

The IWA Climate Smart Utilities Vision

Adapt. Mitigate. Lead.

With urgent action needed on mitigation and adaptation, the International Water Association is calling on utilities around the world, regardless of their size or location, to endorse a shared vision to build momentum for more significant progress.

Utilities are urged to increase their resilience to the impacts of climate change to maintain and improve their service levels. The emissions reported by water and wastewater utilities in various countries vary from 3 to 7% of total greenhouse gas (GHG) emissions ([Nature 2020](#), [Environmental Research 2020](#)). Taking a holistic water cycle approach that encompasses emissions from unconnected residential areas, discharge of untreated sewage into rivers, and industrial treatment facilities would significantly amplify the contribution of GHG emissions. Therefore, **utilities are critical to the cities' successful climate adaptation and should act towards global decarbonisation.**

The 2015 Paris Agreement on Climate Change set a goal of limiting global warming to well below 2 degrees Celsius (preferably 1.5 degrees) compared to pre-industrial times. Unfortunately, the world is not on track. Experts estimate a 20% chance that global warming could reach 1.5 degrees within the next five years if current conditions persist. By the end of the century, warming may even reach 4 degrees or more. **Urgent action is required to avoid catastrophic consequences.** We are in a race against time, and the only way to win is by acting together.

However, utilities are often cautious in embracing change due to a variety of factors. For example, the complexity of their operations, a rooted institutional culture, existing long-term investments (20-50 years' time horizons), and rigid regulations or local governance processes that do not encourage the integration of new activities related to adaptation and/or mitigation.

The IWA Climate Smart Utilities Initiative has been launched to support all utilities worldwide to work collectively on winning this race.

Climate Smart Utilities are **water, sanitation¹, and urban drainage service providers** that are improving their climate resilience by adapting to a changing climate while contributing to a significant and sustainable reduction of carbon emissions. The initiative is structured around four components:

1. **Component 1: Communities of Practice (CoP)** around adaptation and mitigation to climate change to support bridging science and practice and trigger the necessary cultural shifts and actions
2. **Component 2: A web platform** to support utilities sharing resources to support information sharing
3. **Component 3: A Utility leaders peer-to-peer exchange platform** to drive decision making towards Climate Smart
4. **Component 4: A Recognition Programme** to increase awareness and set an inspiration to progress on the Climate Smart Utility

This programme aims to inspire utilities to become increasingly Climate Smart and embrace the cultural shift required for a water-wise future.

IWA invites you, as a water and sanitation professional and/or as a utility leader, to endorse the Climate Smart Utilities Vision. By endorsing the vision, you will be part of an initiative aimed at building a community of leaders that can inspire utilities and their governance structures, regulators, and urban planners to become increasingly Climate Smart, deliver innovation, tools and knowledge exchange to support the green

¹ Sanitation utilities are defined as service providers engaged in the collection, transport, treatment and disposal or reuse of human excreta, domestic wastewater and solid waste, and associated hygiene promotion (Water Supply and Sanitation Collaborative Council, UN).



transition. **By endorsing this vision, you act as a Climate Smart player, providing inspiration and momentum** for all utilities worldwide to achieve the **cultural shift** needed **on three interconnected pillars**:

1. **Adaptation:** Improving resilience to adapt to climate change
2. **Mitigation:** Assessing and aiming to reduce GHG emissions
3. **Leadership:** Leading and inspiring others to take Climate Smart action for a water-wise future

Endorsing the Climate Smart Utilities Vision

As an aspiring IWA Climate Smart Utilities leader, I confirm that individually, OR in the name of my utility (or group of utilities), I/we endorse the vision articulated around the three pillars:

1. Adaptation: Improving resilience to adapt to climate change

Climate Smart Utilities plan to anticipate future threats from climate change impacts. Investments to increase resilience contribute to reducing GHG emissions when possible. This translates into:

- a) Planning an array of measures, including nature-based solutions when appropriate, reducing water use in relation to local scarcity trends, and diversifying water sources, in order to achieve a positive water balance under the impacts of climate change.
- b) Adapting sanitation strategies, collection systems, and treatment facilities to accommodate fluctuations in water flow induced by climate change. This includes preparing for low and high flows, as well as heightened sensitivity of aquatic ecosystems, which necessitate more stringent discharge requirements.
- c) Providing adequate drainage to manage rainwater and reduce the risk of flooding rivers
- d) Supporting an asset management and maintenance programme that delivers robust and adaptive infrastructure, incorporates redundancy and bypass systems, with active monitoring of infrastructure integrity and intelligent controls enable an agile response needed to face the impacts of climate change.

2. Mitigation: Reducing GHG emissions

The transition is facilitated by a reduction in the utility's greenhouse gas (GHG) emissions, with well-defined and strategically planned reduction targets implemented throughout the entire service chain. This translates into:

- a) Monitoring and reducing GHG emissions related to the utility's operations, including energy consumption, wastewater and biosolids management (e.g., by reducing N₂O or CH₄ emissions during the treatment process and decreasing chemical usage).
- b) Maximising resource recovery to offset GHG emissions within and outside of the utility boundary through carbon substitution.
- c) Achieving high energy efficiency in water supply and sanitation systems, also through investments in low-energy and low-carbon solutions for new assets.

3. Leadership: The utility is a local, national, and international leader

Climate Smart Utilities are leaders driving the transition through the exchange of knowledge and the development of innovative, equitable solutions for climate adaptation and the reduction of GHG emissions. This translates into a robust culture of learning and sharing on local, national, and international levels.

- a) Empowering citizens and urban planners as partners of the Climate Smart Utility, this includes enhancing the awareness and planning capabilities of all urban stakeholders.
- b) Developing a strong learning culture to ensure that knowledge and skill requirements are consistently reviewed and updated to include multi-disciplinary skills and knowledge in water-related fields.
- c) Sharing knowledge and best practices with other utilities at national and international levels. The utility is committed to facilitate knowledge exchange on technology, innovation, and research towards the Climate Smart Water agenda.
- d) Incorporating Diversity, Equity, and Inclusion (DEI) principles.

To endorse the Vision, please complete the online form using this link: <https://forms.gle/e9xydFAkUwgRHBXt7> or fill in the offline form below and email it to climate@iwahq.org



Contact information (full name, role in organisation, name of organisation, country and email)

I endorse the vision as an individual (Y/N):

Endorsing the vision on behalf of my company/conglomerate (name of the company):

Additional statement: Why is it important for you to endorse the IWA Climate Smart Utilities Vision? Please provide 1-2 sentences maximum below.

Date:

Sign:

As an endorsing utility or practitioner, you will be part of the IWA Climate Smart Utilities community, where you will be able to exchange best practices and share your challenges with your peers. IWA will leverage the experiences shared to inspire action among the wider water professional community.