



**Maninee Leila Karnik, founder and director, EcoWorks Biotech Pvt Ltd**

*"When the last tree is cut down, the last fish eaten and the last stream poisoned, you will realise that you cannot eat money."*  
- Cree Indian (Native American) saying

This prophetic saying is truer for our country today than ever before. It is projected that by 2050 at least one in four people will be affected by recurring water shortages. That is a number equivalent to the population of India and China!

The key to surviving this is sustainability, an interdependent balance between the environment, society and economy. Shape shifting interests of politics and profit make sustainability an ideal pursuit.

In 2015, UNDP's 17 Sustainable Development Goals included "the availability and sustainable management of water and sanitation" as the sixth global goal.

The main concerns of the water cycle is to cut back on usage, manage fair and safe distribution as well as replenish ground water sources. However, to be truly sustainable, it is vital to manage waste water to avoid irreversible contamination that will consequently affect our health and the economy.

In industrialised countries, industries consume over half of

## Our future down the drain?

**Sustainable treatment for waste water must get top priority**


the water available for human use. Freshwater withdrawals have tripled over the last 50 years. Demand for freshwater is increasing by 64 billion cubic metres a year. This soaring demand brings the food industry under the magnifying glass. With it comes an increase in the use of grease, oil and other potential hazards in waste water systems, which directly impact freshwater quality. Another consideration: the ability of effluent and sewage treatment plants to effectively treat waste depends largely on the quality of influents in the collection system.

In the US and European nations, there are strict levies and surcharges for improper waste water discharge. While in India, although water quality standards have been set by Central and State-level Pollution Control Boards, the implementation is subjective and open to interpretation and 'adjustments'. Besides, manual drain cleaning perpetuates the unhealthiest social system because the job is often relegated to oppressed classes. The Swachh Bharat Mission has put a spotlight on the issue of waste in general. However, tons of chemicals, acids and caustics are being poured down the drain across all systems. The availability of cheap chemical

cleaners and a lack of awareness about the impact of inputs result in heavy degradation of waste water systems. The indiscriminate use of harsh chemicals, surfactants, acids, caustics etc. dewater and harden the soft grease in the drains, which makes the problem worse.

Bioremediation is the solution as it doesn't damage the drainage infrastructure. It regularly introduces non-toxic and non-pathogenic microorganisms into the waste water system, using high-quality, cost-effective and biodegradable solutions, to reduce the levels of pollutants.

At EcoWorks Biotech, our focus is on working with a right mix of eco-friendly products for waste water management. We use pre-treatment solutions directly at the source of waste water (a kitchen sink or toilet). Our products use naturally occurring bacteria that are isolated and stress-trained to break down complex organic substances into simpler components (carbon dioxide and water).

The burden of clean water, a governmental responsibility, is shifting partially onto the shoulders of waste water producers. However, there needs to be a conscious and sincere effort to switch to sustainable options for the sake of future generations. 



# COMMERCIAL DESIGN

Latest in fenestration systems; The evolving cleaning equipment market; How do green buildings improve business?

The definitive guide to successful commercial spaces and facilities management

Total pages 52  
Volume 4 | Issue 4 | December 2016 | ₹50

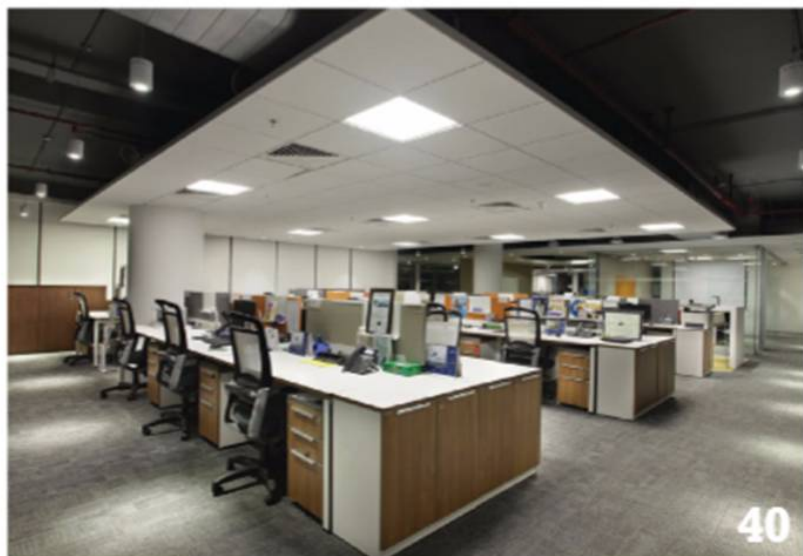


AG CH AONKRI ME NWK

## MAKING CHANGE WORK

How IBM India campuses reflect the evolving interface between the brand and its people





## 12 BULLETIN

A roundup of the latest industry news from across the country.

## 16 COVER STORY

A glimpse into how IBM India campuses reflect the evolving interface between the brand and its people

## 24 FOCUS

*Commercial Design* talks to facility managers about their approach to sustainable methods.

## 30 WHITE PAPER

How do green buildings improve business?

## 34 TRENDS

A look into the diverse options available for window and fenestration systems.

## 37 DESIGN UPDATE

Celebrated French botanist, Patrick Blanc, unveiled his design for Dubai's first in-store vertical garden.

## CASE STUDY

**40** The Airbus office in New Delhi by reflects an astute clarity of materials, openness and the initiative taken to translate its global presence through design.

**44** AHEC's American ash and white oak bring tactile architecture to Akin Barber & Shop.

## 48 PRODUCTS

What's new on the market.

## 50 OPINION

Maninee Leila Karnik, EcoWorks Biotech Pvt. Ltd talks about sustainable treatment for waste water.