

Digital Geospatial Innovation for Water, Climate & Sustainability

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Hi, I am Aman Chaudhary

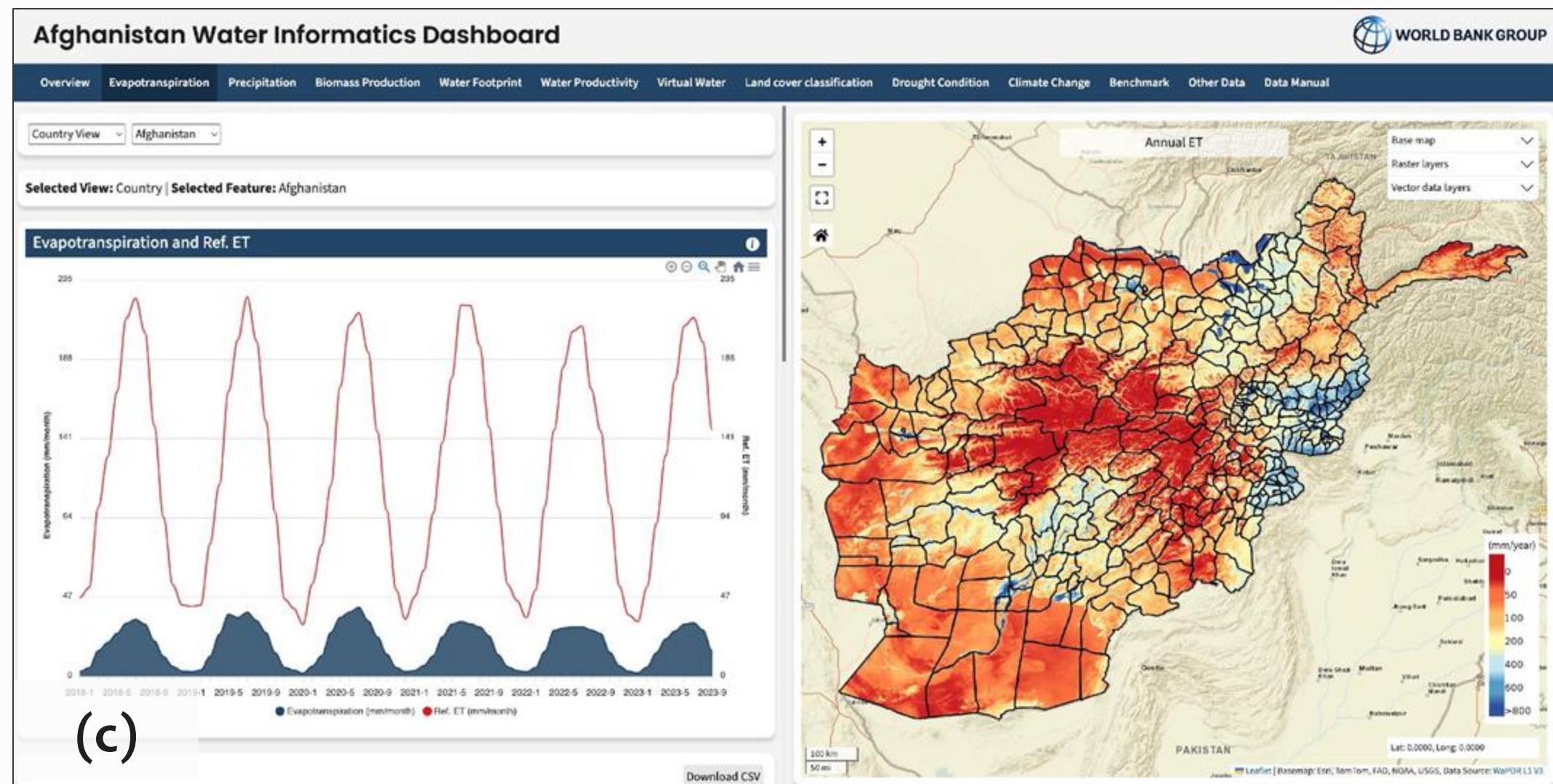
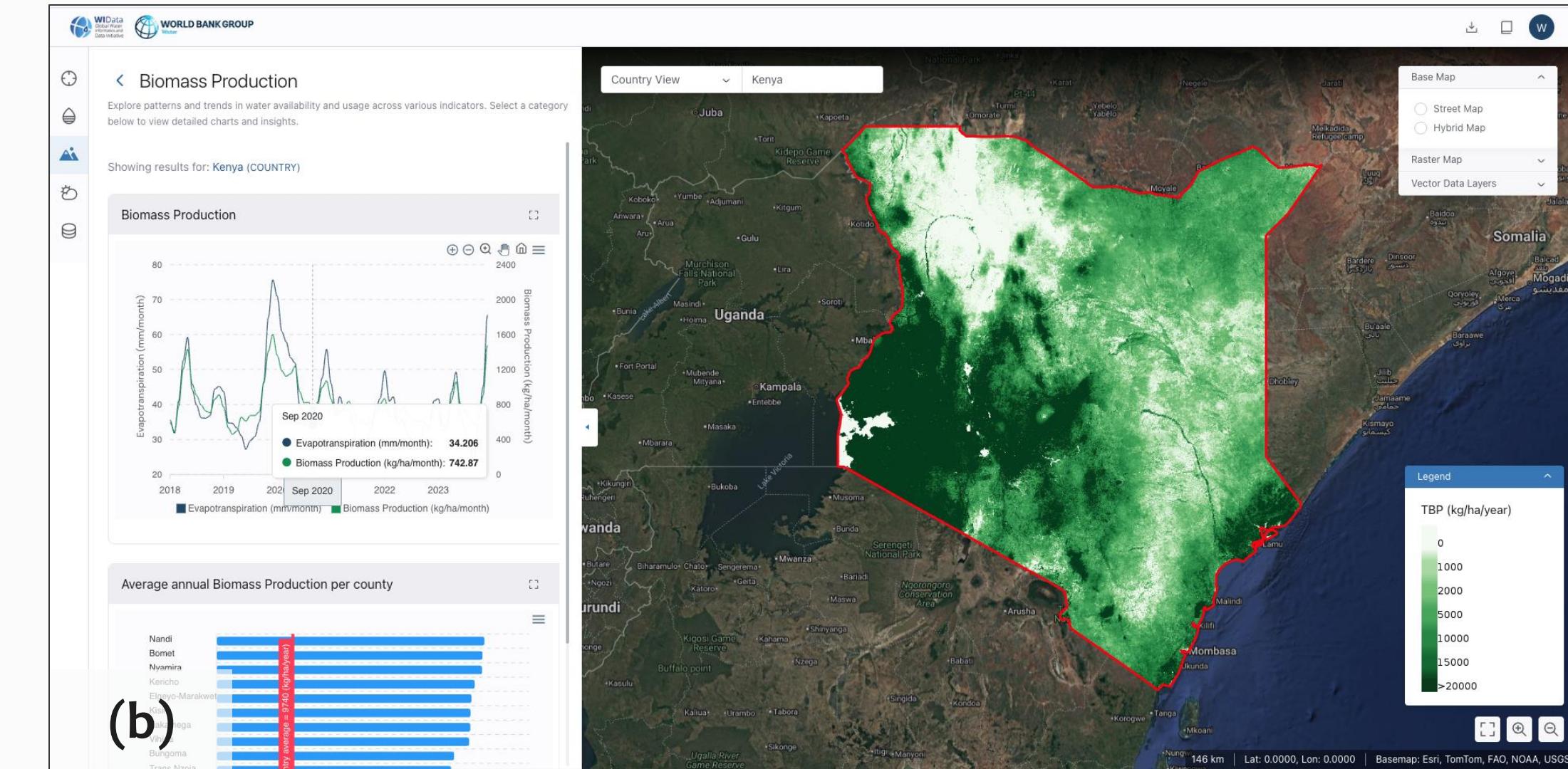
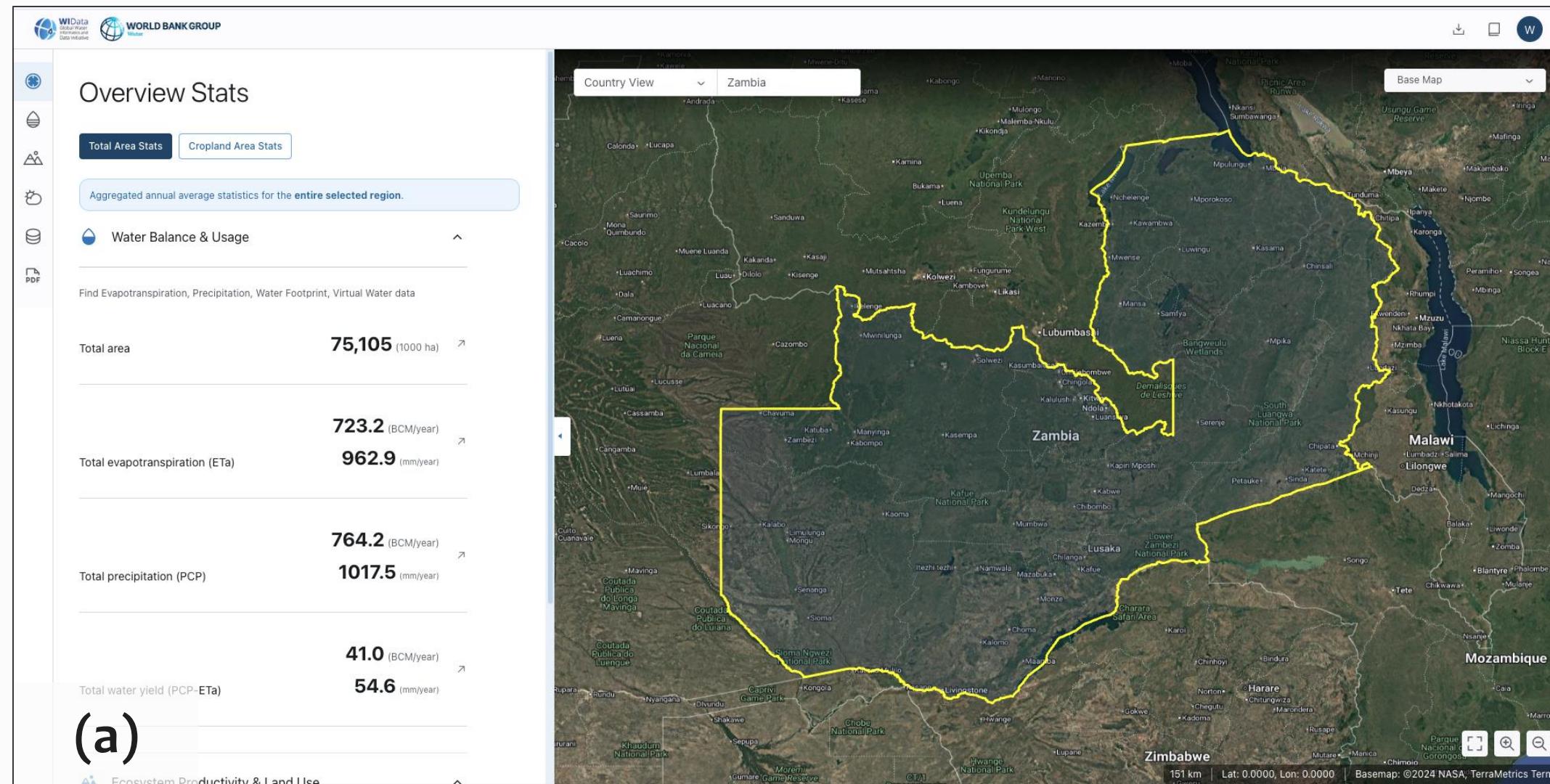
I'm Geospatial Technologies Specialist with a passion for developing intelligent, interactive platforms that transform complex spatial data into actionable insights.

With deep expertise in WebGIS, remote sensing, spatial analytics, and Earth observation, I build data driven digital tools that enable decision-making, monitoring, and planning across diverse domains — including water resources, agriculture, food systems, climate, urban development, disaster risk, and sustainability.

From visualizing satellite data to deploying full-stack spatial platforms, I focus on scalable, open-source solutions tailored to real-world impact.

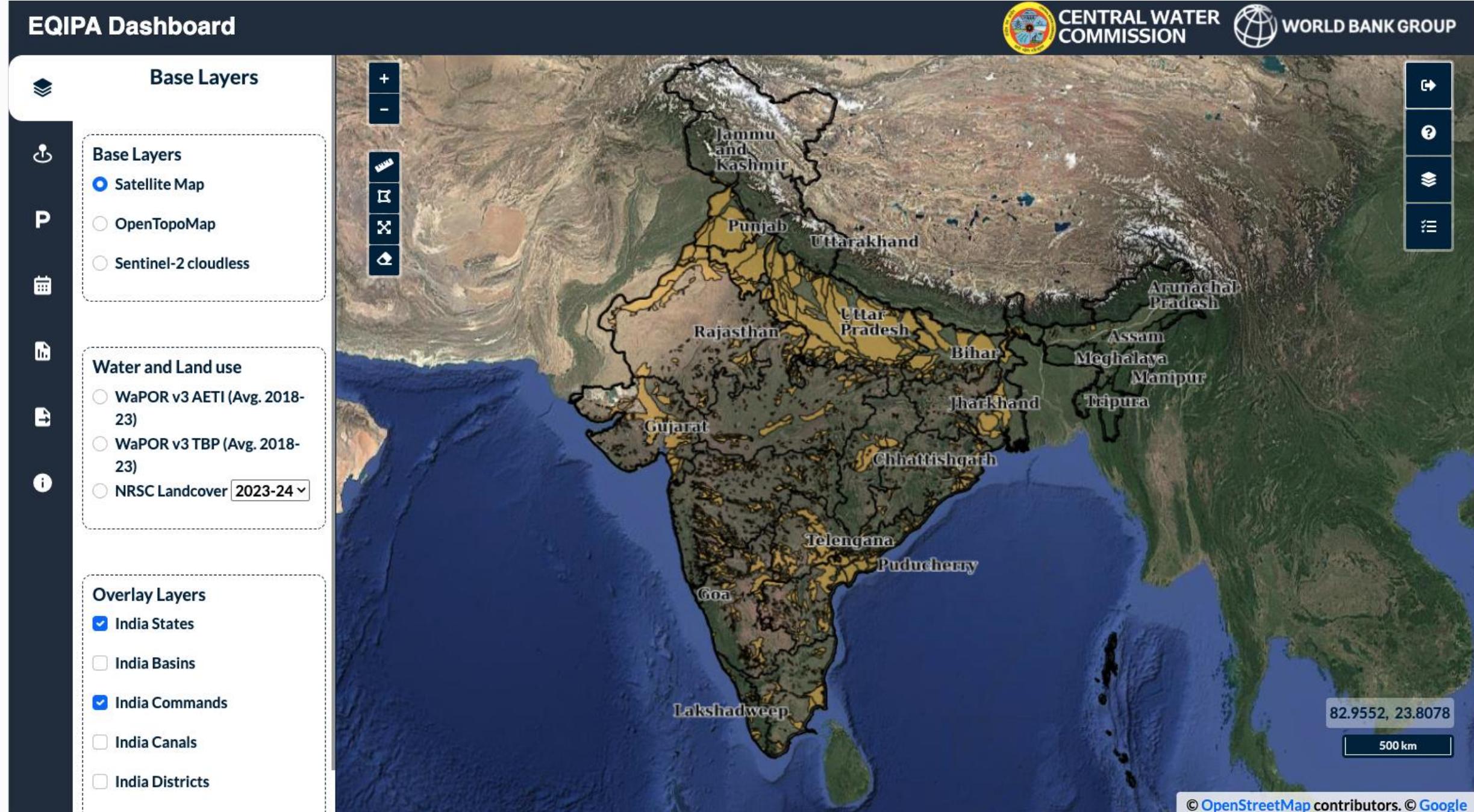
The following slides highlight key projects and platforms I've developed over the years.

Water Informatics Dashboards



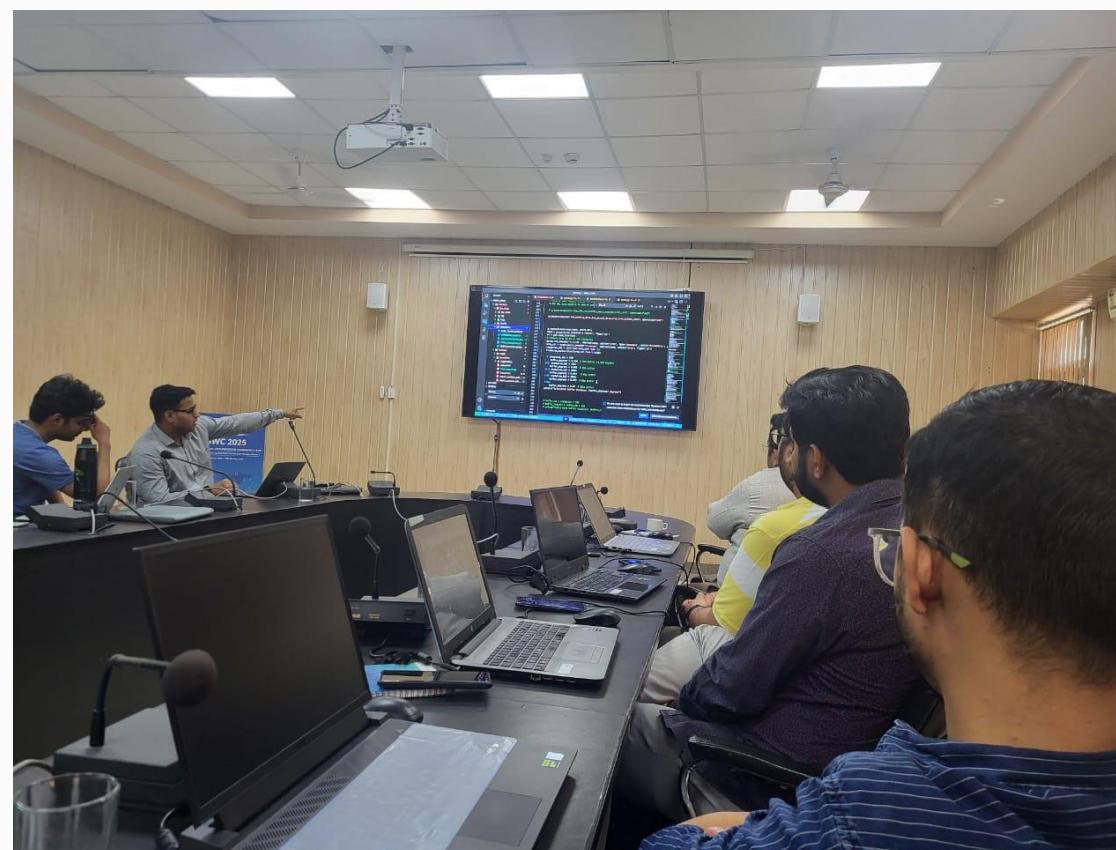
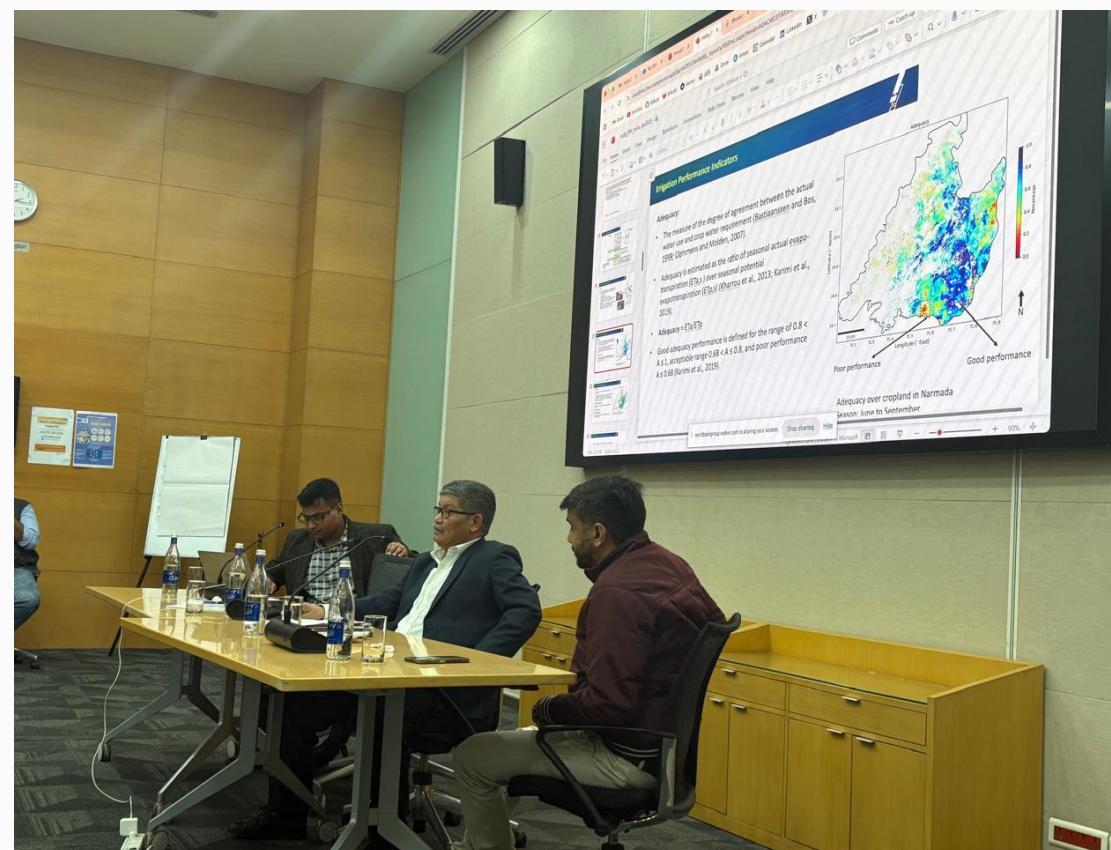
- Country-level Water Informatics Dashboards integrate **precipitation, evapotranspiration, water footprint, land cover, biomass production, and water productivity** indicators derived from Earth Observation data.
- Each dashboard operates at multiple administrative and hydrological levels — from national to basin, watershed, provincial, and district scales — enabling data-driven decision-making for sustainable water management.
- (a) Zambia: zambia.waterinformatics.org
- (b) Kenya: kenya.waterinformatics.org
- (c) Afghanistan: afg.waterinformatics.org

Operational Irrigation Performance Assessment Dashboard

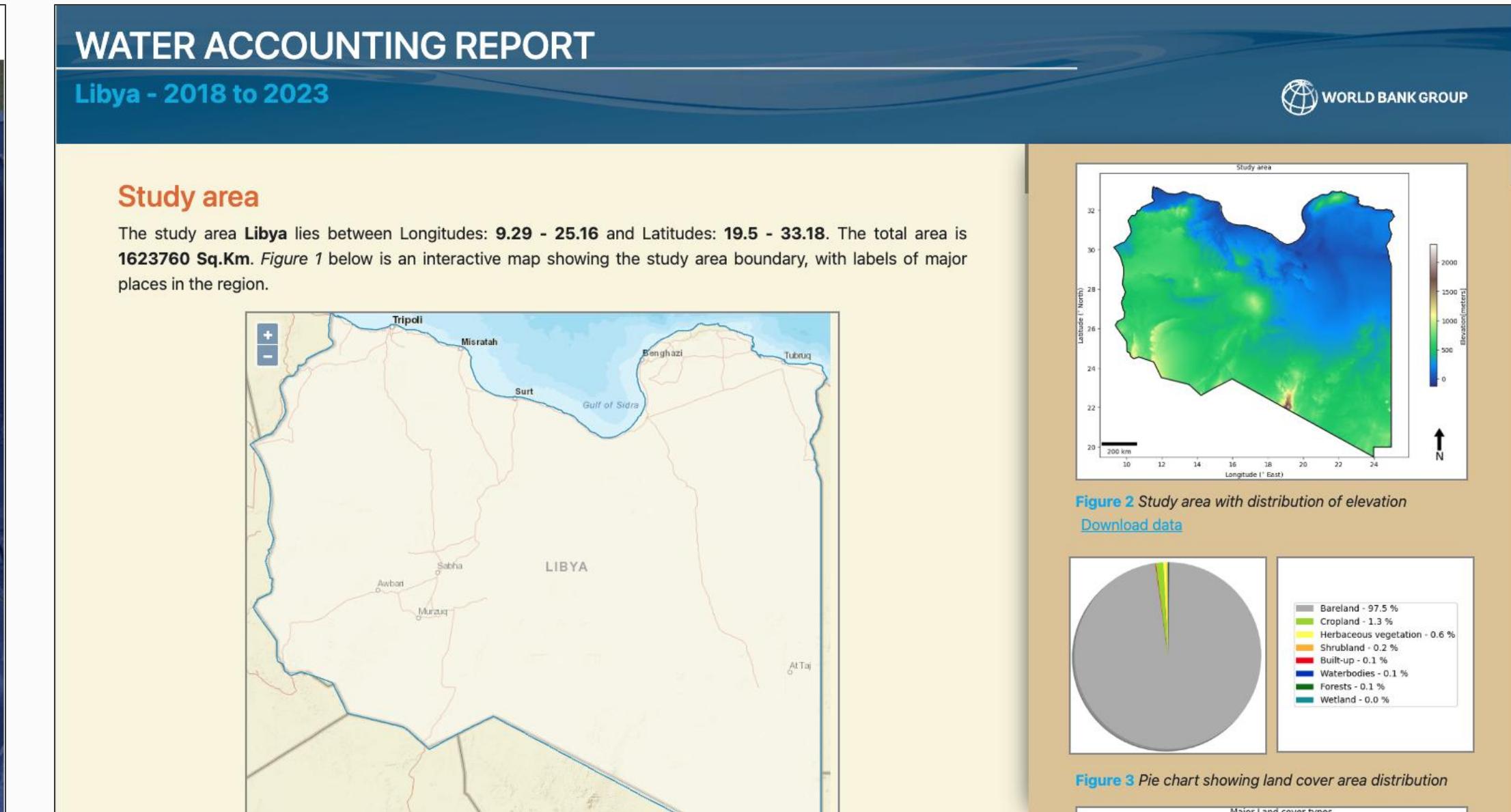
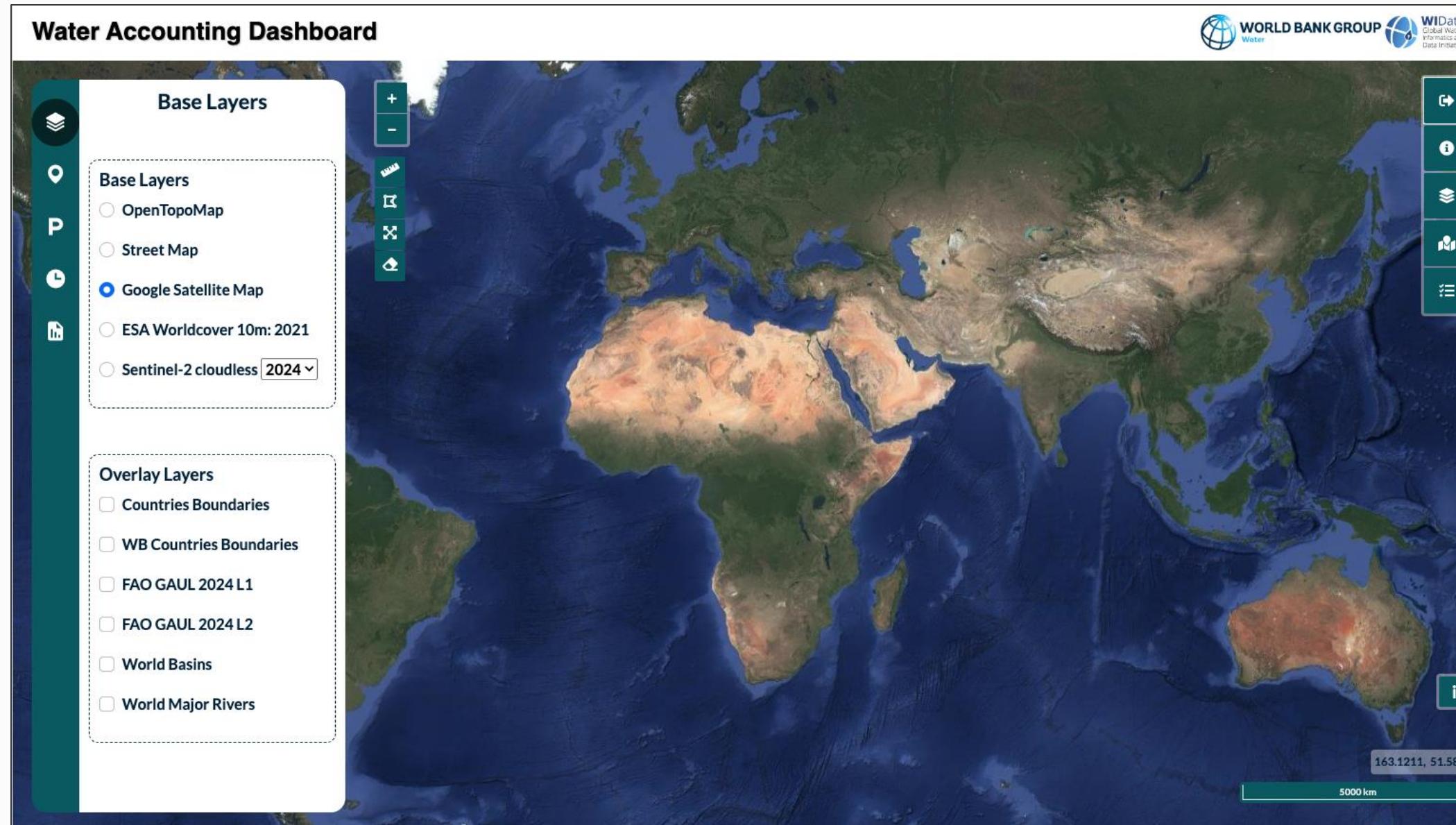


- An automated web-based dashboard designed to evaluate the performance of irrigation schemes across India. The platform supports on-demand report generation based on user-selected year and season
- Currently operational for over 2,000 irrigation command areas, the system integrates Earth Observation data and analytical models to assess irrigation efficiency, and water distribution equity.

Capacity Development and Institutionalization: Conducted extensive training sessions for national and state water agencies including NIH, DoWR, CWC, and various State Water Departments. The platform was officially showcased during India Water Week 2024 as part of the World Bank's Water Informatics initiative.

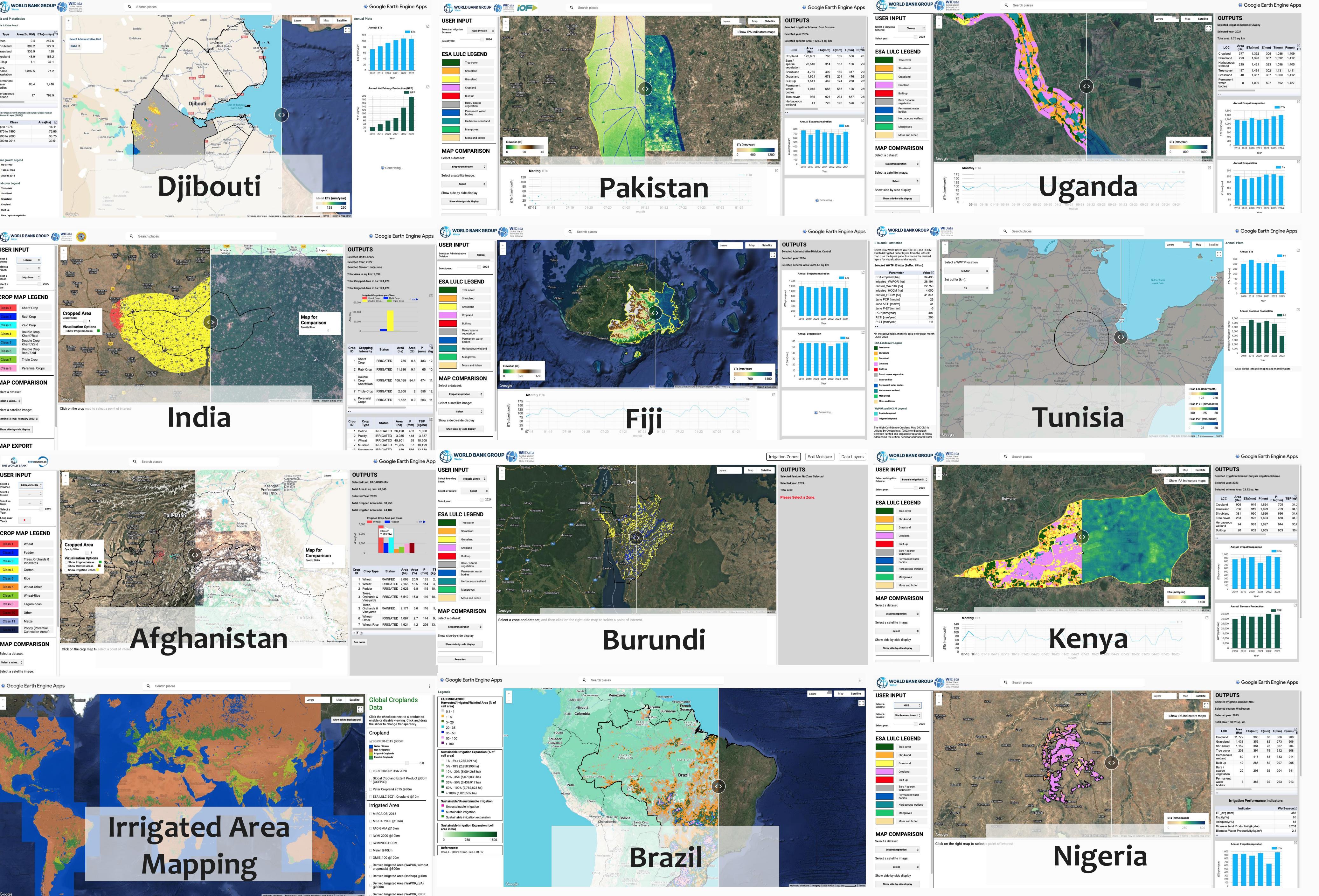


Water Accounting Report Generator

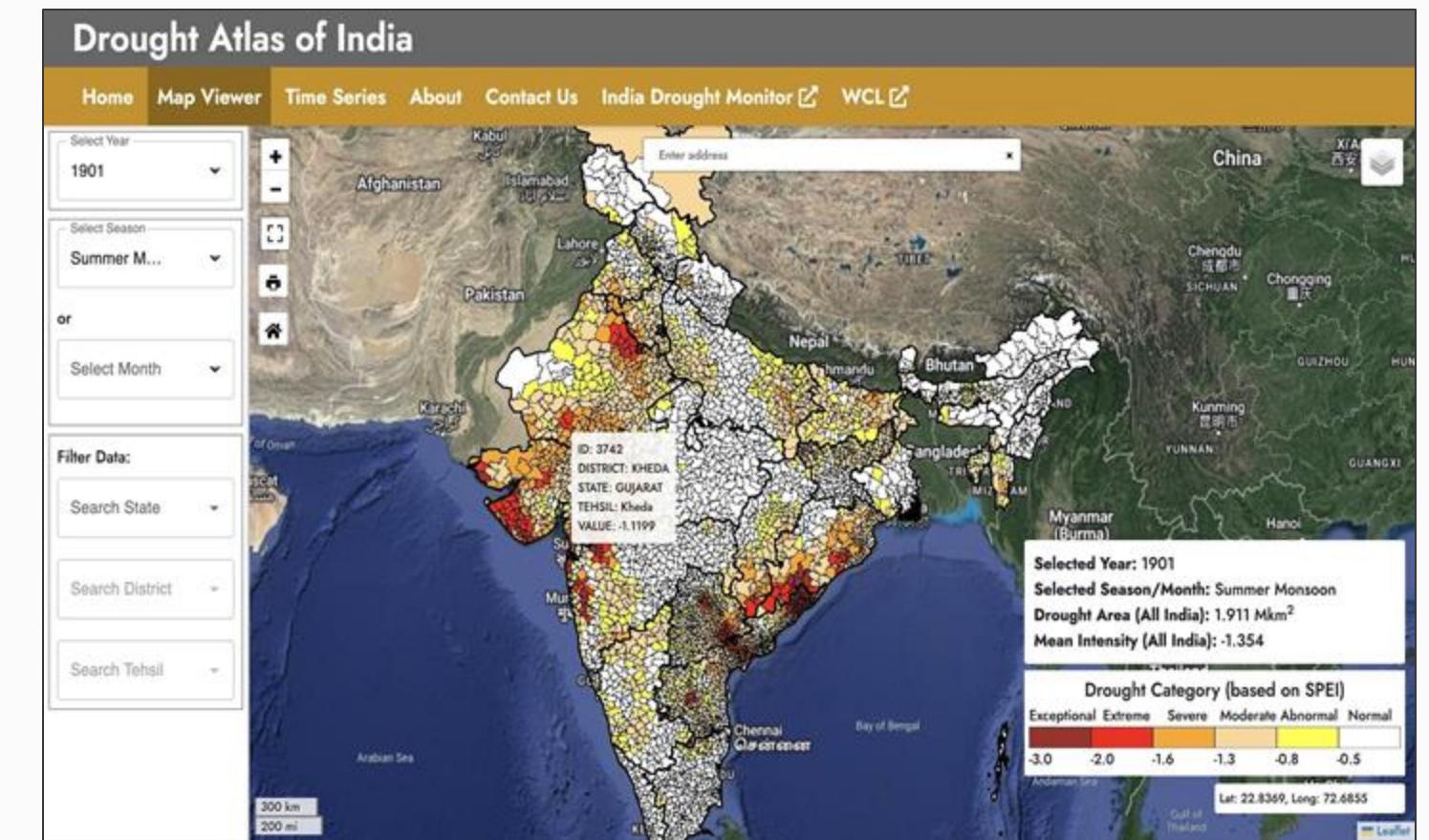
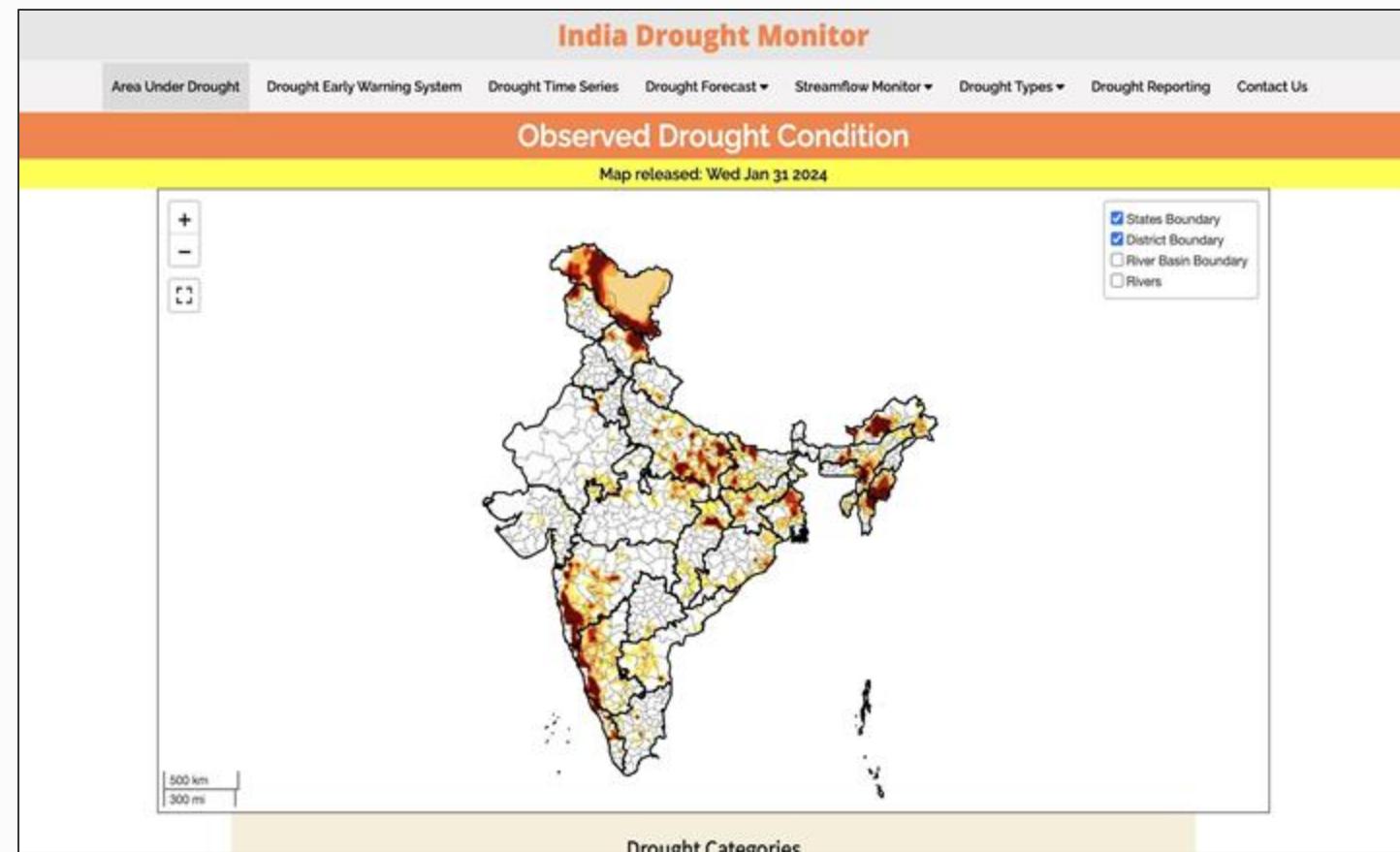
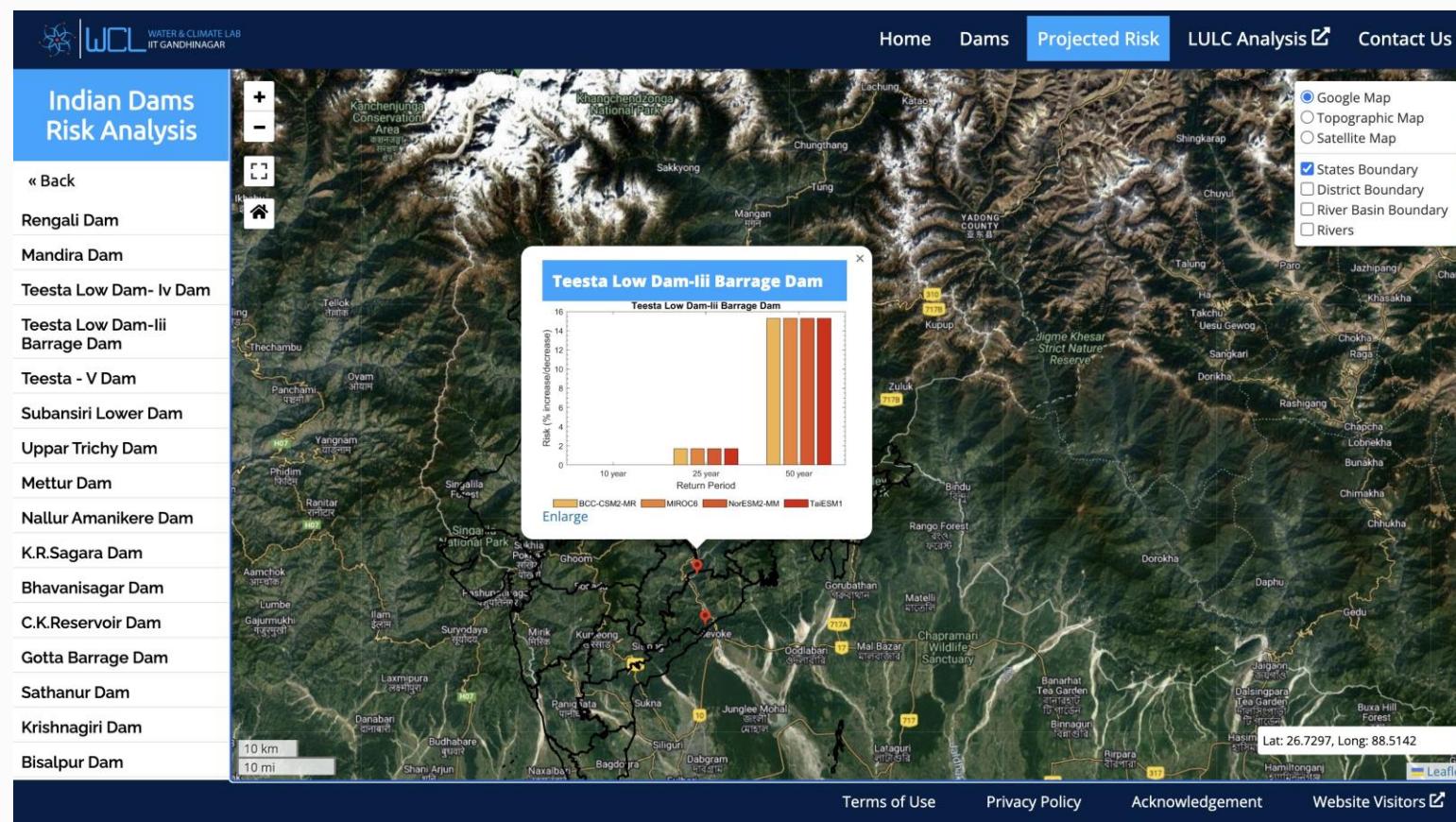


- An automated reporting system that generates water accounting reports for any country, basin, or watershed using open and accessible Earth Observation datasets.
- The platform integrates multiple remote sensing products to enable comprehensive analysis of water availability, use, and productivity.
- Data Sources Integrated:
 - Evapotranspiration: WaPOR v2, WaPOR v3, SSEBop, Ensemble
 - Precipitation: CHIRPS, GPM, GsMAP, ERA5, Ensemble
 - Land Use / Land Cover: ESA WorldCover, Copernicus Global Land Service
 - Elevation: JAXA DEM
 - Water Storage Change: GRACE
 - Dry Matter Productivity (DMP): Copernicus
- <https://global.waterinag.org/>

Remote Sensing-based Country-Level Water Informatics & Accounting Applications



Geospatial Platforms for Water and Climate Resilience: India



Geoportal of Indian Dams (GeOID)

- A web-based GIS application that provides information on over 5400 dams across India.
- <https://wcl-iitgn.github.io/geoid/>

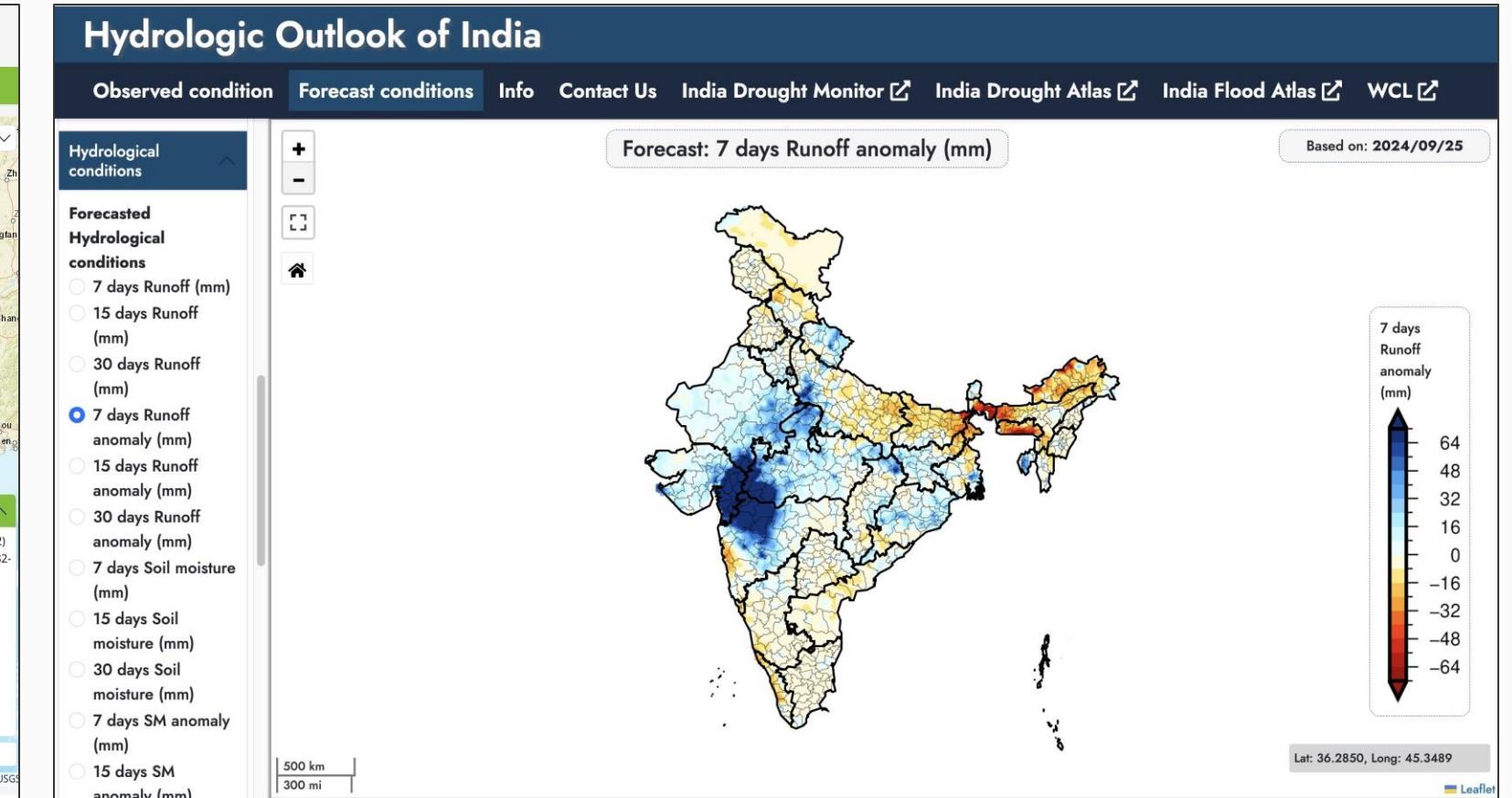
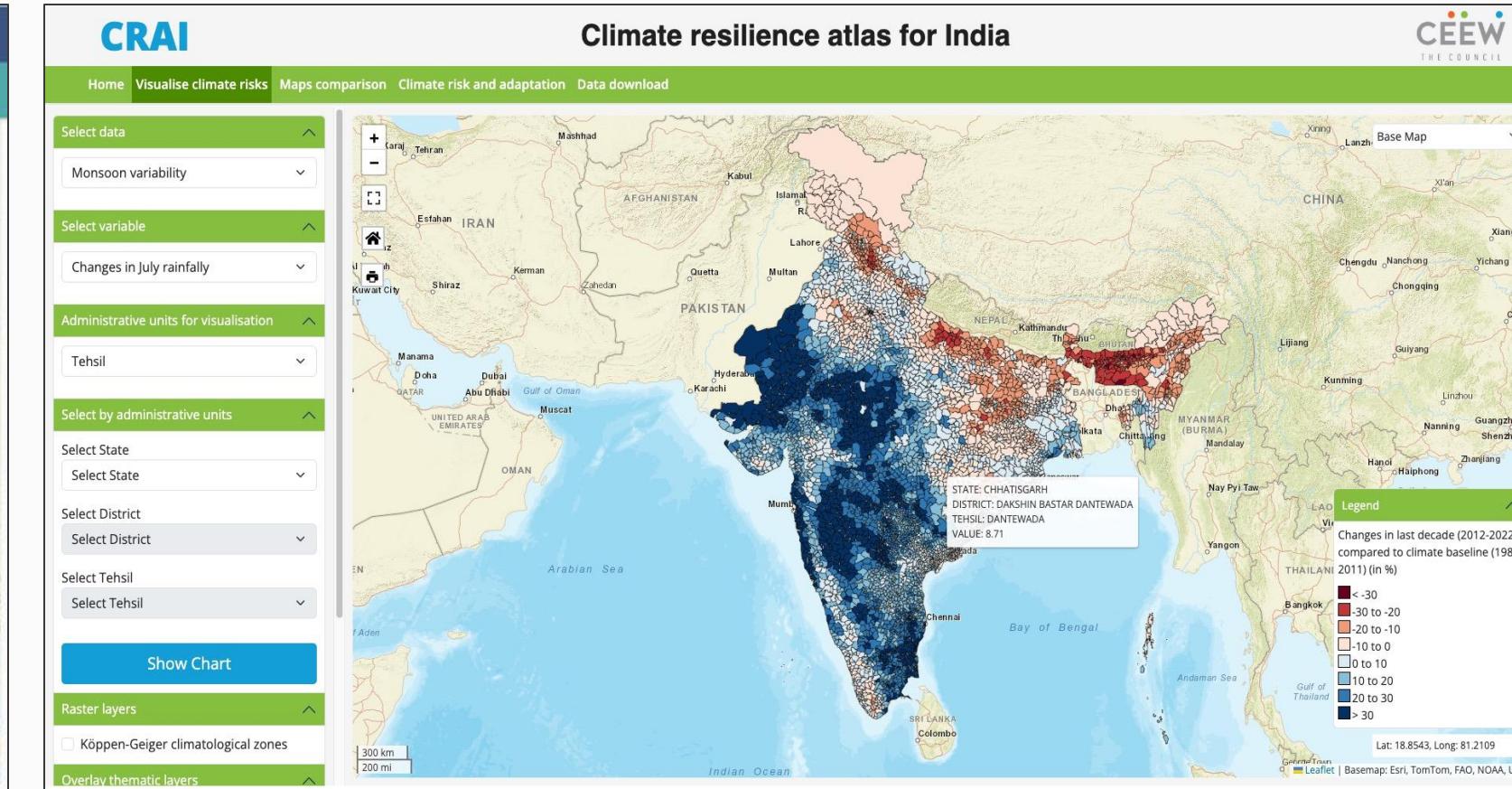
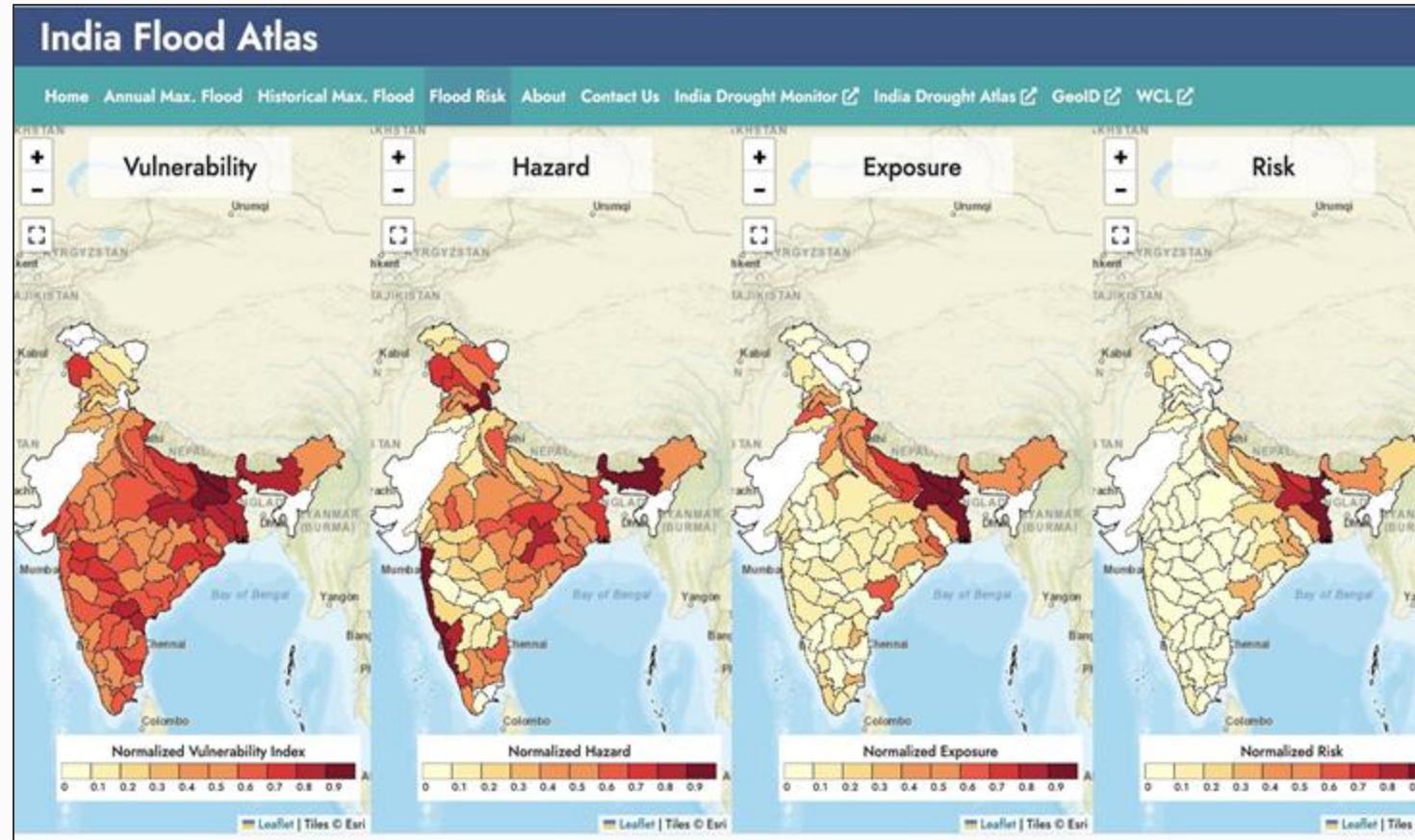
India Drought Monitor

- A real-time drought monitoring and forecasting web application that provides valuable insights into drought conditions in India and updates on a weekly basis.
- <https://indiadroughtmonitor.in/>

Drought Atlas of India

- Provides comprehensive information on drought occurrence, impacts, and risks in India.
- <https://indiadroughtatlas.in/>

Geospatial Platforms for Water and Climate Resilience: India



India Flood Atlas

- Based on the gridded simulations of flood dynamics. The atlas provides a glimpse of past annual maximum flooded area, Historical maximum flooded area and flood risk during 1901-2020
- <https://indiafloodatlas.in/>

Climate resilience atlas for India

- Platform to enable climate risk-informed decision making and identify resilience strategies across sectors.
- <https://ceew-crai.vercel.app/>

Hydrologic Outlook of India

- Provides water outlook for India, covering the current month, the past four months, and a one-month forecast
- <https://indiahydrolook.in/>

Thank you!

You can find me at email and Social media

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