LOCKING *CARBON* WITH *WATER*:
RESILIENT CLIMATE MITIGATION

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AGWA: Alliance for Global Water Adaptation
ClimateReady podcast
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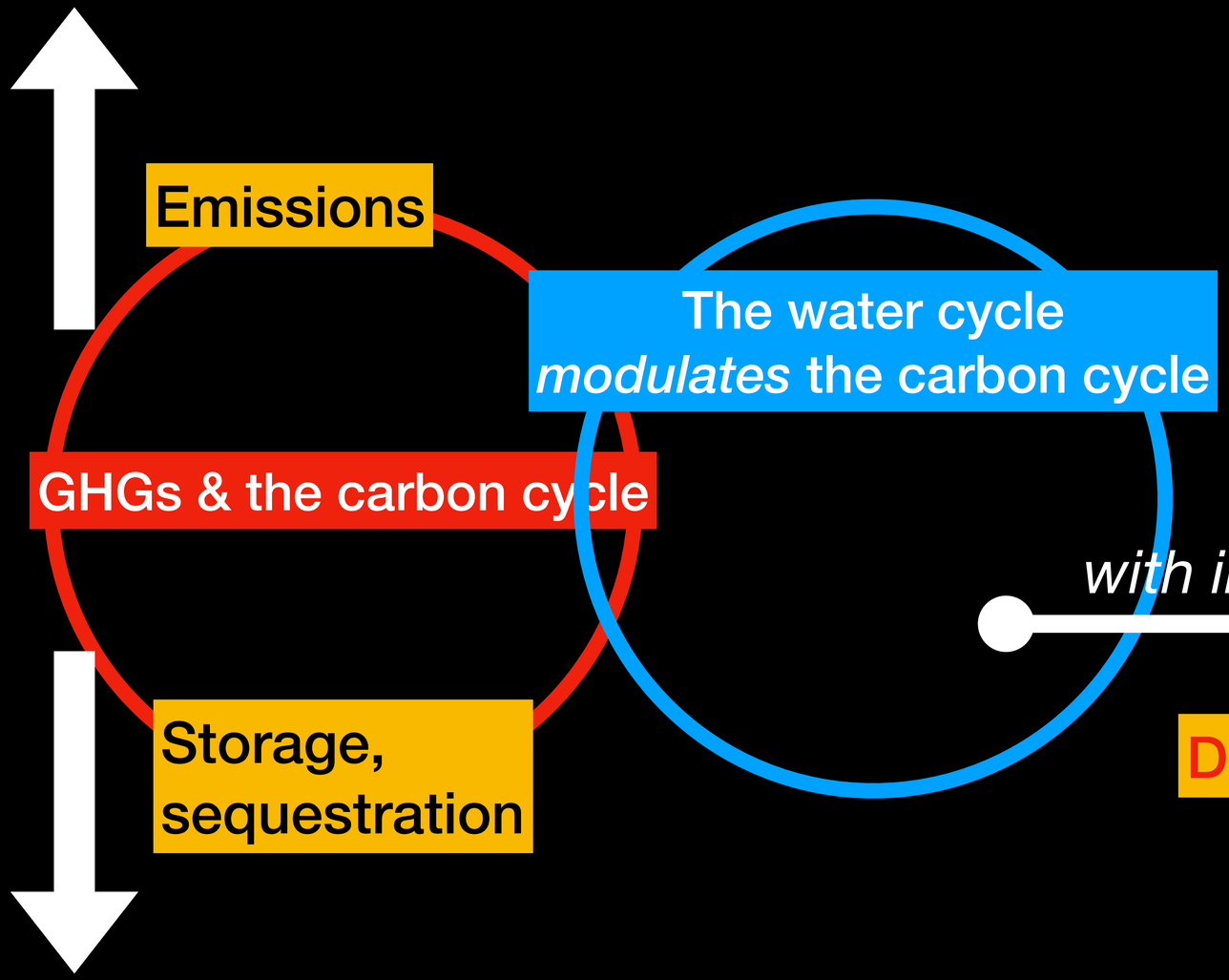
#ClimateIsWater

Carbon is easy (compared to water)



The water cycle *modulates* the carbon cycle

Efficiency Competition Design

Precipitation Climate variability

with impacts from climate change

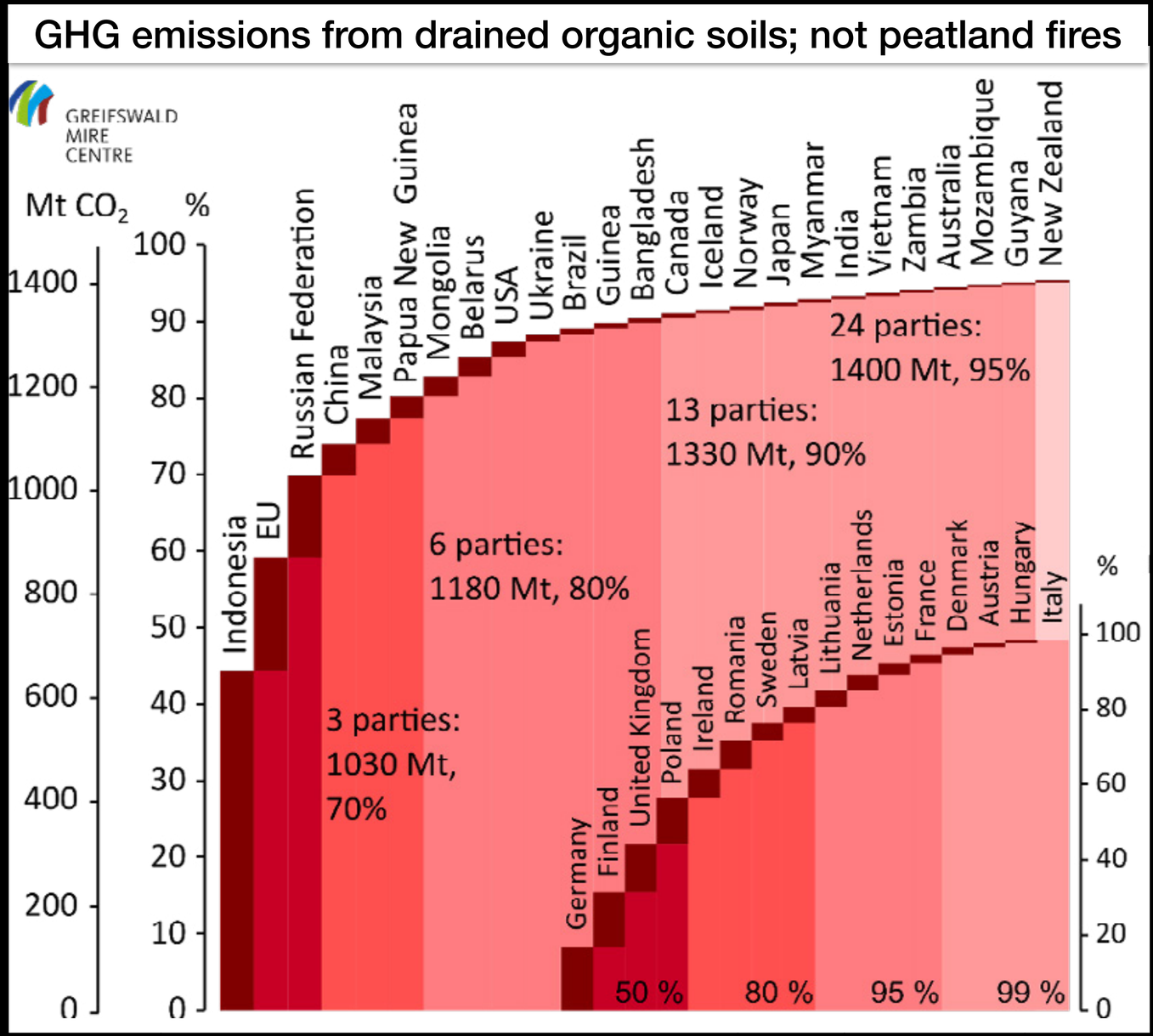
Desiccation Fire Ecotransformation

Land-use change

Nature’s carbon sponges

Wetlands: Missing from our carbon accounting

- Emissions from the Agriculture, Forestry and Other Land Use (AFOLU) sector are 20-24% GHG emissions (second to energy)
- Peatlands: 3% land surface, but absorbing twice as much CO_2 as forests
- Three strategies:
  - **Keep** carbon in wetland reservoirs
  - **Capture** future emissions in wetlands
  - **Adapt** wetlands for their "adaptation services"



Wetlands mitigation ***policy***

Safeguarding high-carbon wetlands will avoid triggering emissions feedback loop

- Wetlands are the most rapidly declining ecosystems in the world
- Major threat is land use change (development, destruction, draining)

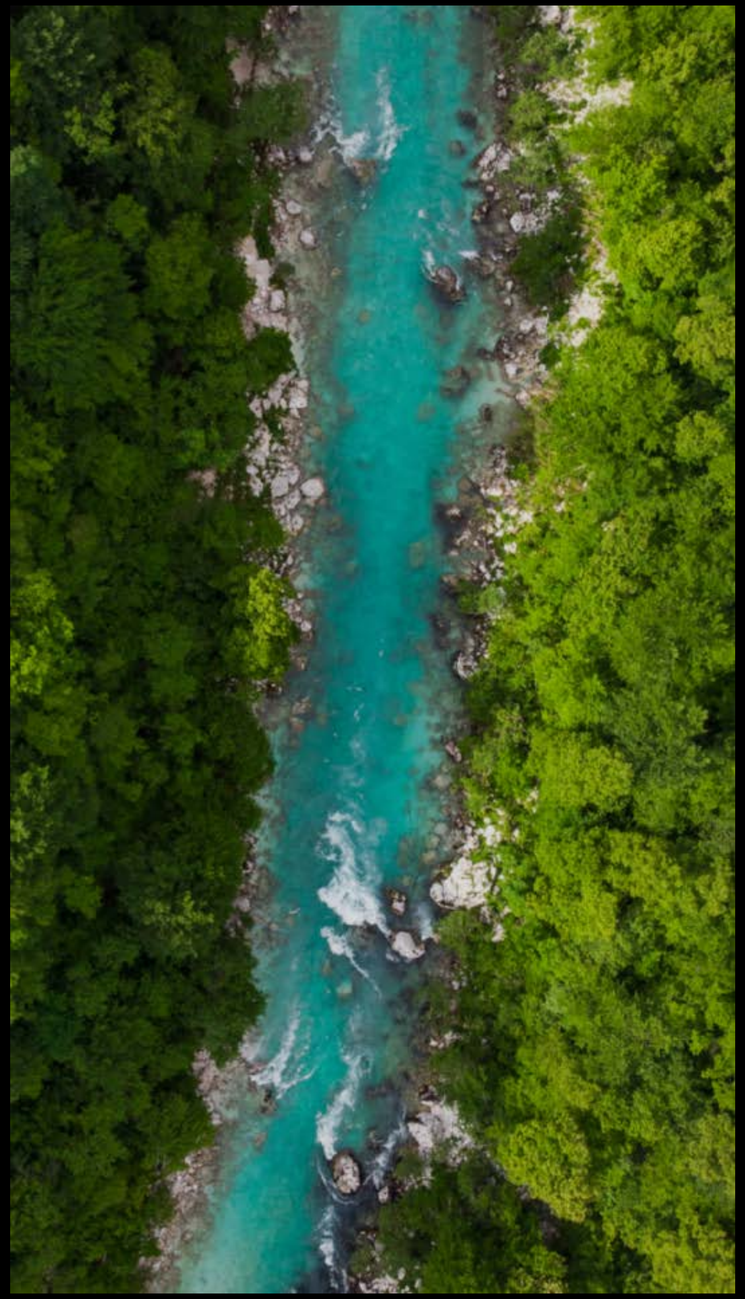
Restoring, safeguarding wetlands is cost-effective and low regret

A holistic solution for achieving targets of multiple global environmental frameworks

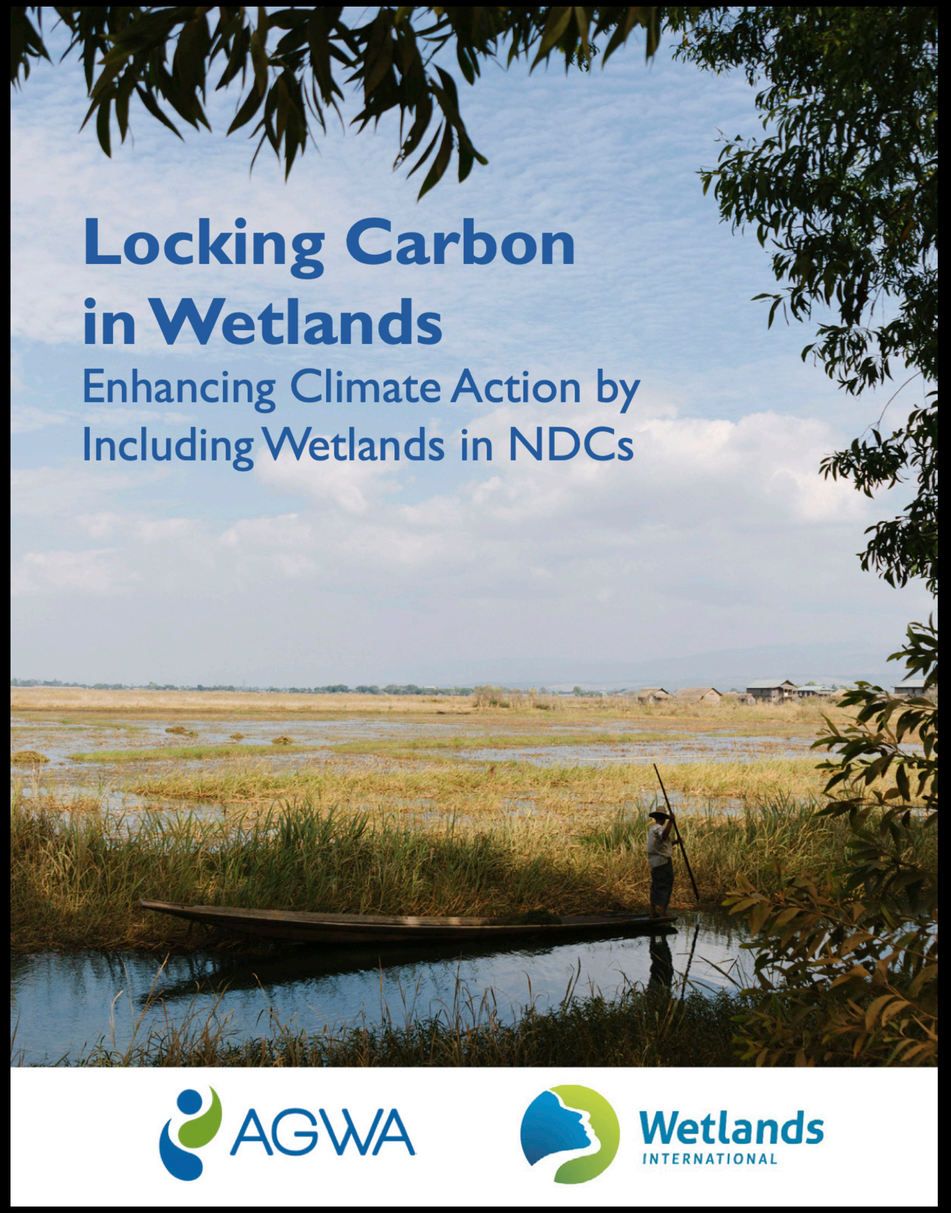
- Climate mitigation and adaptation (NDCs, NAPs)
- Disaster Risk Reduction (Sendai Framework)
- Biodiversity (CBD’s Post-2020 Biodiversity Framework; Aichi Biodiversity Targets)
- Sustainable Development (SDGs, UNCCD’s Land Degradation Neutrality Targets)

Wetlands mitigation ***action***

- Prioritize wetlands in land use policies (e.g., active conservation, rewetting of degraded systems)
  - High priority: permafrost and tropical regions
- Establish NDC wetland management targets
  - FAO peatland monitoring guidelines (2020) provide a clear monitoring and assessment framework
- Measure, report, and verify
  - IPCC's *Guidelines for National Greenhouse Gas Inventories* (2006) and special *Wetlands Supplement* (2013)
- Expand cost-benefit analysis methods
  - Incorporate socioeconomic contributions, co-benefits
- Align strategies: flood resilience + wetlands
  - Sponge cities in China



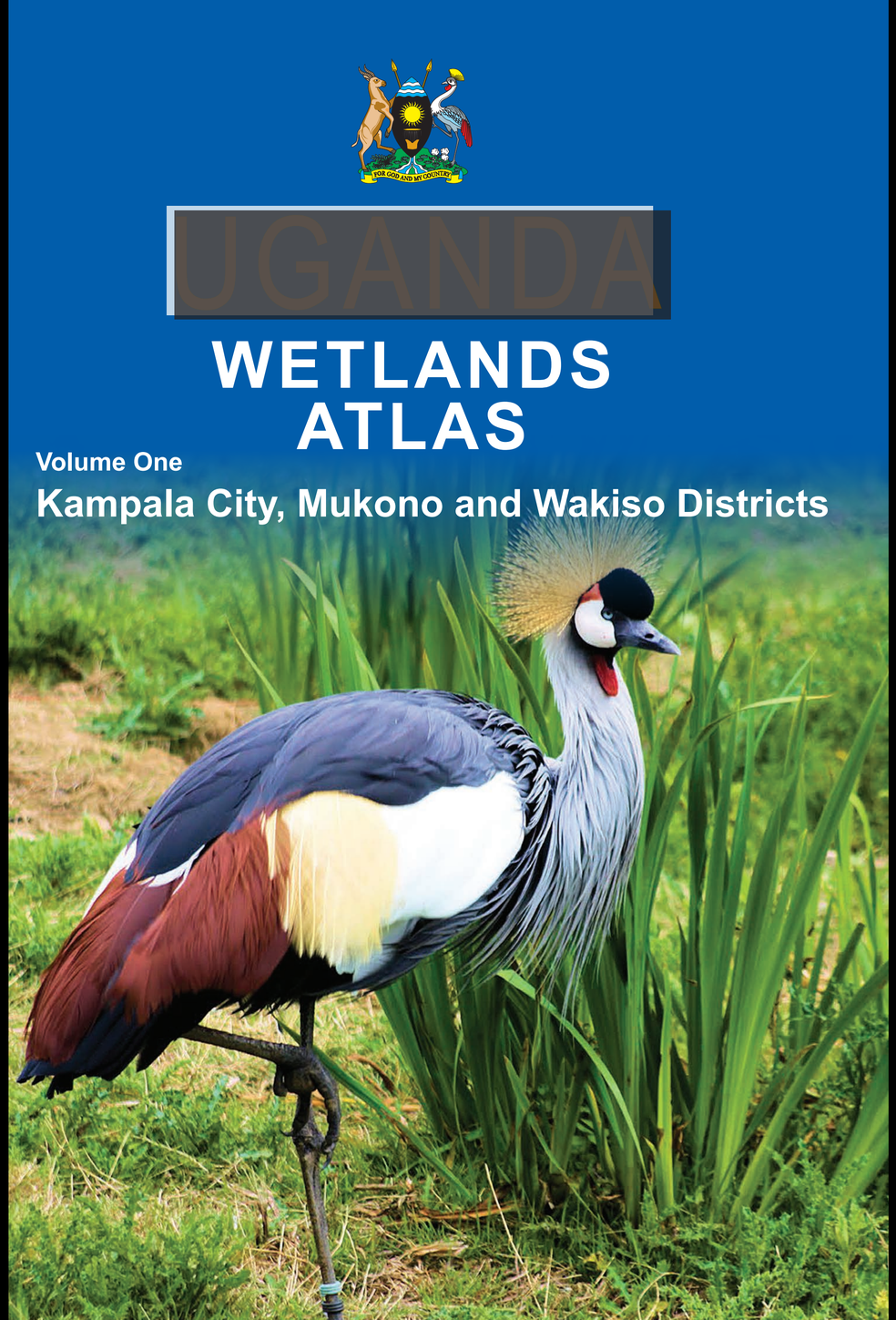
- August 2020 report from AGWA and Wetlands International
- *Why* and *how* wetlands should feature in NDCs
- Special guidance on MRV implications and successful country programs



alliance4water.org/locking-carbon-in-wetlands

UGANDA / NATIONAL ADAPTATION PLAN (NDC)

- Places wetlands at the center of both their climate **adaptation** & **mitigation** strategy
- Currently the only country worldwide that identifies wetlands explicitly in the Nationally Determined Contribution (NDC) under the UNFCCC Paris Agreement



Securing the clean energy we invested in


What would we tell them to do differently?

What would we tell them to do differently?

BACKGROUND PAPER

IWMI International Water Management Institute

AGWA

ADAPTATION'S THIRST: ACCELERATING THE CONVERGENCE OF WATER AND CLIMATE ACTION

Lead authors: D Mark Smith and John H Matthews

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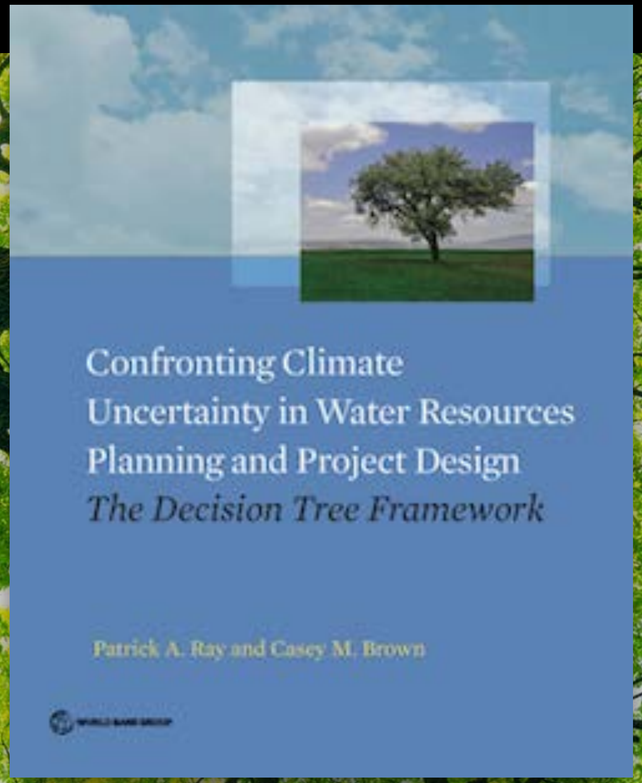
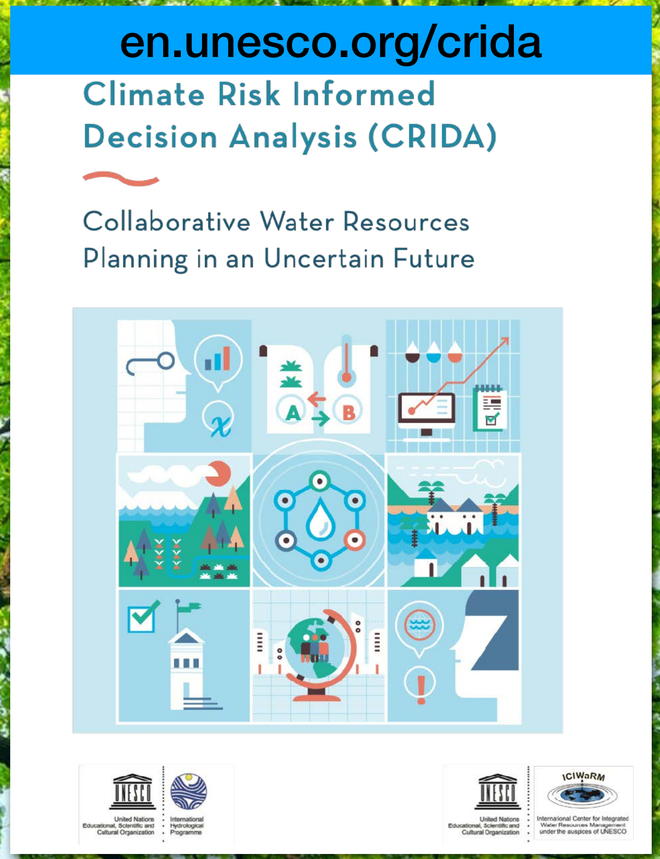
Global Commission on Adaptation:
adaptationsthirst.org

NEW CLIMATE RISK DECISION SUPPORT SYSTEMS





AGWAguide.org/

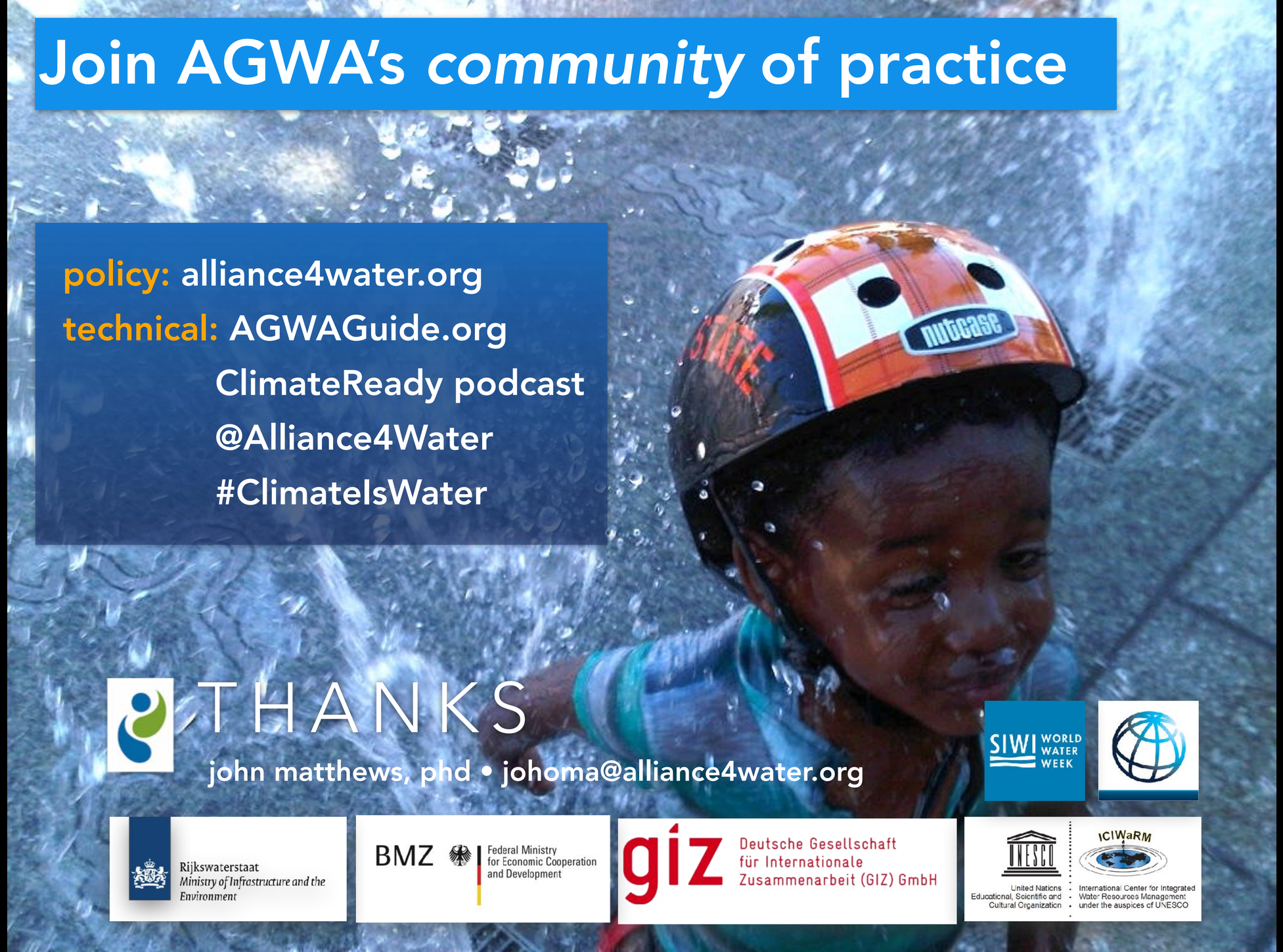
POLICY RECOMMENDATIONS

- Finance for infrastructure needs to include water & climate risks — following the CBI water infrastructure climate bonds standard
- New risk assessment mechanisms need to focus non-optimized (“bottom up”) that include flexibility within their framework, effectively including multiple potential futures
- Both finance and risk assessment processes should evaluation sustainability over **operational** lifetimes (100 years or more)

"WE BUILD THINGS THAT LAST **300 YEARS.** WHY DON'T WE THINK ABOUT SUSTAINABILITY FOR THAT LONG?"

Senior manager, World Bank, February 2017

Join AGWA's *community* of practice



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ClimateReady podcast

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THANKS

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SIWI WORLD WATER WEEK

Rijkswaterstaat
Ministry of Infrastructure and the Environment

BMZ Federal Ministry for Economic Cooperation and Development

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

UNESCO United Nations Educational, Scientific and Cultural Organization

ICIWaRM International Center for Integrated Water Resources Management under the auspices of UNESCO