



SAYA



南亞塑膠公司  
NAN YA PLASTICS CORPORATION

a responsible brand by Nan Ya Plastics



# Introduction on Garment Cutting Scrap Recycling with SAYA



Putting things in perspective...

## Nan Ya Plastics

**#800**

US\$20.06B

## Vietcom Bank

**#814**

US\$18.13B

## Formosa Plastics

**#981**

US\$19.49B

## Formosa Petrochemical

**#1062**

US\$26.46B

### About Nan Ya Plastics Group

Global Employees **11,427**

Established Since **1958**

Registered Capital **US\$2.69 billion**

**Forbes**

The World's  
Largest Public  
Companies  
2023



8,000,000,000

PCR Bottles Renewed  
by SAYA in 2023

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# SAYA 365

# Rscuw



## Post-consumer Recycled Bottles

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*1,000,000+ bottles are sold every minute globally.*



## Textile Scraps and Offcuts

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*5%-25% offcuts from garment production.*



## Off Grade Fabric

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*100% of companies have some off grade fabric.*



## Used Garments

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*15% of global plastics are used for garments.*

**on average**

**15% of fabric become cutting scrap waste in garment production**



**This equals about  
300,000 tons  
of textile waste each year  
in Vietnam**

# Cutting scrap is also calculated into brands' product CO2 emission

## Scope 1

- Fuel combustion
- Company vehicles
- Fugitive emissions

## Scope 2

- Purchased electricity, heat and steam

## Scope 3

- Purchased goods and services
- Business travel
- Employee commuting
- **Waste disposal**
- Use of sold products
- Transportation and distribution

\*Ref: What are Scope 3 emissions and why do they matter?, CARBON TRUST

<https://www.carbontrust.com/our-work-and-impact/guides-reports-and-tools/what-are-scope-3-emissions-and-why-do-they-matter>



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# Brands starting to take action on Scope 3 (cutting scrap waste)



REUTERS®

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Climate & Energy | Industry Insight | Circular Economy | ESG Investors | Climate Change

## Despite climate pledges, fashion brands 'way off track' on cutting carbon from the catwalk

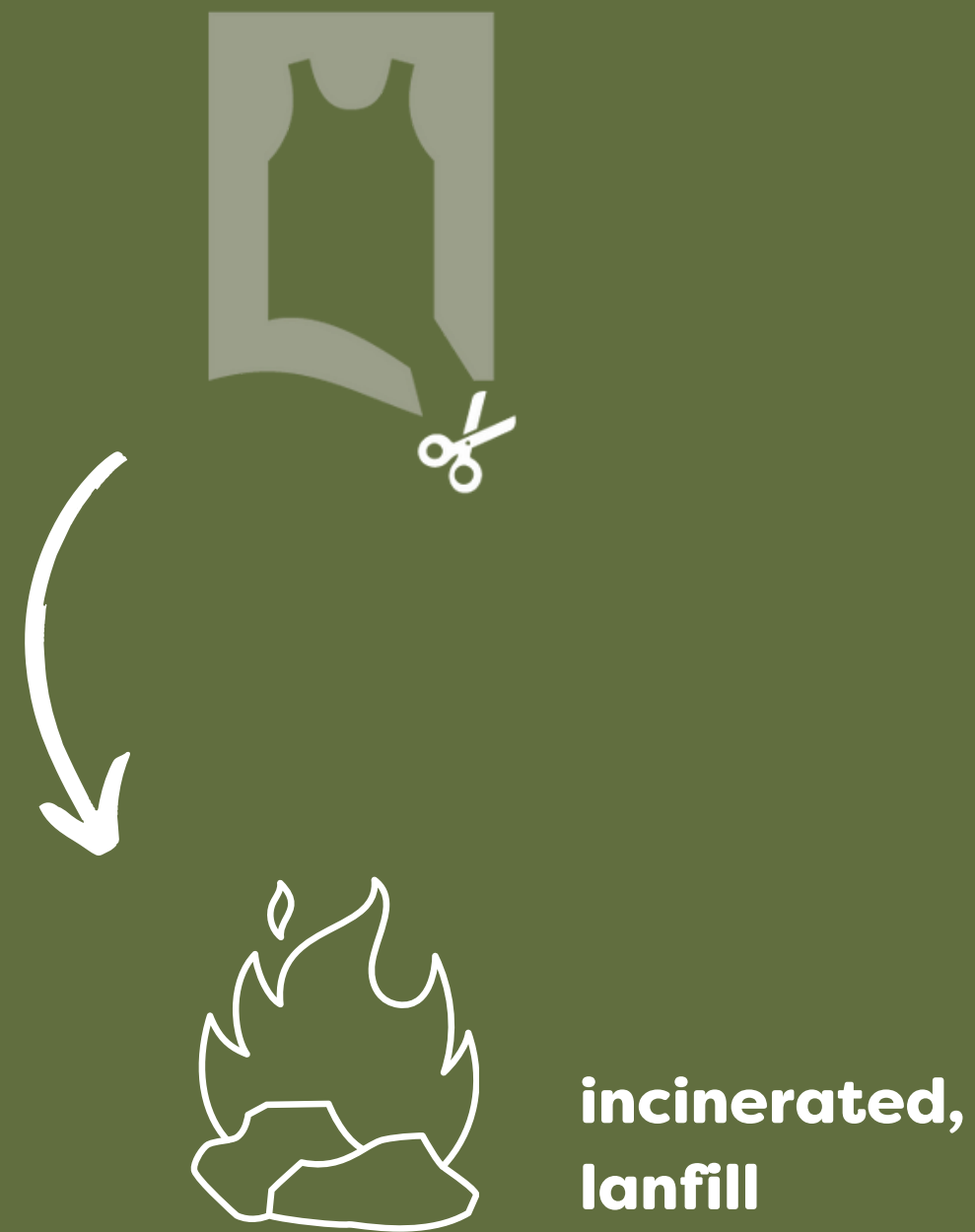
targets 56% reduction in Scope 3 emissions

... 3 emissions by  
... 3 emissions are 90  
times emissions in its own operations. Its latest report, for 2022, shows it's so far cut them by 7% to  
around 5.6 million tonnes, compared with its 2019 baseline. And this progress doesn't include the  
consumer use phase, which adds another 1.4 million tonnes.

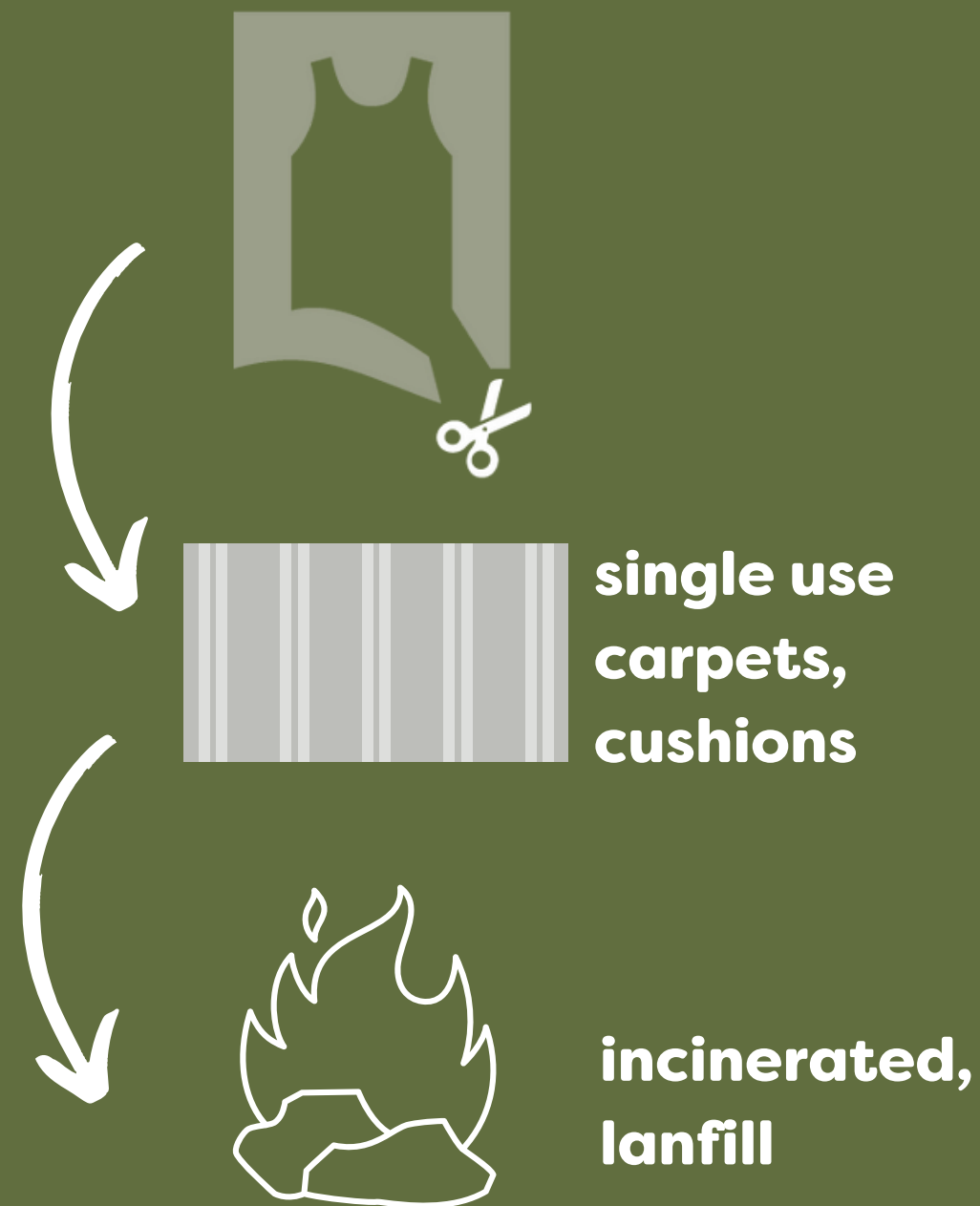


# Different Approach on Cutting Scrap

## Disposal



## Downcycle

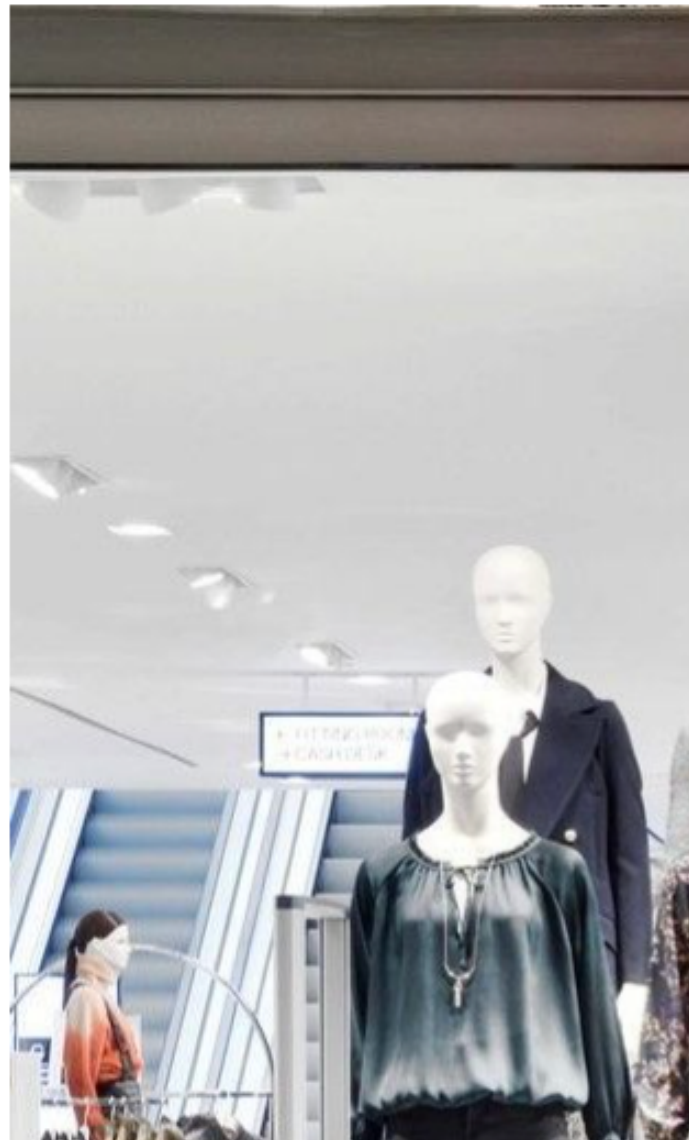


## Recycle



# Fast fashion doesn't recycle your used clothes

The circularity scam that always ends up in a landfill



- **Downcycled or Destroyed:** Seven items were quickly destroyed, in poor condition. Some were used as fuel to produce energy in cement plants, contrary to the brands' claims about downcycling or burning for fuel only items not suitable for reuse.
- **Downcycled or Destroyed:** Only five items have found a second life in second-hand clothing stores or with customers on the same continent. Although promising, this used clothing trade in some regions contributes to the waste problem in countries with significant challenges.
- **Just disappeared:** Several items have been trapped in the global used clothing trade, stagnating for months in indeterminate locations or warehouses, never fulfilling brands' promises of reuse or recycling.
- **Sent off to Africa:** The most controversial category involves clothing shipped to African countries, entering the massive second-hand clothing markets with

# Recycling Feedstock Comparison

Feedstock	Recycling method	Price	Color	GHG (kg CO <sub>2</sub> e)	Water Use (m <sup>3</sup> )	Circularity
Bottle	Mechanical	Standard	White	0.53	0.14	NO
100% PET textile	Mechanical	Standard	White - Yellow	0.53 + x	0.14 + x	YES
Blended fiber or textile	Chemical	4x Standard	White	1.3 + x	2.1 + x	YES

**x = resource for textile pre-treatment**

\*Ref:

Nan Ya Plastics, Taiwan

2023 American Chemical Society (ACS) Sustainable Chem. Eng.



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# Cutting Waste Recycling Challenges



**Paper marker**



**Fabric with blends & treatment finishes**



**Scrap separation by fiber content**

# Textile to Textile Recycling Needs your help

- **Building new infrastructure together -**
  - **Sorting**
  - **Handling**
  - **Logistics**
- **Seeking collaboration with Vietnamese stakeholders to enable textile waste circularity**





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Innovating Renewal Technologies

Q&A

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**Contact us if you have  
100% PET feedstock!**