PIONEERING WATER STEWARDSHIP FOR FASHION

REPORT

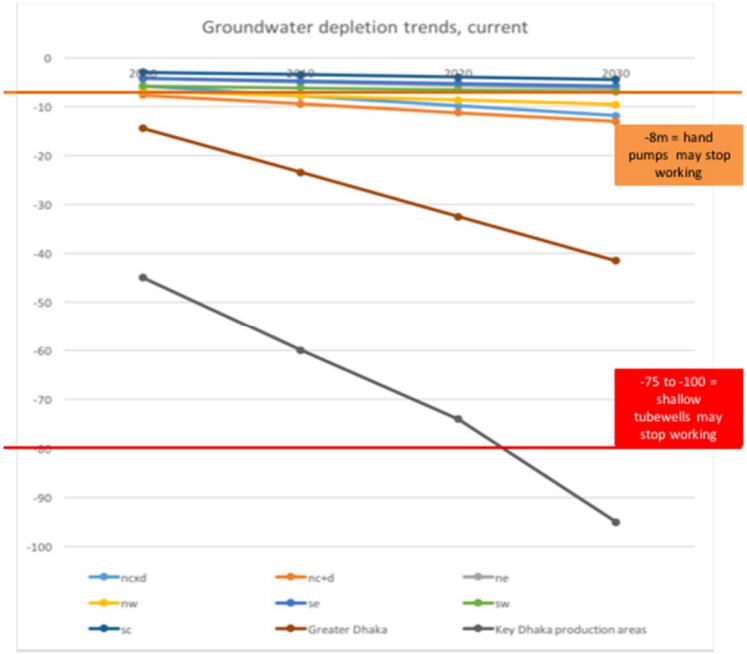
ECONOMIC WATER RISK IN BANGLADESH

WHY WATER GOVERNANCE IS KEY FOR ECONOMIC GROWTH

As part of their pioneering global partnership on water stewardship, WWF and H&M have worked with local delivery partner PPRC to investigate the potential economic outcomes of future water governance scenarios in Bangladesh.
WWF and H&M believe that effective water governance underpins all other efforts to reduce water impacts, and is the only long-term solution to ensuring water resources are optimised in an equitable and sustainable way. Supporting good governance also allows private sector, agricultural and community actors to move away from a 'win-lose' mind-set towards a 'shared risk' mind-set – as water is a shared resource, all risks and benefits are ultimately shared.
Bangladesh is a key sourcing country for H&M and one of the largest apparel production hubs of the world, but it faces high water risks alongside challenges in implementing effective water governance. This research begins to illustrate the scale of risks and their likely economic outcomes.

The preliminary findings of the report suggest that the biggest water-related risks for the Bangladesh economy are human access to water and sanitation, farming irrigation supply and costs, and groundwater depletion in key industrial areas including Dhaka. These risks could potentially create 'crunch points' in groundwater levels, creating uncertain outcomes and putting nationwide farm level profits and industrial production in Dhaka at risk.

The report uses desktop research and existing datasets from a variety of sources to construct a predicted 'Business-As-Usual' scenario of existing water and economic trends till 2030; covering agriculture, industry and water and sanitation (WASH). Two other scenarios were then created, considering potential changes in governance: 'Business-As-Usual-Plus', where some positive trends that are beginning to be observed (such as better water quality management in large textile sites) are followed through into the future; and an 'Improved Water Governance' scenario where recommended water governance interventions from WWF's companion report[1] are modelled to 2030. All three scenarios are plotted in terms of outcomes for a) water resources b) societal benefit and c) economic benefit.

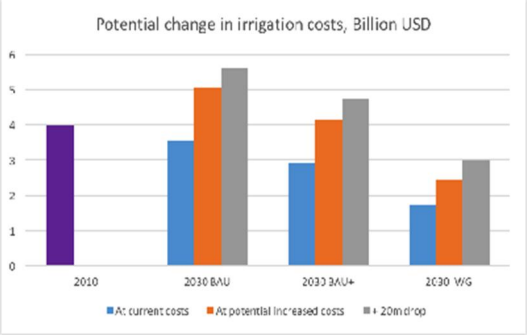


Current groundwater depletion rates (as shown to the left) already show that by 2020 many regions are likely to reach groundwater levels of -8m, when household technologies such as hand-pump wells may begin to fail. In the most economically productive regions of Dhaka, groundwater levels are already dangerously low, and look likely to dip below -80m by 2025. Usually this is the point at which shallow tube wells work less well, and as the water table drops, costs for extraction increase in deep tube wells. This could create higher infrastructure and running costs for sites dependent on large quantities of water, for example dyeing mills. It could also mean that the local population currently relying on private shallow tubewells would require further support from municipal suppliers.

The report's preliminary results show that the BAU 2030 scenario (based on current growth in industry in line with BGMEA targets and increased municipal demand), would require 250% higher water use in Dhaka than today – suggesting even higher depletion rates and a much greater likelihood of even deep tube wells coming operationally or economically non-viable by 2030.

[1] Water Governance in Bangladesh: challenges and opportunities around policy, institutions function and implementation for a sustainable water future, WWF 2015

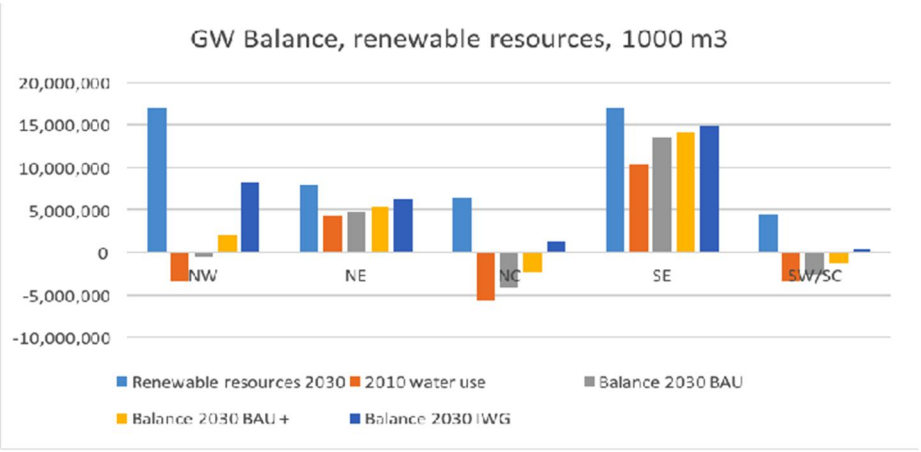
At the same time, surface water pollution – alongside population growth and groundwater depletion- is likely to create a shortfall in municipal supply in Dhaka. It is estimated by IWM that the Dhaka Water Supply and Sewerage Authority may need to spend around US$700 million in infrastructure to tap surface water resources if supply challenges and pollution continue, with additional investment needs highly probable in the future. The impacts from lack of improved water and sanitation are also likely to be high without additional intervention to increase WASH coverage, with possible economic losses (including lost productivity due to illness, water and sanitation access time and water treatment costs) of around US$ 7 billion* per year by 2030.



Preliminary results

Finally, agricultural projections show a slight decrease in water use under a BAU 2030 scenario, as farmers have almost reached peak production in Boro rice and are already showing a transition towards other, less water intensive, crop types. However, experts predict that even with a slower depletion rate, irrigation costs are likely to rise due to increases in fuel prices and lower water tables (requiring more energy to pump water to the surface). Therefore irrigation costs are predicted to rise by US$ 1.5 billion by 2030 according to initial findings*.

However, the report also offers a strong vision for the potential solutions to these problems. Under an IWG (Improved Water Governance) scenario, water use in all regions could be in line with sustainable groundwater recharge rates if smart governance interventions are made – even assuming the same rate of agricultural production and value and the same growth rates in population and industrial revenue. These interventions include incentives towards higher value, lower water usage crops, changes in irrigation incentives and subsidies (or irrigation controls if feasible) to reduce water losses, full implementation of WASH in line with the 2030 Sustainable Development Goals, and tighter controls on industry pollution and water use. They also include the potential to switch from heavy groundwater dependence towards use of surface water, although this would be highly dependent on effective water quality controls within industrial hubs like Dhaka.



Preliminary results

Overall savings through irrigation cost reduction and lost productivity are estimated at US$8.5 billion in 2030, a significant saving. Sources estimate that implementing all current targets from the Bangladesh Water Development Board would come to around US$7 billion* – less that one year's worth of lost productivity.

ABOUT WWF AND H&M:

The World Wide Fund for Nature (WWF) is one of the world's largest and most experienced independent conservation organizations. WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature. As part of its long-term conservation strategy, WWF has partnered with many national and international organisations on Water Stewardship. Water stewardship focusses on the role of private sector and other actors to work together to create shared solutions to shared water risks, with a focus on strengthening water governance.

H&M was founded in Sweden in 1947, with a business concept to offer fashion and quality at the best price. The H&M Group has around 2,700 stores in 48 markets including franchise markets. This includes Europe, Asia, Middle East, North Africa, North America and South America. WWF and H&M have been working in partnership on water stewardship since 2012, and have a comprehensive programme across the WWF water stewardship ladder.

For full details on WWF's work in Bangladesh and access to the report, please go to *panda.org/Bangladesh*

*Further investigation is underway into the costs and benefits of action on water governance, and results should be considered indicative until full publication of the report.