

Topic Concept Note Template

Thematic Process, 11th World Water Forum

*This template should be completed through collaborative discussions among Topic Coordination Group Members under the leadership of each Topic Coordinator, and submitted to Theme Coordinators **by January 30th, 2026**, after which it will undergo final review by the Co-Chairs of the 11th Forum Thematic Process.*

Instructions: Replace the text in red with relevant information

- **Theme Number:** Theme 2
- **Theme Title:** Water Finance
- **Topic Number:** 2C
- **Topic Title:** Funding for Water Resilience and Climate Adaptation (Prioritizing investment in WASH, climate-smart financing, and scalable nature-based adaptation solutions)
- **Topic Coordinator:** Green Climate Fund (Dr Amgad Elmahdi-Head of Middle East Region, Dr Bapon Fakhruddin, Senior Water sector Specialist)

I. Topic Overview

Rationale and Context

Climate change is intensifying hydrological extreme: floods, droughts, salinization, water quality degradation, and slow-onset processes such as groundwater depletion, placing unprecedented pressure on water security, WASH systems, and ecosystem services. These climate-driven risks directly affect human health, economic stability, agriculture, and livelihoods. Agriculture, which accounts for approximately 70% of global freshwater withdrawals, is among the most climate-vulnerable sectors, requiring urgent investment in climate-resilient irrigation, drought management, groundwater sustainability, and rural livelihood protection. Achieving SDG 6 under rapidly evolving climate conditions requires a fundamental shift in how water adaptation is financed and delivered.

The global financing gap remains acute. Estimates indicate that more than USD 150 billion per year in additional investment is required to meet universal WASH targets by 2030. Climate change further amplifies this gap by increasing the cost of resilient infrastructure, disrupting already strained public budgets, and exposing utilities to higher operational and capital expenditure needs. Billions of people continue to lack basic water and sanitation, while climate impacts accelerate service disruption and inequity.

Traditional financing flows, largely grant-based, fragmented, and public-sector driven are insufficient to address the scale and pace of climate impacts. New financing partnerships; scaled private-sector engagement; climate-proofed investment models; and bankable, risk-informed project pipelines are urgently required. These must integrate adaptation priorities under the Paris Agreement (Articles 7 and 9), including strengthened resilience, enhanced adaptive capacity, and scaled climate finance for developing countries.

As Topic Coordinator, the Green Climate Fund (GCF) brings extensive experience in structuring adaptation finance, deploying blended instruments, preparing project pipelines, and strengthening country systems. This topic will leverage GCF's role to promote climate-aligned investment pathways for water resilience, climate-resilient WASH, and nature-based solutions. It aligns with other Theme 2 subtopics—innovative finance (2A), private engagement (2B), micro- and small-scale financing (2D), and enabling conditions (2E) and contributes to cross-cutting Forum priorities: digital innovation, gender equality, community resilience, and youth empowerment.

Objectives of the Topic

The topic aims to accelerate financing for climate-resilient water systems by advancing practical, scalable solutions. It will:

- 1. **Promote innovative and blended finance approaches** including concessional loans, equity, guarantees, green/blue resilience bonds, insurance schemes, adaptive tariffs, and digital/fintech-enabled solutions to mobilize capital for resilient WASH, water reuse, IWRM, early warning systems, climate-resilient agricultural water systems (such as efficient irrigation, treated wastewater reuse for agriculture, managed aquifer recharge, and on-farm water storage), and nature-based adaptation.*
- 2. **Support policy, regulatory, and institutional frameworks** to integrate water into national climate strategies, NDCs, NAPs, and sector budgets. Emphasis will be on reforms that enhance utility governance, strengthen financial regulations, enable performance-based financing, and ensure climate-risk-informed planning.*
- 3. **Strengthen project preparation and bankability** through improved access to readiness support, feasibility assessments, investment design tools, climate rationale development, Water investment planning of national and regional levels such as NAP, NDC, LT-LEDS, and pipeline incubation, particularly for developing countries and vulnerable regions.*
- 4. **Enhance stakeholder capacity** from governments and utilities to local communities and SMEs—to access climate finance, structure resilient water investments, and apply adaptation metrics and monitoring frameworks.*

5. **Promote inclusive and gender-responsive financing models** that expand access to underserved communities, youth-led initiatives, and small-scale or community-driven adaptation projects.

II. Key Issues, Opportunities, and Scope

Key Challenges

- **Severe financing gap:** Adaptation costs and water infrastructure needs outpace domestic resources and donor flows. Many countries lack dedicated adaptation budgets for water and climate-resilient WASH.
- **Underdeveloped private-sector participation:** Water projects often present long payback horizons, low revenue certainty, high climate risks, and insufficient risk-mitigation instruments. This limits investor interest in water reuse, nature-based solutions, and community-scale resilience projects.
- **Fragmented governance and limited climate-risk data:** Water management, climate adaptation, and disaster risk reduction remain institutionally siloed. Access to standardized climate-risk assessments, hydrological projections, and integrated planning tools is limited, reducing the quality and bankability of project pipelines and resulting in failure to recognize the value of water in overall economic, livelihood, and ecosystem resilience, and lack of political prioritization for investment.
- **Low bankability and weak project preparation:** Many water adaptation concepts lack climate rationale, robust financial models, and creditworthy off-takers. Small-scale and local initiatives face high transaction costs and limited institutional capacity.
- **Utility performance constraints:** Many service providers face inadequate tariff systems, financial instability, high non-revenue water, and institutional barriers to implementing climate-resilient upgrades.

Opportunities and Strategic Importance

- **Momentum in climate finance and adaptation:** International platforms, DFIs, and climate funds increasingly prioritize water resilience, creating an opportunity to integrate water into major climate finance windows.
- **Emergence of innovative instruments:** Blended finance structures, green/blue bonds, resilience bonds, catastrophe bonds, PPP models, and micro-insurance schemes present new avenues to attract investment and diversify capital sources.
- **Digital and data-driven tools:** Fintech can facilitate adaptive tariffs, smart metering, digital credit scoring, and community-based funding. Advances in climate analytics and early warning systems enable risk-informed investment decisions.

- **Multi-benefit solutions and cross-sector linkages:** Water adaptation projects deliver ecosystem, health, agricultural, and economic co-benefits, opening access to biodiversity finance, agriculture funds, and carbon markets.
- **Strengthening subnational and municipal financing:** Pooled funds, municipal bonds, and utility-focused climate finance can expand access for cities and local governments, especially those managing climate-sensitive water infrastructure.

Proposed Priorities of the Topic / Guiding Questions

- **Closing the financing gap:**
What combination of public finance, climate funds, private investment, and concessional instruments can mobilize the volume required for climate-resilient water and WASH systems?
- **Structuring innovative mechanisms:**
Which financial instruments blended finance, Islamic finance, resilience bonds, PPPs, micro-insurance, digital financing platforms are most effective for scaling water adaptation and how can they be mainstreamed?
- **Enhancing private-sector engagement:**
How can guarantees, risk-transfer tools, credit enhancement, and climate-proofed revenue models improve project bankability and investor confidence?
- **Strengthening enabling environments:**
What policy, regulatory, governance, and utility reforms are required to unlock finance? How can countries integrate water resilience into NDCs, NAPs, and sector budgets?
- **Expanding access for local and vulnerable communities:**
Which models microfinance, community adaptation funds, credit lines through local banks, community enterprises, can ensure equitable access to finance?
- **Improving climate rationale and impact measurement:**
How can resilience metrics, monitoring systems, and standardized climate-risk assessments support water adaptation investments?
- **Supporting integrated water–agriculture–ecosystem investments:** *How can climate finance mechanisms better support integrated water–agriculture–ecosystem investments that simultaneously deliver adaptation, food security, and livelihoods outcomes?*

Proposed Sessions of the Topic

- **Innovative Finance for Water Security (Joint with 2A)**
Exploration of new and emerging financing models—including blended finance, green/blue bonds, fintech solutions, and resilience bonds—with practical applications for water adaptation.

- **Public–Private Alignment for Climate Adaptation (Joint with 2B)**
Showcases successful PPP models, corporate investments, and risk-sharing frameworks that crowd in private capital for resilient water systems.
- **Financing Nature-Based and Community Resilience (Joint with 3C and 2D)**
Focus on valuing ecosystem services, leveraging climate and biodiversity finance, and supporting community-led adaptation initiatives.
- **Climate-Resilient WASH and Water Reuse (Lead Session of 2C)**
Examination of financing models for resilient WASH upgrades, circular water systems, reuse technologies, and climate-risk-informed planning.
- **Bankability and Project Preparation for Water Adaptation (New Session)**
Technical session on developing climate rationales, pre-feasibility, financial structuring, and pipeline development with support from DFIs and climate funds.
- **Risk Analytics and Early Warning for Investment Decisions (New Session)**
Discussion on climate-risk analytics, hydrological forecasting, and integrating risk information into infrastructure planning and financing.

(Optional) Regional Showcases for MENA, SSA, and SIDS.

III. Expected Outcomes and Deliverables

By advancing this topic, we anticipate the following concrete outcomes:

Policy and Strategic Outcomes

- *Clear policy recommendations for integrating water resilience financing into national climate strategies, NAPs, NDCs, and sector budgets.*
- *Proposed reforms on tariffs, PPP frameworks, utility governance, and climate mainstreaming in water planning.*
- *High-level commitments supporting adaptation finance for water.*

Technical and Knowledge Deliverables

- *A comprehensive toolkit on financing climate-resilient WASH, water reuse, climate-resilient irrigation finance, water reuse in agriculture, and nature-based adaptation.*
- *Templates for developing climate rationales, bankability assessments, and risk-informed project design.*
- *A synthesis report on global trends, gaps, and pathways for scaling water adaptation finance.*

Partnerships and Financing Outcomes

- *Partnerships between governments, DFIs, private investors, utilities, and climate funds to develop pipelines and co-financing arrangements.*

- *Announcements of pilot financing schemes, resilience bonds, pooled funds, or community financing initiatives.*

Actions and Initiatives for Implementation

- *Launch of time-bound pilot initiatives (e.g., microfinance schemes for rural water adaptation, city-level resilience bonds, or regional adaptation accelerators).*
- *Development of at least 3–5 bankable concept notes or investment ideas as direct outputs of the topic.*
- *Establishment of a working group or task force from the Topic 2C participants to carry forward the action items. This group could work on preparing bankable project concepts, matching them with financing options identified, or coordinating a regional initiative (e.g., an “Africa Water Adaptation Finance Accelerator” or similar).*

Communication and Visibility

- *Key messages on water finance for climate adaptation distilled from this topic will be fed into the Forum’s overall messaging such as ensuring that ministers, parliamentarians, and the public hear about the importance of investing in water resilience.*
- *Public messaging emphasizing the urgency of investing in water resilience.*
- *Media coverage of innovations, investments, and commitments emerging from the topic.*
- *Targeted communication outputs such as press releases highlighting any major commitments or innovations from this topic, social media coverage of success stories*

IV. Monitoring and Post-Forum Action

- *Establishment of a Topic 2C follow-up platform or working group, convened by the Topic Coordinator, to monitor commitments, support pipeline development, and coordinate implementation.*
- *Simple monitoring indicators tracking number of partnerships formed, financing commitments, concepts developed, and policy actions initiated.*
- *Integration of Topic 2C outcomes into Forum legacy programs and alignment with global frameworks (UN-Water, SDG 6 and 13 monitoring, COP processes).*
- *Biannual knowledge exchanges and updates through an online hub or community of practice hosted by partners such as GCF, MDBs, or regional institutions.*

V. Proposed Cross-Process Dialogue Areas

- *Topic 2C will engage in joint thematic dialogues with related topics to strengthen coherence across the Forum. With Topic 2A, it will explore how innovative financing tools. For example blended finance, climate bonds, and adaptive tariffs can be applied to water resilience. A joint session with Topic 3C will focus on financing nature-based solutions, aligning ecosystem health with human resilience. Collaboration with Topic 4A*

- will address how governance reforms can unlock investment, using case studies to illustrate the link between policy and finance.*
- *Collaboration with Topics 2A, 2B, and 3C on innovative finance, PPPs, and nature-based solutions.*
 - *Engagement with Topic 4A and the governance cluster to examine reforms required for unlocking climate adaptation finance.*
 - *Coordination with the Ministerial, Parliamentary, Youth, and Citizen Processes to ensure political commitment, inclusivity, and public engagement.*
 - *Dialogue with the Science and Technology Process to strengthen climate analytics, hydrological modelling, and adaptation metrics.*
 - *Engagement with private investors, philanthropic institutions, and financial platforms to explore commercial investment opportunities in water resilience.*
 - *Regional focus on MENA, Sub-Saharan Africa, and SIDS to tailor financing models to local needs and vulnerabilities.*
 - *Strengthening coordination with food systems, land, and ecosystem dialogues to ensure integrated approaches to water, agriculture, and environmental resilience*