

Too dirty water

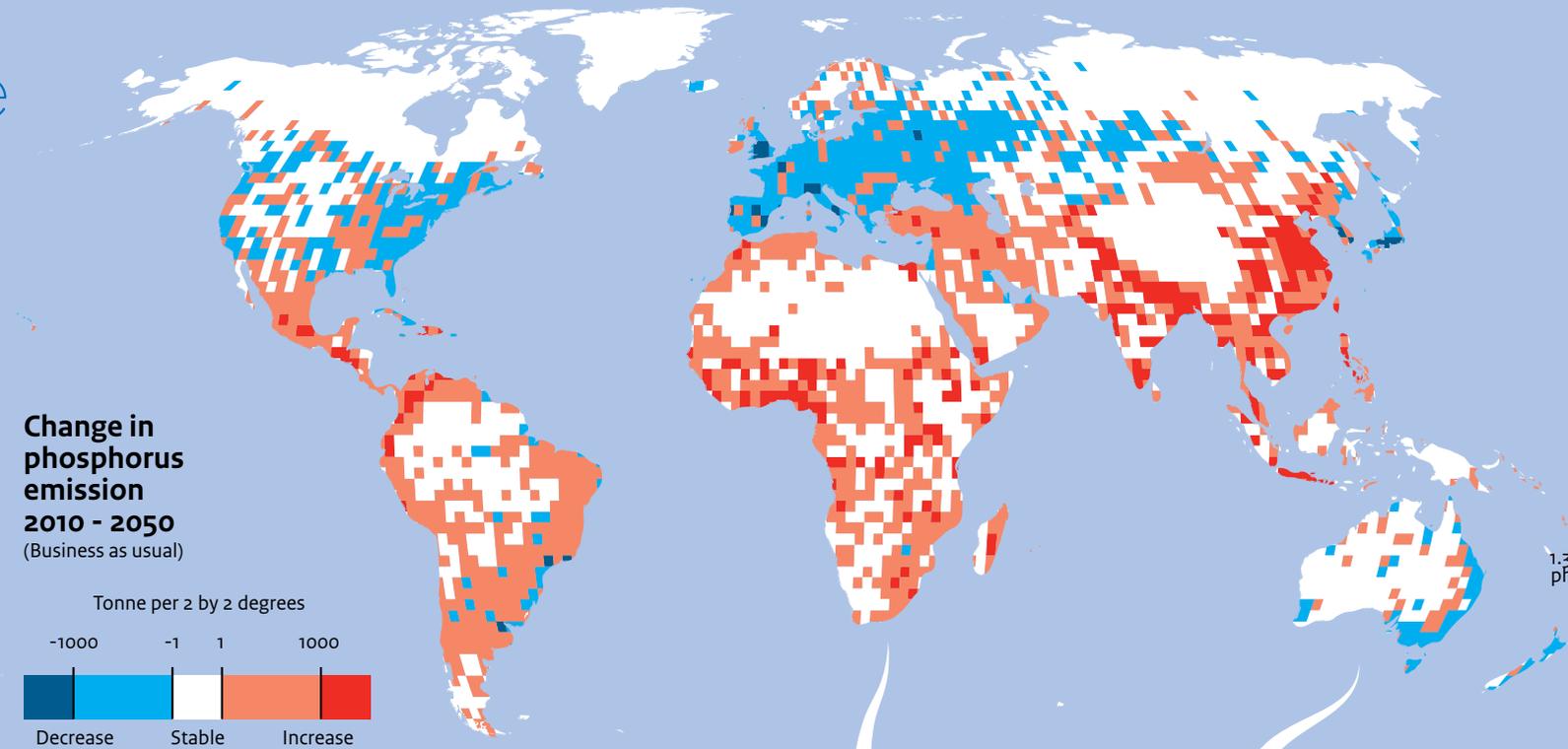
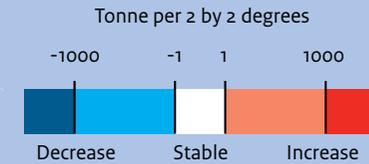
Towards improved waste water treatment

A century ago, the dominant flow for nutrients was their reuse in agriculture. Today, nutrients mostly end up in surface water. This results in eutrophication caused by phosphorus emissions and the subsequent pollution of rivers, lakes and coastal waters.

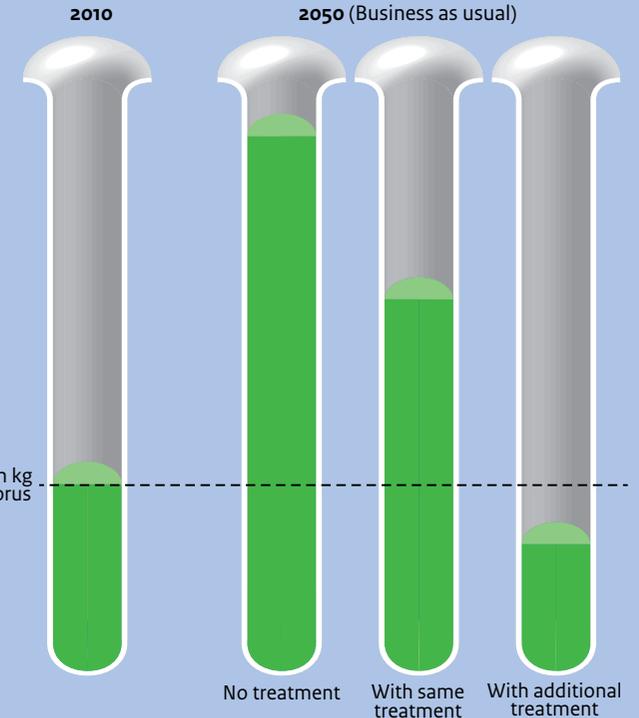
In developed countries, continued investments in wastewater treatment are expected to stabilise and restore surface water quality. However, in developing countries, further deterioration is expected to occur between 2010 and 2050. It is increasingly recognised that the urban water system is best designed, planned and managed in an integrated manner. Wastewater treatment should be part of a larger system, aimed at delivering services to urban dwellers without compromising on sustainability.

An option for improving wastewater quality is to combine wastewater collection with wastewater treatment to avoid the discharge of untreated wastewater and contribute to the reuse of nutrients in agriculture. Wastewater treatment plants can be upgraded to include tertiary treatment systems with new technologies that enable the removal of 95% or more of the nutrients contained in the effluent. For rural areas, promising options may be on-site sanitation and better management of faecal sludge. International agreements are important incentives for countries to invest in wastewater treatment to improve water quality downstream.

Change in phosphorus emission 2010 - 2050
(Business as usual)



Effects of treatment
on emissions from households to surface water



No water treatment while cities are expanding Water treatment is improving

Closed system connected to advanced treatment system On-site sanitation

Sewerage system releasing to surface water Sewage not separated from storm drains Human health in cities Threat to aquaculture, tourism, fishery and industry



Source: PBL