



Dear Reader,

Welcome to the October Issue of the PaCT Newsletter!



“ PaCT aims to expedite investment and adoption of more resource efficient and cleaner production practices along Bangladesh’s entire textile production chain. ”

The past three months have been busy ones here at PaCT. We have managed to extend our project outreach beyond the borders of Bangladesh, increase our program and environmental awareness in country and in Europe, and expand our PaCT partner/client family with the proud introduction of three new members. I am, therefore, very pleased to share these and a number of our program’s quarterly highlights with you here. These include:

The September Steering Committee welcomed Mr Peter De Vries as the incoming First Secretary and thematic water expert for our principal donor, the Embassy of the Kingdom of the Netherlands in Bangladesh.

PaCT also welcomed Levi Strauss & Co., Carrefour, and VF Corporation into the PaCT family, bringing the total number of brands in the program to 15. With Levi Strauss & Co., PaCT is undertaking a regional pilot program assessing supplier performance in Bangladesh, Vietnam, India, and Sri Lanka.

The results of our factory assessments through June 2016 have been finalized. We have engaged with 165 factories and expect that we can reach the 200 factory target by June 2017. Water savings measures implemented by the factories have resulted in a savings of 14.4 billion liters of water per year. This is equal to the daily drinking water consumption of 320,000 people. Energy savings have also increased, reaching 1.23 million MWh/year. All credit goes to those factories that have taken the efforts to be environmentally responsible and improve their bottom line.

On July 5th, PaCT’s Program Manager participated in a panel discussion organized by the OECD on “*The Future of the Textiles Value Chains: Making It Work for Development*”. The conference was attended by Ministers from Egypt, the Dominican Republic, and other developing countries. The key topics were the medium and long-term trends for the textile industry, the major drivers for change, the impact of digitalization on production, and environmental sustainability of the value chain.

PaCT Newsletter

October
Issue

In August, at the World Water Week Conference in Stockholm, Mr M. A. Jabbar, Managing Director of DBL Group, PaCT partner factory, gave the keynote speech on '*Water and Job Opportunities: A Critical Nexus for Growth*'. Mr Mohammed Zahidullah, Head of Sustainability of DBL Group was one of the panelists in a panel discussion titled '*Public Private Platforms for Sustainable Growth and Development*'.

For our partner financial institutions, BRAC Bank and IDLC, on August 30 – 31, PaCT carried out *Sustainable Energy Financing Clinics* to upgrade their capacities in promoting water and energy efficiency financing. Dr Brahmanand Mohanty a leading expert on Energy Efficiency Financing, and IFC's Senior Energy Expert Dianjun Zhang also spoke at the event.

PaCT collaborated with GIZ to host the "*Wastewater Management- Going Beyond Compliance*" workshop on September 25th. The workshop was an opportunity to work together with GIZ PSES and we look forward to do more such events in the future. Also on September 20th, PaCT participated in the Sustainable Sourcing Conference organized by the Embassy of the Kingdom of the Netherlands, in partnership with the International Apparel Federation and BGMEA. The conference discussed a wide range of topics relevant to the Bangladesh RMG sector including environmental sustainability.

We would also like to highlight the revamped [resource savings calculator](#) on PaCT website, which now includes process improvements in addition to the utility solutions.

Following on from our Solar PV Workshop, we are now calling for interested factories to do 10 more feasibility studies.

In this issue, we are showcasing an interesting case study on caustic recovery. The industry is heading towards a circular economy, and we are proud to say that the Bangladeshi companies are not far behind. Zaber and Zubair Fabrics Ltd. is leading the way in recovering caustic from process water. This has allowed them to save 6.5 million L/year of 28°Baumé caustic with a payback period of less than a year, proving that resource recovery is economically viable. We at PaCT would greatly encourage others to follow this example.

Respectfully,



Mohan Seneviratne
Program Manager, PaCT

Program ImPaCT till June 30th, 2016



Resource Efficiency Calculator *Revamped*

With over 20 recommendations in process improvement and utility, PaCT is happy to announce the launch of the revamped Resource Savings Calculator. The state-of-the-art tool now comes with exciting new features, including a brief description for each recommendation, and an option to

print potential savings and profit outcomes resulting from the recommendation options selected. In addition to water, energy, and GHG emissions, the calculator now displays savings in chemicals, an essential resource for the textile industry.

Interested to use the calculator?

Calculate your Savings 

PaCT Levitates

PaCT's Cleaner Production Program to improve environmental impact in Levi Strauss facilities across Asia.

PaCT recently partnered with leading jeans-wear manufacturer, Levi Strauss & Co. to develop the program's first global initiative for achieving environmental sustainability. "We are pleased to be the first IFC partner to pilot the PaCT program in additional countries. Our goal is to scale the practices globally to achieve greater reductions in water, energy, and chemical use across our supply chain," said Michael Kobori, Vice President of Sustainability, Levi Strauss & Co. The pilot program will build upon PaCT's extensive knowledge and

experience assembled from interventions in over 165 textile factories in Bangladesh, and is expected to be rolled out to Levi Strauss & Co. suppliers across Asia's four major sourcing countries, Bangladesh, India, Sri Lanka, and Vietnam.

PaCT aims to help Levi Strauss reach their sustainability goals through Cleaner Production assessments and PaCT Advantage, a purpose-built web based diagnostic process to develop a road map towards continuous improvement for the suppliers ([read more](#)).

LEVI STRAUSS & CO.

PaCTIVITIES

Brands Engaged for Sustainability

Global brands VF Corporation and Carrefour join PaCT to increase sustainable industrial practices in Bangladesh supplier factories.

As part of this engagement, PaCT will work with supplier factories nominated by VF Corporation and Carrefour. PaCT's efforts will include awareness building and the initiation of Basic and In-depth Cleaner Production (CP) assessments in the factories.

Major activities will involve factory-level advice on Basic CP measures, technical

assessment of resource efficient textile processing, facilitating implementation through user groups, strengthening corporate water and energy management systems, and investment facilitation in technologies with significant water sustainability benefits.



Sustainable Energy Financing for a Cleaner Textile Sector



PaCT organized a Sustainable Energy Finance Clinic in August for partner banks active in Bangladesh's textile sector. The clinic was designed to showcase finance opportunities and products to textile factory representatives as well as representatives from IDLC Finance Ltd. and BRAC Bank Ltd.

in order to catalyze broader investment in improving and upgrading resource consumption and production, respectively. Dr Brahmanand Mohanty, Asian Institute of Technology, Thailand and Dianjun Zhang, Senior Energy Specialist, IFC Energy Efficiency Program, hosted sessions highlighting the business case for energy efficiency financing and cutting-edge technologies in water and energy efficiency in the textile sector. BRAC Bank Ltd. also showcased its energy efficiency financing product, *Planet Solutions*.

The clinic received positive feedback from more than 90 percent of the participants.



Participants pose for a group photo at the end of the [Wastewater Management - Going Beyond Compliance Workshop](#), organized by Bangladesh PaCT, in collaboration with GIZ PSES, and the Textile Technology Business Center (TTBC).

Interested to undertake a Rooftop Solar PV Feasibility Study for your factory, but not sure where to go?

Please contact Abdallah Naeefy (anaeefy@ifc.org)

PaCT and Partners

Developing Sustainable *Recipes*

Decisions made throughout the garment and textile supply chain can have severe influence on the environmental impacts of textile end products. For example, dyeing jerseys using a liquor ratio of 1:10 rather than the liquor ratio of 1:4 would make a dramatic difference in the environmental sustainability of the end product.

Reducing such impacts requires an integrated, informed approach, where brands and retailers are tasked to *rethink* their choices and their decisions throughout the textile supply chain, including developing product recipes and sourcing.

The Decision Support Guidance (DSG), an innovative go-to tool developed by PaCT, provides directions on sustainable decision-making by demonstrating how brands and retailers can increase demand for better practices in their supply chains, and how decisions with regard to product design, development, and sourcing can have a favorable impact on the environment. The DSG focuses on two key product categories for the Bangladesh textile sector: circular knit fabric processing, and denim finishing.

Conventional bleaching processes in denim finishing are generally chlorine-based and use harsh chemicals that cause adverse impacts. The DSG goes beyond the resource profile of a particular process and provides recommendations on greener, safer alternatives like Ozone or Enzymatic Shading over conventional bleaching for denim finishing.

- Targeted at international brands and retailers, textile wet processing factories, technology suppliers, donor agencies, and the broader global textile and garment industry
- Provides a quick review of processes indicating where resource savings or excesses are likely to be found, and where extra caution related to chemicals is required
- Side-by-side comparisons of similar/alternate processes
- Additional details on specialized processes-bleaching and scouring combinations, enzyme processing
- Self-explanatory icon system with clearer traffic-light coloring



Binning the toxins for a safer future through ZDHC



The textile industry uses a large variety of chemicals throughout the cumulative production cycle. According to a report by the *Natural Resources Defense Council*, approximately 25 percent of all globally manufactured chemicals are used by the textile industry. Many of these chemicals have toxic traits that cause harm to the environment. The use of most of these has already been banned or strongly discouraged, as new dyes and chemicals are now available and readily serve as relatively safer alternatives. Unfortunately, despite the underlying benefits of using these new and greener alternatives (reduced pollution load and substantial economic benefit), a large fraction of the textile sector still continues to use the harmful chemicals.

Reducing the environmental impact of these chemicals requires a unanimous commitment from the apparel and related sectors to remove them from the supply chain. In 2011, a group of major apparel and footwear brands and retailers agreed to such a shared commitment in order to help lead the industry towards zero discharge of hazardous chemicals by 2020. These brands and retailers formed the Zero Discharge of Hazardous Chemicals (ZDHC) Programme. Today, 22 global sports, fashion, and outdoor brands continue to collaborate under the ZDHC Programme.

When countries like China set out to achieve their ZDHC goals, Bangladesh, home to the second largest textile sector in the world, must not be far behind. Bangladesh has made an encouraging start on the ZDHC Programme, with the development of a publicly available list of 11 banned hazardous chemicals, and a Manufacturing Restricted Substances List (MRSL). However, for Bangladesh to achieve its ZDHC goals, an effective partnership between all major industry stakeholders, most importantly the Government of Bangladesh, trade associations, as well as individual factories, must be established to work collectively to address sectoral issues.

PaCT is playing a pioneering role in reducing the environmental footprint of Bangladesh's textile sector by promoting resource efficiency practices, and has so far successfully delivered promising results in more than 160 factories. Besides resource efficiency, another important focus for PaCT has been the reduction of pollution levels in the sector, which is in sync with the ZDHC Programme's philosophy. Moreover, more than 30 percent of the ZDHC members are PaCT partners, enabling PaCT to press its advantage for achieving ZDHC goals.

PaCT has also launched a sector focused, public-private dialogue platform, the [Textile Sustainability Platform](#) to help build the enabling environment necessary for sectoral reform. Members of the platform include textile factories, leading global brands, and industry associations like the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), Bangladesh Textile Mills Association (BTMA), Bangladesh Knitwear Manufacturers & Exporters Association (BKMEA), civil society, and government agencies.

These members have collectively developed background papers, one of which looks upon the ZDHC initiative at the global level as well as its implication in Bangladesh. The paper also looks at the current taxation policy with regard to these chemicals and cites few policy recommendations related to ZDHC. These recommendations were advocated to relevant government authorities for their consideration - including the increase of tax rates on the 11 banned hazardous chemicals.

In response to the recommendations, customs duty rates of three chemicals, *azo dyes*, *organotin compounds*, and *chlorophenols* with previous duty rates of five percent were reviewed and raised to 25 percent in 2016. "That the government has raised taxes on these hazardous chemicals is a promising move from their part in encouraging the use of environment-friendly goods and in recognizing the role of the Textile Sustainability Platform in promoting sustainable practices in the textile sector," said Mohan Seneviratne, Program Manager, PaCT, at the launching ceremony of the Textile Sustainability Platform.

Although, just a start, such initiatives give Bangladesh as well as PaCT program major grounds for optimism to achieve the ZDHC goals, and to work towards reducing pollution levels in the country's largest industrial sector.

Case Study

When Recovery is the Remedy



To enhance the luster and strength of its fabrics, [Zaber and Zubair \(Z&Z\) Fabrics Limited](#) of Noman Group, apply a mercerization technique where the fabric is treated with caustic soda (NaOH) and other wetting agents. At the end of the process, the mercerized fabric is rinsed with water to remove the excess caustic.

In the past, Z&Z drained the rinse water, which is mainly weak caustic, from its six mercerizing units without recovery or treatment. This gave rise to a number of critical issues. For example, the factory lost a substantial amount of caustic soda in the wastewater. This then put stress on the factory's Effluent Treatment Plant (ETP), as the wastewater entering was high in salinity (TDS) and pH. At the same time, the factory was consuming large quantities of sulfuric acid (H_2SO_4) to neutralize the excess caustic.

Z&Z was keen to address these issues by focusing on upstream caustic recovery. The factory installed two Caustic Recovery Plants (CRPs) that concentrated diluted, spent caustic into concentrated caustic, which can be reused in the mercerizing units. Additionally, the factory uses the hot water by-product and vapor condensate as resources for the bleaching, boiler feed tank, and mercerizing units - *icing on the cake!*

ENVIRONMENTAL BENEFIT

Caustic soda saved - 6.5 million L/year
Hot water generated - 28 million L/year
Sulfuric acid saved - 400,000 kg/month

FINANCIAL BENEFIT

Total Investment - USD 2,300,000
Cost Savings - USD 3,800,000/year
Payback Period - < 1 year

OTHER BENEFITS

Reduced steam consumption in bleaching units, reduced water consumption for boiler feed water

“ We have been able to make significant savings in resource cost by reducing our caustic consumption through recovery. At Zaber and Zubair, we are actively engaged in implementing similar resource efficiency initiatives to optimize our resource consumption, and to achieve economic and environmental sustainability. ”

Md. Rashed Mosharrof
Head of Operations & Planning
Zaber & Zubair Fabrics Limited

PaCT is a partnership program that is supporting the textile wet processing sector in Bangladesh to move towards greater adoption of Cleaner Production practices, with a focus on reducing resource consumption and pollution, and contributing to the sector's long term competitiveness. PaCT works in partnership with

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