

# CERTAIN CHANGE, UNCERTAIN RESILIENCE

FROM CONFLICT TO COOPERATION THROUGH CLIMATE

WILSON CENTER • 28 NOV 2018 • JOHN H MATTHEWS



AGWA: Alliance for Global Water Adaptation  
ClimateReady podcast  
@alliance4water  
#ClimateIsWater

Many investment decisions have long term consequences. Infrastructure in particular can shape development for decades or centuries, a duration that often extends beyond infrastructure's lifetime because the economic system reorganizes itself around them.

— Hallegatte et al.,  
Investment Decision Making  
Under Deep Uncertainty,  
World Bank

[governance &  
ecosystems too]

Kanba Dam

new, underperforming,  
livelihood- and river-killing

and representative....

Koshi basin, Nepal

Another approach might be

How long will it last or  
keep working?

What might come after it?

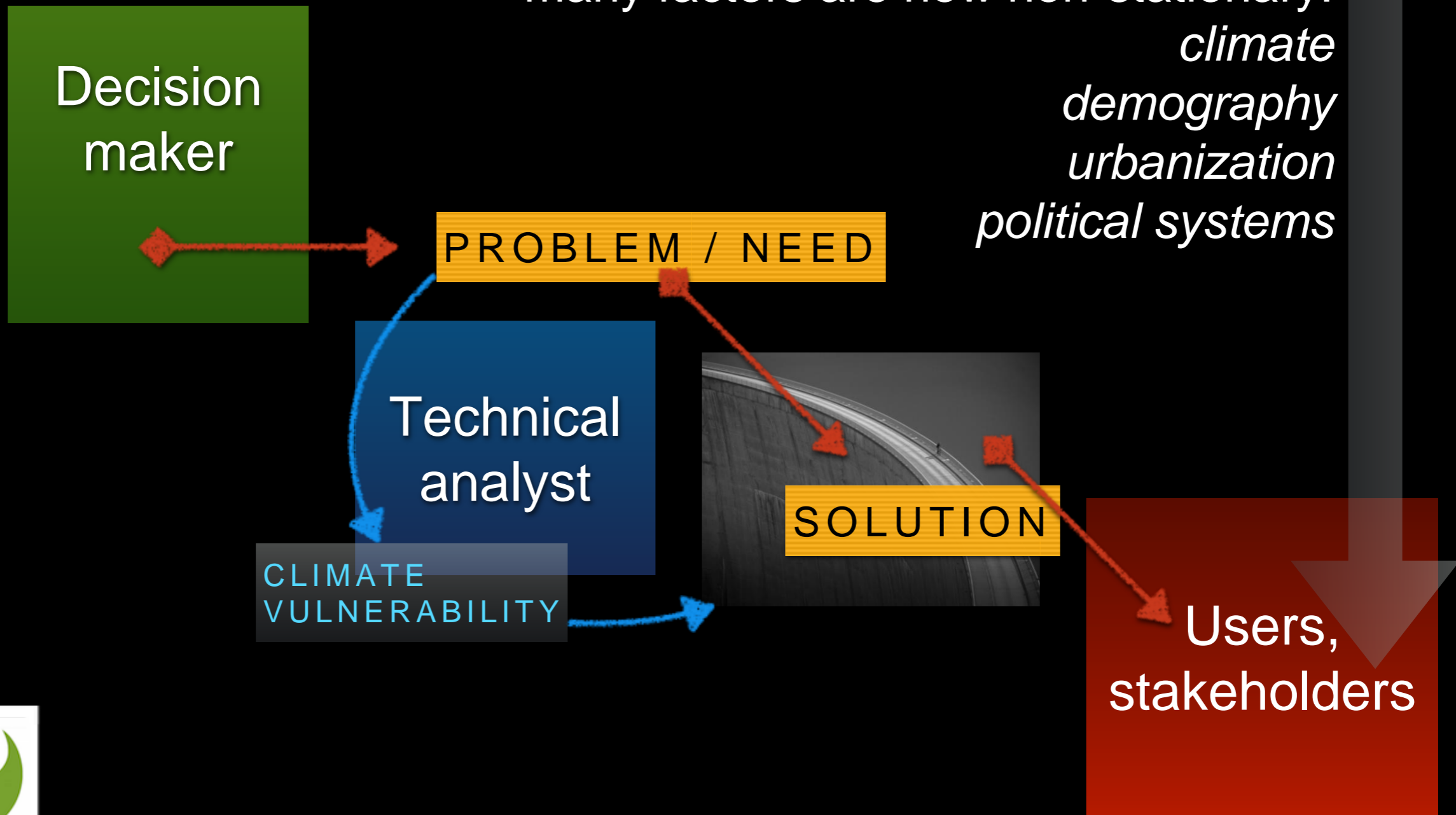
Dujiangyang irrigation facility

What would we tell them to do differently?

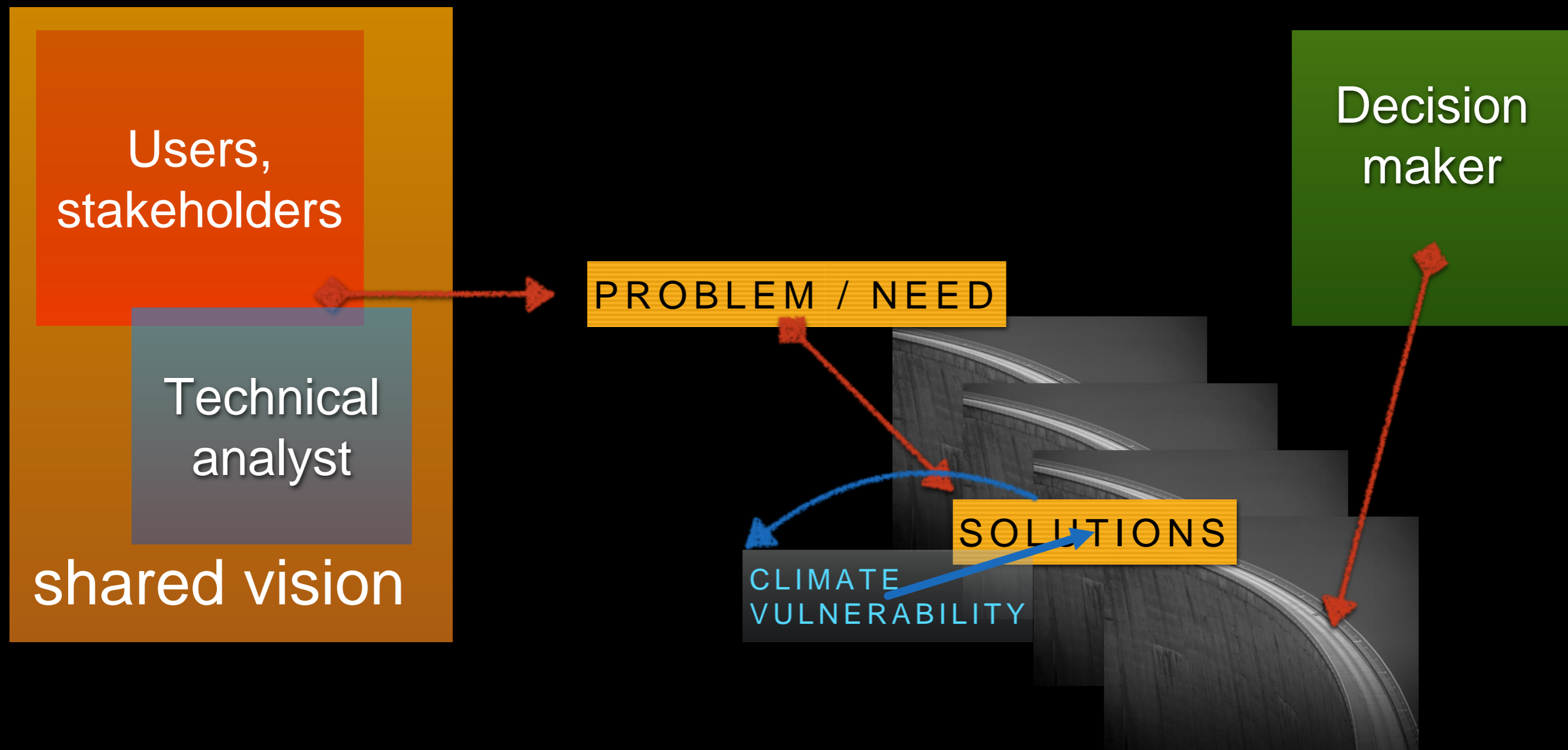


# THE TOP-DOWN ERA: OPTIMIZING WATER RESOURCES MANAGEMENT

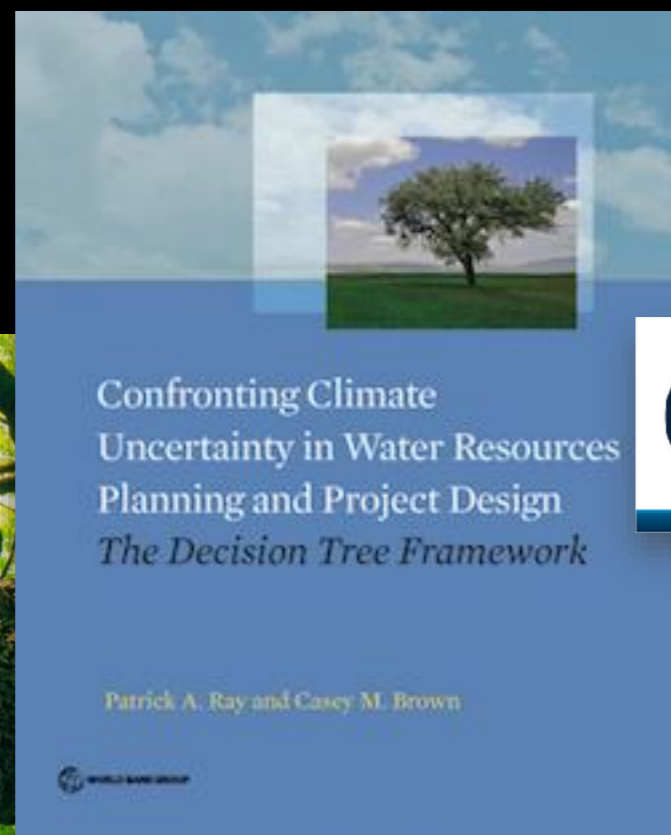
many factors are now non-stationary:  
*climate*  
*demography*  
*urbanization*  
*political systems*



# BOTTOM-UP DECISION MAKING: ARE WE POST-OPTIMIZATION?



# WHO'S USING THESE APPROACHES?



## Climate Risk Informed Decision Analysis (CRIDA)

Collaborative Water Resources  
Planning for an Uncertain Future



<http://AGWAGuide.org/>



# CRIDA: CLIMATE RISK INFORMED DECISION ANALYSIS

<http://AGWAGuide.org/>

DEC

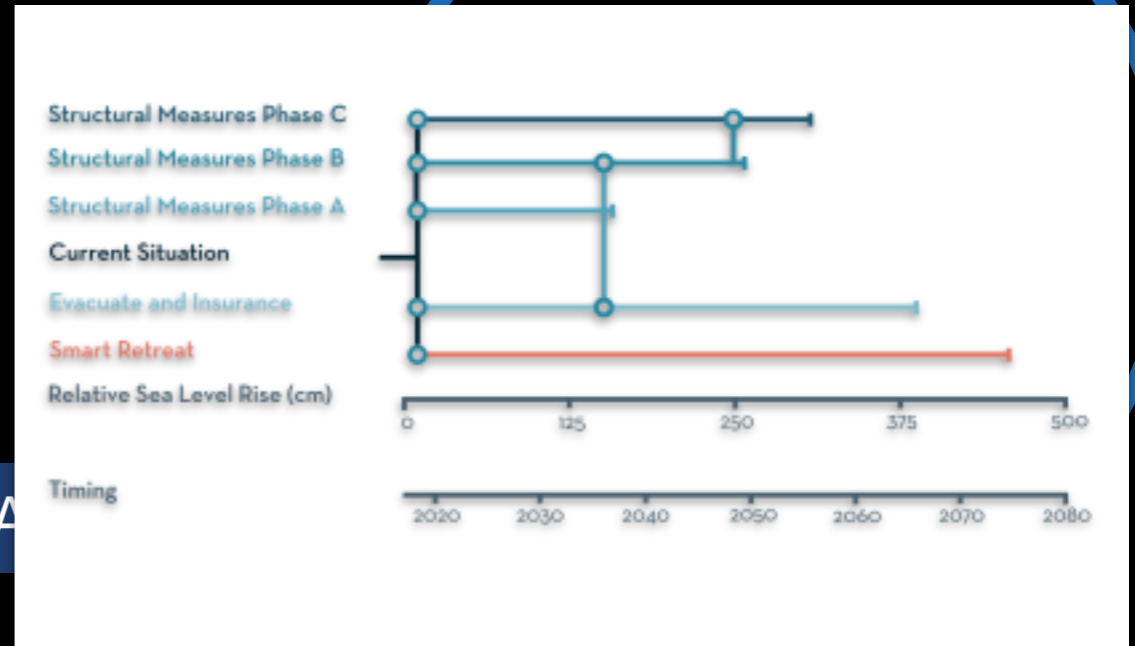
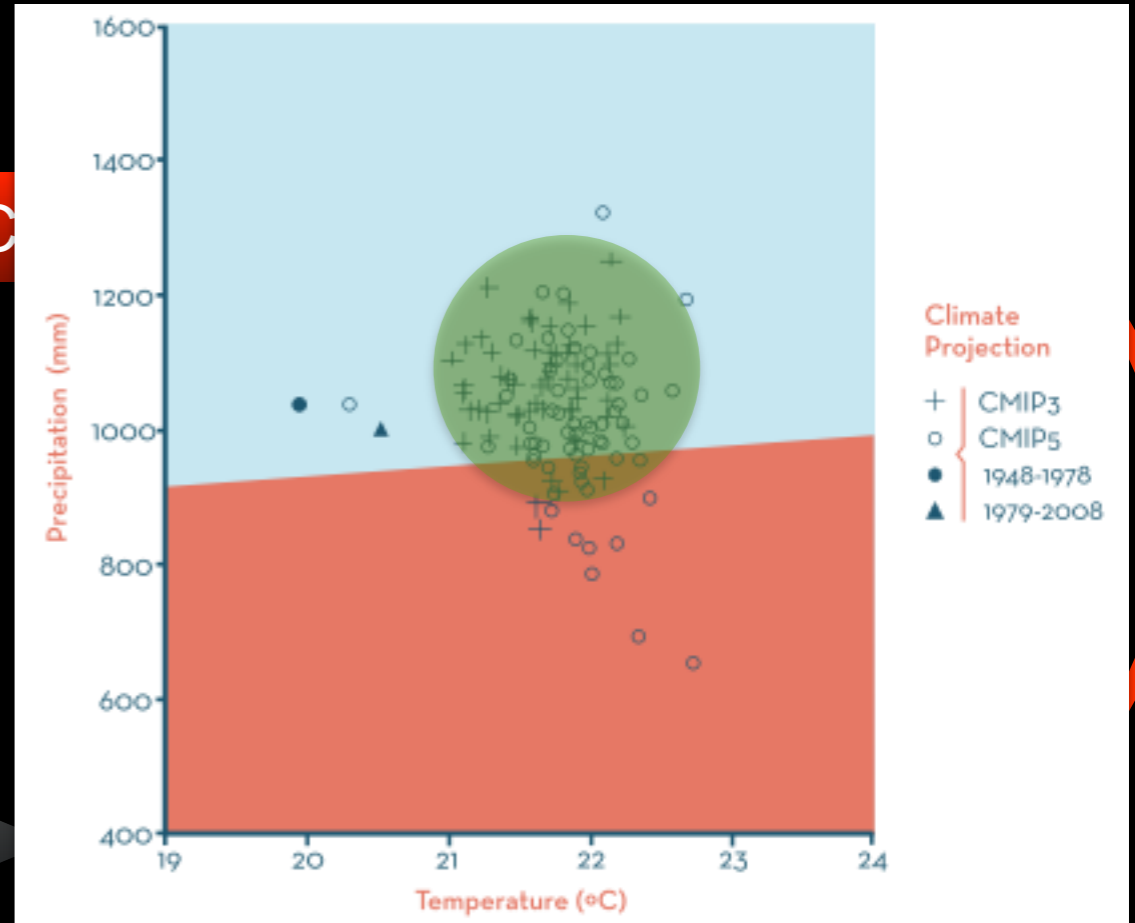
SHARED VISION

stakeholder,  
decision  
maker needs

performance  
indicators

nature-  
based  
solutions

ECOSYSTEMS



ADA

# GREEN & CLIMATE BONDS

- Core aspects of bottom-up approaches applied through resilience criteria for green and climate bonds
- Went live for gray infra in late 2016, nature-based solutions criteria live in May
- >2 billion USD scored against the standard

ARTICLES | GENERAL Share 28 Tweet

## San Francisco Makes History With New Water Bond

The city is leveraging the power of green bonds by issuing the first certified under the Water Climate Bonds Standard to help fund projects to repair the city's aging water infrastructure, including the stormwater and sewer systems.

WRITTEN BY  
Tara Lohan

PUBLISHED ON  
May. 23, 2016

READ TIME  
Approx. 3 minutes

Never miss an update.  
Sign up for our newsletter to receive weekly updates, special reports, and featured insights as we cover the most critical issues of our industry.

Enter your email address

[SUBSCRIBE](#)





“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

**policy:** [alliance4water.org](http://alliance4water.org)

**technical:** [AGWAGuide.org](http://AGWAGuide.org)

ClimateReady podcast

@Alliance4Water

#ClimateIsWater



john matthews, phd • [johoma@alliance4water.org](mailto:johoma@alliance4water.org)

