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With the publication of this report *Tackling the global water crisis – State of the world 2021* FIDIC has clearly set out the complex interconnected challenges which face the water sector in its broadest sense.

Taken together with the previous State of the World report *Establishing the value of water - the business case for change* the drivers for change in the way we interact with water and the importance of encouraging greater innovation into this sector are unambiguously expounded upon leaving us in no doubt of the challenges we face in addressing existing environmental concerns while at the same time facilitating future development.

These challenges are far-reaching, impacting on all regions of the world and across all economic sectors albeit with a predictably disproportionate impact on those who are already less fortunate. From the most developed countries (such as the regions in the

US which are currently experiencing unprecedented periods of drought) to the poorest (where for the three in ten people globally who are unable to regularly use soap and water to wash their hands at home, a lack of adequate water and sanitation negatively impacts the ability to follow the simplest of health guidelines) the issues raised in this report are relevant to engineers across the world.

The water sector provides an excellent example of the need for market driven innovation to deliver positive improvements in order to facilitate engineers who are at the forefront of tackling the problems we currently face in the development of resilient and sustainable infrastructure. Digital disruption in engineering and construction continues to open exciting opportunities for innovation and we as engineers must focus this progress on areas, such as the water sector, which currently lack in both investment and public attention. The recognised links between water, energy, food and climate which are highlighted again in this report further emphasise the need for a more sustainable approach to all aspects of water engineering.

The need for increased investment in the delivery of new water supply, sanitation and flood relief infrastructure is clear from this report as is the need for greater investment in the going operation and maintenance of existing systems. The benefits accruing from such investment is obvious given that the World Bank estimates the toll from floods and droughts over the last decade to include tens of thousands of deaths and more than a trillion dollars of property damage. Equally stark however is the cost of continuing to delay in remedying the impact of existing and in many cases outdated, urban infrastructure on the quality of our natural water environment. The ongoing COVID-19 pandemic has shown the ability of governments, public health bodies and industry across the world to collectively address major global health challenges. Given that the World Bank estimates that a lack of adequate safely managed sanitation impacts on 4.5 billion people worldwide and causes an estimated 1.6 million deaths each year, our role as engineers must be to ensure that as we build back better after the pandemic the issues facing the water sector are addressed in a similarly forthright manner.

I have spent the majority of my career to date working on water-related projects be it in water supply, wastewater collection and treatment, catchment hydrology and flood relief or the water-related aspects of highways and infrastructure projects and I have therefore witnessed first-hand many of the issues which have been outlined in this report. The difficulties the issues outlined in this report generate for engineers striving to deliver robust, resilient, sustainable and cost-effective design solutions and construction projects are obvious and at times greatly frustrating. However many opportunities for meaningful interventions also abound within the water sector which provides endless opportunities to deliver environmental improvements and facilitate future development are also palpable, whether that's through the improvement of water quality by removing plastics from our oceans or nitrogen rich agricultural runoff from our rivers, by providing safe reliable drinking water and sanitation, or protecting at risk communities from flooding. Based on my experience I believe that engaged and innovative engineers are key to addressing the myriad of challenges that continue to face the water sector and that groups like FIDIC's Future Leaders in particular have a crucial role to play in turning these challenges into opportunities for positive improvement.

