

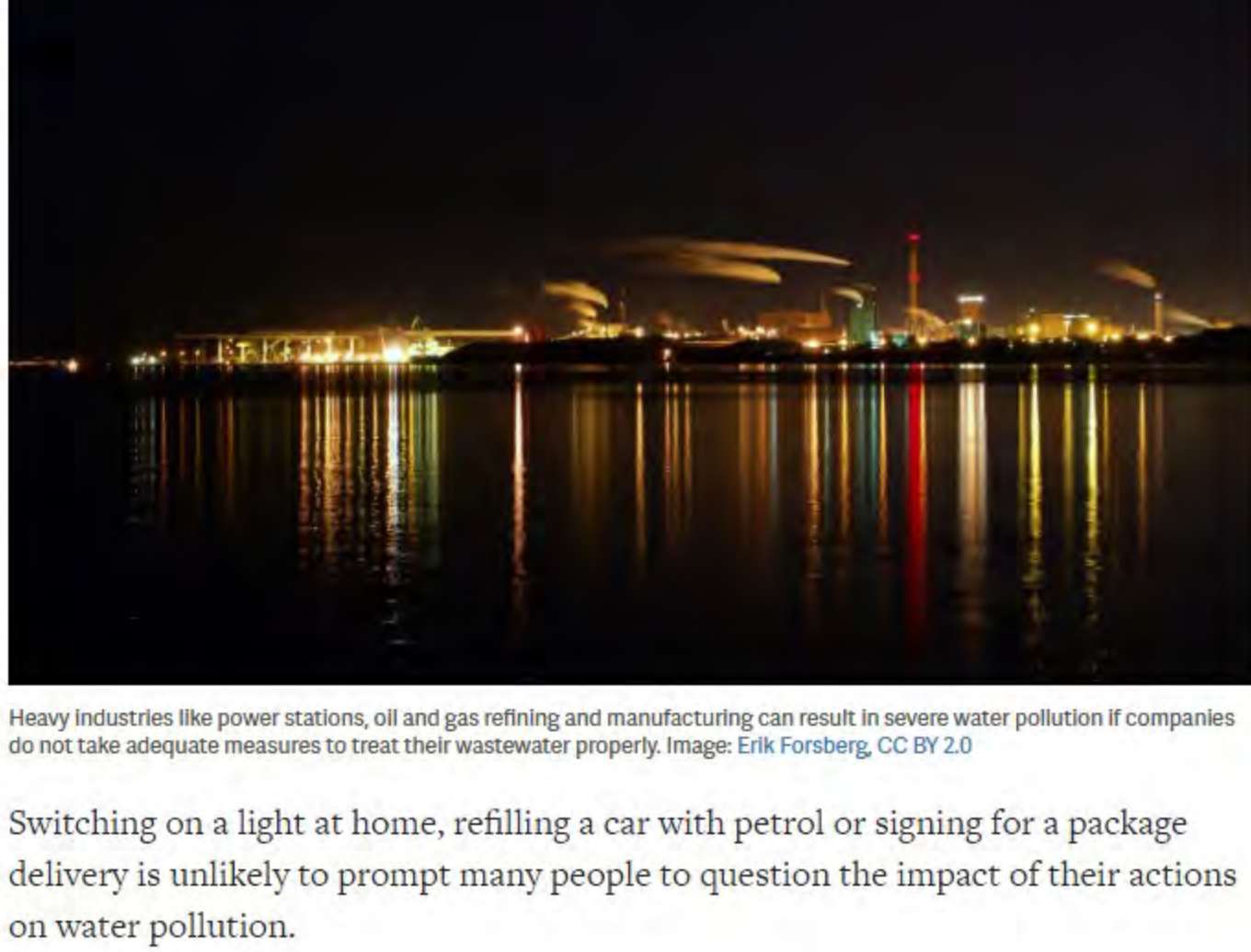


Managing the water impact of Asia's industrial boom

Italian firm De Nora is reaching out to help Asia's booming industries manage wastewater pollution risks from its Singapore regional headquarters.

By [Vaidehi Shah](#)

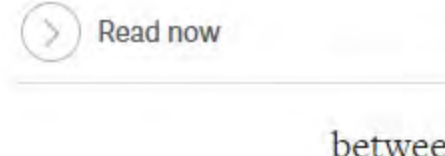
Tuesday 30 May 2017



Heavy industries like power stations, oil and gas refining and manufacturing can result in severe water pollution if companies do not take adequate measures to treat their wastewater properly. Image: Erik Forsberg, CC BY 2.0

Switching on a light at home, refilling a car with petrol or signing for a package delivery is unlikely to prompt many people to question the impact of their actions on water pollution.

But this is a central concern for the power plants, petrochemical companies and shipping firms that deliver these conveniences to consumers. These sectors not only rely heavily on water for their operations, but also risk incurring heavy penalties if they violate regulations on wastewater treatment.



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Regulators keep a close eye on the impact of these heavy industries for good reason; they are a major cause of freshwater contamination and pollution, and the consequences of pollution can be devastating.

This is seen in China's 'cancer villages', where industrial water pollution has caused a massive spike in cancer rates in villages across the country; or the recent death of [tens of thousands of fish](#) in Vietnam due to a toxic spill from a nearby steel factory.

Globally, UN Water, a collaboration between various United Nations agencies, estimates that the fossil fuel sector alone contaminates between 15 and 18 billion cubic metres of freshwater resources every year—this is equivalent to 7.2 million Olympic-size swimming pools. The manufacturing, agriculture, and shipping sectors compound this problem further.

The problem is especially acute in developing countries; UN Water estimates that as much as 70 percent of industrial wastewater is dumped into waterways untreated in developing countries globally.

In Asia Pacific, the Asian Development Bank (ADB) [puts this figure](#) at 80 percent. The risk of industrial water pollution is likely to increase as the region experiences rapid population and economic growth.

Not only will this have dire consequences for the region's citizens and communities, but industrial firms also risk financial and reputational damage in the form of fines, public protests, and boycotts. However, proper water management can also benefit companies in many ways.

As ADB puts it, "wastewater must be seen as a resource with potential financial returns", citing gains such as the production of an alternate water supply for irrigation, cooling, or industrial use, generating energy or providing green employment opportunities.

Technology innovation to minimize risks

One company that has spent almost a century developing solutions that minimise the risks associated with inadequate wastewater management is Italian electrochemical technologies giant De Nora.

The company, which provides electrochemistry-based solutions for sectors such as renewable energy storage, mining, and agriculture, in 2015 set up a subsidiary, De Nora Water Technologies, to deliver its solutions for industrial and municipal wastewater treatment.

The company's industrial water treatment technologies include systems that can produce sodium hypochlorite—a chemical to disinfect effluent water—on-site; machines that can pipe chlorine gas into effluent water to disinfect it; and treat water on offshore oil rigs and ships using a method called electrolysis to make it safe to discharge.

According to De Nora, which has had a presence in Singapore since the 1980s, Southeast Asia's water treatment sector is worth some US\$20 billion. The city-state is currently the company's regional headquarters; providing sales and technical services to clients across Asia Pacific.

Vincenzo Palma, De Nora's sales director for disinfection in Asia Pacific and China, tells Future Ready Singapore in a recent interview: "We see that Singapore can be a hub for expanding our technology into the Southeast Asian market."

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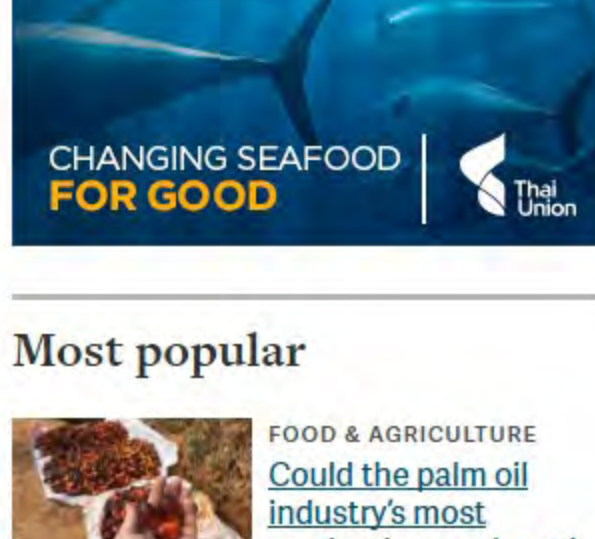
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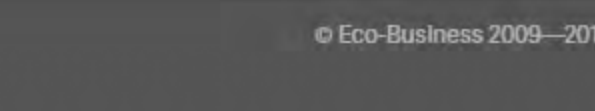
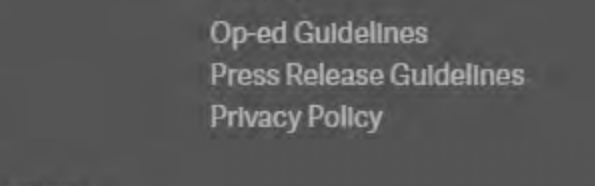
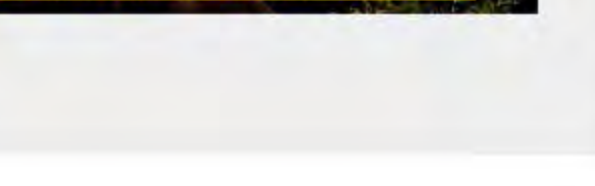
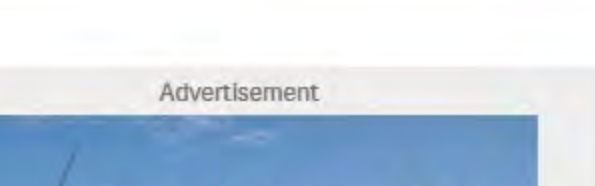
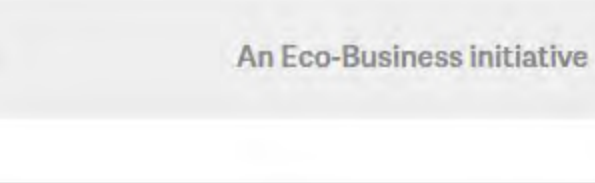
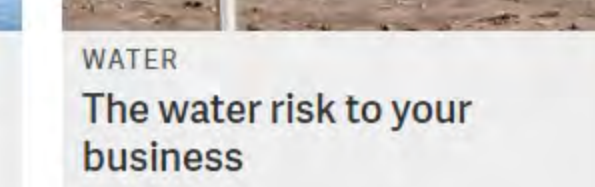
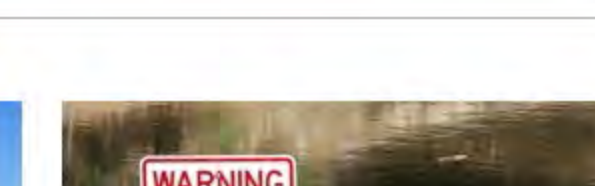
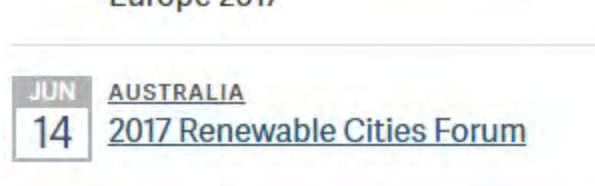
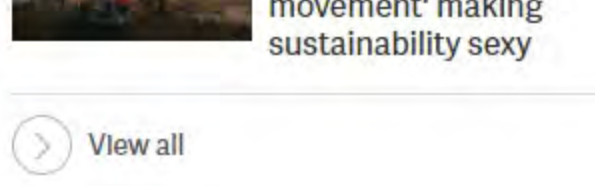
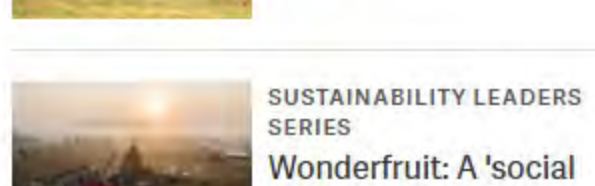
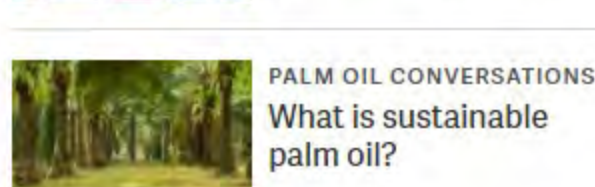
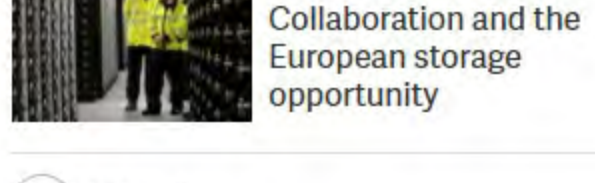
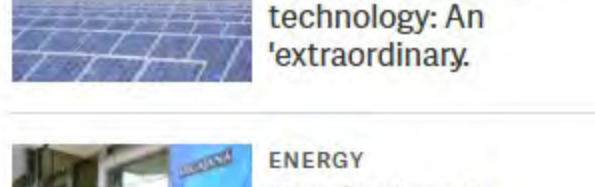
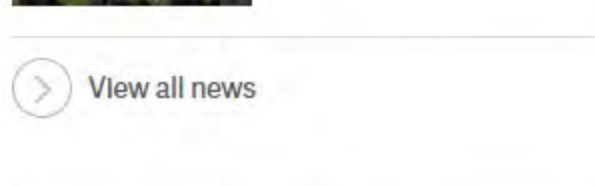
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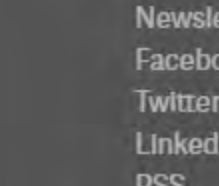
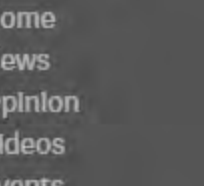
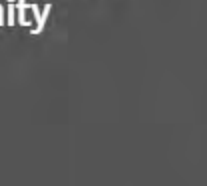
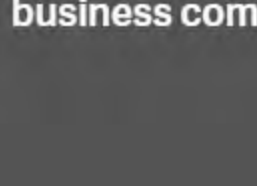
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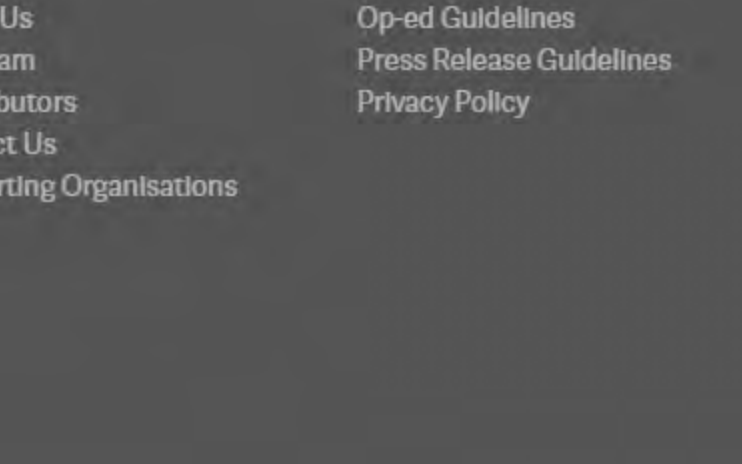
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