

Central Asian Water Information System: 1992- 2019



Dinara Ziganshina, PhD

Scientific Information Centre of
Interstate Commission for Water
Coordination in Central Asia

5 December 2019, Geneva



Information exchange: the role of joint bodies

UNECE Water Convention

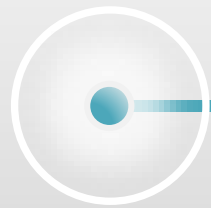
Joint bodies - preferential platform for data and information exchange

The tasks of joint bodies [...] to **serve as a forum for the exchange of information** on existing and planned uses of water and related installations that are likely to cause transboundary impact (Art 9(2))

Practice in Central Asia

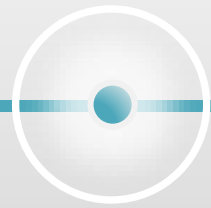
- Riparian countries agreed to “**facilitate wide information exchange**” (1992 Almaty Agreement)
- The establishment and maintenance of **a unified information system** on water resources use, monitoring of irrigated lands and hydrometrological support – among the main tasks of Interstate Commission for Water Coordinate (ICWC Statute)
- **Scientific Information Centre** established in 1992
- Regional water information system - **a priority area** in all ASBP

Key Achievements & Milestones | 1992 - 2012



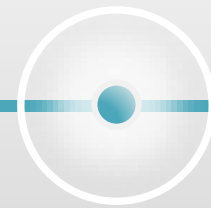
1992

Regional information system (RIS) development initiated at SIC



1996-1998

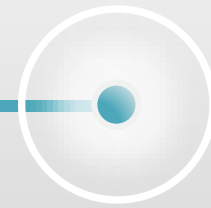
EU funded WARMIS & WUFMAS laid the foundation of RIS



2000-2003

Data population:

- CIDA – melioration
- EU Copernicus – drainage, irrigation water requirements



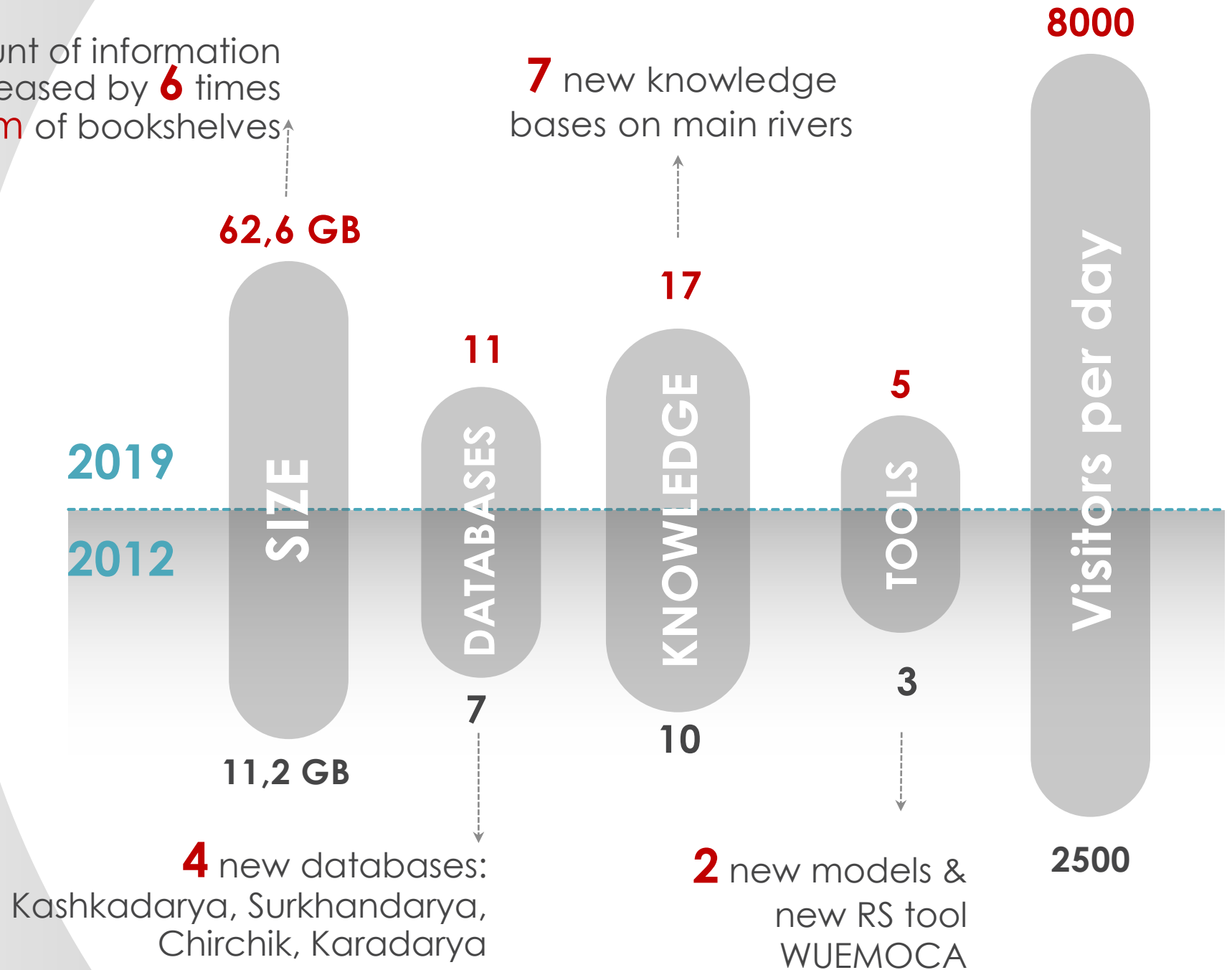
2003-2012

SDC funded CAREWIB project (SIC, UNECE, Zoi):

- CAWater-Info
- Updated RIS.

Progress in Numbers

Amount of information increased by **6** times
= **630 km** of bookshelves



Examples of New Products

15 thematic section classification system

Hierarchical Classification System of the Knowledge Base



- [1. Water Resources](#)
- [2. Water Resources Use](#)
- [3. Agriculture](#)
- [4. Land Reclamation](#)
- [5. Land Degradation and Desertification](#)

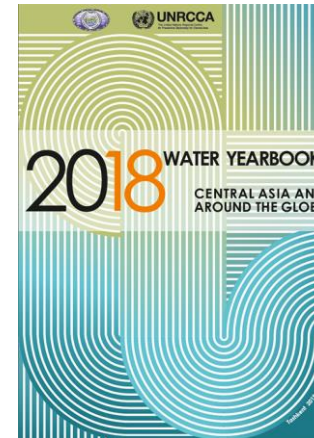
Interactive maps of best practices & training centers

Database

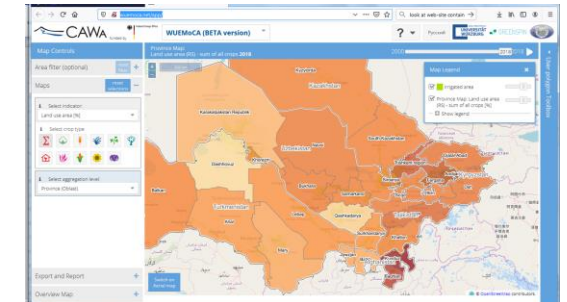


Best practices on the use of water, land and energy resources, as well as the environment of Central Asia

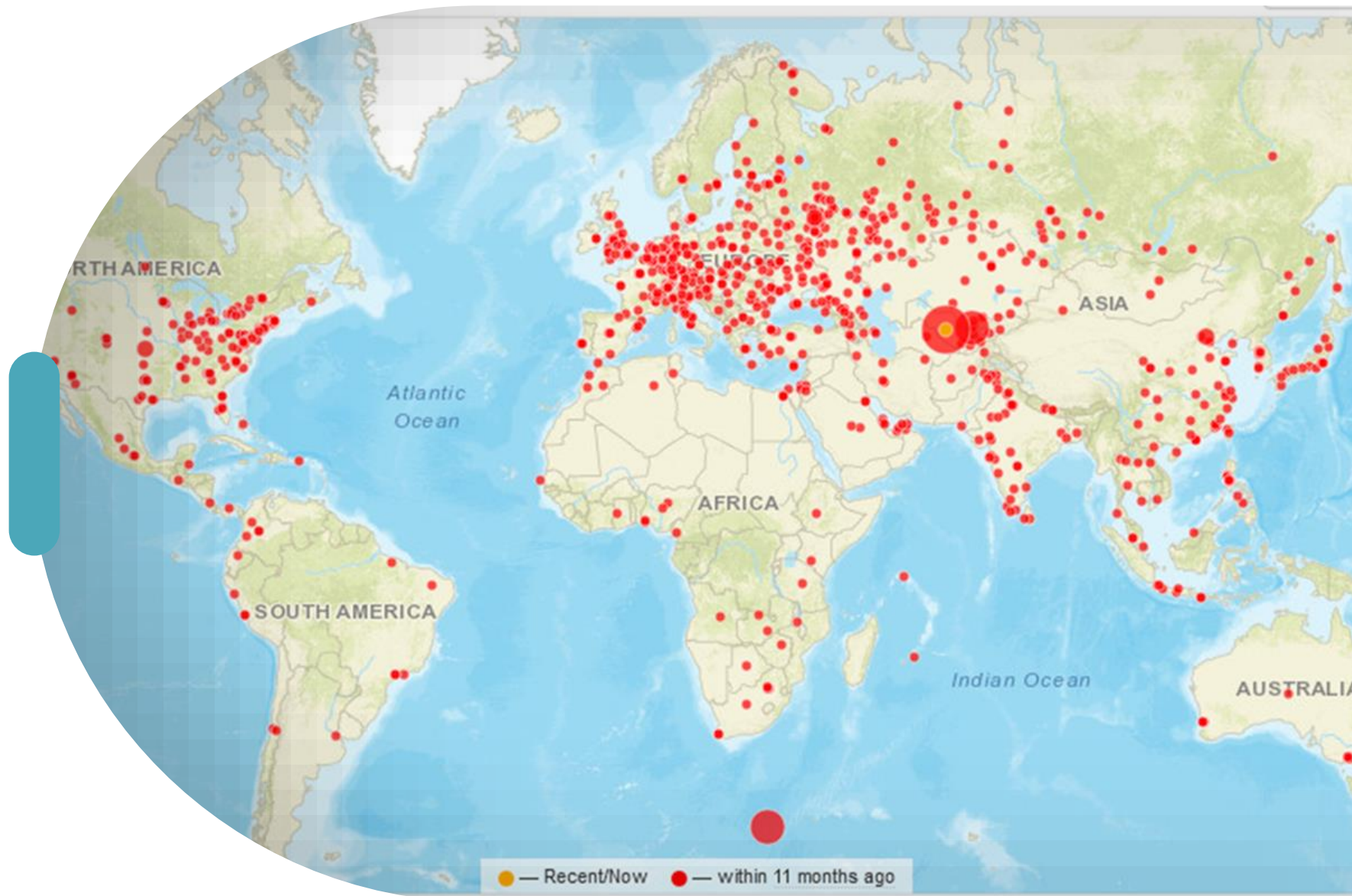
Central Asian Water Yearbook



Water use efficiency monitor WUEMoCA



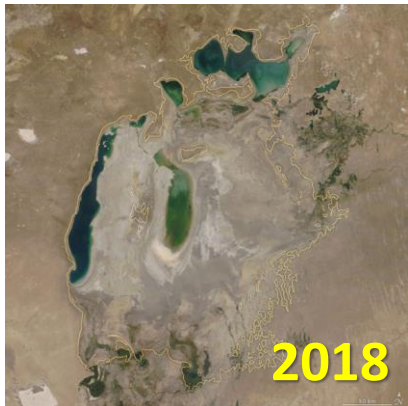
Visitors map for CaWater-info.Net



Combination of Remote Sensing & Ground Data: Monitoring of the dried bed of the Aral Sea

2005-2011

11 Expeditions
(Germany funded)



2010-2019

Regular remote sensing based monitoring (SIC)



2019 FALL: Aral Expedition

- **Integrated assessment** – soil, flora, groundwater, forest, topography, landscape for **1570 points** across **2500 km** (35 soil profiles)
- **30 days 600 th ha** out of 3,2 mln ha in Uzb (total 5.5 mln)
- **Natural & Anthropogenic landscape:** mining infrastructure, cutting furrows for planting
- **Risk zone mapping** – ecological unstable areas
- Revised approach to **ground thruting & RS images interpretation:**
 - Water-Soil-Vegetation Recognition based on spectral indexes: reed in water, dust on plants, saksaul & tamarisk





Sustainable information system (Maruster, Niels, & Peters, 2008)

- (i) adapts to its environment,
- (ii) involves relevant stakeholders,
- (iii) supports the knowledge lifecycle.

Central Asian information system

- (i) adapts to its environment:** by working with limited open access information, technical and political constrains on regional exchange, unreliable forecasts, etc
- (ii) involves relevant stakeholders:** water agencies & users, BWO, hydromets, experts, statistical agencies, etc
 - not all ready to contribute & accessibility understood as free of charge
- (iii) supports the knowledge lifecycle:** by creating knowledge (research, field studies), evaluating knowledge (assessments, analytical reports) and integrating knowledge into decision-making and water management practices

Lessons Learned: **Sustainability is about ...**

- **Institutions**

- **Mandate**: from riparian countries to establish and maintain RIS
- **Institutional memory**: Mandate (not project) based
- **Expertise**: Local experts with int'l partners not vice versa
- **Regular connections** to decision makers and users

- **People**

- **Ownership** or fancy products cannot be transferred; **co-production** is the must. CaWater-Info.net is still operated by individuals who created it.

- **Technologies**

- Remote sensing & GIS technologies help increase transparency, water use efficiency & improve cost effectiveness **WUEMOCA** (<http://wuemoca.net/>)

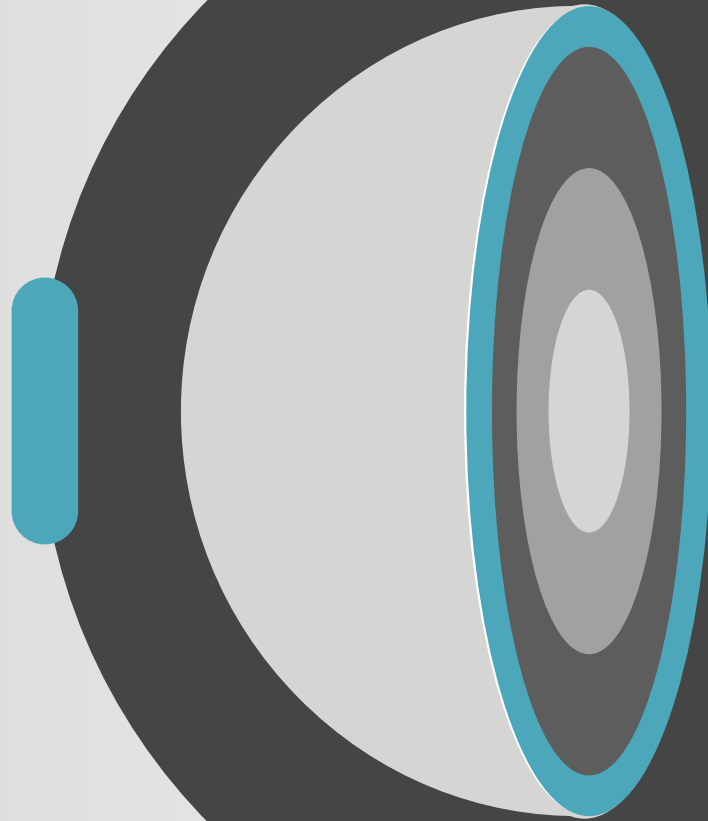
Lessons Learned: **Sustainability is about ...**

- **Riparian countries support and Partnerships**

- **90%** of funds to support regional information system on a daily basis comes **from national budgets**
- **International data sources**, initiatives and projects **support** regional information exchange by providing **open access information, funds for data collection and verification, staff support**
 - ✓ USAID funded PEER project: Amudarya
 - ✓ EU-funded CAWA project: High resolution satellite images
 - ✓ UNECE & Russian Fund for INBO EECCA
- What is needed:
 - ✓ More openness and willingness from countries to share their data
 - ✓ Support from donors for software, national data collection, visualisation

CAWater-Info

www.cawater-info.net/



Thank you for listening