BEIJING DECLARATION

北京宣言

in support of the

UNESCO International Decade of Sciences for Sustainable Development (2024–2033)

Adopted on 17 April 2026

at the Symposium on Innovative Technologies and International Cooperation in Water and Sanitation

University of Science and Technology Beijing (北京科技大学)

2024 • 2033
International Decade of
Sciences for Sustainable
Development

环境可持续排水技术研究中心
Centre for Sustainable Environmental Sanitation

Symposium opening ceremony — USTB Beijing, 17 April 2026

International delegates at the symposium

Audience

Introduction

We stand at a pivotal moment of this landmark event, where the vision of UNESCO's International Decade of Sciences for Sustainable Development (IDSSD) meets the collective wisdom of many experts committed to water and sanitation progress. After days of in-depth exchanges, rigorous discussions, and heartfelt consultations, we are now ready to present a document that embodies our shared aspirations, collective commitments, and actionable roadmap: the Beijing Declaration.

Before we formally announce this declaration, let us reflect on how it came to be. Over the course of this symposium, we have confronted stark realities: despite remarkable global progress, 3.4 billion people worldwide still lack access to safely managed sanitation services, and 354 million continue to practise open defaecation. Yet, amid these challenges, we have also witnessed hope: cutting-edge technological innovations from researchers, inclusive governance models from policymakers, and tireless efforts from practitioners across sectors. This declaration is forged from these dual realities, acknowledging the urgency of our mission while embracing the power of our collective action.

The Beijing Declaration is not a product of solitary vision, but a testament to inclusive collaboration. It draws on insights from experts spanning continents, and guidance from UNESCO's noble mission to harness science for humanity's common good. It reflects the consensus we built: that water and sanitation are not mere technical issues, but fundamental human rights and cornerstones of sustainable development. That no single nation, institution, or sector can address global water challenges alone, only through unwavering international cooperation, open knowledge sharing, harmonising with ecological balance, and innovative force, as science must serve people and the planet, prioritising vulnerable communities.

Key Facts

3.4 billion people lack safely managed sanitation (2024)

771 million people lack safely managed drinking water services (2024)

58% of domestic wastewater treated globally (2022)

What makes this declaration meaningful is its commitment to action. Beyond reaffirming our alignment with SDG 6 and the IDSSD, it outlines concrete steps to make progress: strengthening cross-border collaboration on water technology innovation, scaling up capacity-building for developing regions, promoting inclusive governance that centres social justice, and leveraging digital technologies to bridge the knowledge divide. Each of us here has a role to play in ensuring these commitments translate from paper into practice.

Now, with profound respect for the collaborative spirit that has defined this event, and with unwavering optimism for the future we can build together, it is our great honour to introduce, and invite all participants to acknowledge the Beijing Declaration. May it stand as a beacon of international cooperation, a testament to scientific progress, and a catalyst for transformative change in sanitation and water for all.

Preamble

We, scholars, researchers and implementation experts convened at the Symposium on Innovative Technologies and Cooperation for Water and Sanitation, held in Beijing from 15 to 17 April 2026 and representing universities, research institutes, scientific networks, and implementation partners from 21 countries across Africa, Asia, Europe, Oceania, and South America, issue this Declaration in our academic and professional capacity to advance the scientific foundations of global sanitation and its inseparable link with water.

Situating this Declaration within the UNESCO International Decade of Sciences for Sustainable Development (2024–2033), launched in June 2025 as the principal multilateral framework mobilising science, technology, and innovation for the 2030 Agenda and beyond;

Recognising that safely managed sanitation remains the most severely underachieved dimension of Sustainable Development Goal 6, with 3.4 billion people still lacking safely managed sanitation in 2024 and progress requiring a sixfold acceleration to reach universal coverage; that this deficit also constrains the achievement of safely managed water services, for which 771 million people lacked access in 2024; and that globally only 58 per cent of domestic wastewater was treated in 2022, with the lowest levels observed in low- and middle-income countries;

Reaffirming that access to safe sanitation and clean water has been recognised by the United Nations General Assembly as a human right, and must be progressively realised for all people without discrimination;

Recognising the strong nexus between water and sanitation, and that treated wastewater is an increasingly valuable resource, giving water “a second chance” through reuse in agriculture, industry, environmental flows, and, where appropriately safeguarded, indirect and direct potable reuse, which has become an essential pillar of global water security;

Acknowledging that addressing these deficits demands not only the deployment of known solutions but also the rigorous expansion of the scientific evidence base, including standardised methodologies, transdisciplinary and comparative research, and context-sensitive innovation in sanitation systems and services;

Recognising further that, in many developing contexts, it is local attitudes, practices, and demands that determine which technologies take root, not the technologies that change attitudes or demands, and that many technically sound solutions fail to spread for want of social adaptation and acceptance; research must therefore focus not only on technical and scientific questions but also on the methods by which the demands of people and communities are understood and answered, requiring systematic cooperation between engineers, natural scientists, and social scientists (including sociologists, anthropologists, and specialists in public health and governance) in the design, implementation, and evaluation of sanitation and water projects;

Emphasising the importance of public-private-people partnerships, engaging governments, private-sector actors, academic institutions, and the communities concerned as equal partners, as an essential model for translating research into durable, demand-responsive sanitation and water services;

Affirming that universities and research institutions bear a distinctive responsibility, complementary to, but independent of, governmental and intergovernmental actors, to generate, validate, and disseminate the knowledge required for evidence-based policy and practice;

we hereby articulate the following commitments to advance the role of science in sanitation and water development:

Declaration: The Nine Commitments

1. Anchoring Our Work in the UNESCO Science Decade

We align our research agendas with the UNESCO International Decade of Sciences for Sustainable Development and commit to contributing peer-reviewed and policy-practice-relevant outputs, open data, and methodological innovations to its shared scientific infrastructure, positioning sanitation and its water nexus as a priority thematic axis of the Decade.

2. Strengthening Research Capacities

We commit to expanding institutional research capacity in sanitation and water globally, and particularly in low- and middle-income settings, through joint master's and doctoral programmes, postdoctoral exchanges, shared laboratory infrastructure, scientifically accompanied implementation, and long-term collaborative grants. Priority is given to building enduring research communities rather than short-term consultancy engagements.

3. Developing Common Methodologies

We will work towards harmonised methodologies for the assessment of sanitation and water interventions, including standardised indicators for areas such as pathogen inactivation, resource recovery, water reuse and quality assurance, greenhouse-gas accounting across the sanitation service chain, and advances in research approaches for the social, cultural, and behavioural determinants of sanitation practice, as well as institutional, regulatory, and service-delivery arrangements, and life-cycle and economic evaluation of non-sewered and sewered systems.

Recognising that successful implementation depends at least as much on sociological and institutional conditions as on engineering performance, we place particular emphasis on the integration of social-science methods alongside technical ones, and on the active cooperation of technical scientists with sociologists and other social scientists throughout the design, evaluation, and scaling of solutions. Open methodological protocols will be published and maintained as a shared scientific good.

4. Strengthening Sanitation Systems

We endorse the Citywide Inclusive Sanitation approach, recognise the role of governments as mandate holders for sanitation, and affirm the importance of scientific research that considers the entire sanitation value chain in urban and rural areas and addresses the institutional and governance dimensions critical for ongoing service delivery and the effective application of new innovations.

5. Advancing Innovation in Sanitation and Water Technologies

We prioritise research on a diverse range of sanitation solutions, on faecal-sludge management, and on water-cycle management and its intersections with domestic water supply; on resource-recovery and circular-economy approaches, including the reuse of treated wastewater for agricultural, industrial, environmental and, where appropriately safeguarded, indirect and direct potable purposes; on low-carbon treatment; on the removal of emerging and critical contaminants; and on effective monitoring. Innovation is pursued in co-design with end users, so that technical solutions correspond to the actual demands, practices, and capacities of the communities they are meant to serve.

6. Bridging Research, Policy and Practice

We will establish and sustain living laboratories across social, technical, and institutional research, including field demonstrations, implementation science, transdisciplinary projects, and longitudinal studies that translate laboratory findings and proven field experience into validated, scalable

interventions and inform effective policies. We commit to transparent reporting of negative as well as positive results in order to reduce publication bias in sanitation research.

We further affirm that the durable translation of research into lasting services requires public-private-people partnerships, in which governments, private-sector actors, academic and research institutions, and end-user communities engage as equal partners; our research will accordingly address the design, governance, financing, and evaluation of such partnerships, and the conditions under which they deliver equitable and sustained outcomes.

7. Inclusivity, Gender, and Research Ethics

Our research designs prioritise inclusion and integrate the perspectives of unserved and marginalised groups, including women, children, persons with disabilities, Indigenous peoples, homeless people, and residents of informal settlements. All work is conducted in accordance with established standards of research ethics, data sovereignty, and equitable authorship.

8. Open Science and Knowledge Exchange

We commit to open-access publication, open data, and open-source tools where feasible, and to South–South, North–South, and triangular cooperation as the default mode of collaboration under the UNESCO Decade. We further commit to effective communication and publication strategies that convert evidence into practice and policy recommendations.

9. Follow-Up and Scientific Accountability

We establish an academic and field-research network of signatory institutions to coordinate joint research, publish biennial progress reports on advances in sanitation and water research, and provide evidence-based scientific input to UNESCO and relevant United Nations bodies throughout the remainder of the Decade.

Final gathering

Closing

This Declaration expresses the commitment of the scientific community and implementation partners to place sanitation, and its inseparable nexus with water — at the centre of the UNESCO International Decade of Sciences for Sustainable Development, through strengthened research capacities, shared methodologies, rigorous innovation, and supported implementation. We invite academic institutions and implementing organisations worldwide working in these areas to endorse this Declaration and to join us in generating the evidence on which sustainable sanitation and water for all will depend.

Adopted in Beijing on 17 April 2026

by the participants of the Symposium on Innovative Technologies and Cooperation for Water and Sanitation

Opening speeches

Signatories

The following 40 scholars, researchers and implementation experts signed the Beijing Declaration at the Symposium on Innovative Technologies and Cooperation for Water and Sanitation (15–17 April 2026, USTB Beijing):

#	Name	Country	Institution
1	**Juliet Willetts**	Australia	Institute for Sustainable Futures, University of Technology Sydney
2	**Dibalok Singha**	Bangladesh	Dushtha Shasthya Kendra (DSK) – NGO
3	**MD Ekramul Haque**	Bangladesh	Dushtha Shasthya Kendra (DSK) – NGO
4	**Tanvir Ahmed**	Bangladesh	Department of Civil Engineering, Bangladesh University of Engineering and Technology (BUET) & Regional Director, Global Sanitation Graduate School – South and South-East Asia
5	**Marc Wauthelet**	Belgium	Epuval – NGO
6	**Marcelo Antunes Nolasco**	Brazil	University of São Paulo (USP)
7	**Paula Loureiro Paulo**	Brazil	Resource Oriented Sanitation Research Group, Federal University of Mato Grosso do Sul
8	**Soumaïla Sodré (online)**	Burkina Faso	Office National de l'Eau et de l'Assainissement (ONEA) (National Water and Sanitation Corporation)
9	**Yu Jingcheng**	Canada	CanFit Resource Recovery Technologies Inc.
10	**Baogang Zhang**	China	China University of Geosciences (Beijing)
11	**Hongzhi Ma**	China	School of Energy and Environmental Engineering , University of Science and Technology Beijing (USTB)
12	**Jiantong Pan**	China	Bohuiter (BHT) Co.
13	**Meijuan Zhao**	China	University of Science and Technology Beijing (USTB)
14	**Min Yang**	China	ANSO Alliance for Environmental S&T and Industry & Research Center for Eco-Environmental Sciences, CAS
15	**Shikun Cheng**	China	CSES, University of Science and Technology Beijing (USTB)
16	**Xuemei Wang**	China	University of Science and Technology Beijing (USTB)
17	**Yirong Zhou**	China	Lihe Technology (Hunan) Co., Ltd
18	**Yumeng Zhao**	China	Harbin Institute of Technology
19	**Zhen Yang**	China	Nanjing Normal University
20	**Zhengxian Chen**	China	University of Science and Technology Beijing (USTB)
21	**Zhidan Liu**	China	China Agricultural University (CAU), Beijing
22	**Zifu Li**	China	School of Energy and Environmental Engineering, University of Science and Technology Beijing & National Base for International S&T Cooperation
23	**Khalid Zaki Elwakeel**	Egypt	Department of Environmental Sciences, Port Said University & Department of Chemistry, Jeddah University, Saudi Arabia
24	**Heinz-Peter Mang**	Germany	German Toilet Organization (GTO) & UPM Umwelt-Projekt-Managment GmbH & Association for sustainable Biogas and Bioenergy Utilisation (GERBIO – FnBB)
25	**Jian Zhang**	Germany	EnviroSystem GmbH & Wanruo Environment Co. (China)
26	**Rivaldo Lé**	Guinea-Bissau	CSES, University of Science and Technology Beijing (USTB)

#	Name	Country	Institution
27	**Devendra Saroj**	India	Indian Institute of Technology –(IIT) Delhi & Centre for Environmental Health and Engineering (CEHE), University of Surrey (UK) & De La Salle University (Philippines)
28	Cindy Priadi	Indonesia	Universitas Indonesia
29	**Mohamedin Hussein Isaack**	Kenya	CSES, University of Science and Technology Beijing (USTB)
30	**Mantopi MdP Lebofa**	Lesotho	Technologies for Economic Development (TED) – NGO
31	**Davaa Basandorj**	Mongolia	Mongolian Toilet Organisation & Mongolian Water Partnership & Mongolian University of Science and Technology
32	**Laila Mandi**	Morocco	Tensift Centre for Regional Development (CDRT), Cadi Ayyad University & African Academy of Sciences & France Water Academy
33	**Peter Mafimisebi**	Nigeria	CSES, University of Science and Technology Beijing (USTB)
34	**Yusuf Usman**	Nigeria	CSES, University of Science and Technology Beijing (USTB)
35	**Jack Sim (online)**	Singapore	World Toilet Organization (WTO)
36	**Sayed M. Nazim Uddin**	Spain	IMDEA Water Institute, University of Alcalá, Madrid & Asian University for Women (Bangladesh)
37	**Barbara Evans**	United Kingdom	School of Public Health Engineering, School of Civil Engineering, University of Leeds; Editor-in-Chief & Journal of Water, Sanitation and Hygiene for Development
38	**Zhe Zhan**	United Kingdom	School of Civil Engineering, University of Leeds
39	**Le Thi Kim Oanh**	Vietnam	Faculty of Environment, Van Lang University
40	**Loi Huynh Tan**	Vietnam	Faculty of Environment, Van Lang University

Participants from the following Countries

Australia · Bangladesh · Belgium · Brazil · Burkina Faso · Canada · China (Host) · Egypt · Germany · Guinea-Bissau · India · Indonesia · Kenya · Lesotho · Mongolia · Morocco · Nigeria · Singapore · Spain · United Kingdom · Vietnam

The Declaration remains open for endorsement by academic institutions and implementing organisations worldwide working in sanitation and water.

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