



# Sustainable Water Partnership (SWP)

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#### Water in the 21<sup>st</sup> century

Water resources under great pressure worldwide, being degraded at unprecedented rates, due to stressors and shocks:

- Population growth, rising living standards
- Urbanization, increased demand for food and energy
- Climate change
- Natural and man-made disasters: floods, droughts, landslides, algal blooms, as well as market or currency collapses and political/civil unrest





#### Water in the 21<sup>st</sup> century

"During the next 10 years, many countries ... will experience water problems (...) that will risk instability and state failure [and] increase regional tensions ... Water problems will hinder the ability of key countries to produce food and generate energy, posing a risk to global food markets and hobbling economic growth."

Global Water Security Paper, 2012

U.S. Office of Director of National Intelligence





#### Water Security

# Water security is essential to support:

- Public health
- Economic growth
- Env. sustainability
- Political stability
- Disaster risk reduction





#### Water Security

Water security outcomes = enhanced water...

- Availability (sufficient quantities)
- Access (management & service delivery: mobilization, storage, conveyance, supply, regulation, preservation)
- Safe use:
  - Adequacy (for all usages, including ecosystems)
  - Reliability (predictability/consistency over time)
  - Resilience (both human and natural systems)





#### Water Security

"Water security is the adaptive capacity to safeguard the sustainable availability of, access to, and safe use of an adequate, reliable, and resilient quantity and quality of water for health, livelihoods, ecosystems, and productive economies."

Achieving and maintaining water security is a fundamental development challenge to support socio-economic growth and political stability.





## Traditional water management

Engineering approach = infrastructure to supply more water & protect against floods/drought

- Most engineers are managers
- Politicians prefer construction

Little, if any, consideration to negative externalities to water user groups beyond intended beneficiaries





#### **Traditional water management**

Ignoring the Many Dimensions of Water Issues

- Social: Common use behaviors polluting & wasteful
- Environmental: ecosystems & riparian livelihoods
- Economic: construction expensive, limited O&M
- Institutional:
  - Unenforced laws and standards
  - Absent or ineffective water policies
  - Unclear roles, lack of accountability = poor performance
  - Centralized, disconnected decision-making
  - Gender and social inequities





#### **Traditional water management**

Failure to Understand that:

- Built, natural, and social systems are interdependent.
- Water problems are complex, and sometimes "wicked" problems, difficult to evaluate and solve.
- Past solutions may not replicate well and past conditions may not be good predictions of future





#### **WSI process**

- One inception
- & five steps

Process presented through six toolkits

https://www.swpwater.org/

#### The Water Security Improvement (WSI) Process



### STEP 2

Assess water risks (Toolkit #2)



**Prepare water security action plan** (Toolkit #3) **and fund it** (Toolkit #4)

#### STEP 4

Implement water security actions (Toolkit #5)

#### STEP S

**Monitor, evaluate and adapt** (Toolkit #6)





### **Eight WSI guiding principles**

- Pragmatic focus on specific water risks
- Engagement and mobilization of water users
- A "Systems thinking" approach
- Robust decision-making to address uncertainties
- Science-based, negotiated solutions
- Integrated solutions to produce tangible benefits
- Adaptive management to improve over time
- Sustainability through economic efficiency, environmental soundness, and social equity







#### Final Guiding Practice: Communications

- Among gov. agencies, between them and water user entities engaged in WSI process
- Between WSI implementers and sponsors, donors, higher-level authorities
- Between WSI implementers and water users, residents and public at large

Communications to disseminate relevant information, advertise achievements, reduce resistance to change, legitimize WSI process









# THANK YOU

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