



**CEO
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MANDATE**

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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



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



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