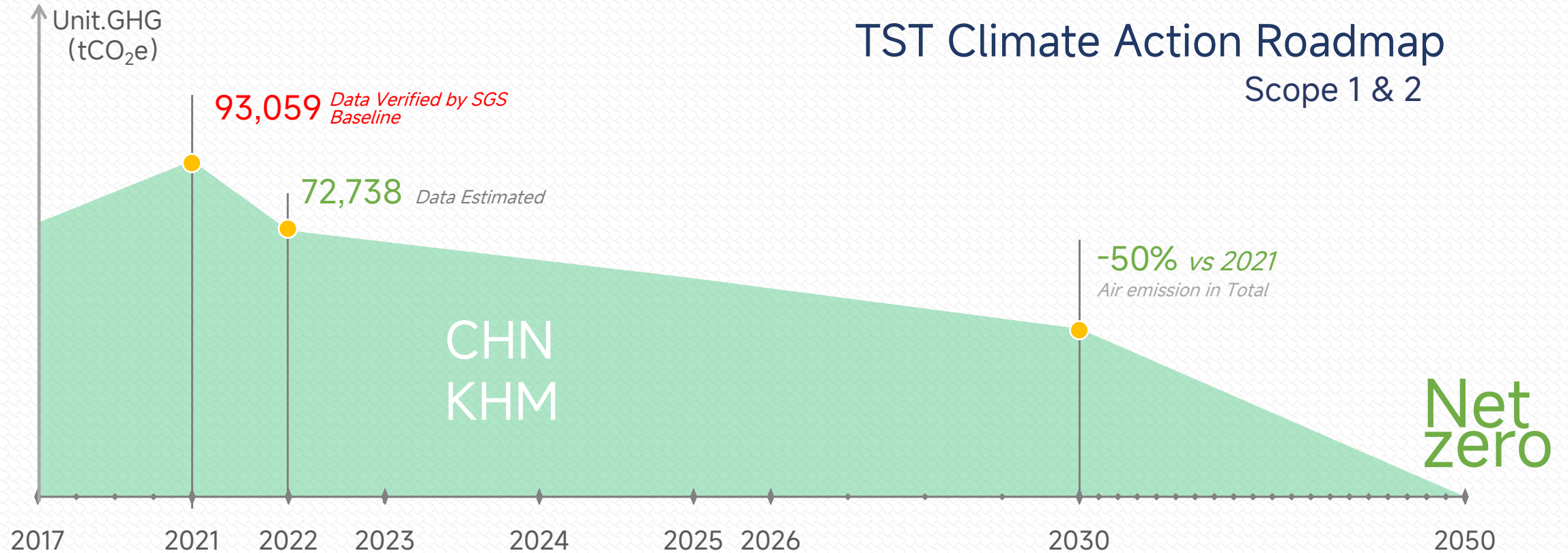
Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management



Officially launch
SBTi project



100% Achieve
Coal Phase-out



Achieve Maximum RTS
Installation Capacity



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

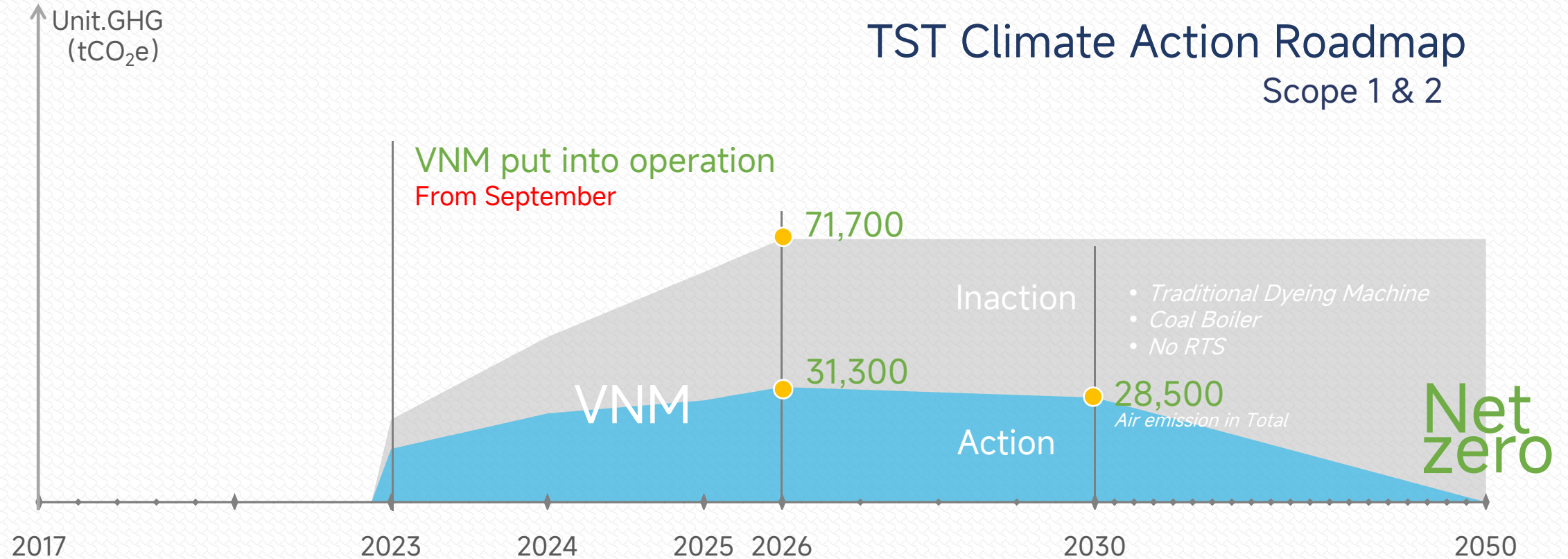
Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management



Officially launch
SBTi project



100% Adopt Biomass Boiler
at the Beginning



RTS Synchronous Installation
with the Facility



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

Dec.2022

2023

2024

2030

Continuous
Carbon
Reduction

GHG Verification Finished

Set targets
& Roadmap

Officially
Confirmed by SBTi

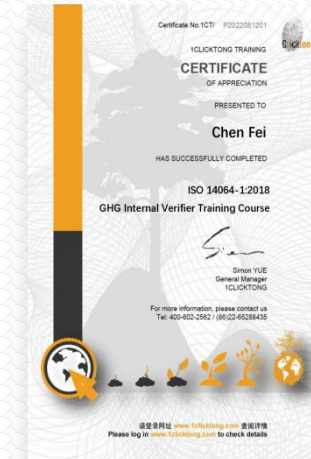
CO₂e -50%
in the Group wide

Nov. 2022

Completed GHG Inventory for the first
time

Aug. 2022

TST SBTi Project Launched; Training & Certifying



Jul. 2022

TST SBTi Special Team has been set up



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

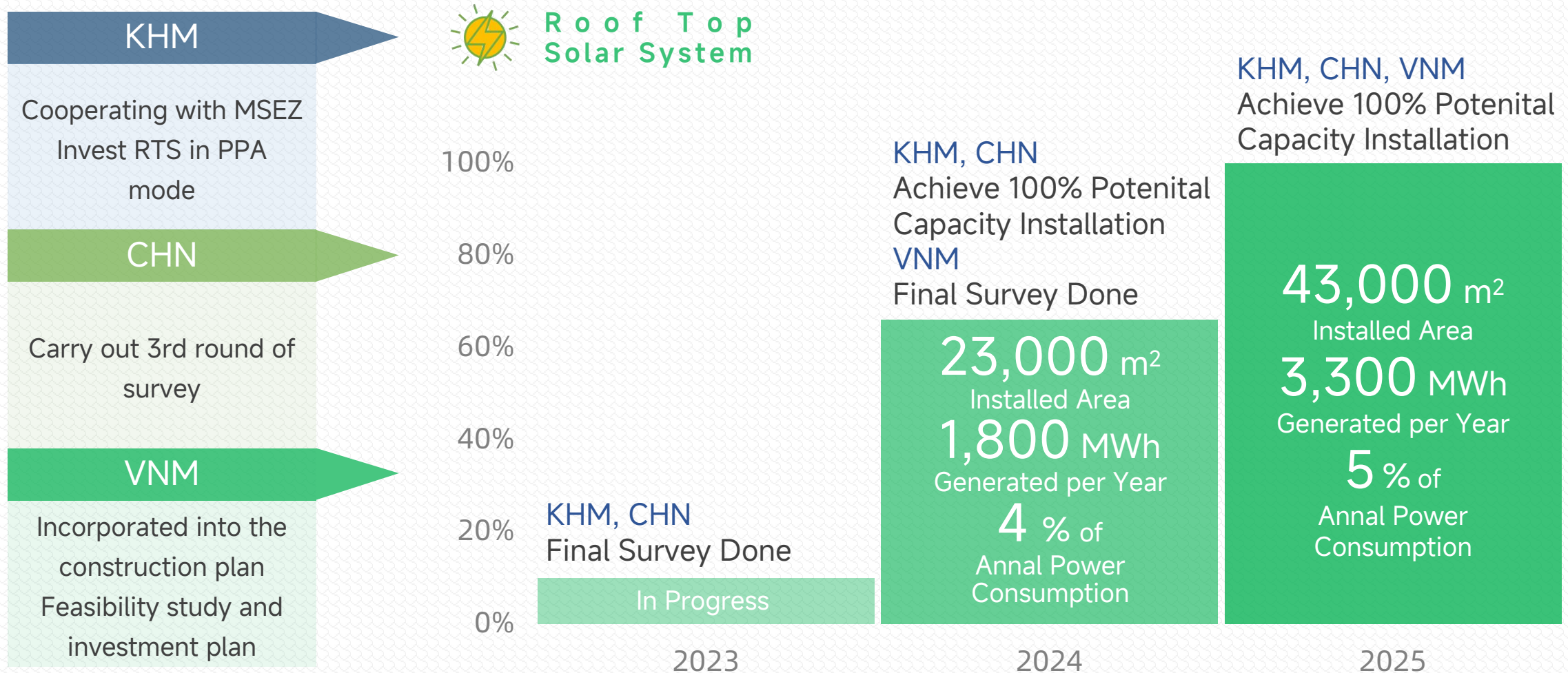
Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management





SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

KHM

Gradually invest in
replacing and
reforming biomass
boilers

CHN

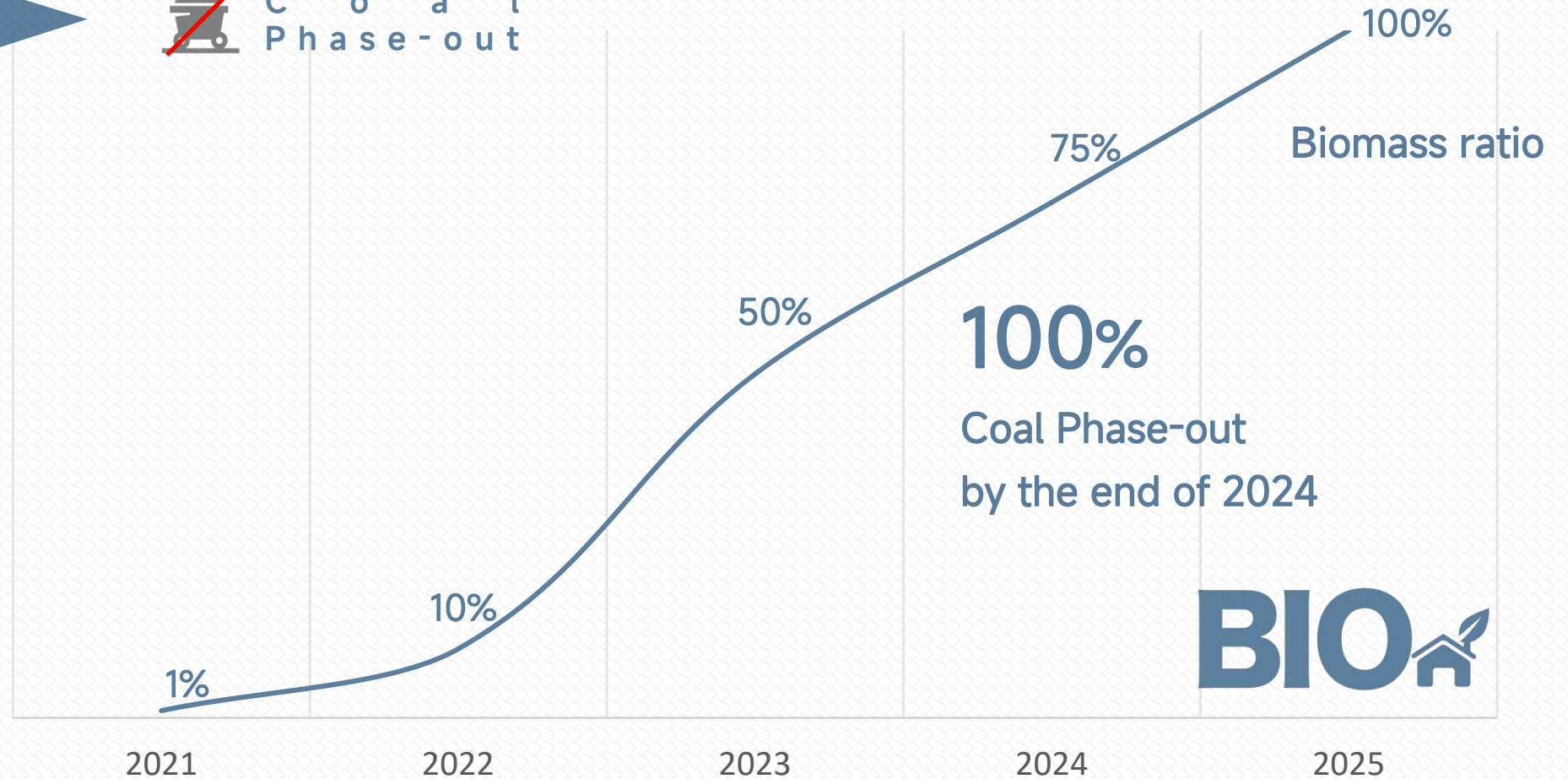
Purchase steam
No coal use

VNM

Incorporated into the
construction plan
All Biomass boiler



C o a l
P h a s e - o u t





**SUSTAINABLE
TOP STAR**

Sustainable
Products

Climate
Action

Energy
Efficiency

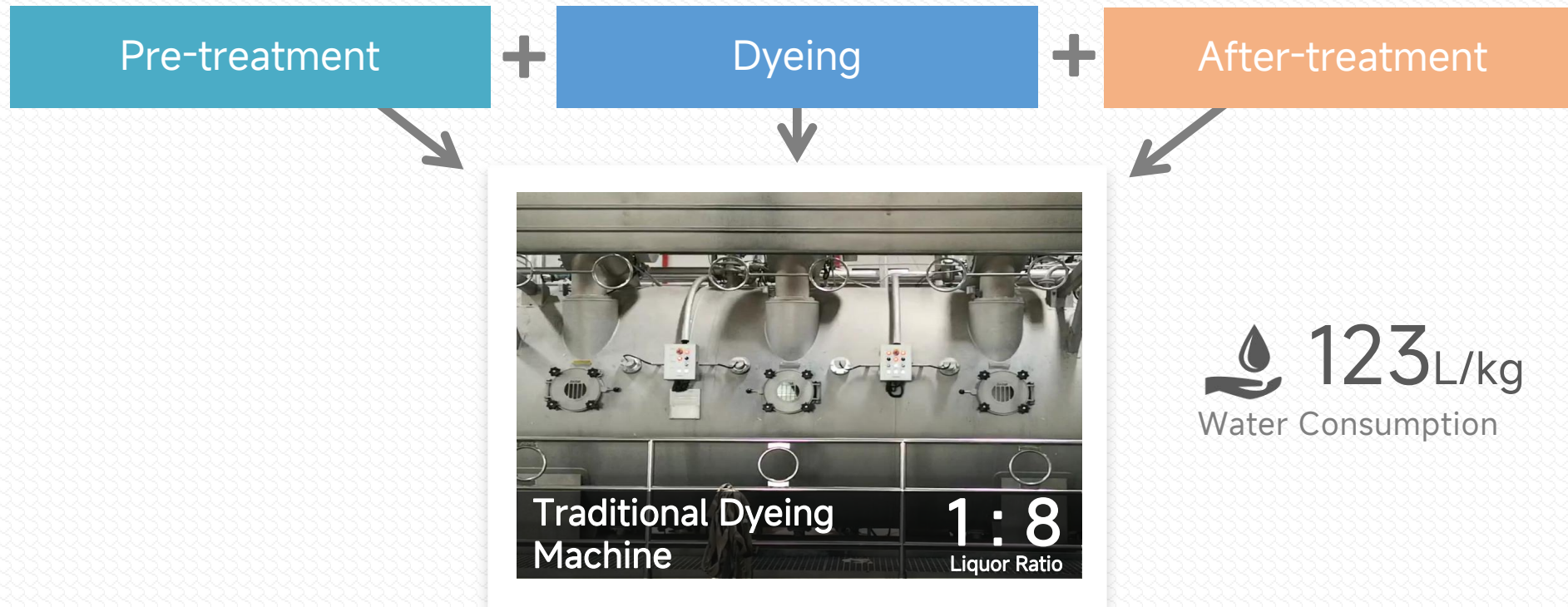
Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

Conventional Process



All in ONE

- Low mechanical efficiency
- High consumption of energy/water/chemicals



SUSTAINABLE
TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

TST Low Carbon Technology – Separate Processes



CHN
Mode I



-70%
Water Consumption



-60%
CO₂ Footprint

Continuous
Pre-treatment



Low LR Dyeing



Continuous
After-treatment





SUSTAINABLE
TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

TST Low Carbon Technology – Separate Processes



CHN
Mode II



-75%
Water Consumption



-55%
CO₂ Footprint



-90%
Chemical Consumption

Continuous
Pre-treatment



Continuous
Pre-treatment Machine



CPB Dyeing



Cold Pad Batch
Dyeing Machine

1 : 1
Liquor Ratio



Continuous
After-treatment



Flat Pad Continuous
After-treatment Machine



SUSTAINABLE
TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

TST Low Carbon Technology – Separate Processes



 **-40%**
Water Consumption

 **-45%**
CO₂ Footprint

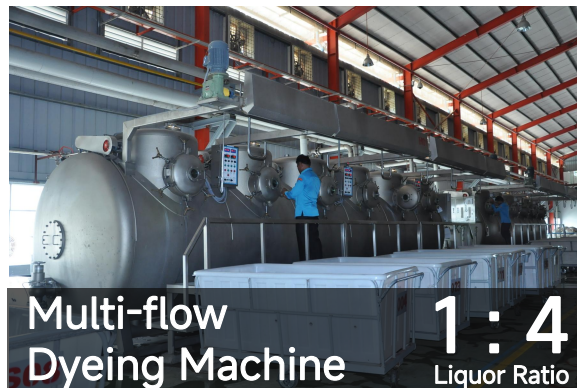
CPB
Pre-treatment



CPB Pre-treatment
Machine



Low LR Dyeing



Multi-flow
Dyeing Machine

1 : 4
Liquor Ratio



Continuous
After-treatment



Rope Washing Machine



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

Conventional Process

Pre-treatment + Dyeing (1:8) + After-treatment

123 L/kg

TST Low Carbon Technology – Separate Processes

Estimated Savings

CHN

Continuous
Pre-treatment

Dyeing
(1:4)

Continuous
After-treatment

-70%
Water
Consumption

-60%
CO₂ Footprint

CHN

Continuous
Pre-treatment

Dyeing
(CPB1:1)

Continuous
After-treatment

-75%
Water
Consumption

-55%
CO₂ Footprint

-90%
Chemical
Consumption

Step 1

Step 2

Step 3

KHM

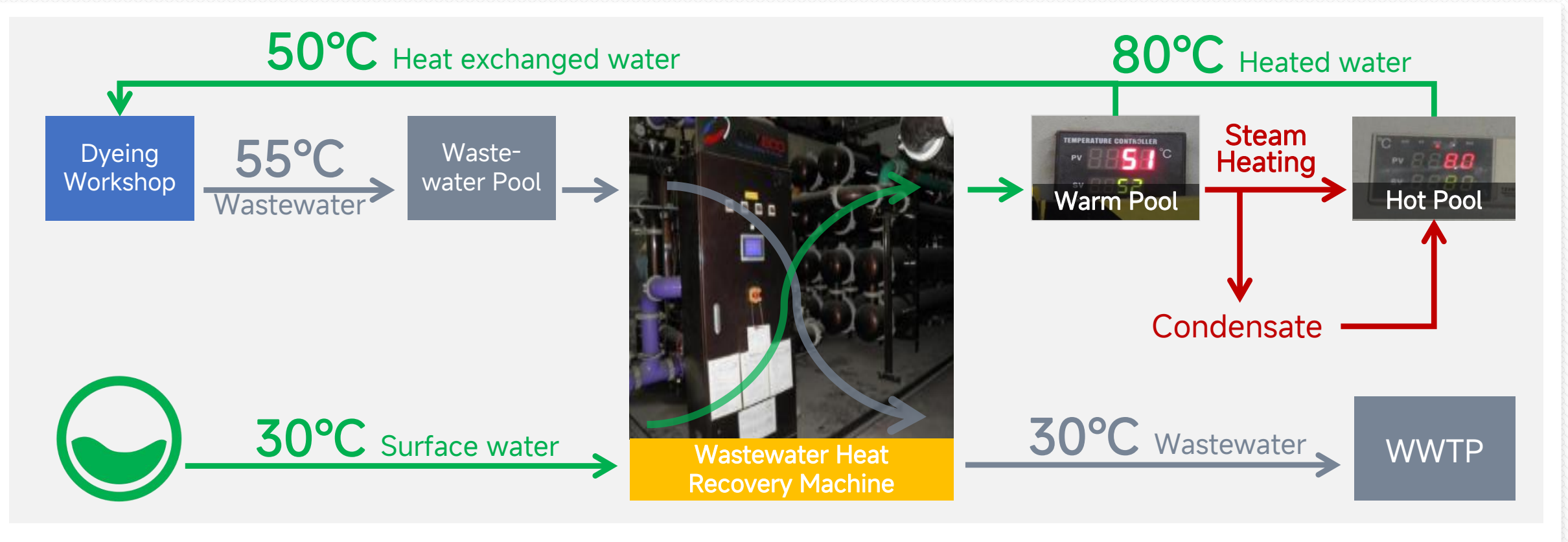
Pre-treatment
(CPB)

Dyeing
(1:4)

Continuous
After-treatment

-40%
Water
Consumption

-45%
CO₂ Footprint



Wastewater Heat Recovery

- Heat the cold surface water to be put into the Dyeing Machine by using the waste heat from waste dyeing water.
- Save energy consumption.



SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

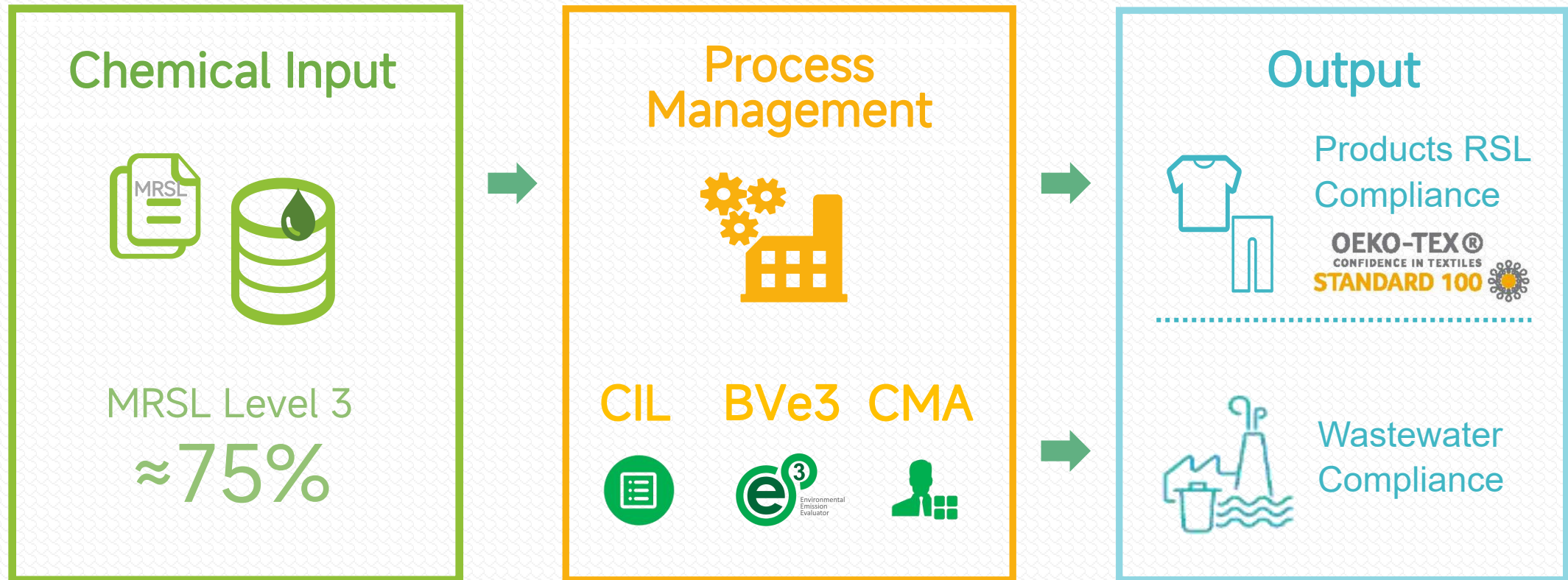
Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

Integrated Management

We systematically control chemicals from the input, process management & output to mitigate the environmental impact of chemicals throughout the process.





Sustainable Products

Climate Action

Energy Efficiency

Water Efficiency

Chemical Management

Wastewater
Exhaust Gas

Waste Management

Compliance & Disclosure

We fully adopt the ZDHC platform, Wastewater Guidelines, and join the Supplier to Zero project. We publicly disclose relevant information on IPE DETOX and ZDHC Gateway.



ON-SITE CHEMICAL INVENTORY LIST VERIFICATION CHECKLIST

Facility Name:	TOP SPORTS TEXTILE LTD		
FFC ID:	69864		
Facility Address:	Manhattan SEZ (Svay Rieng), Bavet Commune, Bavet City, Svay Rieng Province, Cambodia		
Date of Verification: (Month DD, YYYY)	August 30, 2022		
Time of arrival:	8:00	Time of departure:	12:00
Facility Responsible Person Name:	Heng Chanvuthy (CI supervisor)		
Verification: (Please tick the box)	<input checked="" type="checkbox"/> On-site CIL verification <input type="checkbox"/> Virtual CIL verification		
No. of Chemicals verified: (Please tick the box)	<input checked="" type="checkbox"/> ≤ 30 chemicals <input type="checkbox"/> > 30 chemicals (with ____ supplementary sheets)		
Month(s) of CIL verified: (Mmm)	Jan, Feb, Mar, 2022		

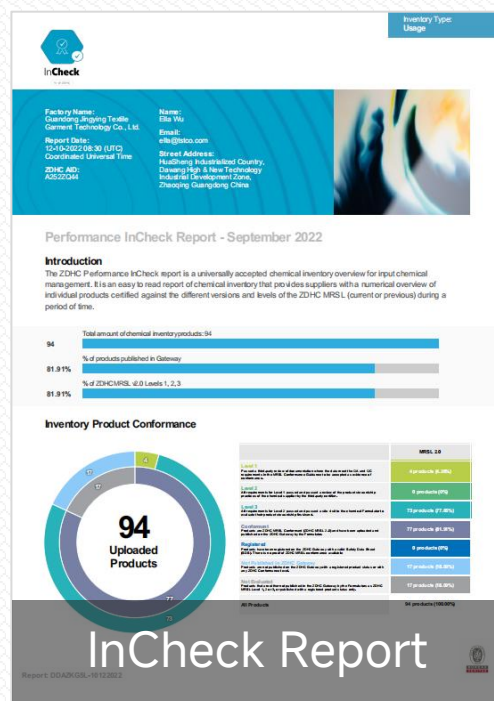
Notes:

- ✓ * All check items under that Critical Check comply with Appendix A
- ✓ * All check items under that Usage Check comply with Appendix A
- ✓ * All check items under that SDS Check comply with Appendix A
- ✓ * All check items under that Physical Check comply with Appendix A
- ✗ * Any check item(s) under that Critical Check does not comply with Appendix A
- ✗ * Any check item(s) under that Usage Check does not comply with Appendix A
- ✗ * Any check item(s) under that SDS Check does not comply with Appendix A
- ✗ * Any check item(s) under that Physical Check does not comply with Appendix A

CIL Audit Report

ZDAD-AN-PMAN-ONSITE CIL VERIFICATION CHECKLIST-V2

Page 1 of 6



Supplier to Zero

Acknowledgement of Completion

Based on supplier self-evaluation,
this document acknowledges

Top Sports Textile LTD

has successfully completed Supplier to Zero (Foundational Level) on
21.10.2022*

Frank Michel
ZDHC




471-2301-7E8
Document Control Number

Supplier to Zero

Powered by IMPLEMENTATION HUB

IPE DETOX

ZDHC Gateway

			
Total Quality Assured.			
<u>TEST REPORT</u>			
SOFTLINES WASTEWATER TESTING		Number: GZHTD2544455	
		Date: Apr 18, 2022	
Factory:			
Factory's Name	:	Guangdong Jingying Textile Garment Technology Co., Ltd	
Address	:	Huasheng Industrialized Zone, Dawang High & New Technology Industrial Development Zone, Zhaoqing, Guangdong, China	
On-site Wastewater treatment plant	:	Yes	
Type of wastewater discharge	:	Indirect discharge	
Date of sampling	:	Mar 25, 2022	
Sample type	:		
Sample / Incoming water	:	[Transparent, grab at 09:20, For RCA When Necessary]	
Sample / Wastewater (pre-treated)	:	[Light Yellow, composite sample at 10:07, 11:07, 12:07, 13:07, 14:07, 15:07]	
Sample / Sludge	:	[Brown, grab at 09:34]	
ZDHC Sampler Accreditation	:	8F146507035	
Certification Number	:		
Local legal standard name ^[4]	:	Discharge standards of water pollutants for dyeing and finishing of textile industry	
Local legal standard no. ^[4]	:	Discharge limits of water pollutants	
	:	GB 4287-2012;	
	:	DBH/4 26-2001	
Parameters (ZDHC WWIG V1.1, Table 1A-1B) exceeded local regulation	:	No exceeded	
Discharge permit provided	:	Yes	
Ambient temperature of receiving water body	:	N/A	
Date received/Date test started	:	Mar 28, 2022	
Tests conducted:			
As requested by a brand program, for details refer to attached page(s).			
<hr/>			
Prepared And Checked By: 			
For Intertek Testing Services ShenYang Lab (Guangzhou Branch)			
			
James Ma Textile lab Senior Manager			
<h1>Wastewater Test Report</h1>			
Intertek Testing Services Textile Lab Guangzhou Branch			
			Page 1 Of 33



Investment & Compliance

Wastewater

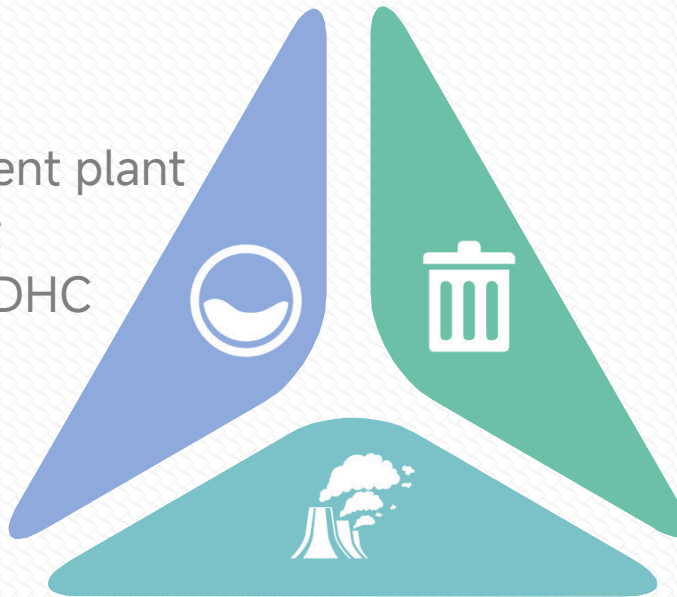
- Build wastewater treatment plant
- Conduct wastewater test as per regulations and ZDHC Guidelines

Exhaust Gas

- Invest gas cleaning Machines
- Conduct air emission test as per regulations

Waste

- Build classification & storage facilities
- Third-party units recycling





SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

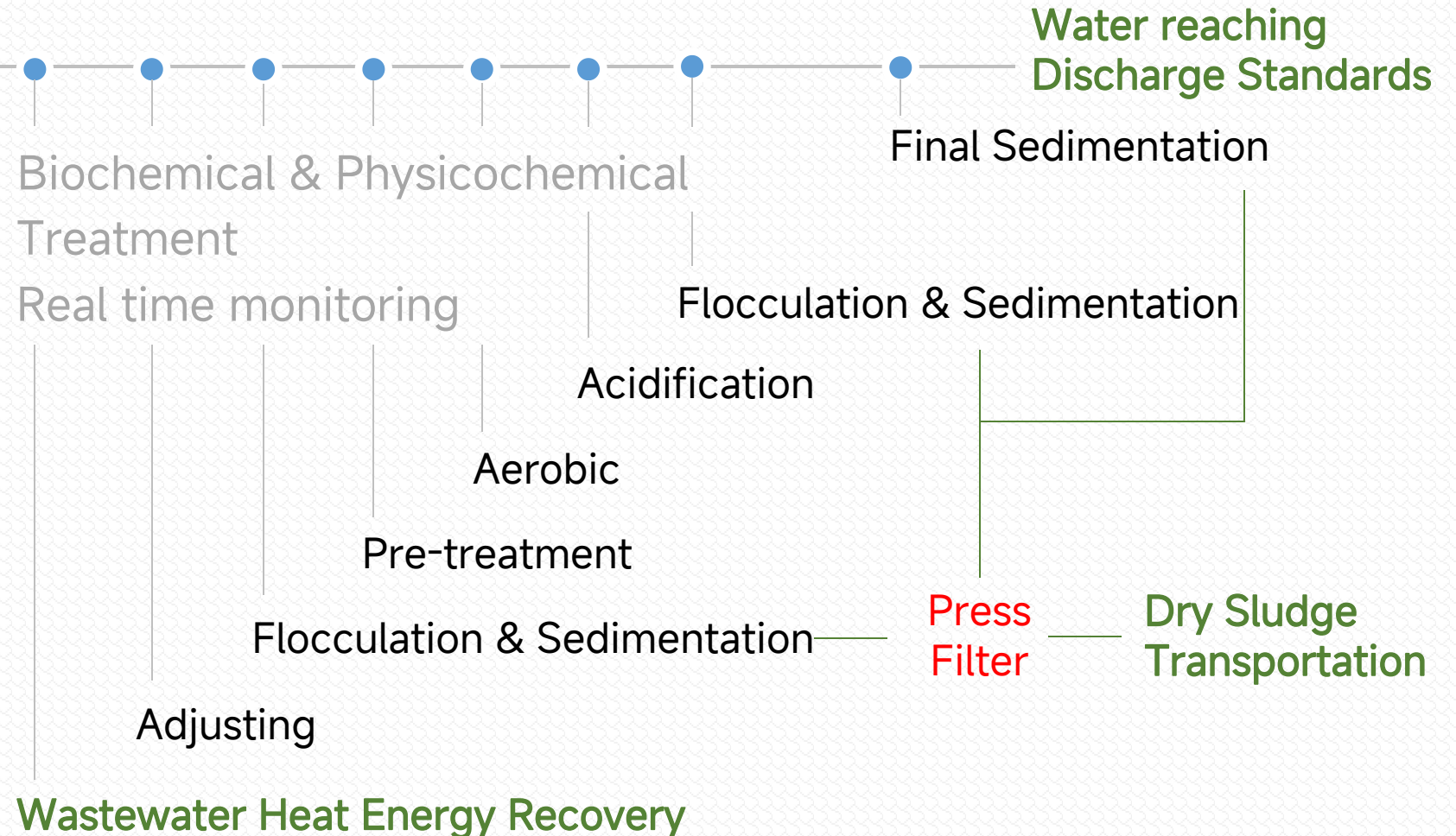
Wastewater



Treatment Facilities



Real Time Monitoring





SUSTAINABLE TOP STAR

Sustainable
Products

Climate
Action

Energy
Efficiency

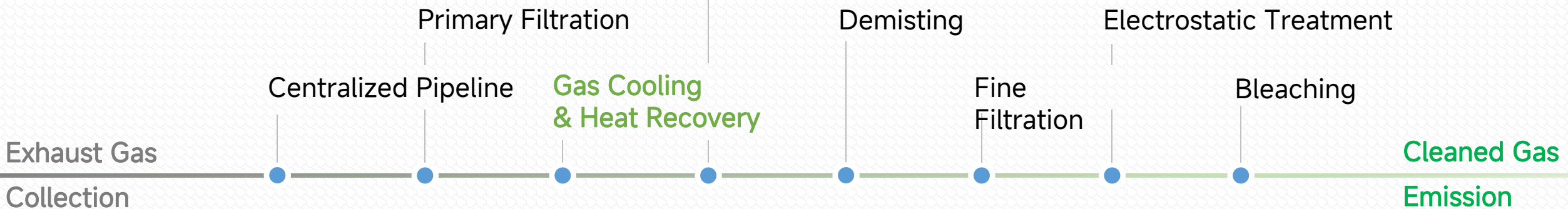
Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

Water Spraying

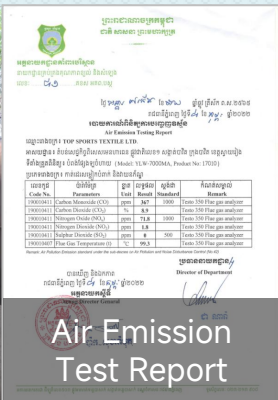


KHM

- Air emissions are tested every 1 years as per regulations

CHN

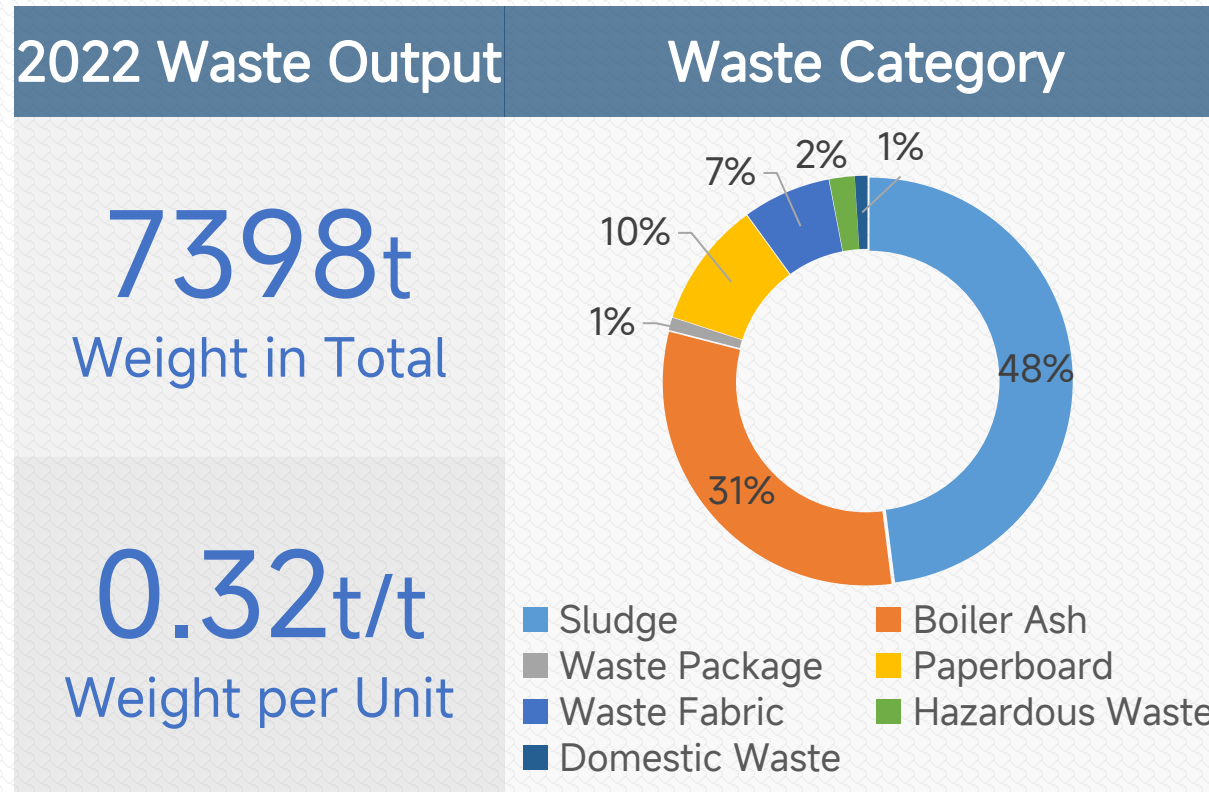
- Different objects are tested once a quarter ~ once a year as per regulations





Classify & Store

We adhere to the principle of "Reducing, Recycling & Detoxifying", we reduce waste from the source, classify and store waste according to its characteristics.





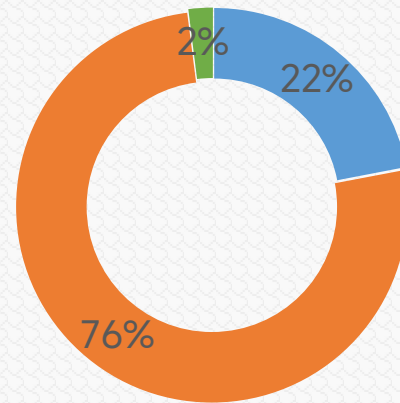
Recycle & Reuse

We actively promote the concept of circular economy as well as the comprehensive utilization of solid wastes, achieve agreements with various third-party waste recycling units.

Diversion Rate

99%
'Zero Landfill'
Rate

Diversion Category



- Waste to Energy
- Waste Recycling
- Chemical Drums Refilling



Sludge to Energy



Sludge to Bricks



Boiler Ash to Bricks



Chemical Drums
Refilling



Waste Fabric Mop



SUSTAINABLE
TOP STAR

5 - Y E A R P L A N
P E R F O R M A N C E

2017-2022

97%

(2022)

-21%

(2022vs2021 Baseline)

73,728 tCO₂e

Scope 1+2

-19%

(2022vs2017)

34 MJ/kg

-25%

(2022vs2017)

81 L/kg

- Adopt the BVe3 & ZDHC platform to Continuously improve MRSL as well as other chemical management compliance

- Strictly follow the legal requirements and take advance actions

- Low carbon dyeing process
- Intelligent packaging
- Improve RFT
- Qualified third party co recycling

Sustainable
Products

Climate
Action

Energy
Efficiency

Water
Efficiency

Chemical
Management

Wastewater
Exhaust Gas

Waste
Management

75%
MRSL Level.3
(2022)
60% in 2017

100%
Compliance
(2022)
100% in 2017

99%
Waste Diversion
(2022)
57% in 2017

- Seek cooperation with more sustainable raw material suppliers to produce more sustainable products

- RTS Project in progress
- Gradually replace coal boilers with biomass boilers
- Commit to join SBTi

- CPB Dyeing
- Low Liquor Ratio Vat
- Continuous Pre-treatment/After-treatment
- Wastewater heat recovery

- CPB Dyeing
- Low Liquor Ratio Vat
- Continuous Pre-treatment/After-treatment



SUSTAINABLE
TOP STAR

ENVIRONMENT
ROAD TO 2025

2021

Sustainable
Products

98%

(Recycled PES)
(Organic Cotton)
(BCI Yarn)

Climate
Action

-30%

(2025vs2021)

Energy
Efficiency

-18%

(2025vs2021)

Water
Efficiency

-10%

(2025vs2021)

80%

(MRS� Lv.3)

100%

(Compliance)

99%

(Waste Diversion)

Chemical
Management

Wastewater
Exhaust Gas

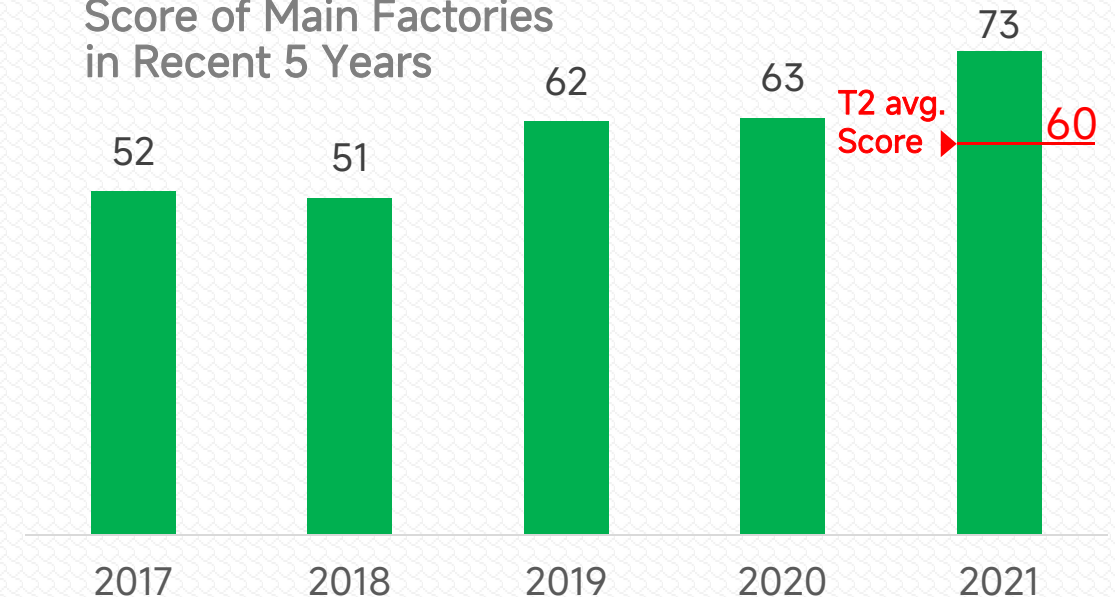
Waste
Management

2025

SUSTAINABLE TOP STAR | ENVIRONMENT PERFORMANCE



Average Higg FEM Verification Score of Main Factories in Recent 5 Years





SUSTAINABLE
TOP STAR

A W A R D S
& H O N O R S



“Top Of The League”

“Manufacturing Excellence & Innovation”

“Performance Award”

“Leadership/Sustainability Award”
for 3 consecutive years

“Adidas GASA Champion”
for 2 consecutive years

“Reliability Award”

“Golden Shoes Prime”

“Outstanding Contribution Award”



CONTACT US

Ella Wu ella@tstco.com

ENVIRONMENTAL MANAGEMENT MANAGER
TOP STAR TEXTILE LTD.

We sincerely hope that this *Sustainability Report* can provide useful information to our stakeholders.

We are also looking forward to your valuable comments on the content of this report and our sustainability work.

Should you have any questions or suggestions, please feel free to contact us, thank you.



冠星集團控股有限公司
TST GROUP HOLDING LTD.