



**CEO  
WATER  
MANDATE**

**WATER  
RESILIENCE  
COALITION**



# Digitizing Water Resilience Monitoring in Basins Project Process & Member Engagement

September 2022

# Collective Action to Digitize Metrics & Monitoring in Basins

Through the use of space and digital technologies, we will be able to visualize:

- the current baseline of water stress in priority basins,
- understand the systemic interlinkages of the challenge,
- model future risks, and
- identify areas for innovation

in order to prioritize actions, monitor and report on progress towards water resilience in 100 water stressed basins.

*WRC Partnership with the European Space Agency will enable WRC to:*



- *Leverage **earth observation technologies** to support basin diagnostics and monitor progress on water security and resilience in basins*
- *Leverage **digital tools such as AI and IOT** to collect better data on water quantity, water quality, and water access /sanitation/hygiene systems –*
- *To identify solutions that can be deployed or innovation that is needed*
- *Leverage **satellite connectivity** to connect data being captured in basins to decision-makers*

# Applications of ESA Project in WRC's Key Strategies



**S1:** Scaling Proven Solutions in Basins

Piloting digital & space monitoring technologies in WRC priority basins



**S2:** Multiplying Impact of Business Expertise and Innovations

Bringing WRC member company digital expertise to support the application and scale up of digital monitoring in basins



**S3:** Leveraging Investment via Innovative Finance

Bringing public finance from ESA to seed fund digital monitoring providers' applications for water resilience



**S4:** Influencing via Collective Measurement & Advocacy

Digitizing collective measurement and monitoring of NPWI in basins



# The Project: Roles

## Water Resilience Coalition

**Apply NPWI and next-generation water resilience data sets and framework**

**Leverage WRC companies' expertise** to support the pilots and scale up

**Network** of digital technology service providers

## European Space Agency

**Financial and space tech support & network**

**Network** of digital technology service providers

# The Project: Phases

## PHASE 1 (2022-23)

### Develop Tech Capabilities & Pilot

Supporting the development of **new technologies** to monitor **water resilience**

**Piloting** water resilience monitoring technologies **in priority basins**

## PHASE 2 (2024-25)

### Scale Up Digitized Monitoring Across Basins

**Merging** existing baseline data with global partners

Developing **water resilience specific data sets**

**Scaling up** water resilience monitoring technologies **across priority basins**

# Phase 1 Timeline 2022-2023

2022



WWF  
STOCKHOLM  
23 AUG -  
01 SEP



UNGA  
NYC  
TBD



COP27  
SHARM EL-SHEIH  
07 - 18 NOV

AUG

SEP

OCT

NOV

DEC

**WRC** – Identify 2 priority basins, initial water resilience criteria, member company engagement

2023

**ESA** – Member States Approval of Funding

Marketing to **WRC & ESA** Networks

**WRC & ESA** – Launch of Project & Call for tech co solution providers

JAN

MAR

JUN

SEP

DEC

**WRC, Member Companies & ESA** – Support Cohort of digital monitoring companies to develop digital water resilience monitoring for basins & pilot in 2 priority basins



# WRC Member Engagement 2022-2025

1. **WRC** – Identify 2 priority basins, initial water resilience criteria, member company engagement

Form Collective Action Working Group of WRC companies with relevant expertise

2. **WRC & ESA** – Identify & select relevant monitoring technology companies via joint networks

Leverage digital expertise of member companies to select digital monitoring tech companies from open innovation platforms

3. **ESA** – Funding support to selected monitoring technology companies to develop digitized water resilience monitoring

4. **WRC Member Companies Collective Action**

Member companies support digital water resilience monitoring innovations with digital expertise and scale

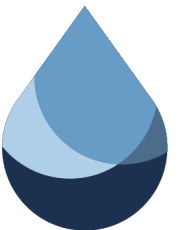
5. **WRC** – Pilot digital basin diagnostics & water resilience monitoring in 2 priority basins

Member companies support digital monitoring application pilots in 2 priority basins as collective action

# Thank you!



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# The Process: Phase 1 2022-2023

1. **WRC** – Identify 2 priority basins, initial water resilience criteria, member company engagement

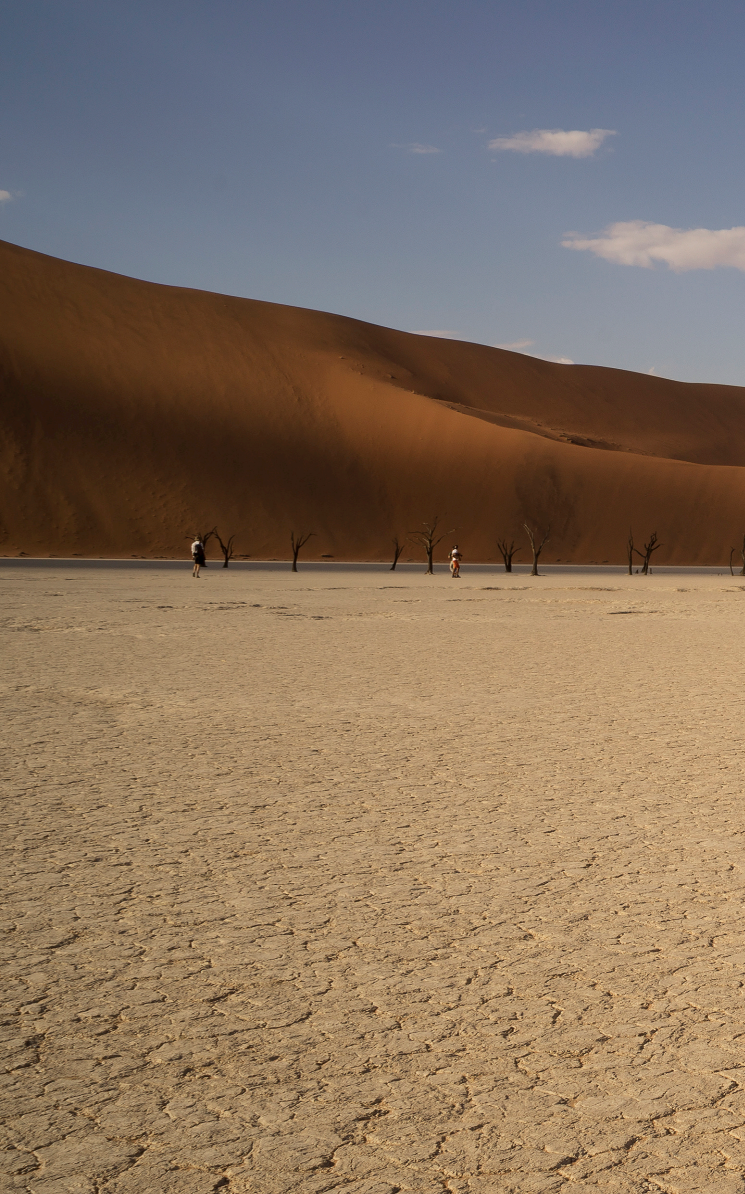
2. **WRC & ESA** – Identify & select relevant monitoring technology companies via joint networks

3. **ESA** – Funding support to selected monitoring technology companies to develop digitized water resilience monitoring in basins

4. **WRC Member Companies Collective Action** – Support water resilience monitoring innovations with digital expertise

5. **WRC** – Pilot digital basin diagnostics & water resilience monitoring in 2 priority basins

# Current Challenges to be Overcome



- **Standardizing approach for basin classification and naming** – hydro shed system upgrade
- **Merging existing baseline data about priority basins** (including biodiversity; climate benefits; social impact)
- **Limited data sets** or existing data sets but dispersed in multiple platforms
- **Limited use of next-generation data sources** i.e. sensors for monitoring water bodies linked to space, high-altitude platform stations, drones monitoring
- **Defining next-generation methods** for basin diagnostics and water resilience monitoring