



Water Security and Climate Change Conference

ADAPTATION FOR SUSTAINABLE AND RESILIENT DEVELOPMENT

CONCEPT NOTE

01-03 DECEMBER 2022

DATES	01-03 December 2022
VENUE	Hybrid (with In-person sessions at Novotel Bangkok Future Park Rangsit, Thailand)
ORGANISERS	CNRD (TH Köln), SWINDON (TU Braunschweig), FSC (Univ. Hohenheim), SDG ^{nexus} Network (Univ. Gießen), ABCD Centre (TU Dresden), & the Asian Institute of Technology (AIT).

BACKGROUND

The Water Security and Climate Change (WSCC) series of conferences have been held on an annual basis since 2016. The first edition of the conference was organized in Bangkok (2016), and subsequently in Cologne (2017), Nairobi (2018), San Luis Potosí (2019), and Hanoi (2021). The overarching objective of these conferences is to proliferate the exchange of knowledge and practical know-how on the intrinsic relationship between water security and climate change, with a view to advance fundamental and action research in this domain that will help humankind address one of the greatest challenges of our times.

The WSCC conferences have become a notable academic platform for scientific, technical and policy-oriented discourses and discussions, evidenced by the increased number of participants each year. Furthermore, the conference has also contributed to the strengthening of the EXCEED^[1] by connecting member networks as well as raising awareness on the topic of water security and climate change. The conference additionally broadens its organizing committee in 2022 by including the DAAD-funded organizations SDG ^{nexus} Network and ABCD-Center.

This year, the WSCC will be held from 01-03 December 2022 in Bangkok. The conference will be organized in a hybrid format, with a selected number of participants invited to Bangkok to present their work in person, while some sessions organized online for a wider audience.

Additional information about the conference will follow soon on the website: <https://watersecurity.info/>

KEY FOCUS AREA OF THE CONFERENCE

The key focus area of WSCC2022 is “adaptation for sustainable and resilient development”. This area is particularly significant in view of the caveat issued by the recently launched Sixth Assessment Report of the Intergovernmental Panel on Climate Change, “Available evidence on projected climate risks indicates that opportunities for adaptation to many climate risks will likely become constrained and have reduced effectiveness should 1.5°C global warming be exceeded and that, for many locations on Earth, capacity for adaptation is already significantly limited.”

It is now well established that adaptation is more of a ‘necessity’ than a ‘choice’ for climate-resilient development, which requires synergizing diverse forms of knowledge—scientific, indigenous, and traditional—in understanding and evaluating climate adaptation processes and actions to reduce vulnerabilities and risks from human-induced climate change.

[1] <https://www.daad.de/en/information-services-for-higher-education-institutions/further-information-on-daad-programmes/exceed/>



Funded by



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Federal Ministry
for Economic Cooperation
and Development

The proceedings of the conference seek to strengthen and harmonize these synergies as a means to inform holistic and integrated solutions to combat the impacts of climate change. In doing so, it envisages to cover the gamut of discourse spanning science, policy, and practice.

There are three core themes for WSCC2022 as follows



**TRANSITIONING FROM
SECTORAL TO NEXUS THINKING**



**ROBUSTIFYING CLIMATE CHANGE
ADAPTATION STRATEGIES**



**TRANSLATING KNOWLEDGE
INTO ACTION**

Transitioning from sectoral to nexus thinking

Sustainable and climate resilient development, and nexus thinking, have a common fundamental trait. Both rely on a systems approach that requires looking at the ‘big picture’ in order to arrive at holistic and impactful solutions. Likewise, both require breaking down ‘silos’ and opening out channels for inter-sectoral communication and coordination. This is vital for ensuring a systematic, collective, and meaningful response to the burgeoning challenges. Therefore, there is good merit in adopting a nexus approach to manage the water sector (along with energy, food, and ecosystems) as an overall climate change coping mechanism.

While the knowledge on the nexus thinking has increased by leaps and bounds in the last few years, the challenge has been in its implementation. This is because nexus issues are cross-cutting and broad, very often constrained by lack of practical know-how capacity. Science-based solutions, such as the nexus thinking, require close dialogue and collaboration with politics and society (science-policy dialogue) so that the necessary transformational processes and changes can reach society and the economy in a lasting and sustainable way.

This theme will focus on five broad subject areas: (a) Promoting and adopting nexus thinking, (b) Gathering the best information to understand nexus challenges, (c) Fostering collaboration among government, regulators, industry and communities, (d) Assessing risks and building climate resilience, and (e) Innovation in the nexus thinking.

Robustifying climate change adaptation strategies

It is becoming increasingly evident that the existing efforts to combat climate change are not sufficient to prevent the manifestation of climate change impacts now and in next decades. The 26th Conference of the Parties (COP26) in Glasgow made it abundantly clear that adaptation needs to ‘increase ambition’. The climate change predicted for the future will undoubtedly lead to dramatic changes in the world's ecosystems. What is new in this context is the shift towards a more “agile” management perspective. To address climate change while increasing the resilience of ecosystems and valuable resources, active adaptation strategies will need to operate at multiple spatial and temporal scales. These strategies should be designed to help move a system from one state to another more resilient and stable state (moving away from the tipping point).

The last five years or so have seen a significant increase in the volume and sophistication of literature on this topic. The scientific understanding of the adaptation processes has improved vastly. However, because adaptation is site-specific, there is a need to focus on locations where evidence is weaker, assessing and synthesizing knowledge in this regard to inform credible decision making. It is expected that the discussions under this theme will help address this need.

This theme will focus on four broad subject areas: (a) Mapping vulnerability and risk and developing sustainable transitions (b) Nature-based solutions for climate change adaptation, (c) Financing climate change adaptation, and (d) Inclusive and participatory approaches for adaptation.

Translating knowledge into action

Ensuring global water security requires incorporating water sector development priorities into national strategies to adapt to climate change. To achieve this, both, water and climate change scientific community and policy makers need to work closely with civil society to understand the real climate change impacts on water resources and be able to work on holistic solutions. Through the last decades, efforts to generate evidence-based knowledge to achieve a sustainable water resource management have increased but translating this knowledge into local actions remains a challenge.

The conventional cycle of research-to-publication-to-recommendation may have worked in the past. However, the current urgency to address the impacts of climate change demands embedded approaches to research, that accompany the pursuit of massively scaled-up climate action. This calls for solution- and action-oriented research that is integrated into practice: from problem definition to solution implementation, from program design to evaluation.

This theme will focus on three broad subject areas: (a) generating evidence-based knowledge, while addressing real needs, (b) integrating all sectoral interests into policy making, and (c) capacity building of end users to complete the loop for an actionable agenda.

FORMAT OF THE CONFERENCE

The conference will be organized in a hybrid format, with a selected group of participants (chosen through an open call) invited to Bangkok, while the remaining joining online. The conference will feature four categories of sessions.



Keynote Sessions (KS): For invited thought leaders and visionaries to address the gathering. Keynote speakers will be invited to Bangkok to deliver their talk in person (unless they choose to do so online). These sessions will be streamed live through the conference media channels.

Partner Sessions (PS): For like-minded partner organizations who will be invited to share their work related to the three aforementioned themes. The partners will be given full flexibility to design their sessions, invite suitable panelists and speakers, and prepare their own dissemination material. Partner organizations may conduct these sessions online, which will be streamed live to a wider audience.



Technical Sessions (TS): For participants who will be selected through the open call for abstracts to present their work under the three themes of the conference. These sessions will be designed by the conference organizers and conducted in-person in Bangkok.

Special Sessions (SpS): For emerging state-of-the-art topics that have a strong bearing on the focus and themes of the conference. These sessions will be designed by the conference organizers as panel discussions and conducted in a hybrid mode.



PROVISIONALLY, THREE SPECIAL SESSIONS ARE PLANNED:
BIG DATA AND ARTIFICIAL INTELLIGENCE FOR CLIMATE RESILIENCE
WATER SMART CITIES
CLIMATE FINANCING FOR ADAPTATION

CONFERENCE PROGRAMME AT A GLANCE

	Time (ICT)	01 December			02 December			03 December		
Physical	09:00 – 09:30	Opening Session			TS ₄	TS ₅	TS ₆	TS ₁₀	TS ₁₁	TS ₁₂
	09:30 – 10:30	KS1								
	10:30 – 11:00	COFFEE/BIO BREAK								
	11:00 – 12:30	TS ₁	TS ₂	TS ₃	TS ₇	TS ₈	TS ₉	SpS ₁	SpS ₂	SpS ₃
	12:30 – 14:00	LUNCH								
Hybrid	14:00 – 15:00	KS2			KS3			KS4		
	15:00 – 16:30	PS ₁	PS ₂	PS ₃	PS ₇	PS ₈	PS ₉	PS ₁₃	PS ₁₄	PS ₁₅
	16:30 – 17:00	COFFEE/BIO BREAK								
	17:00 – 18:30	PS ₄	PS ₅	PS ₆	PS ₁₀	PS ₁₁	PS ₁₂	Closing Session		
	18:30 – 20:00	Gala Dinner								

TS1 to TS12 = Technical Sessions (three parallel tracks based on the three themes);

KS1 to KS4 = Keynote Sessions; PS1 to PS15 = Partner Sessions; SpS1 to SpS3 = Special Sessions