

# Global Water Security Center



**ANNUAL  
REPORT**

2023



## Letter from the Director



Over the past three years, the Global Water Security Center has gone from mostly an idea to a functioning resource that translates science to aid decision making around water security. We are excited to share some of our recent progress in our first annual report.

From the start, our aim has been to bring a unique contribution by translating water science into easy-to-understand analyses that can be put to work in real-world situations and events. To support that effort, we have grown our staff of analysts to enable GWSC to produce high-quality situational overviews in both short and medium formats. In 2022-23, we added four analysts to the team, with an additional three slated to join before the end of the year.

We've also made significant progress toward the full public launch of our Global Water Data Viewer, an online repository of global water and environmental security information and analysis. We made a Beta version of the product available to testers in summer 2023 and received outstanding feedback that will help bring it over the finish line.

As we continue to grow, we look forward to being able to generate even more content and build partnerships that will help increase situational awareness of global water security issues and support decision making at the water-food-health-energy nexus.

Here's to the future of water security!

Mike Gremillion  
GWSC Director

## Mission

GWSC translates water and environmental science to help key global decision makers improve security at the intersection of water, energy, food, and health.

## Vision

GWSC aims to be the go-to translator of water science to support water and environmental security, providing scientific insight and analysis of global water and environmental data.

## Our Work

We develop country- and region-level Quicklooks and briefs (highlighted below) that give decision makers relevant information about water, food, health, and energy security.



**Nicholas Roberge, Senior Geospatial Intelligence Analyst**

I analyze data, produce maps and visuals, and assemble the final reports. We chose **Haiti** for one of our first Quicklooks. It was immediately clear that the country had still not recovered

from previous disasters and that climate change would only exacerbate the instability of the country. I used NASA, UN, and World Bank reports to highlight the population's exposure to natural disasters, specifically the poor, and the lack of basic sanitation services.



**Hobson Brian, Associate Director of Technology**

I have dived deep to familiarize myself with the users of our data platform, the platform architecture, and its internal workings. I ensure we deliver incremental changes requested by our users while also building the

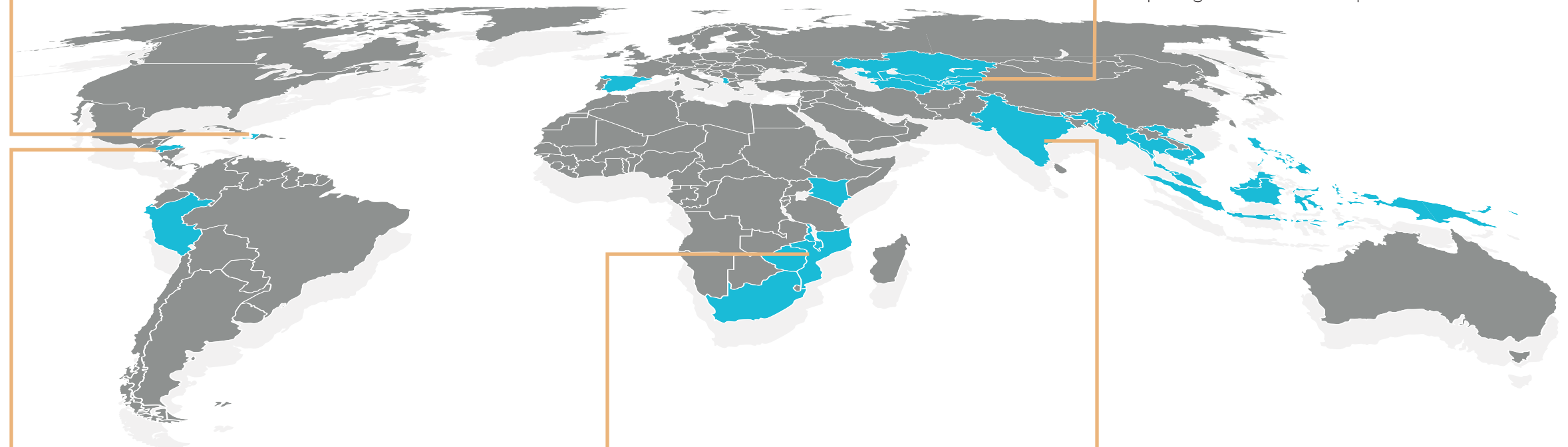
right architecture to support our long-term needs. When I'm not collaborating live with our platform users and developers, I'm actively reviewing our code base, compiling research materials, experimenting with new design concepts, and updating our deliver roadmap to keep our stakeholders informed.



**Kate A. Brauman, Deputy Director**

I connect our analysis products directly to our users, so I'm often on the phone or in workshops with learning about our partners' challenges and listening for the information they need. Then I come back to the Analysis Team thinking

about the big picture. For example, there are a lot of water challenges in **Central Asia**, but since the interest was in transboundary watersheds, we highlighted the tension between hydropower upstream and irrigation downstream. I also work on ensuring our message can be understood at a quick glance – even complex ideas.



**Penelope Mitchell, Human-Environmental Analyst**

I try to figure out how projected shifts in climate will affect people on the ground. For **Honduras**, we used 2050 as the timeframe. Climate projections predict more intense tropical cyclones.

Five percent of the world's coffee is grown there, representing almost 15% of their export income. Most of the coffee is grown in the mountainous region of the country that is prone to landslides. The heavy precipitation from even tropical depressions can trigger landslides which takes out the actual hillsides where the coffee plants are grown.



**Misty Mathews, Communications Liaison**

My work involves editing and strategy – typically summed up by asking, “So what?” I help our analysts carve down their insights to the absolute most important information for the audience and

figure out ways to appropriately highlight that information, supported by facts, statistics, and data. In our **Mozambique** brief, all the right information was there when I received the brief for edits, but we had focused more on prior events instead of looking at potential future impacts. By switching a few things around, we told a much more compelling story.



**Penny Beames, Human-Environmental Analyst**

With each new Quicklook, I dive into literature on the region. Answers rarely just present themselves; I piece together insights to create a working model then work with the team to see

if the data supports the model. When my model is robust, I distill the story into one sentence, which forces me to prioritize forecasts and potential impacts. This was challenging for the **India** El Niño and rice outlook because precipitation and rice production varied so much over time and space.

**\$2.6 million**  
UA Start-up Funding

**\$6.2 million**

US Government contribution FY '22-23

**4** New hires

**7** Total staff

**3** Anticipated additional staff in 2023



**\$51 million**  
Requesting funding to increase GWSC's capacity over the next 5 years ('24-'28)

**21**

Quicklooks and country insight briefs generated

## Testimonials

"The Global Water Security Center has assisted USSOUTHCOM leadership by operationalizing relevant research in order to identify areas within the AOR that may be at risk for a water shortage which may lead to future conflict. The GWSC's information is helping alter planning to ensure USSOUTHCOM is tackling the future challenges climate change will bring."

–USSOUTHCOM Official

"The Global Water Security Center provides the Department of Defense with cutting-edge water and environmental security research and analysis. This allows us to gain contextualized insight on the impact to national security risks for the US, its allies and its partners."

–Senior Navy Official

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(205) 348-5888

[gwsc@ua.edu](mailto:gwsc@ua.edu)