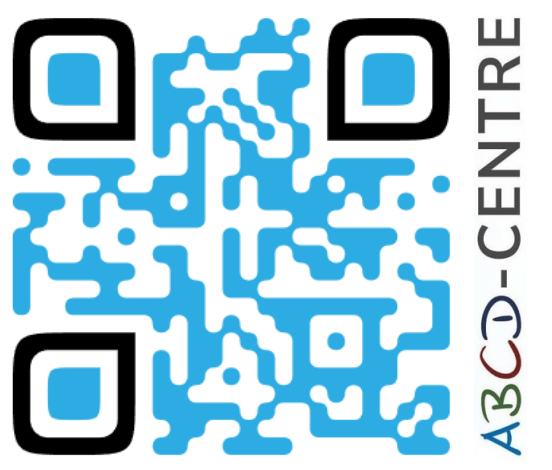




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Leveraging Postgraduate Education for Sustainable Development and Progressing the Water Action Agenda



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The Challenge

- **Pressing Water Issues:** Communities worldwide face urgent water challenges – **from scarcity and pollution to climate-induced floods and droughts** [1] – which threaten livelihoods and sustainable development (Fig. 1).
- **Knowledge-Action Gap:** There remains a persistent gap between scientific knowledge and policy action in the water sector. **Innovations and research often do not fully translate into practice**, slowing progress toward global goals. Stronger dialogue and collaboration are needed so that academic insights inform policy, and policymakers can provide feedback on practical implementation [2].
- **Capacity & Equity:** Many regions, especially in the Global South, lack sufficient capacity and expertise to address complex water issues. Disparities in educational resources mean **talented individuals often cannot access quality training**, hampering local water management efforts. Building inclusive, interdisciplinary education programs is vital to empower the next generation of water leaders everywhere.

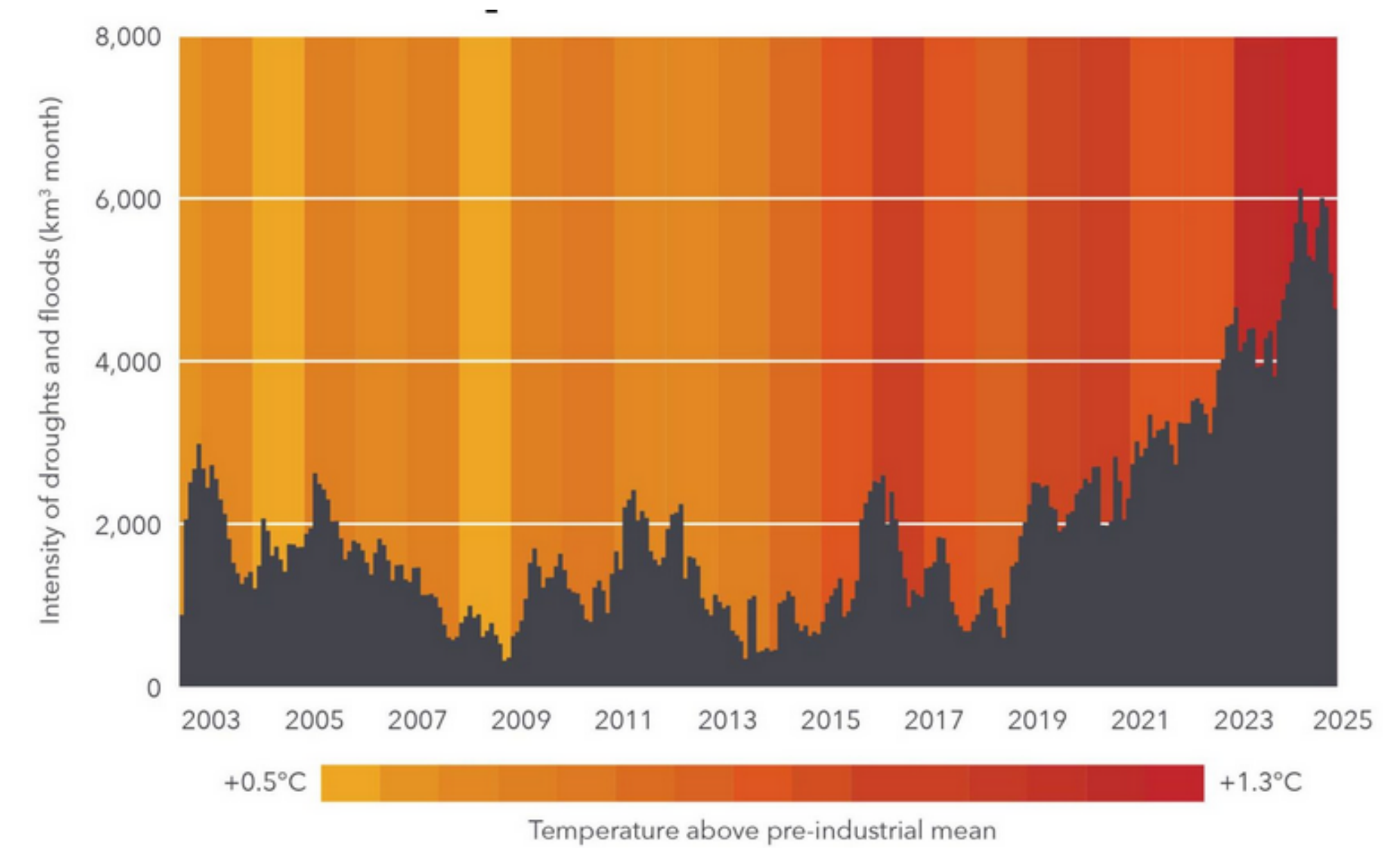


Fig. 1. Rising drought and flood Intensity with global warming (2003–2025) - a clear upward trend in both climate extremes and temperature is visible, particularly after 2015, highlighting the link between global warming and intensified hydrological impacts (source: *Rethinking Resilience. Global Water Intelligence. 2025*)

Our Collaborative Approach

To respond to these challenges, in May 2021 a consortium of universities and international partners established the **Global Water and Climate Adaptation Centre – ABCD-Centre**, linking:



This multilateral initiative fosters **North-South and South-South collaboration**, creating a **global research, transfer and learning network** focused on sustainable water management and climate resilience. The ABCD Centre promotes **interdisciplinary, cross-sectoral, and digital education**. It connects engineering, environmental science, and governance, combining classroom learning, field experience, and research practice. Students and researchers co-develop solutions with communities, policymakers, and industry, ensuring that academic work leads to tangible results. Education becomes the bridge between knowledge, innovation, and policy implementation to → **address pressing water issues**.

Innovative Education Programs

International Joint M.Sc. “Water Security & Global Change”

At the **core of the ABCD-Centre** since 2024 this pioneering two-year Master’s program brings together students from around the world to study in India and Germany. The **curriculum integrates water engineering, resource governance, and climate adaptation**, combining lectures with hands-on research projects and internships. Co-supervised theses, fieldwork, and digital learning tools connect theory and practice. Graduates emerge ready to lead across academia, policy, and industry — as translators between science, decision-making and implementation to → **close the knowledge-action-gap**.

associated with the ABCD-Centre:

Centre for International Postgraduate Studies of Environmental Management (CIPSEM)

Since 1977, with the support of UNEP and UNESCO, CIPSEM has offered postgraduate courses for early- and mid-career professionals from developing and emerging economies. Over **3,000 alumni from 146 countries** have strengthened their capacity to **implement environmental and water-related policies** through this unique program. Its holistic, interdisciplinary approach, combining lectures, field visits, and peer learning, empowers participants to act as focal points and multipliers for sustainability in their home countries to → **enhance capacity and equity**.



UNU Hub – Climate Resilience and Sustainable Technologies (CREST)

Inaugurated in 2025, CREST serves as a hub for research, innovation and postgraduate training on climate-resilient management, including **water as a core resource**. It provides research and dialogue platforms linking scientists, engineers, and policymakers. Through applied interdisciplinary projects and policy labs, CREST promotes **integrated climate solutions**, ensuring that new technologies and strategies inform policy at multiple governance levels.



Impact & Recommendations

These collaborative education initiatives are cultivating a new generation of water leaders who integrate scientific insight with policy engagement and social responsibility. Graduates get involved with ministries, river basin authorities, NGOs, and international organizations, helping to implement climate-adaptive water policies. Together, these efforts **directly advance the Sustainable Development Goals and contribute to the UN Water Action Agenda** [3].

Scaling up postgraduate education at the science-policy interface is one of the most effective investments for a water-secure and sustainable future.

References

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Acknowledgements

ABCD-Centre is funded by



CIPSEM is funded by



UNU-FLORES is funded by

