IJSO 2017

Xylem Water Prize

When you hear "Water and Sustainability", what is the first thing that comes to mind? How would you take on the global water challenges? Is your head full of ideas already?

How can we solve water?

If you are a student and registered to participate in the International Junior Science Olympiad 2017 (IJSO), this is your opportunity to join the water and sustainability video challenge and demonstrate how your innovative idea can help to mitigate the impact of global trends on the secure access to safe drinking water. The winning student or team of students of the participating school will be recognized with the Xylem Water Prize. Xylem Water Prize is a separate recognition from the International Junior Science Olympiad. Xylem is a leading global water technology company dedicated to solving the world's most challenging water issues and the company is sponsoring IJSO this year.

The challenge

Pick one of the global trends described below, and define one (1) innovative scientific idea that can help to mitigate the impact of that trend on the secure access to safe drinking water.

- Population growth
- Urbanization
- Aging infrastructure
- Water scarcity
- And, natural disasters

How?

Make a 1 – 3 minute video that describes how the innovative scientific idea will help to improve access to safe drinking water globally and how you see it implemented.

JOIN THE CHALLENGE ON XYLEMWATERPRIZE.COM

Imagine your idea actually making a difference in the world…

This is your opportunity to share your innovative scientific idea with water ambassadors around the world and to put your name on the map as a future scientist, water professional and/or sustainability expert. By joining the challenge, your video may get selected among the top 10 best ideas. The best ideas will also be shared on Xylem's YouTube channel and will be promoted on the Xylem and IJSO websites. The best idea will be recognized with the Xylem Water Prize award.

IJSO

xylem
Let's Solve Water

Questions?
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www.xylemwaterprize.com

XYLEM WATER PRIZE ADDITIONAL INFORMATION

There are major global trends affecting our future when it comes to water. First, macro trends such as **population growth** and **rapid urbanization** are placing new demands on limited water supplies. The world's population is growing by 80 million people per year. This increases demand for food, energy, and consumer goods – all which drive the need for more water. In fact, the United Nations estimates that the demand for fresh water is growing by 17 trillion gallons a year. In addition, people are moving to cities, especially in the developing world – where cities are gaining an average of five million new residents every month. In the next 20 years, nearly 60% of the world's total population will live in cities. Experts predict that there will be 37 mega-cities by 2025. Cities need to invest in more efficient and resilient systems for clean water supply and sanitation, and to prepare better for risks – like flooding and water scarcity.

Second, water management is a massively inefficient process, with unsustainable systemic waste and losses. Water systems in most developed countries are old, and in disrepair. In fact, every year more than 1.7 trillion gallons (1 US gallon = 3.79 liter) of clean water are lost due to leaky and broken pipes. And 10 billion gallons of raw sewage are released into waterways each year due to insufficient infrastructure. These **aging infrastructures** need investment to ensure they will continue to supply clean water in the future. Recent macroeconomic challenges, combined with the ongoing challenges associated with the costs of public service delivery, have resulted in a massive gap in financing for water infrastructure. In the U.S., repairing existing infrastructure and expanding it to meet the needs of a growing population is estimated at more than $4.8 trillion (1 US Dollar = 0.93 Euro) over the next 20 years.

Third, water quality is declining in many regions of the world, with toxic algal blooms, salinization and dead zones becoming a fact of life for many countries. In addition, pollution, agricultural runoff and municipal wastewater are stressing global water systems. For example, 40% of U.S. waters are considered to be dangerously polluted. 90% of China's urban rivers are considered to be seriously polluted. To protect waters and the environment, new **government regulations** are emerging. Helping customers adapt to these regulations requires better solutions for quality and monitoring.

And finally, water supplies are becoming **more scarce and more variable**. As an example, in 2000, 150 million people lived in cities facing yearly water shortages. By 2050, it is expected that more than three billion people living in cities will face critical water scarcity. New solutions are needed to encourage the reuse of water.

Also, the growing incidence of droughts, floods and other disasters is creating significant natural risk exposures. According to World Bank research, in 2010, 178 million people were affected by floods with losses exceeding $40 billion. Solutions are needed to help in the aftermath of such tragedies.

Questions?
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