



NTWAM WATER & ENVIRONMENT INITIATIVE

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NTWAM's Active Participation at the 4th IWA International Conference on Rainwater Harvesting and Management (RWHM) 2026, Phnom Penh & Siem Reap, Cambodia (1st – 6th September 2026)

From **1st to 6th September 2026**, the **NTWAM Water & Environment Initiative**, represented by its Treasurer and Co-Founder **Dr. Tulinave Burton Mwamila** (Water Institute, Ministry of Water, Tanzania), participated actively in the **4th IWA International Conference on Rainwater Harvesting and Management (RWHM 2026)** – a global forum convened by the **International Water Association (IWA) Specialist Group on Rainwater Harvesting and Management** in partnership with the Royal Academy of Cambodia (RAC), Seoul National University, Rain For All (RFA), the International Rainwater Harvesting Alliance (IRHA), the Mekong Institute, WaterAid and the Association of Academies and Societies of Sciences in Asia (AASSA). Held under the theme **“Rainwater for Tomorrow: Water, Climate and Culture”**, the conference brought together ministers, national academies, universities, research institutions, NGOs, schools and development partners from Asia, Africa, Europe and the Americas to position rainwater as a core component of climate-resilient water management.



Figure 1: RWHM 2026 partner institutions – IWA RWHM Specialist Group, Royal Academy of Cambodia, Rain For All, IRHA, Mekong Institute, RIWEM, ICED, WaterAid, KSEE and NTWAM Water & Environment Initiative (left column, third row).

Dr. Mwamila carried a substantive technical and governance role across the conference programme. She served as **Co-Chair of Parallel Session B1 on “Rainwater for Drinking, Water Quality and Public Health”** (Day 2, 2nd September 2026), guiding an international panel of contributions from Korea, the United Kingdom, Cambodia, Vietnam, Bangladesh, India and Nigeria. On Day 3 (3rd September 2026) she was an invited panelist in the **Phnom Penh Rain Dialogue** – the conference's high-level dialogue chaired by H.E. Ambassador Kim Seong-In and concluded by H.E. Dr. Kim Hak-su, former Executive Secretary of UN-ESCAP – where she presented the African and Tanzanian perspective alongside speakers from Cambodia, Korea, the United States, Thailand and Myanmar. The dialogue fed directly into the **Phnom Penh Declaration on Rainwater** and the establishment of **Khmer Rain Day**, announced by the President of the Royal Academy of Cambodia.



Figure 2: Phnom Penh Rain Dialogue on 3rd September, 2026.

Beyond her chairing and panel duties, Dr. Mwamila co-authored two papers from ongoing research works presented (oral & Poster) at the conference, both grounded in Tanzanian evidence:

- (i) **“Assessment of Water Quality and Contamination Pathways in Household Rainwater Harvesting Systems: Case Study of Kagera, Tanzania”** (Phaustine Jackob, Josephine Gobry and Tulinave Mwamila) – a 30-household field assessment which found that while most physico-chemical and heavy-metal parameters met potable standards, stored rainwater was slightly acidic and microbiologically contaminated, driven by poor maintenance, absence of first-flush diversion and corroded roofing.
- (ii) **“Rooftop Rainwater Harvesting in Tanzania: Policy Recognition, Legal Frameworks and Institutional Gaps”** (Margaret Kironde, Paschal Massay and Tulinave Mwamila) – which demonstrates that despite formal policy recognition, weak regulation, fragmented institutional mandates, limited financing and poor coordination continue to suppress adoption.

- (iii) **“Mitigating Flash Flooding in the City: Drain or harvest?”** (Tebogo V. Siphambe, Abdurrahman Aliyu, Kawter Souadji, Samuel Ahana Bayongwa, Tiwangye Amans, Hermann Fomena-Tchinda, Pinisikin Yasmina Banaon, Ciniso Sizwe Gina, Hidayat Ame Vuai, Abdikadir Mohamud Farah, Adji Billo Niang, Abdelhak Taicha, Seifeldin Ahmed, Ahmed Bashir, Chérifa Abdelbaki, Tulinave Burton Mwamila and Chicgoua Noubactep) – demonstrates that rainwater harvesting offers a radical innovation for sustainable cities by transforming households into water production units that reduce flooding, recharge groundwater, and drive social and environmental resilience through entrepreneurial and social innovation.
- (iv) **“Maintenance Manual for Rainwater Harvesting System”** (Tulinave B. Mwamila) – a guide to operating and maintaining rainwater harvesting system at household level, featuring a case study at Malimbika Secondary School of Gairo district in Morogoro Region, where a demonstration project was conducted by a committee of women in the water sector, Ministry of Water, Tanzania.

NTWAM's institutional profile was further elevated through the **IWA RWHM Specialist Group compendium contribution, “Rainwater for Resilience: From Earth's Anger to Sky's Mercy”**, in which Tanzania features as one of five global case studies. The chapter credits the Water Institute of Tanzania and its partner NTWAM Water & Environment Initiative with pioneering community rainwater systems under the national slogan **VUMME – “Vuna Mvua kwa Maendeleo Endelevu” (Harvest Rainwater for Sustainable Development)**, integrating technical training with gender inclusion and local enterprise development. Tanzania is also recognised, alongside Cambodia and Korea, within the global **Rain School Initiative** and cited for the traditional Kilimanjaro irrigation furrows as living evidence of indigenous rainwater wisdom.



Figure 3: RWHM 2026 panelist of various panel sessions

The conference resolved to:

- (i) **adopt the Phnom Penh Declaration on Rainwater** and institutionalise Khmer Rain Day, advancing the proposal for a United Nations World Rain Day on 3rd September;
- (ii) **mainstream rainwater harvesting into national policy, legal and financing frameworks** by closing regulatory, institutional and enforcement gaps identified across countries;
- (iii) **scale the Rain School and Community-Based Rainwater for Drinking (CBRD) models** through school curricula, youth science clubs and women-led networks (W-RaINet, Young Rainwater Champions);
- (iv) **strengthen South–South and regional cooperation** by linking SARNET in South Asia with African and Latin American networks under the MoMoMo principle of managing “all water, by all, for all”; and
- (v) **advance Rain Justice** – equitable access to rainwater for low-income and climate-vulnerable communities – supported by citizen science, low-cost sensors and open data platforms.

NTWAM's contribution demonstrated that Tanzania holds both the scientific evidence and the institutional partnerships needed to convert rainwater harvesting from a household coping strategy into a national instrument of water security and climate resilience. By co-chairing a technical session, shaping a global declaration, and presenting peer-reviewed Tanzanian evidence on water quality and governance, Dr. Mwamila positioned NTWAM as a credible African voice within the

IWA rainwater community. The engagement directly supports Tanzania's Water Sector Development Programme, the National Water Policy, Tanzania Development Vision 2050 (**Dira 2050**) and **FYDP IV**, as well as SDG 6, SDG 13 and the African Union's Agenda 2063 water investment priorities.

Going forward, NTWAM will pursue four follow-up actions: consolidating the Kagera and rooftop governance findings into a national policy brief on rainwater harvesting regulation and financing; advocating for mandatory first-flush diversion, safe storage and roofing standards in Tanzanian building and water regulations; establishing Rain Schools in Tanzania in partnership with the IWA RWHM Specialist Group, RFA and IRHA; and hosting a national rainwater harvesting dialogue to domesticate the Phnom Penh Declaration and mobilise the VUMME agenda. Through its agility, technical expertise and established government–academia partnerships, NTWAM stands ready to support national, regional and global coordination on rainwater harvesting and management.



Figure 4: Poster display in Conference exhibition and registration area at the RWHM 2026 venue, Phnom Penh, Cambodia.