**A E , B E** United Nations University has said that by 2050, most of the world's population will live downstream of dams operating at or beyond their design life, which could have implications on public safety, escalating maintenance costs, and reservoir sedimentation.

*A Wa I a . . : A E G a R* was published by the Canada-based UNU Institute for Water, Environment and Health (UNU-INWEH) in January 2021. It provides an overview of dam ageing by world region and primary function, along with dam decommissioning or ageing case studies from the US, France, Canada, India, Japan, Zambia, and Zimbabwe.

"This report aims to attract global attention to the creeping issue of ageing water storage infrastructure and stimulate international efforts to deal with this emerging, rising water risk," said co-author Vladimir Smakhtin, Director of UNU-INWEH.

According to the report, most of the 58,700 large dams worldwide were constructed between 1930 and 1970 with a design life of 50 to 100 years, adding that at 50 years a large concrete dam "would most probably begin to express signs of ageing." While acknowledging that dams that are well-designed, constructed, and maintained can "easily" reach 100 years of service, the report authors predict an increase in decommissioning as economic and practical limitations prevent ageing dams from being upgraded, or if their original use is now obsolete.

"Underlined is the fact that the rising frequency and severity of flooding and other extreme environmental events can overwhelm a dam's design limits and accelerate a dam's ageing process. Decisions about decommissioning, therefore, need to be taken in the context of a changing climate," Smakhtin said.

"A few case studies of ageing and decommissioned large dams illustrate the complexity and length of the process that is often necessary to orchestrate the dam removal safely," co-author and UNU-INWEH Adjunct Professor R. Allen Curry added. "Even removing a small dam requires years (often decades) of continuous expert and public involvrgetaftseverity of floodinTdan limitsod

with the ability to store water and energy; and not just while the sun shines and the wind blows.

As a representative of our industry, ICOLD has been studying and documenting the state of the practice of