



# Green Pakistan Project

Water Workshop

PRGMEA

October 1 2025



Supported by the



Federal Ministry  
for Economic Cooperation  
and Development

Lahore 2025



# Agenda

- 1. Introduction and update GPP**
- 2. Introduction to Water**
- 3. Insights to Water Consumption for Readymade Garments**
- 4. The practical Approach**
- 5. Outlook**



# 1. Introduction and update

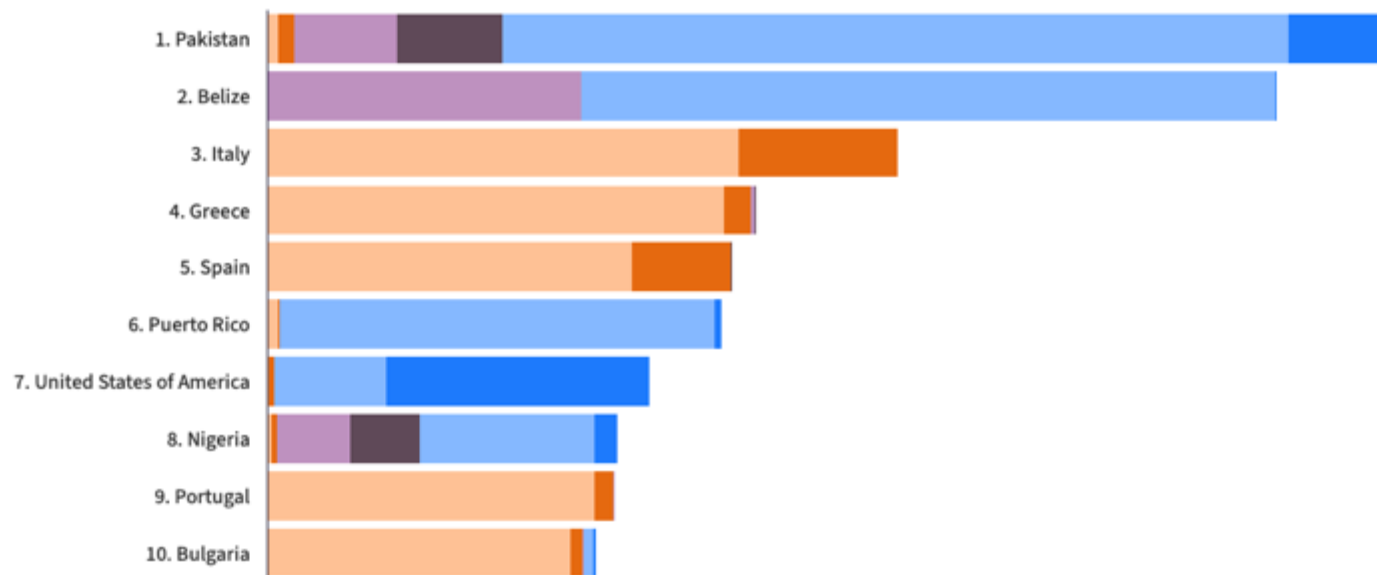
# Risk - Pakistan is particularly affected by climate change,

## Climate Risk Index: Top 10 Most Affected Countries

2022 ▾

Fatalities per 100,000 Fatalities Affected per 100,000 Affected Losses % of GDP Losses

\*1993-2022: Indicators describe annual average



made with 23° | reuse

Source: Germanwatch 2025

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## Dozens of children among at least 178 people killed in Pakistan rains and floods

Officials say at least 63 people died in Punjab alone in just 24 hours

Stuti Mishra • Friday 18 July 2025 06:33 BST

• [Comments](#)

# PAKISTAN: AT LEAST 200 CHILDREN KILLED IN DEADLY MONSOON SEASON AS RAINS THREATEN EDUCATION FOR MILLIONS

28 AUG 2025 - GLOBAL

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5 min read



Large areas of Punjab are under water as rivers continue to flood, with more rain forecast. In Sialkot, rainfall broke records with nearly 364 mm falling in just 24 hours, according to the Pakistan Meteorological Department. Children and their families need food, clean water and

# Heavy Rain and Karachi was under water



**Due to wise  
Press Release  
by TMA 2  
articles  
published on  
Sept 9 and 11**

**BUSINESS  
RECORDER**  
Founded by M.A. Zuberi

## TMA hails GPP initiative for sustainable exports

**KARACHI:** Pakistan's export sector has taken a major leap towards sustainability with the Green Pakistan Project (GPP), which is being hailed as a milestone for transparency, compliance, and international standards.

جوائن واٹس ایپ چینل

گرین پراجیکٹ پائیدار ترقی کا ضامن ٹالول مینو فیکچرز ز اینڈ ایکسپورٹرز

کراچی (اسٹاف رپورٹر) ٹالول مینو فیکچرز ز اینڈ ایکسپورٹرز ایسوسی ایشن نے گرین پراجیکٹ کو پاکستان کی برآمدی صنعتوں کے لیے عالمی معیارات کی تعمیل کے ساتھ پائیدار ترقی کا ضامن قرار دیدیا ہے۔ ٹی ایم اے کے چیئرمین اطہر باری نے کہا ہے کہ پاکستان کی تاریخ میں پہلی بار اس منصوبے نے کامیابی کے ساتھ کوالیفائیڈ سسٹین ایبلٹی رپورٹرز کو تیار کیا ہے۔ گرین پاکستان پراجیکٹ نے مقامی صنعتوں کے لیے کاروباری طریقوں میں پائیداری کو ضم کر کے ایک نیا معیار بنایا ہے۔



**Fact Finding Mission**



**MOU Signing Ceremony**



**Visits in 52 Companies**

## **Alliance for more Sustainability**

**VFI with +300  
connected  
Companies**

**3 Pakistan based  
Association with +  
2.500 Members**

**54 selected to go through  
the parcours for  
preparation of a  
sustainability report**

# 3 Associations prepared 22 Reports



**Asso:** Ready Made Garment

**Sport Goods**

**Towels**

**Office(s):** Karachi und Lahore

**Sialkot**

**Karachi**

**Memebers:** 500 +

**2.000**

**240 +**

**Applicants (82):** 19

**29**

**34**

**Participants (51):** 16

**20**

**15**

**SocialFair<sup>2022</sup> (40):** 13

**15**

**12**

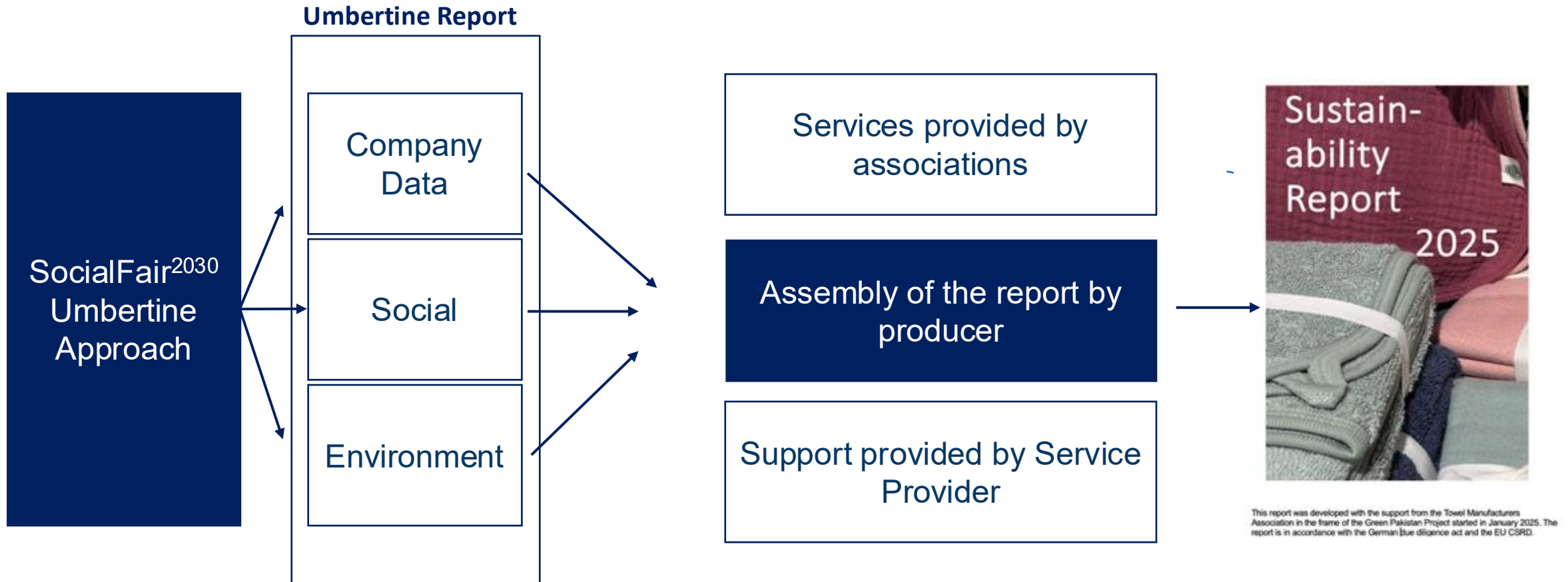
**Sus-Report Drafts:** 7

**8**

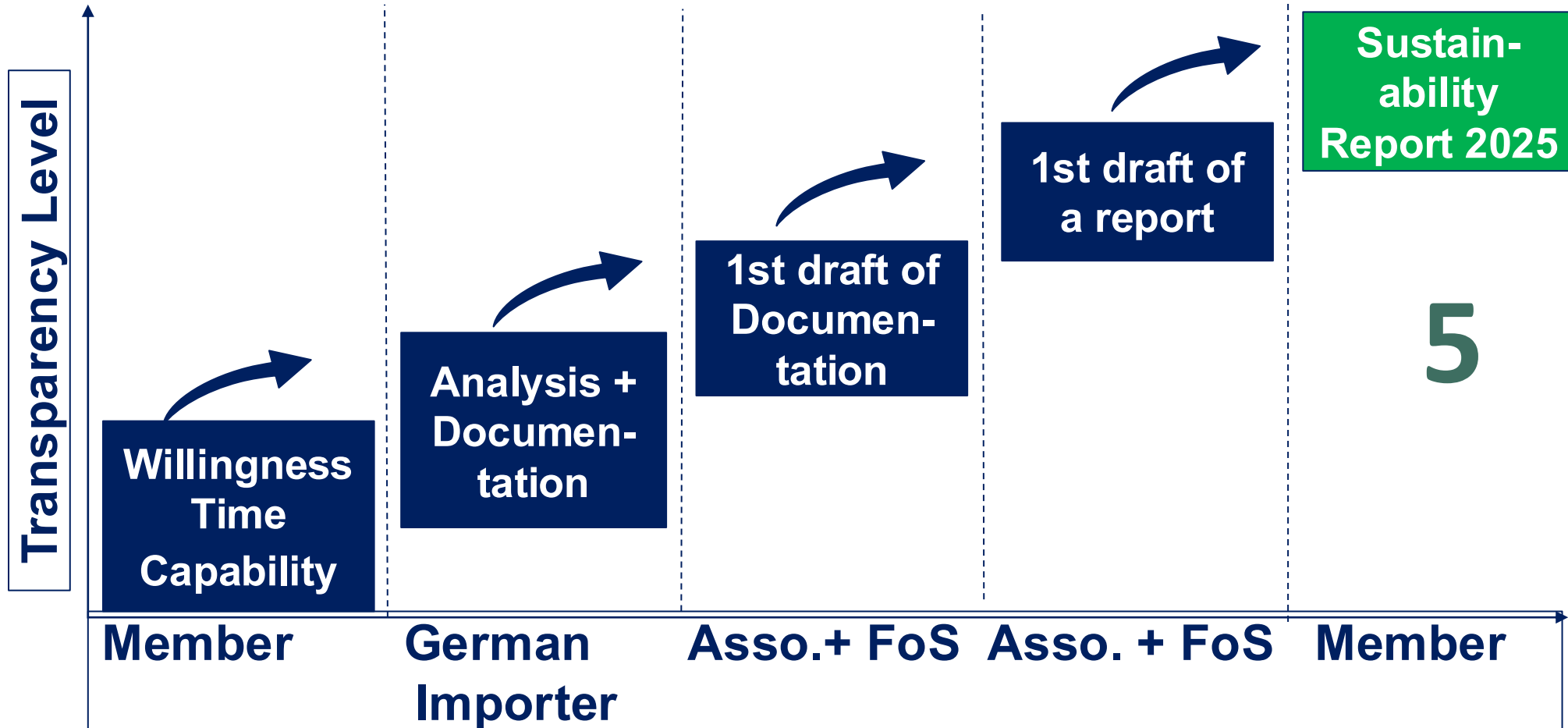
**7**



# From SocialFair<sup>2022</sup> approach to the Sustainability Report for fact-based dialogue



# Four Steps to prepare a sustainability report



# 2025: Our understanding of sustainability

## Environmental

- Materials
- Resources, like wood, energy, water
- Harmful substances
- Environmental pollution, like emissions, waste heat and noises
- Biodiversity

## Planet

## Social

- Health and safety
- Fair payment
- Working hours
- No child
- No forced labour,
- No discrimination
- Complaints procedure

## People

## Governance

- Turnover & profit
- Efficiency & Quality
- Financial resources
- Consumers
- Longevity
- Circularity

## Profit



# 1. Introduction and update

## Human Rights and Criteria for GSP + “German LkSG” + CSRD- ESG



# Eleanore Roosevelt suggested Human Rights and 48 countries voted in favour,

-  Afghanistan
-  Argentina
-  Australia
-  Belgium
-  Bolivia
-  Brazil
-  Burma
-  Canada<sup>[a]</sup>
-  Chile
-  China
-  Colombia
-  Costa Rica
-  Cuba
-  Denmark
-  Dominican Republic
-  Ecuador
-  Egypt
-  El Salvador
-  Ethiopia
-  France
-  Greece
-  Guatemala
-  Haiti
-  Iceland
-  India
-  Iran
-  Iraq
-  Lebanon
-  Liberia
-  Luxembourg
-  Mexico
-  Netherlands
-  New Zealand
-  Nicaragua
-  Norway
-  Pakistan
-  Panama
-  Paraguay
-  Peru
-  Philippines
-  Siam
-  Sweden
-  Syria
-  Turkey
-  United Kingdom
-  United States
-  Uruguay
-  Venezuela



Als Vorsitzende der UN-Menschenrechtskommission war Eleanor Roosevelt maßgeblich an der Ausarbeitung der Allgemeinen Erklärung der Menschenrechte beteiligt. Hier ist sie mit einem Protokoll der Subkommission in englischer Sprache zu sehen. (© picture alliance, Everett Collection)

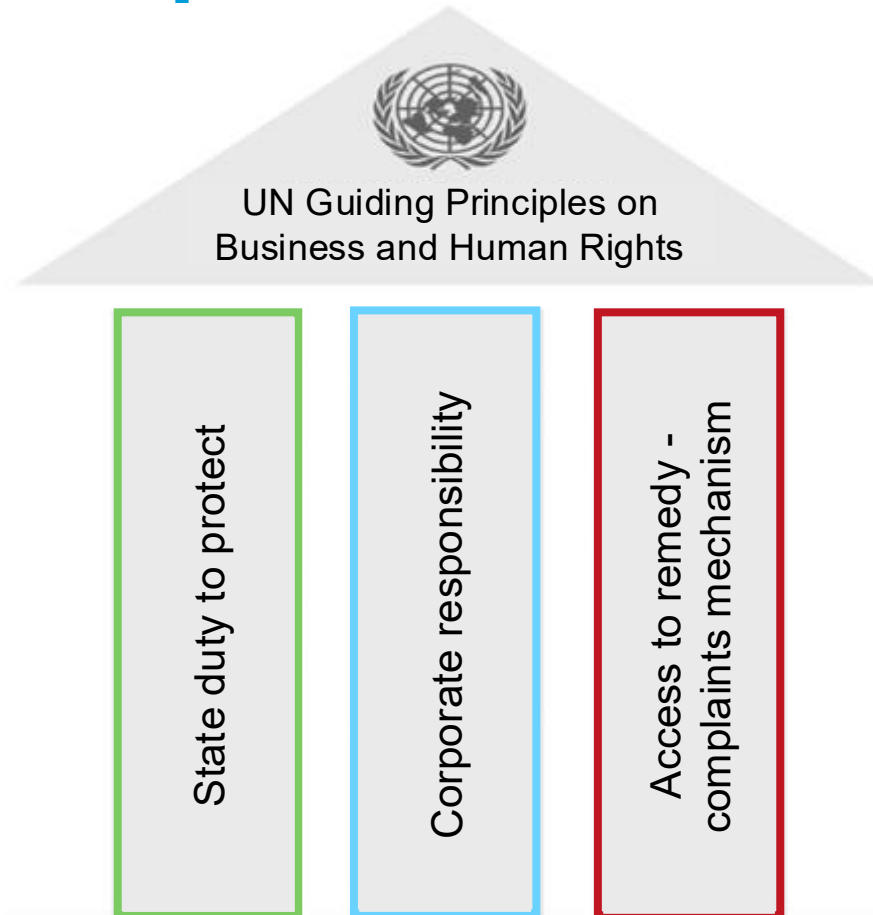
## 8 countries abstained,

-  Czechoslovakia
-  Poland
-  Saudi Arabia
-  Soviet Union
-  Byelorussian SSR
-  Ukrainian SSR
-  South Africa
-  Yugoslavia

## 2 countries did not vote.

-  Honduras
-  Yemen

# 2011: Three-Dimensional Concept of **Protection**, **Respect** and **Remedy** (based on Ruggie Principles)



**Protect:** the state protects people within its borders from human rights violations with appropriate structures

**Respect:** Companies respect human rights and establish the necessary management structures to ensure

**Remedy:** Establishment of complaints mechanisms to avert human rights violations

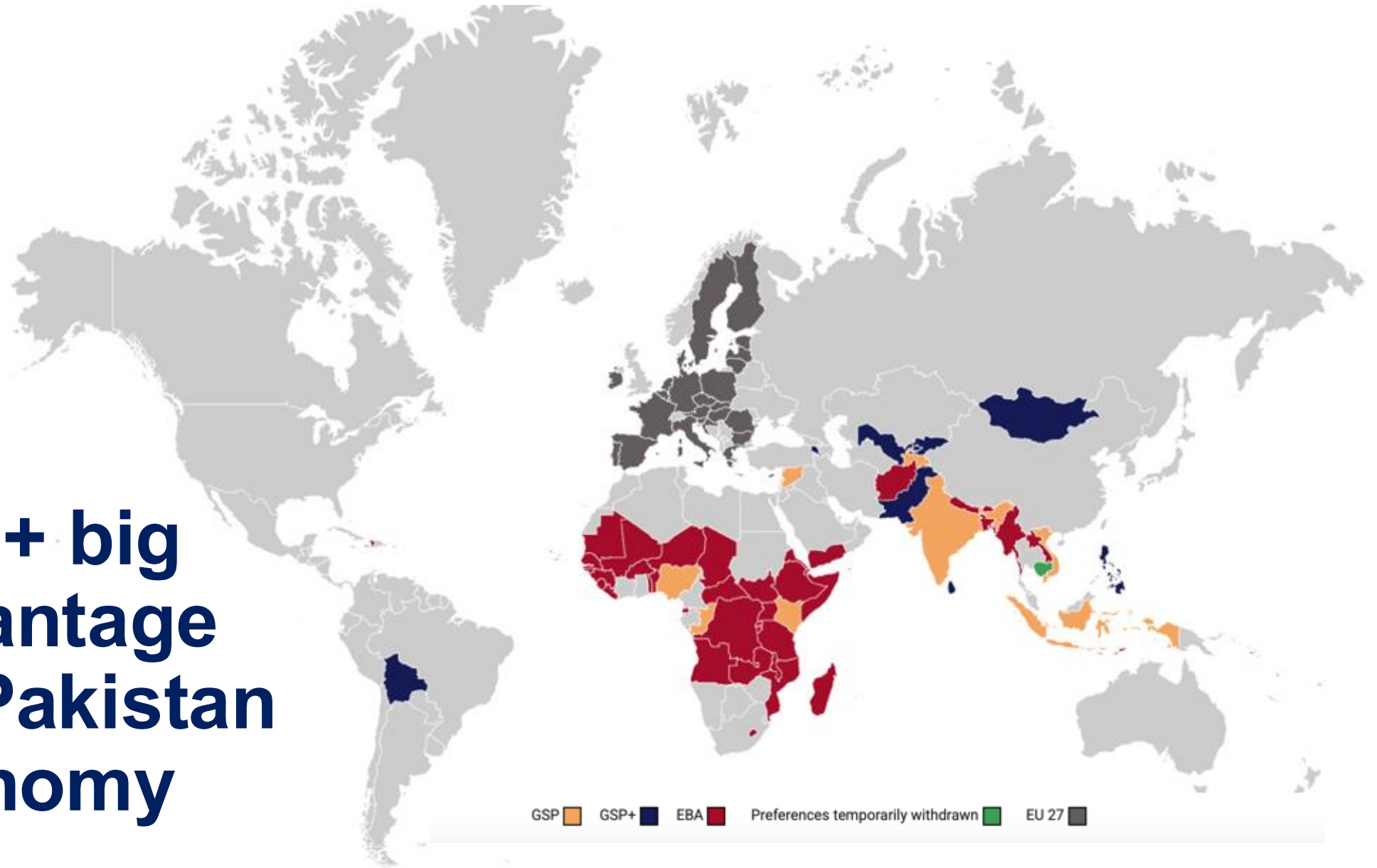
**State:**  
Guiding Principles 1 - 10

**Company:**  
Guiding Principles 11- 24

**State, Company, Employee's:**  
Guiding Principles 25 - 31

Prof John Ruggie was commissioned to develop a concept for sustainable business practices with regard to respect human rights (2005-2011)

# GSP+ big advantage for Pakistan economy



[Home](#)

## Conventions

All GSP beneficiary countries must be deemed to respect the basic human and labour rights principles outlined in the 15 core conventions.

GSP beneficiaries are able to apply for duty elimination on 66% of tariff lines under the GSP+ arrangement, provided that they demonstrate the effective implementation of 27 core international conventions. Core conventions under the GSP+ arrangement address human and labour rights, environmental regulations, and governance principles.

### **German LkSG**

**8 Social +**

**6 Environmental**

**Parameters**

### **EU CSRD and ESRS**

**5 Environmental Areas**

**4 Social Areas**

**3 Governance Areas**

### **EU GSP+ Regime**

**Social Parameter 8**

**Envir. Parameter 8**

**Governance - 4**

# The European Sustainability Reporting Standard (ESRS) contains 12 criteria

GE1 General Requirements

GE2 General Disclosure

E1 Climate change

E2 Environmental pollution

E3 Water and marine resources

E4 Biodiversity and ecosystems

E5 Resource use and circular economy

S1 Own employees

S2 Employees in the value chain

S3 Affected communities

S4 Consumers and end users

G1 Business conduct

E

S

G

These 12 criteria for the ESRS were adopted in November 2022 and form the basis for future sustainability reporting.

Five criteria for the environmental area, four criteria for the social area and three criteria for the governance area



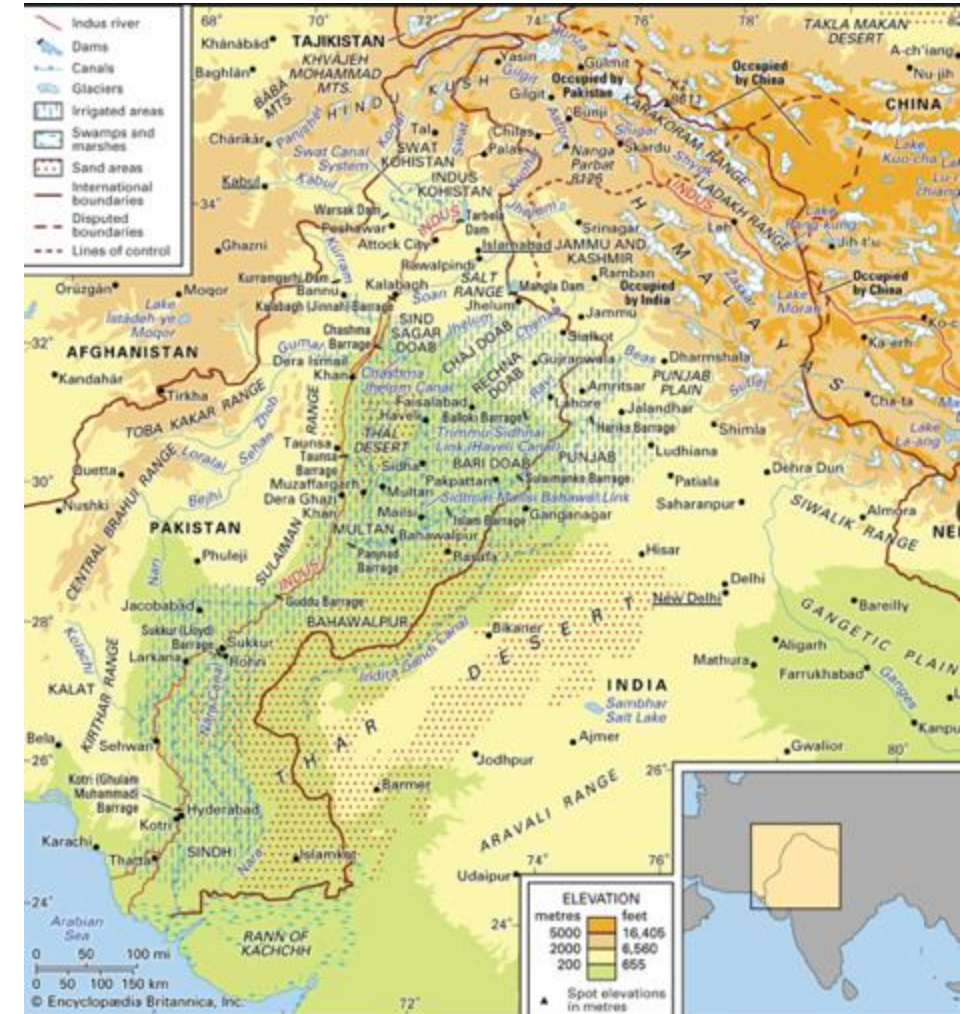
**ESG criteria are decisive for the CSRD**



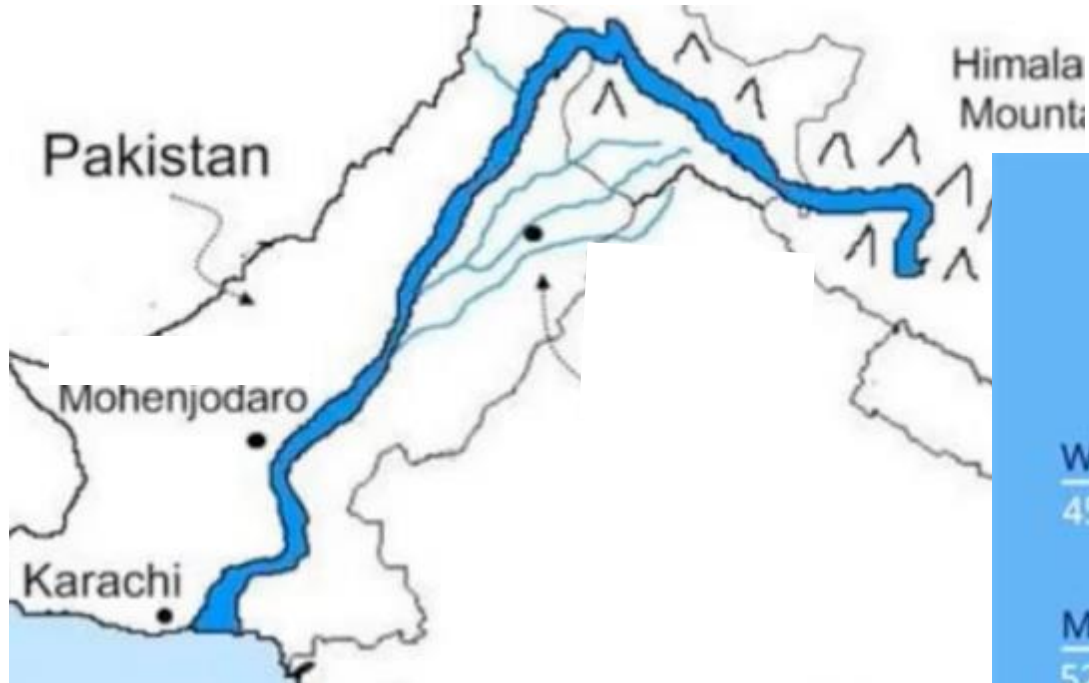
# **2. Introduction to Water Situation in Pakistan**


# The Indus River life line for Pakistan

- is a major river in South Asia, flowing for about 3,200 km (2,000 miles) through China, India, and primarily Pakistan before emptying into the Arabian Sea
- With a flowing distance of 2,749 km in Pakistan
- with a total drainage area of approximately 1,165,000 square km (450,000 sq mi),
- it supports a vast population through irrigation and agriculture, serving as the national river of Pakistan.
- is vital to the region's culture and economy but also faces threats from climate change, pollution, and dam construction.



# The Indus have a length of 2.741 km Pakistan





delta's mangrove forests are the second-largest in the world covering an area of about 600,000 hectares.







It is one of the largest **river deltas** in the **world** and has significant ecological and economic **importance**.

# The System is under Pressure

- <https://www.aljazeera.com/gallery/2025/8/5/water-has-surrounded-us-the-slow-death-of-pakistans-indus-delta>

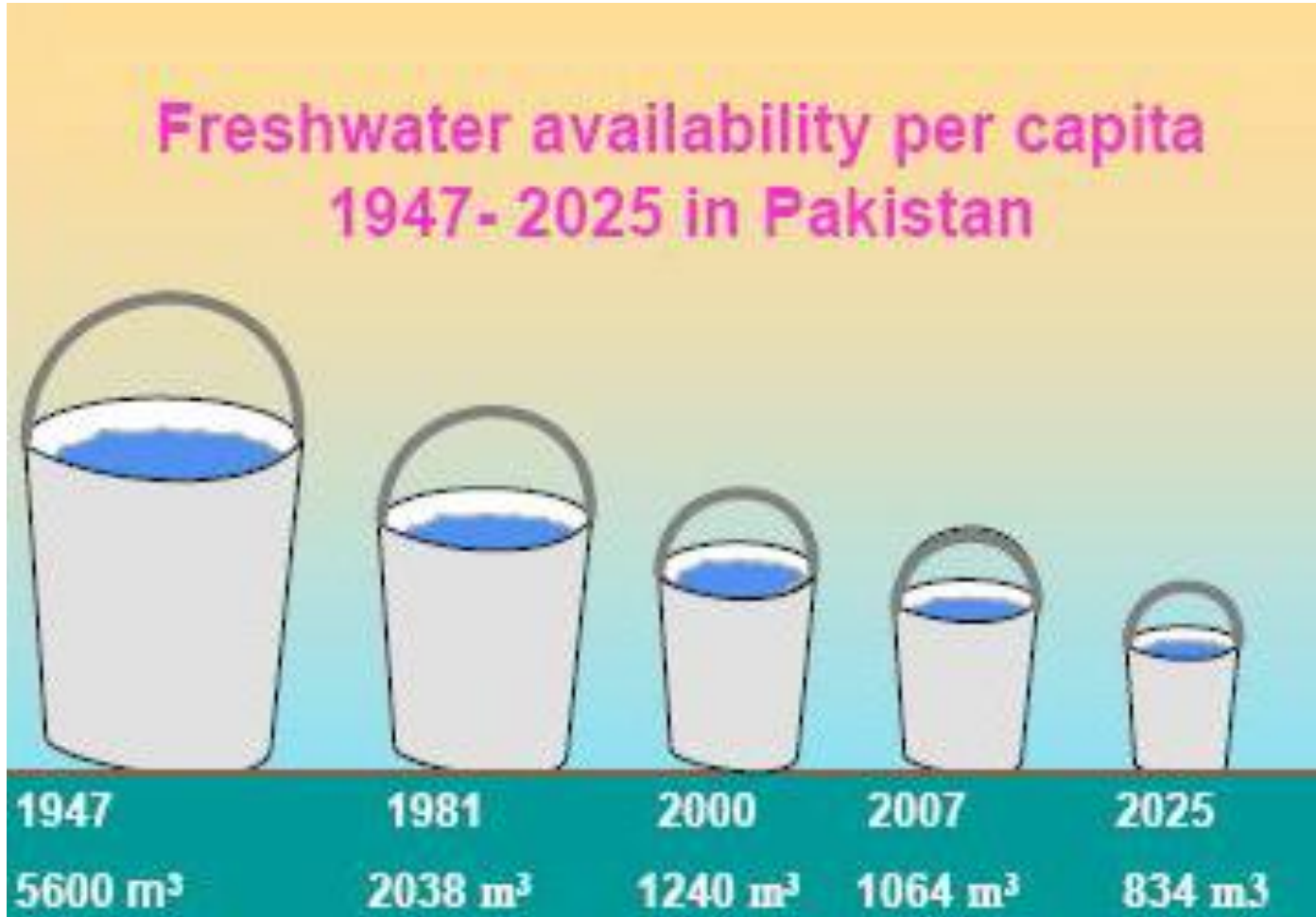
## 'Water has surrounded us': The slow death of Pakistan's Indus delta

*Seawater intrusion into delta, where the river meets Arabian Sea, triggers collapse of farming and fishing communities.*



Abandoned houses in one of the villages in the Indus delta [Israr Ahmed Khan/AFP]

# The fresh water availability shrunk by 80%



Ministry of Water Resources  
Government of Pakistan

وزارت آبی و سائل حکومت پاکستان

## National Water Conservation Strategy

**Goal:**

Support the enforcement of National Water Policy for sustainable water resources management through policy guideline, water conservation strategies, activities and technologies



### Agriculture Sector

- More Crop Per drop
- Water-efficient technologies
- Aquifers recharge
- Non-Conventional Water sources for agriculture
- Modern IT tools for water resource management



### Domestic Sector

- Improved Service Delivery & water efficiency
- Water metering & pricing
- Controlled groundwater abstraction
- Water audits of municipal and commercial settings
- Water saving technologies and fixtures
- Water education program
- Zero liquid discharge from large residential & commercial settings



### Industrial Sector

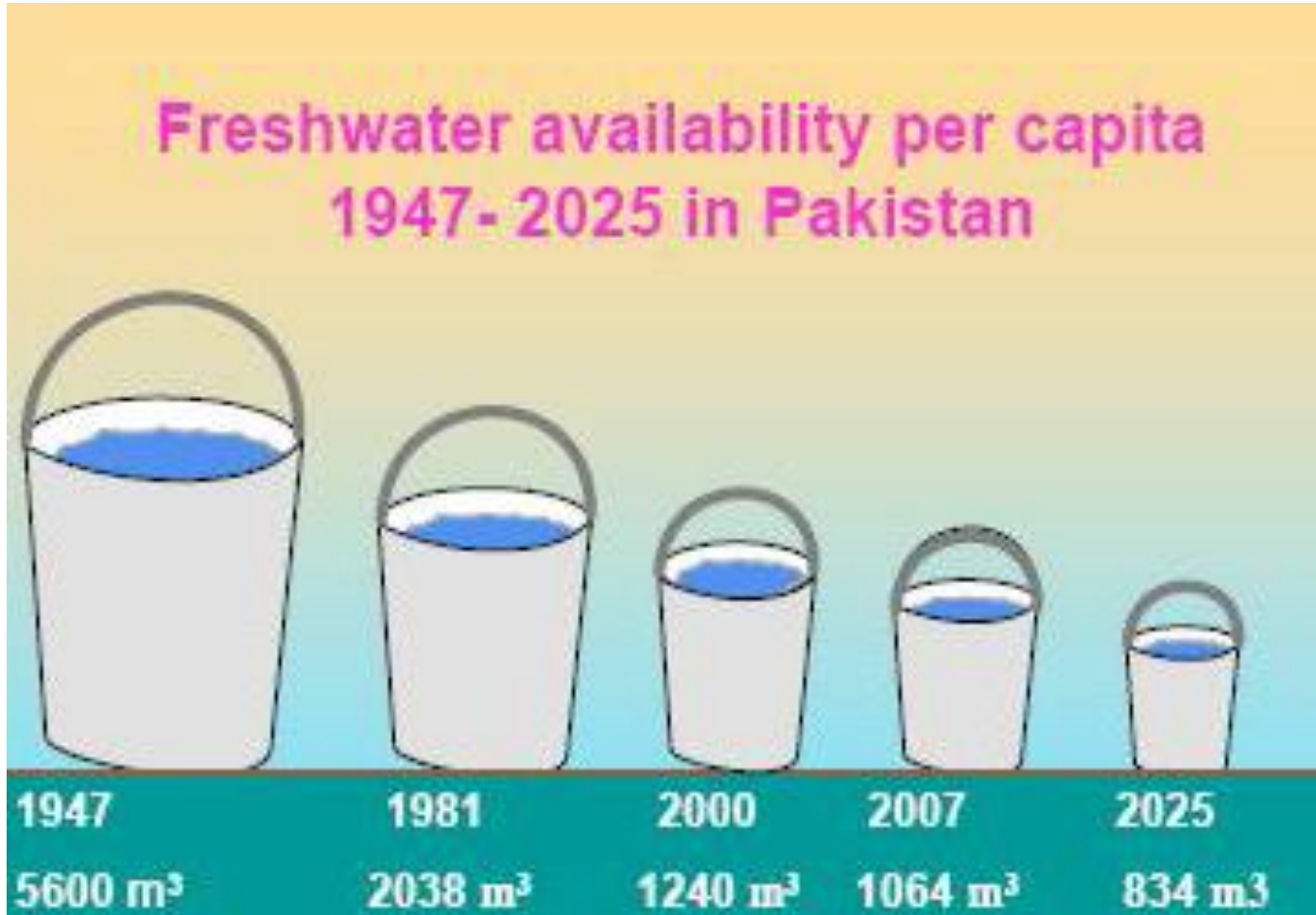
- Zero Liquid Discharge
- Water metering & pricing
- Abstraction licenses
- Water audits
- Water awareness

• <https://pcrwr.gov.pk/wp-content/uploads/2023/02/National-Water-Conservation-Strategy-for-Pakistan-2023-27.pdf>



- Ensuring conservation of water, minimizing wastage and securing its equitable distribution.
- Supporting service providers to develop best management practices for water conservation in minimizing financial dependence on federal and provincial governments.
- Providing actionable information around water conservation in all three sectors ensuring water security under climate change effects.

# The fresh water availability shrunk by 80%



- Training and Schooling
- Documentatio
- Reporting
- Fair Factories
- Energy Efficient
- Water ?
- GPP Frame need a further Focus!



# **3. Insights to Water Consumption for Readymade Garments in Pakistan**

# GPP includes first steps for reduction of Water consumption

- Data Collection in the frame of SocialFair approach
- Data Analysis with Umbertine and “Footprinting”
- Starting Research on best practices
- Developing a programm with
  - Further Research for solutions and know how
  - Factory Visits
  - Workshops



# The flow of water for production of consumer goods

01

Fresh Water Ressources

- Ground Water
- Tanker
- Tap Water
- Rain Water
- Recycled Water

02

Kind of Usages

- Domestic
  - Drinking
  - Cooking
  - Cooling
  - Washing
  - Sanitation
  - Gardening
- Processing
  - Dyeing
  - Finishing
  - Washing
  - Drying
  - “Boiling”

03

Used Water Ressources

- PIT
- ETP
  - Mechanical
  - Biological
  - Chemical
- Recycling

# From Umbertine to Sustainability Report



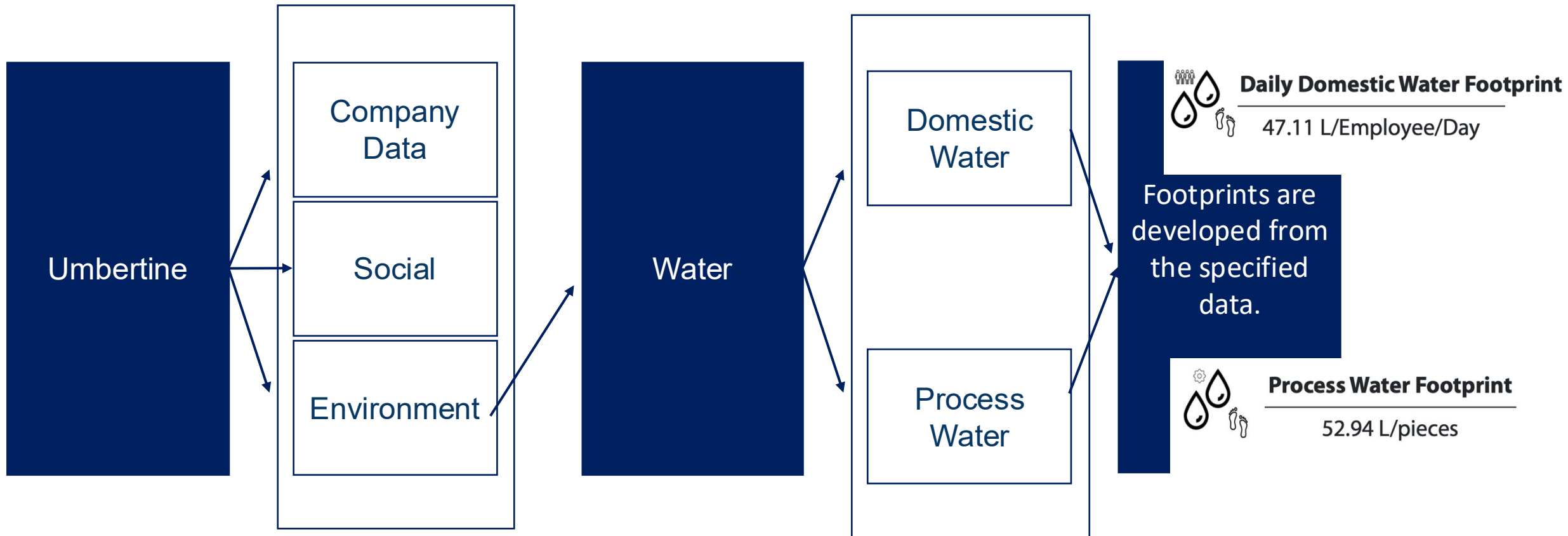
**SocialFair<sup>2022</sup>**

**Basic 1 + 2**

Data Year 2024  
Survey Year 2025  
ID: 114.15.180.180.24



# Data collection for Factorys with Umbertine



# With this footprint, we can then create a benchmark

## We can create various benchmarks:

- Benchmark between the three associations
- Benchmark with the company of your own association
- The best benchmark is the internal benchmark
  - For this, you need data from at least two, preferably three years

# With the data filled in Umbertine the Ressource Consumption can be visualized

## 9.1 Auxiliary Resource Consumption

- Process water is mainly used for:

1. Dyeing
2. Finishing
3. Washing
4. „Boilering“



**Chemical**

124,805 kg



**Process Water**

83,203,000 liter



**Carton Boxes**

158,027 kg



**Domestic Water**

2,012,000 liter



**Fabric**

2,655 ton



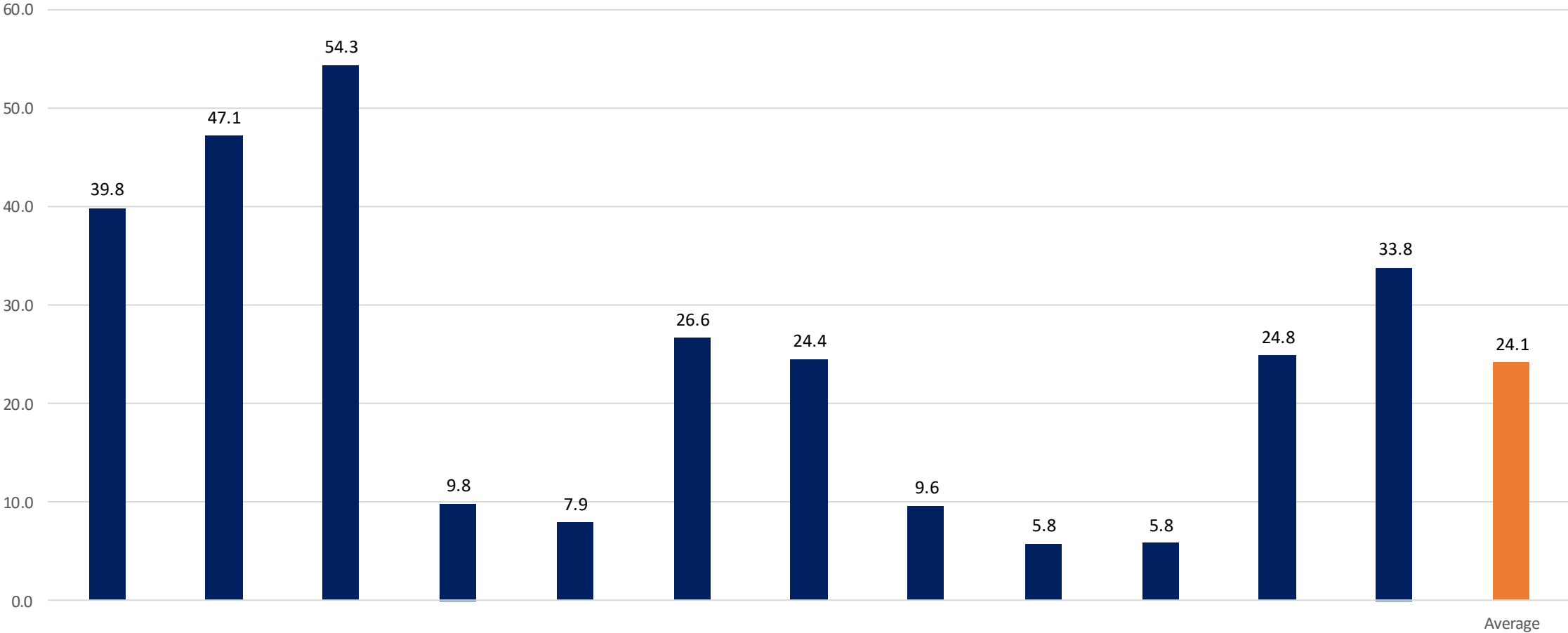
**Packaging Poly**

12,887 kg

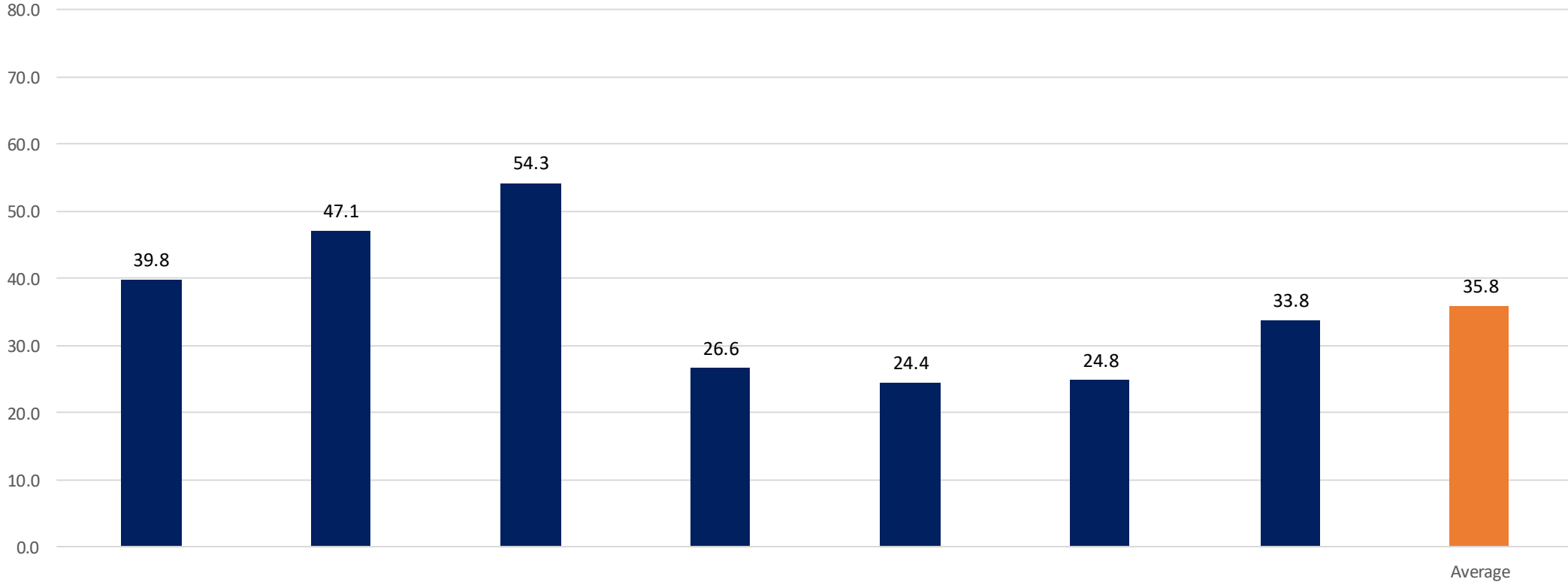
- Domestic Water is mainly used for:

1. Sanitation
2. Cooking
3. Drinking
4. Gardening

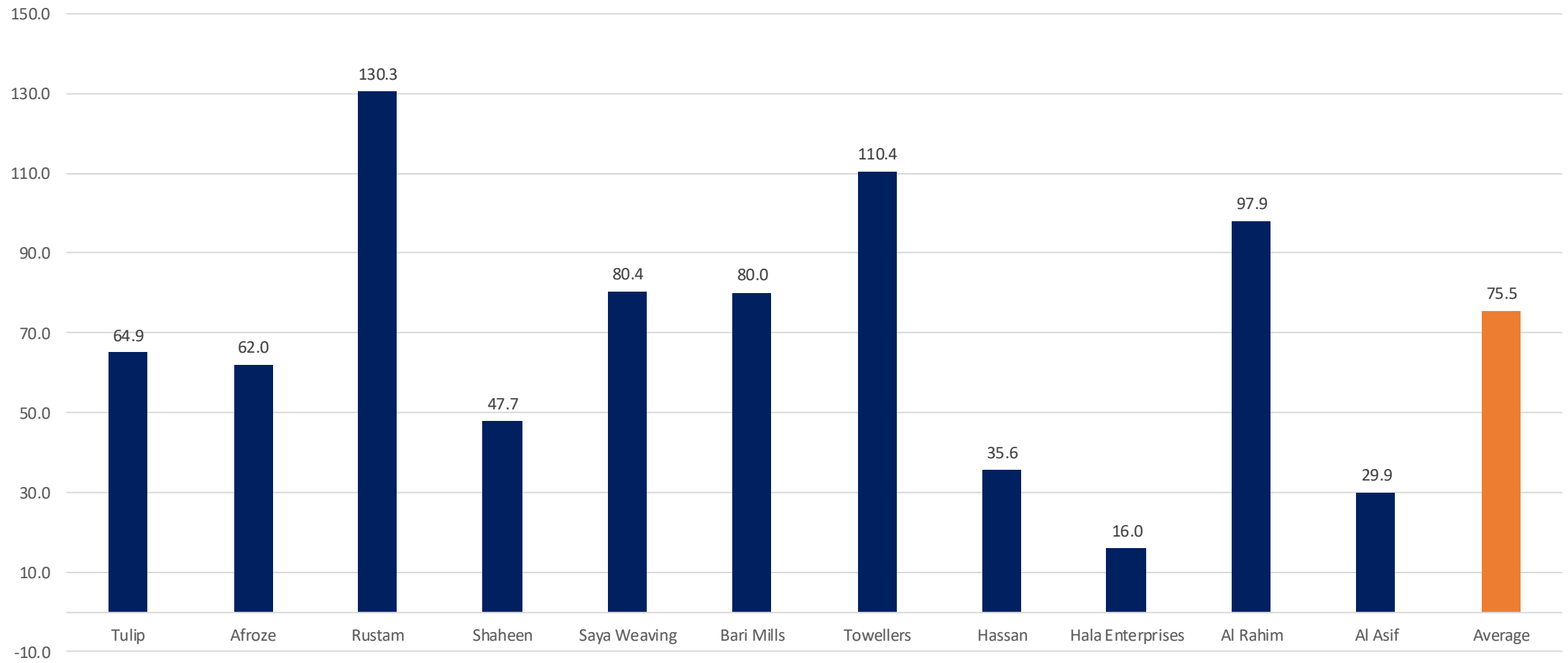
# Average Daily Domestic water consumption of PRGMEA Members is 24,1 l due to Umbertine



# Ø Daily Domestic water consumption without the very low values is 35,8 l due to Umbertine

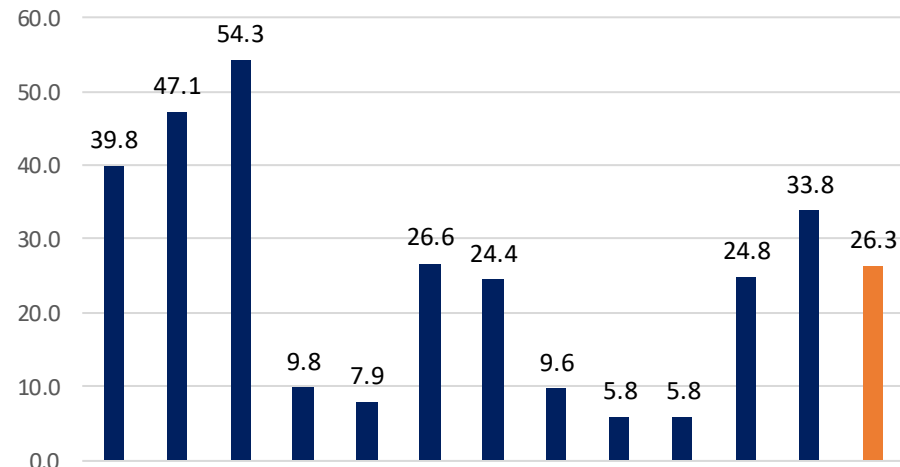


# Ø Daily Domestic water consumption of TMA Members is significantly higher with 75,5 l



# PRGMEA Member did a lot to reduce the water consumption

PRGMEA: Daily Domestic Water Footprint - liter/employee/day



## Efficient Flush Systems

Further reductions have been achieved through the installation of efficient LEED-compliant flush systems across our facilities. Compared with conventional 7-liter cisterns, the new 4-liter systems deliver savings of 9 liters per employee per day, equating to 1,890 liters saved daily across the workforce. On an annualized basis, this represents 567,000 liters of water conserved per year—a 42.9% reduction in sanitary water use versus the baseline Water Consumption

## ROOFTOP RAINFALL CAPTURE:

Our industrial rooftops are equipped with channeling infrastructure to ensure maximum capture efficiency during seasonal monsoon periods. This not only diverts rain from stormwater drains but also prevents surface runoff and urban flooding.

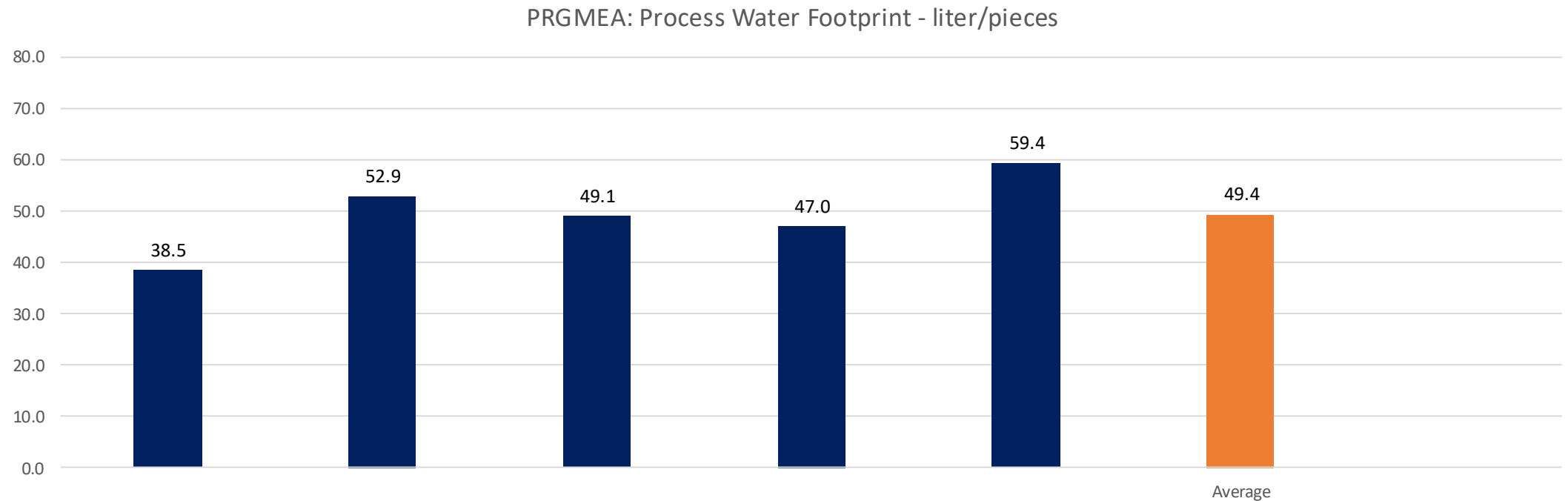
## RECHARGE WELL INTEGRATION:

Captured water will be directed toward a deep recharge well system, enabling the direct percolation of filtered rainwater into subterranean aquifers. This scientific method supports the natural replenishment of local water tables, offsetting the extraction footprint of both our operations and surrounding communities.

## GREEN ZONE IRRIGATION SUPPORT:

A portion of the harvested water is redirected for the irrigation of our on-site Green Zones, which include landscaped and biodiversity-supportive plantings. This creates microclimatic cooling zones, reduces dust and heat island effects, and supports local flora and fauna, further aligning with our environmental ethics.

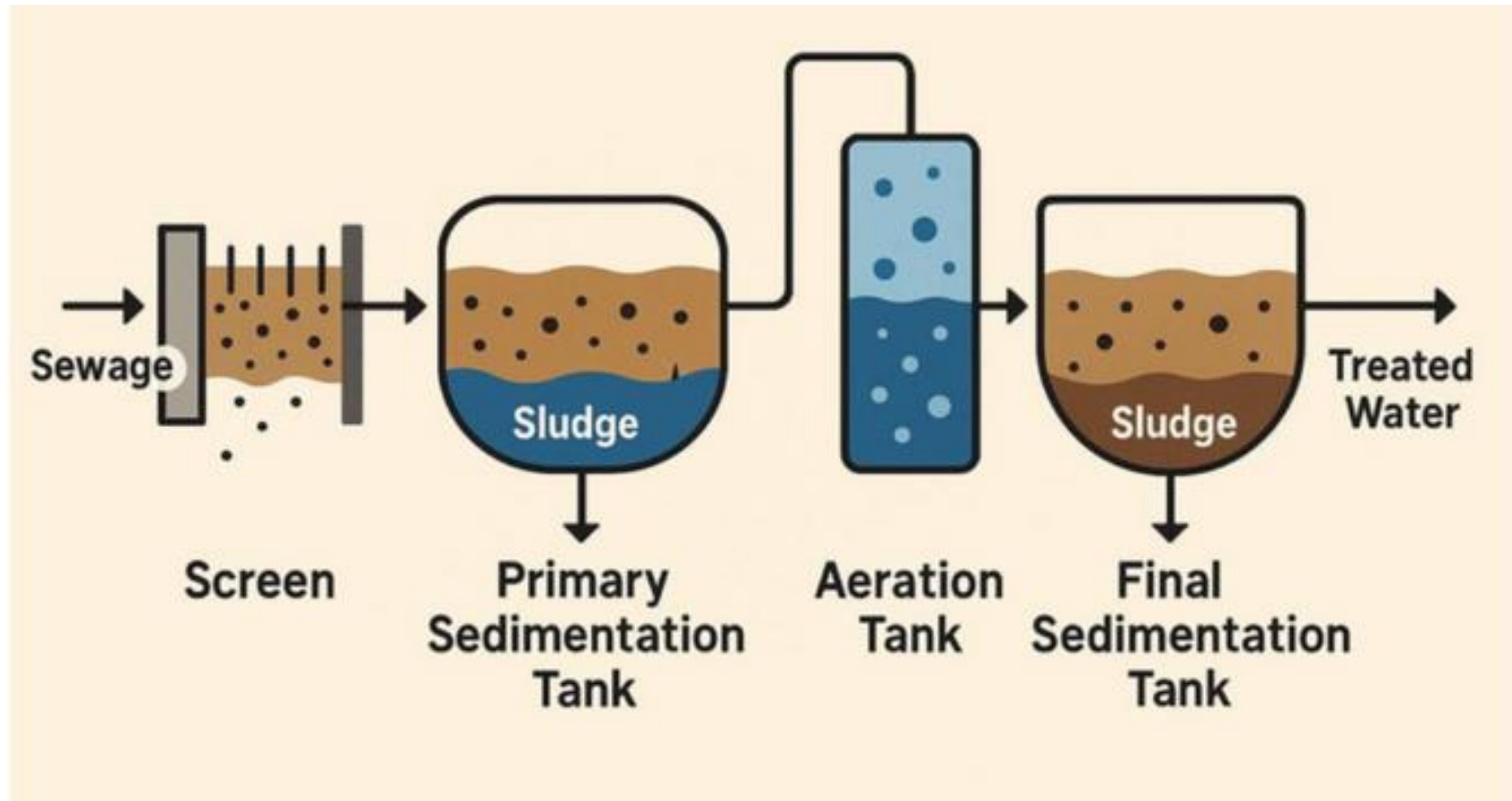
# Factory XY is with 38,5 liters per piece the benchmark for Process Water consumption due to Umbertine





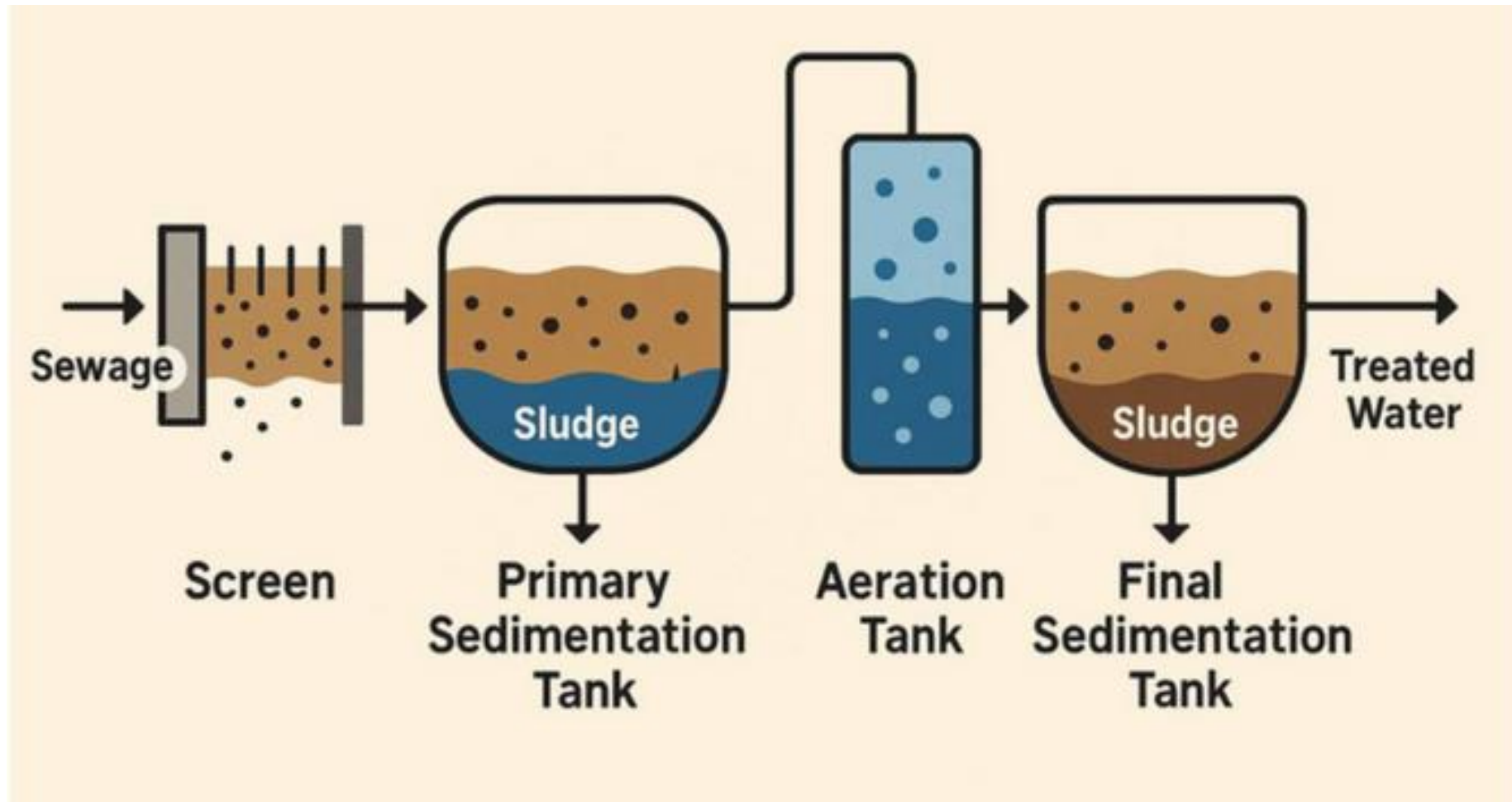
# 4. The practical Approach

# Sewage Treatment Plant Diagram for domestic water



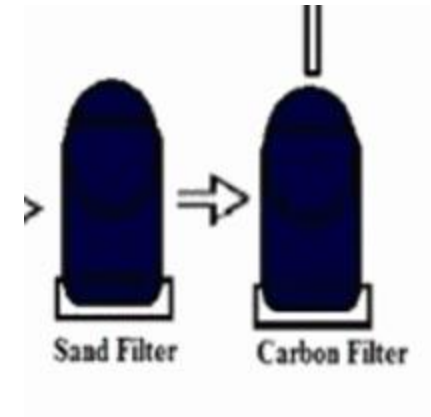
Ready for  
Gardening-  
Watering the  
Urban Forest

# Sewage Treatment Plant Diagram for domestic water



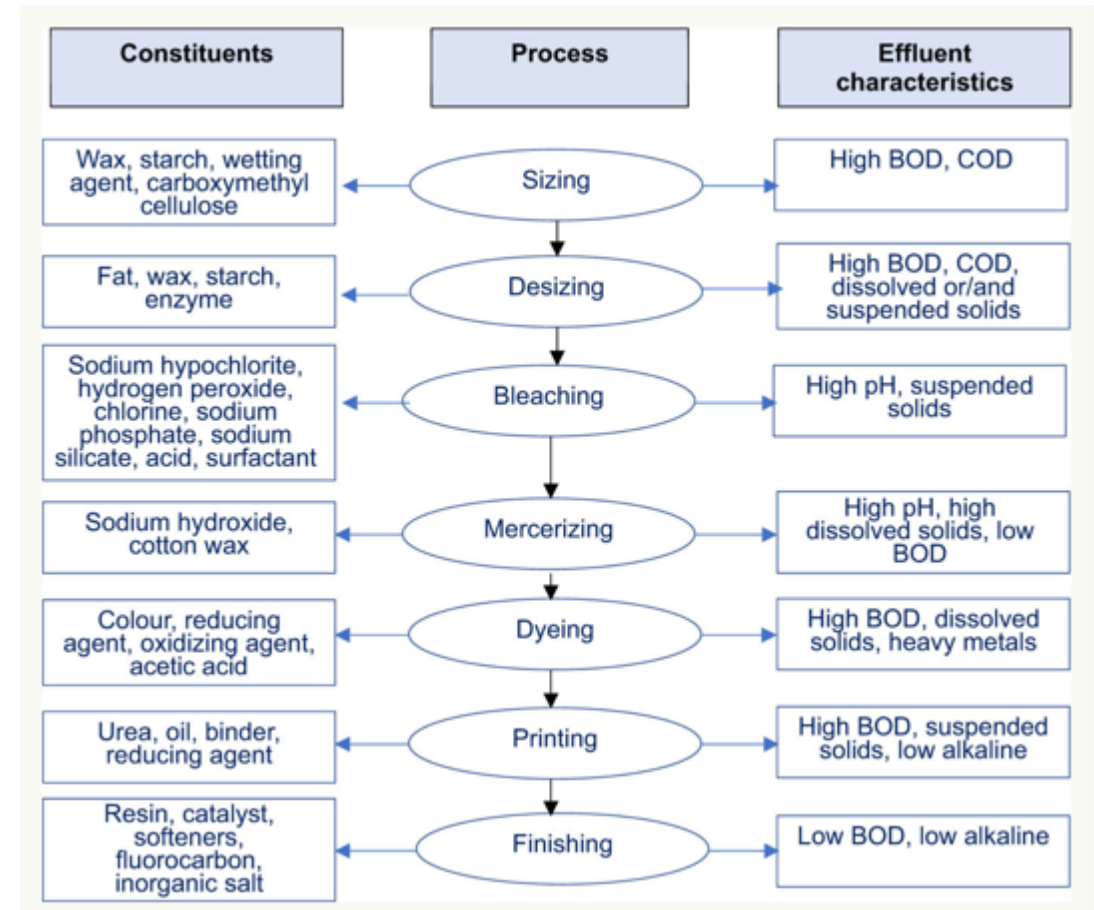
Ready for next  
cycle  
in sanitation

**Chlorification**



# To reduce Waste Water and Sludge innovative techniques and technologies are necessary

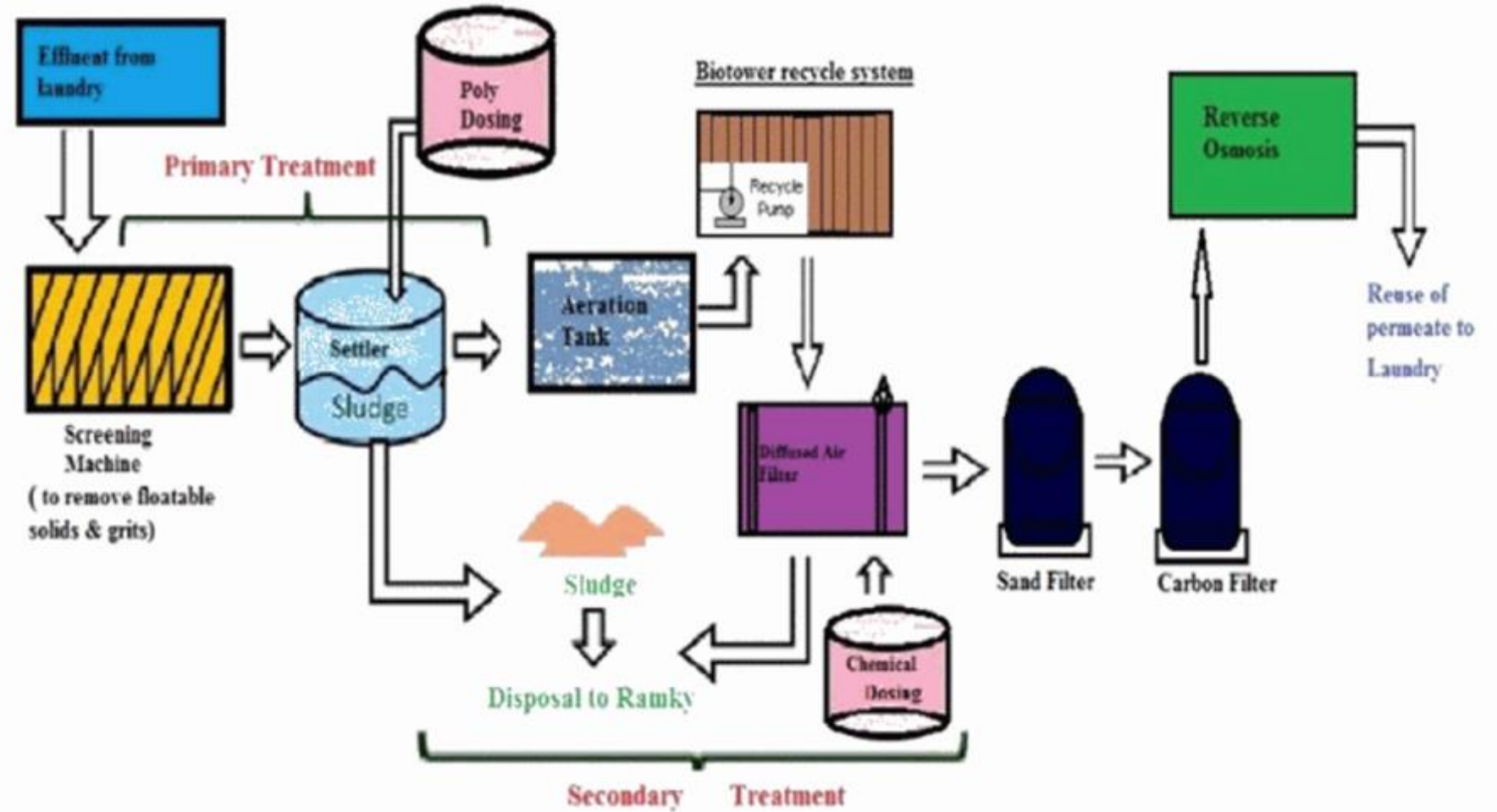
- **Techniques:**
  - „Magic balls“ instead of Stones in Denim Production;
  - More sustainable dye stuffs;
  - More sustainable dyeing auxiliaries.
- **Technologies:**
  - Machines from Tonello or Jeanologia;
- **Processes:**
  - Recycling of „ETP-Water“- an ETP is a prerequisite for this – it is not easy ---->



..and requires a lot of knowledge and experience

3 Treatments are necessary to make „waste“ water reusable

ETP Flow Chart



# 3 Steps to become more water efficient

- Savings through
  - water Nozzles, efficient water slush system, change in behaviour..
  - Techniques and Sustainable Chemicals (in accordance with ZDHC),
  - Technologies
- Separation of water tube system
  - Drinking and washing water,
  - Sanitation – flush- water,
- Treatment
  - Sewage Plant to produce water for gardening and reduce pollution,
  - Effluent treatment Plant for process water and in addition with sand and carbon filter + reverse osmosis system for CLOSED CYCLES



# Starting the process to make your business greener in the ESG frame



E3 Water Resource

E2 Environmental Pollution

E4 Biodiversity

E5 Resource Consumption and Circular Economy

E1 Climate Change

All areas of E1-E5 are tackled in a water saving program!

**The Himalayan Mountains are the region spending the water for the people and your industry.  
Keep that in mind!**

