

This series showcases success stories of PaCT (Partnership for Cleaner Textile) partner factories in the Bangladeshi textile sector that have implemented cleaner production projects.

## Factory Status

Iris Fabrics Limited (IFL) a knit composite factory consists of knitting, dyeing, panel printing, and garment manufacturing facility. The average daily production was 20.3 tonnes per day in 2020 (Jan'20 to Dec'20).

The primary sources of energy at IFL are natural gas (NG), diesel, and electricity purchased from the grid. The share of various energy sources for electricity generation is - NG 49.8%, grid- 49.9% and diesel- 0.3%.

Groundwater consumption as per baseline data provided by IFL from Jan-Dec 2020 is 1,389,053 m<sup>3</sup> and the KPI for groundwater is 195.484 L/kg. Out of total groundwater, 889,283 m<sup>3</sup> is used in the process and the KPI of process water is 125.151 L/kg. Water consumption for domestic and other purposes is estimated at around 36% of the total water consumption.

## Finishing process of IFL

The finishing process includes the final treatment and process of every kind of fabric for better appearance and serviceability. At IFL, the finishing section has two (2) stenters, one (1) dryer, three (3) open width compactors, two (2) tube compactors, two (2) slitter, one (1) sueding machine and one (1) tube compactor.



"Partnering with the PaCT program has brought about transformative changes in our factory's water usage. By implementing water-efficient practices, we've not only reduced our environmental footprint but also significantly cut down on water consumption. This shift not only aligns with our sustainability goals but also underscores our commitment to responsible resource management." – Factory Management

During the field visit, it was observed that washing water (100 m<sup>3</sup>/day) was drained continuously from the Slitting machines. Consultants suggested washing water from slitting machine is suitable for reuse in the process after filtration. So, the authority of IFL was requested to recover the washing water and reuse them in the process to save a significant amount of water consumption.

There is a potential of recovering this washing water which can be filtered and re-circulated using a small circulation pump with a filter having a capacity of circulation of water @ 6 m<sup>3</sup>/h.

## Description of Implementation

According to PaCT suggestion, IFL installed a water recovery system in the existing and new Corino slitting machines. Within October 2021, IFL reported completion of the installation of the water recovery and reuse system in the new and existing slitting machines. Some of the new machines came with a built-in water recovery system.

### Environmental Benefits



29,750 m<sup>3</sup>/year  
Water saved  
(2.14% of the total  
groundwater consumption)

### Investment & Payback Status

**\$12,875**

Initial Investment

Pay-Back Period

**7 Years**

## Results & Benefits

The textile industry relies heavily on water, using it for tasks like raw material cleaning and various production stages. Among these, the finishing process stands out as a significant water consumer. Adopting water reuse practices within the finishing section holds promise for diminishing the industry's overall water usage. This change can greatly benefit the environment and result in considerable water conservation.

### Estimated Water Savings (m3) from Water Recovery System for Slitting Machines

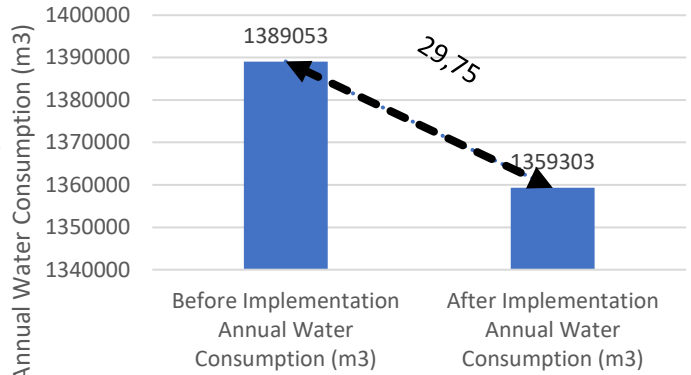


Figure: Corino Slitting Machine with water recovery system

#### CONTACT:

Nishat S. Chowdhury, IFC Program Manager  
[nchowdhury2@ifc.org](mailto:nchowdhury2@ifc.org)

**IFC led Advisory Partnership for Cleaner Textile (PaCT)** is a holistic program that support the entire textile value chain – spinning, weaving, wet processing and garment factories in adopting Cleaner Production (CP) practices and engages with brands, technology suppliers, industrial associations, financial institutions, government to bring about systemic and positive environmental change for the Bangladesh textile sector and contribute to the sector's long-term competitiveness and environmental sustainability.

#### What PaCT Does:

- o Chemical Management Assessments
- o Basic Cleaner Production Assessment
- o In-Depth Cleaner Production Assessment
- o Water & Energy Management
- o Rooftop Solar PV Pre-feasibility Study
- o Rooftop Solar Calculation
- o Online Resource Monitoring

#### DEVELOPMENT PARTNERS



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#### BRAND PARTNERS

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