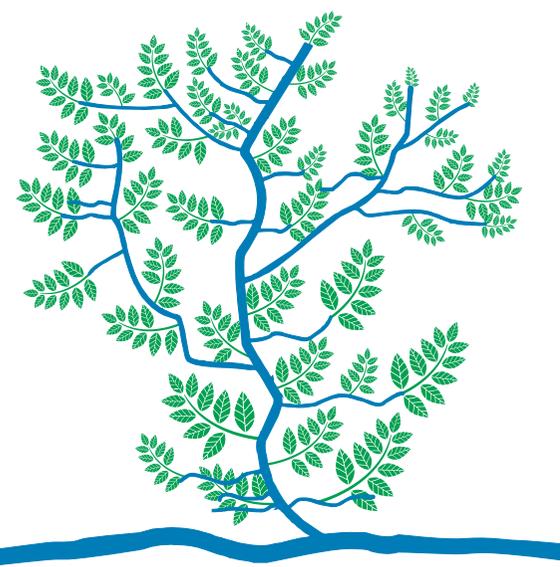




A Step Forward
Paper Mills Complying with
Charter for Water Recycling

Companies Invest in
Effluent Treatment
Plants

HINDON BASIN



*Bindlas Duplex in Muzaffarnagar, Maruti Papers in Shamli and Star Paper Mills in Saharanpur are examples of **paper mills** in the **Hindon basin** which have **optimised water usage** in their manufacturing processes. They have **invested** in waste **water treatment** technologies and are moving closer to desired **zero liquid discharge** standards.*

Adopting the Charter Approach

Paper manufacturing is a highly capital, energy and water intensive industry. It is one of the 17 most polluting industries identified by the Ministry of Environment, Forest and Climate Change. The Central Pollution Control Board (CPCB) in 2013-14 formulated a 'Charter for Water Recycling and Pollution Prevention in Pulp & Paper Industries'. This was done in consultation with experts from Pulp & Paper industries, Central Pulp & Paper Research Institute (CPPRI), Saharanpur and Department of Paper Technology, IIT Roorkee.

The Charter follows a clustered approach and was initially introduced in the Ganga River Basin in five identified clusters of pulp and paper industries located in Uttarakhand and Uttar Pradesh. It envisages the upgradation of the status of pulp and paper industries in process technology, practices and environmental performance. It also targets substantial reduction of fresh water consumption and wastewater generation. This may be achieved by reducing, recycling and reusing effluent streams with and without treatment for different endpoint uses; end of pipe treatment for existing units with retrofitting of recycle and reuse options; and



continuous monitoring. The aim is to attain desired levels of environmental protection which are meeting objectives of the National Mission for Clean Ganga.

Impact assessment of the Charter has shown improvement in the environmental status of pulp and paper industry in the identified clusters. This is an encouraging trend that will see the Charter implementation extending to all pulp and paper industries in the Ganga River Basin States, reducing pollution levels along the Hindon River and beyond.

Medium to large paper mills making efforts to comply

Bindlas Duplux Limited in Muzaffarnagar is an agro residue and waste paper based

company that has two state-of-the-art mills. It produces approximately 70 tonnes of paper a day. In order to combat the problem of pollution due to discharge of black liquor, the company has invested in the non-conventional Chemical Recovery Plant. The caustic soda used for pulping is recovered as sodium carbonate and sold to the Glass and Soap industries. The discharge effluent post the installation of Chemical Recovery Plant are amenable for treatment in Effluent Treatment Plant (ETP) and the norms set in the charter are complied. Moreover, the mill has also installed online monitoring system that is constantly monitored by the authorities which is a positive sign of investing in technology ensuring improvement in the quality of the effluent being discharged.



Maruti Papers Limited aims to achieve zero discharge of wastewater from its plant. Adjoining to the factory is a specially created green field of over 230 bighas of land where 10,582 different trees have been planted. All the treated water released from the ETP is used to irrigate part of this green area which is expected to earn revenue besides serving as a place for employees to stroll around. The quantity of the water generated from the plant is not sufficient and has to be supplemented in part by fresh water. Their next project is rain water harvesting, which shall be started very soon. The slogan “*Jal Hai Toh Kal Hai*” (Where there’s water, there’s a future) coined by them 4 years ago for a water campaign is a positive reminder of the need to preserve depleting water resources.



Reflections and Way Forward

This project reflects a success story of a participatory approach and is a great example of Government-Academia-Industry partnership.

Pulp and Paper units especially SMEs need to be supported by capacity building, sharing best practices as well as providing technical guidance to achieve reduction in freshwater consumption/effluent generation and reducing operational costs. This is necessary to scale-up implementation by other pulp & paper units in this sector.

The good progress made in the implementation of the Pulp and Paper charter can serve as an inspiration for other industrial sectors. However, a Cost Benefit Analysis needs to be carried out for adopting the water efficient practices/technology in the interested industries along with an appropriate financing mechanism for SMEs in those sectors.

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Maruti Papers Limited, a 26-year old company in Shamli district of Uttar Pradesh is one of the leading manufacturers of quality Kraft paper in the state. It manufactures approximately 300 tonnes of unbleached variety of packaging grade paper a day, employing recycled waste paper. The company has been constantly improving its efficiency in multifarious directions aiming towards conservation of raw material, energy, water while upgrading its ETP. This has helped achieve the stipulated norms with respect to the pollution parameters resulting in compliance with the charter. Maruti Papers has upgraded its technological processes by installing equipment such as showers in the paper machine to reduce consumption of water on par with global best practices; from 25 cubic metres to a minimal 4 cubic metres per metric tonne of paper.

The Star Paper Mills, incorporated in 1938, adopted an Energy Policy in 2001

and was awarded a Certificate of Merit for energy conservation by the Indian Paper Manufacturers Association in 2005. It has taken numerous measures to comply with latest environmental standards, including the Charter. The company follows ethical norms with respect to discharge of treated water into the Hindon through metallised drains. According to Mr. IJ Singh, Chief General Manager (Works), "Quality of water is important for product quality and reducing consumption of paper making chemicals." Most of the water released by the ETP is consumed by farmers for irrigation, leaving minimum water for discharge in the river. In summer months, this effluent becomes a critical source of irrigation for farmers. As part of CSR activities, it conducts awareness programmes for local farmers on agro economics and use of quality samplings. It also provides opportunities for students of IIT Roorkee to undertake specialised research on pulp and paper.