



## Sustainable Water Management

UASB (Upflow Anaerobic Sludge Blanket) Wastewater Treatment System of Vina Kraft Paper Co., Ltd, Vietnam, is the best system in SCG Paper designed to support water management according to 3R Principles.

With the commitment to an effective use of natural resources, reduction of environmental impacts and conservation of natural resources, SCG operates with care in the environment throughout its supply chain with 3R principles i.e.

- Reduce;
- Reuse / Recycle;
- Replenish.

### Risks and Opportunities Management

Each year, SCG withdrew water from different sources including surface water, underground water and water supply to use in manufacturing for more than 100 million cubic meters. Hence, SCG has set up SCG Water Management Committee to define policy, targets and guidelines in line with international approaches for water management that maximize utilization effectiveness including to establish measures for managing water throughout product life cycle ranging from upstream to downstream.

1.Risks on Water Scarcity and Quality of Water Utilized in Manufacturing - Fluctuating of water price in scarcity circumstance causes a direct impact to manufacturing costs of SCG products and services. Hence, survey and monitoring of water quantity from water sources were executed with establishment of supporting measures, initiation of projects and development of tools to reduce water consumption in production processes.

2.Risks on Quality and Quantity of Water Discharged from Manufacturing - Investment on installation of wastewater treatment system to improve efficiency was performed together with monitoring and tracking water quality via measurement devices to ensure results continuously better than regulatory standards. Cooperation with communities and stakeholders was executed to allocate treated water for agriculture during a dry season and to carry out a water resource conservation awareness raising project to enable stakeholders to be able to manage water in their own communities sustainably.

### Manufacturing Process Improvement Project

- Install pumps to utilize clear water from a recycling system to dissolve limestone used in the paper manufacturing process resulting in reducing water consumption of 43,200 cubic meters per year,
- Install reverse osmosis systems to increase recycling efficiency resulting in water recycled for 200,000 cubic meters per year,
- Improve a drainage system and dike to retain diluted black liquor and being returned to the paper manufacturing process which reduces amount of wastewater and chemicals used in treatment system and a manufacturing process,
- Install ponds to store wastewater and contaminated storm water in order to enhance stability and efficiency of wastewater treatment system which results in reducing wastewater discharge,
- Increase efficiency of a wastewater treatment system by upgrading from aeration type to SBR type which results in better treated water quality and reduce pollution discharged to water source.

### Engagement with Business Partners

SCG Chemicals has utilized raw water from several reservoirs located in Rayong Province through supply from Eastern Water Resources Development and Management Public Company Limited. As a result, SCG tracked and monitored quantity and quality of water as well as water management every year, and involved with various organizations in governmental and private sectors in

monthly evaluation of water risk. SCG also participated in provision of opinions on adjusting the water pricing structure that suitable for industrial entrepreneurs.

### Response to Customers' Needs

SCG is not only committed to managing water resources within the organization to meet international standards but also develop products with innovation that enhances competitiveness in the markets and responds to customers' needs from planning through manufacturing and product delivery. Currently, SCG has manufactured a number of green products and services to the market especially sanitary ware and fittings that help customers save water usage at least 20 percent.

### Development of Sustainable Water Sources to Communities

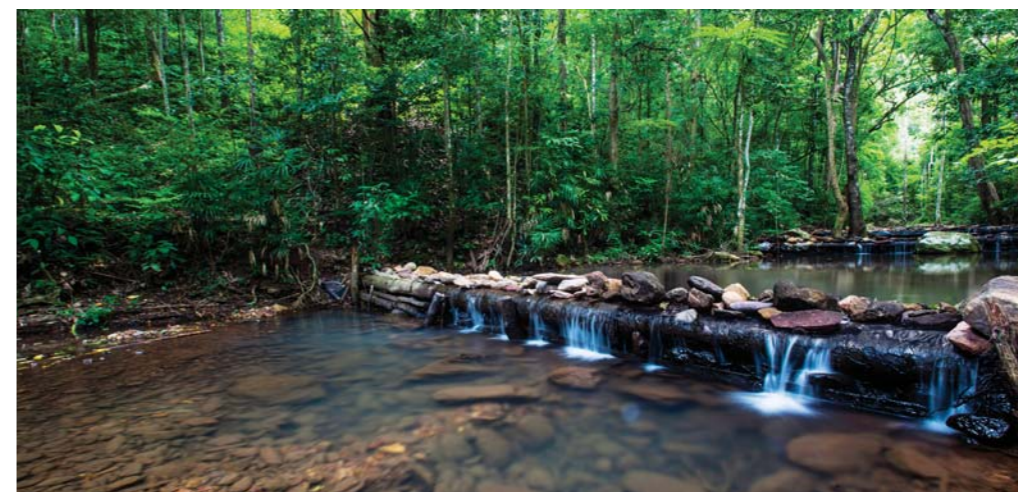
SCG has applied the Royal Initiative of His Majesty the King on water management as guidance and encouraged communities and society to participate in managing water shortage and inundation through 'SCG Conserving Water for Tomorrow' project by building check dams to slow the flow of surface run off, trap sediments, prevent flooding and restore forests to good health, and conserve water to be sufficient for communities to consume and use in agriculture for the entire year.

SCG cooperated with different communities such as Chukadon Community in Kanchanaburi Province to resolve wastewater problems and restore water condition in Mae Klong river through systematic water treatment; removal of water hyacinth from river; installation of grease traps in households and building a wetland to filtrate water prior to discharge to a river.



"Water is a main raw material for paper manufacturing. Hence, we have to study and design manufacturing processes to include water management in line with 3R principles which all SCG's companies try to reduce water usage as much as possible. Wastewater treatment system of Vina Kraft Paper Co.,Ltd. in Vietnam is the best system of SCG Paper as the treated water quality is comparable to clean water in river."

**Sangchai Wiriyampaiwong**  
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### Proportion of Water Withdrawal Sources

