



*A water management project among **textile suppliers** in and around Noida demonstrates how **efficient** resource management can **achieve** substantial **environmental** improvements and **financial** gains.*

The Indian textile industry is one of the largest industrial water users and is facing serious growth limitations due to increasing shortage in freshwater availability. With the aim of reducing water, energy and chemical use in their supply chains, Sweden Textile Water Initiative (STWI) initiated the Sustainable Water Resources (SWAR) programme. This pilot project was carried out between 2013 and 2014 as a joint initiative between Swedish fashion brands such as Indiska, KappAhl and Lindex and their Indian suppliers, Stockholm International Water Institute (SIWI) and the Swedish International Development Cooperation

Agency (SIDA). SWAR was co-financed by the brands and SIDA, in a public-private partnership that linked business and international development goals. Implemented in India with the support of cKinetics as local consultants, factories saved seven per cent of their total annual water use, 360 million litres; average of three per cent of their energy costs and three per cent of their operational costs.

One of the participants in the SWAR programme was Global Mode and Accessories Pvt. Ltd. (Global Fashion India), a garment manufacturer based in Noida, specializing in supplying high fashion retailers in Europe. Mr. Promod Mehra, Founder & Chairman said “We were aware of the importance of water and energy but due to our routine busy life we had not paid enough attention to the need for conservation of



these two vital sources. When Indiska made us aware of Programme SWAR, I knew we had to participate in it and start with at least one of our manufacturing plants.”

In 2014, a variety of measures/projects were carried out under the SWAR programme at their C-54 unit based out of Sector 58 at Noida. Water meters were installed at major points in the textile unit; creating awareness among staff as well as regular resulted in reduction of water usage. Their Effluent Treatment Plant (ETP) was optimized thereby improving both quality and quantity of treated effluent. Leakages in the tanks were plugged and regular water taps were replaced with spring loaded taps realizing savings of at least 10-20%. Overall, the textile unit had saved water resources amounting to 1,185 kilo litre (kl) per annum.

Cumulative resources saved through SWAR and STWI programmes at Global Fashion India	2014 (SWAR)	2015 (STWI)
Electricity (kWh per annum)	42,515	1,33,387
Water (kl per annum)	1,185	9,360
Chemical (kg per annum)	3,763	3,427
Financial (INR per annum)	717,943	19,44,521
Source: Global Fashion India		

Global Fashion India continued their engagement with STWI under a follow up global programme launched in 2015. The STWI programme was executed at their B-2 unit, Sector 65, Noida. Many of the successful interventions previously implemented under the SWAR programme

were replicated in this unit, including installing water meters and monitoring consumption as well as fixing leakages in the tanks.

In addition, improvements were made in the ETP system such as changing the chemical dosage, installing bar screens and reuse of treated water. Reducing fresh water usage in

*“For me, the key drivers were costs and environmental impact. One can make substantial saving in energy & water consumption at nominal cost and thereby help not only protect the environment, but also create an environmental friendly surroundings at work.”*

*Promod Mehra, Founder & Chairman,  
Global Mode and Accessories Pvt. Ltd.*



*“Our team is now gearing up and looking forward to operating in a more sustainable way, we have brought about management level change of view on how such a program improves the unit’s efficiency. We are also investigating and experimenting with how this could help engage brands and buyer groups more closely for a better business assurance”*

*Vikas Kapur, Director, Radnik Exports*



the boiler unit was accomplished by sending condensed steam back into the boiler, this in turn helped the factory to reduce the fuel requirement in the boiler system. Re-using the R.O. reject water for domestic purposes such as flushing also reduced the fresh water consumption of the factory. All these measures led to achieving water savings of 9,360 kl per annum. Global Fashion India continued its association with the STWI programme in 2016 with new measures such as rainwater harvesting being considered for implementation.

Another textile manufacturer, Radnik Exports which has been manufacturing high end fashion apparel for over two decades, participated in the SWAR programme. They were introduced to a wide range of optimization solutions and environmental impact reduction areas along with a practical approach towards execution. Three major initiatives were implemented:

1. Installing an energy and water monitoring system
2. Building standard operating procedures and checklists for ensuring compliance with best practices.
3. Subject specific training through workshops and interaction with industry peers to exchange implementation best practices.

Post execution of these interventions, their textile unit at D-144 Sector-63 Noida reduced water consumption from 15.5 litres/piece in 2013 to 5.5 litres/piece in 2015 along with an overall water savings of 22741 kl per annum. The organization intends to reward employees who take steps towards resource conservation apart from extending the campaign beyond the factory by encouraging employees to adopt water and energy saving practices at their homes.

## REFLECTIONS

The SWAR programme provided a holistic approach towards resource conservation. During the SWAR programme, different manufacturers shared their experiences in implementing measures through meetings and workshops which gave the participants the impetus to execute them in their own premises.

An individual manufacturer may shy away from consulting experts due to the high costs. However, programmes such as SWAR where the costs are shared, enables many manufacturers who are keen to adopt environmental friendly measures to participate in the programme. These programmes also proved that major savings can be achieved with minimal investment. The important thing is for organizations to set the right priorities along with the will to work in this direction.

To achieve further improvements, the textile units also need to adopt new technologies like Cold Pad Batch dyeing (which consumes about 40-50% less water than conventional dyeing process); Counter-current washing; Chemical Recovery system; Zero Liquid Discharge (ZLD) etc. An appropriate Effluent Treatment Plant (ETP) with Reverse Osmosis (RO) Technology and Multi Effect Evaporator (MEE) is imperative to reuse its wastewater so as to achieve ‘Zero Liquid Discharge’ and reduce to its specific water consumption.

*Karishma Bist, Joint Director, Resource Conservation and Management Division, FICCI.*