

Water Insights Knowledge Product

OVERVIEW

About the knowledge product

Deep and detailed insight on water risk and investment opportunity at a choice of country, company, sector or basin scale

- Highly bespoke analysis on water demand and supply
- Source data from remote sensing, in-situ measurement, contextual information
- Climate variability incorporated into future demand and supply projections
- Data validated by specialists using location-specific basin knowledge
- Insights produced by internationally recognised water and finance experts
- Outputs leverage 15 years of water research at the University of Oxford, UK

Our approach

We integrate the latest data on water availability and water demand at the highest available resolution to inform our analysis, insights and projections

- Source data on water availability: surface water, groundwater, precipitation
- Source data on water demand: agriculture, industry, domestic
- Verify, clean and calibrate data; highlighting 'known unknowns'
- Synthesise and overlay data analysed, to understand underlying dynamics
- Comment on analysis with summary, conclusions and recommendations
- Share data tables in preferred structure and format

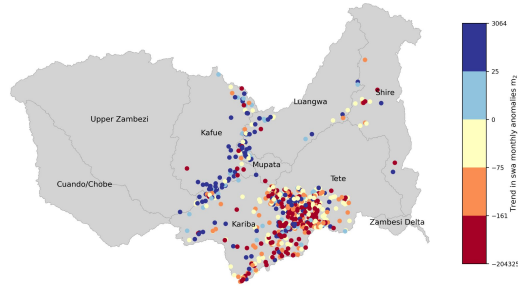
Novelty of approach

Our insights are at higher resolution, using more recently updated data, and with lower latency than any other available proposition at scale

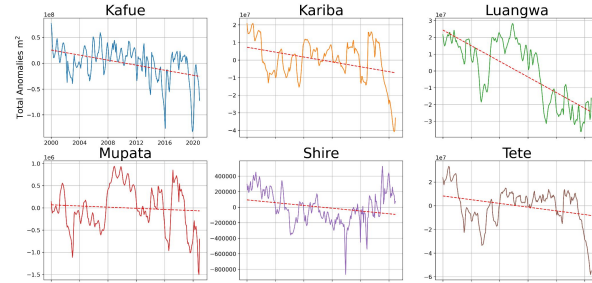
- Observation-based insight that is impossible from models e.g. PCR-GLOBWB 2
- Resolution that uniquely captures intra-basin dynamics
- Agricultural analysis that incorporates crop type, yield, blue and green footprints
- Domestic use analysis that distinguishes by settlement population density
- Industrial use analysis that incorporates asset-level data where available
- Open-source, extensible framework which can incorporate proprietary data

*details in sample report

Example: Surface Water Analysis*



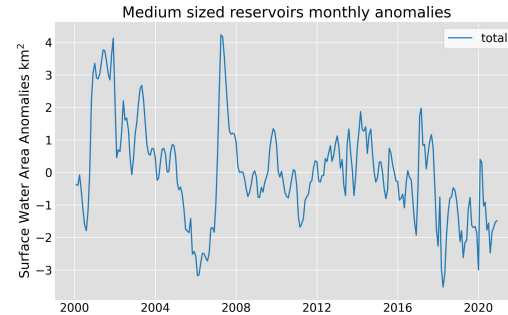
Variation in surface water reservoirs 2000-2020



Trend analysis of sub-basins 2000-2020

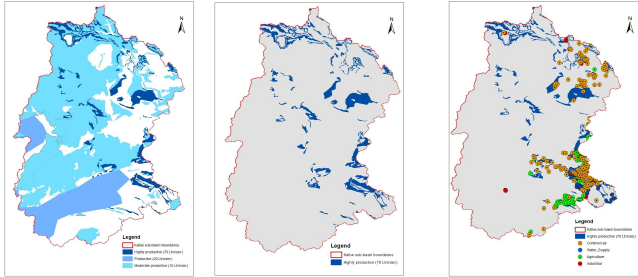


Analysis ready data using remote sensing

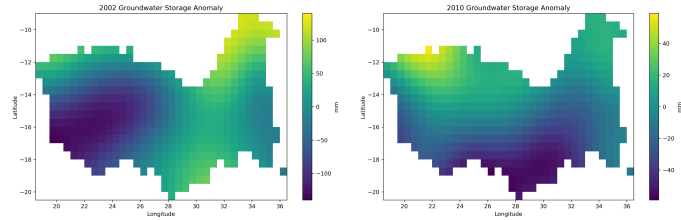


Aggregated trend analysis by source type

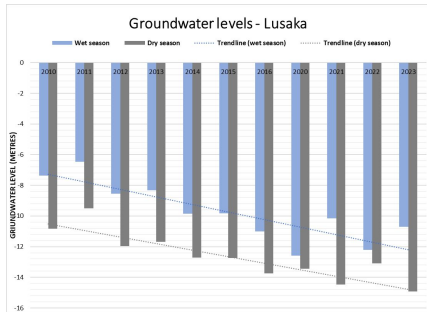
Example: Groundwater Analysis*



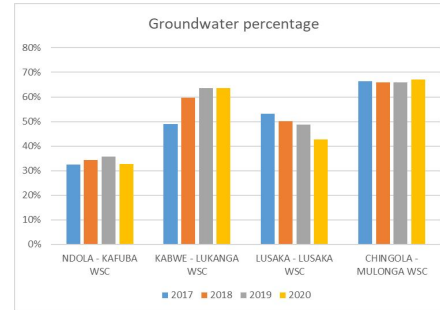
Aquifer productivity and borehole locations



Change in groundwater storage, 2002-2020



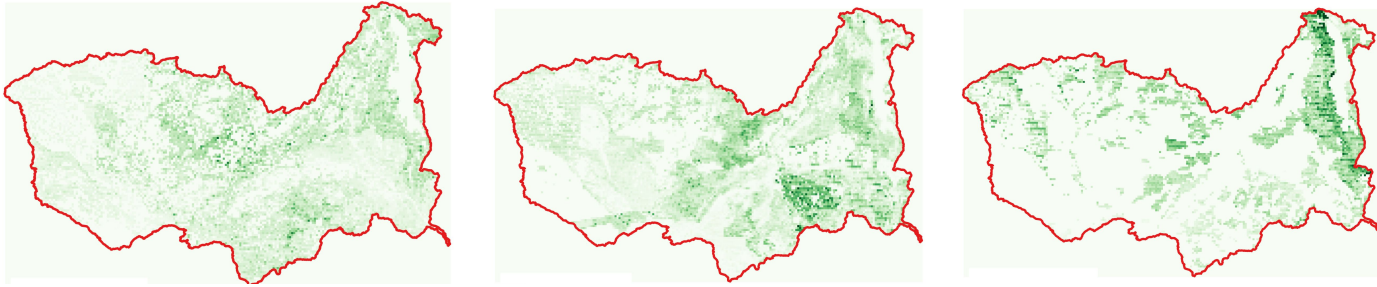
Change in groundwater levels over time



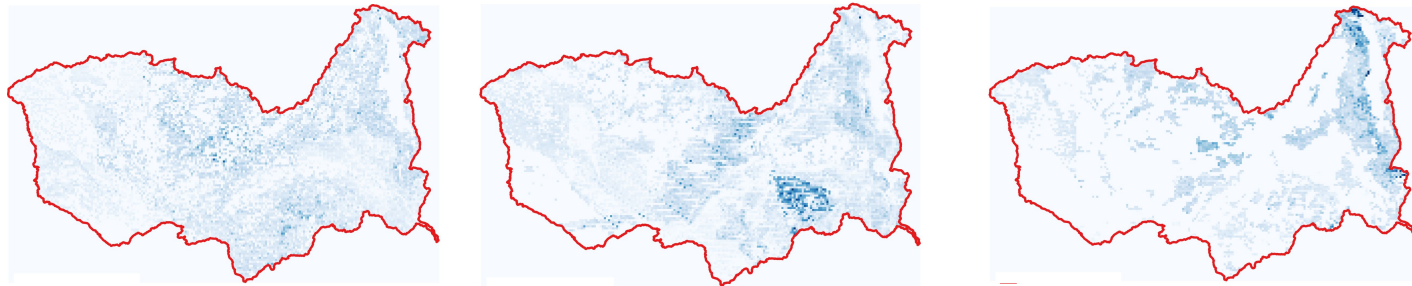
Proportion of groundwater use by utility over time

*details in sample report

Example: Agricultural water use*



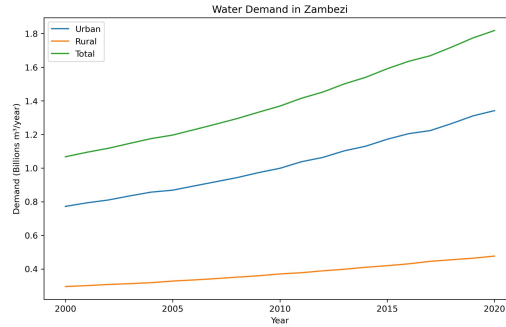
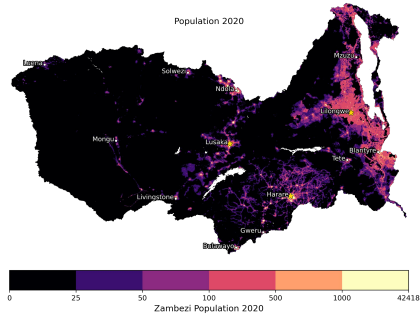
Change in green water footprint by crop type, over time



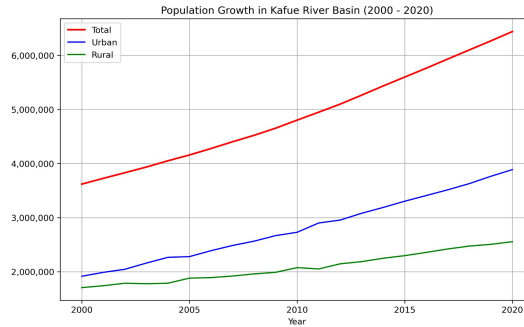
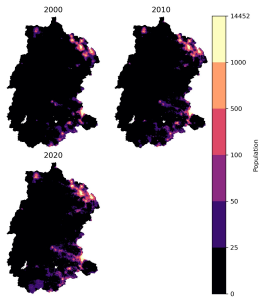
Change in blue water footprint by crop type, over time

*details in sample report

Example: Domestic water use*

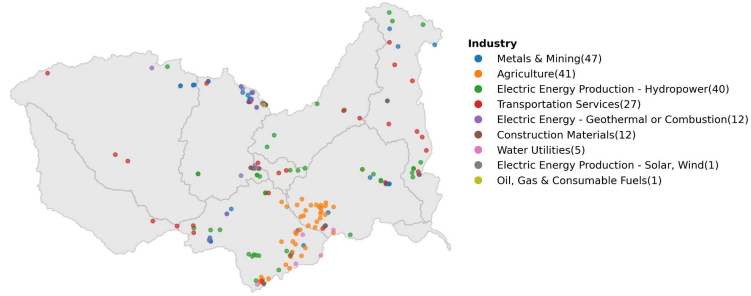


WHOLE BASIN: Population density and estimated water demand over time, urban vs rural

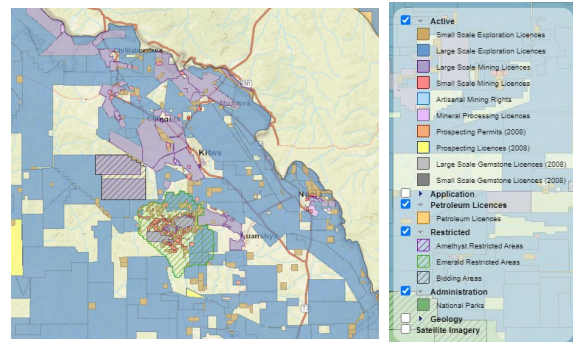


SUB BASIN: Population density and estimated water demand over time, urban vs rural

Example: Industrial water use*



Location of industrial assets by sector



Detail: Mining licences in sub basin, by status

Water Insights: Sample Report

1. Overall analysis of Zambezi basin
2. Detailed analysis of Kafue sub-basin
3. Country-level context: Zambia
4. Sector-level context: critical minerals
5. Report published: Q4 2024



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WATERMARQ

A new approach to valuing water