



From Data to Action: How are Digital Water Tools Solving challenges of Water Security?

Dr. Giriraj Amarnath

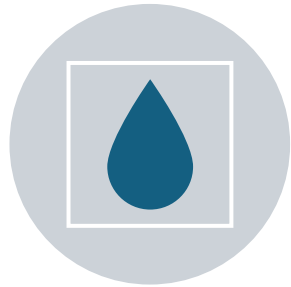
International Water Management Institute (IWMI), Sri Lanka



INITIATIVE ON
Climate Resilience



How do digital technologies support sustainable and resilient future?



Optimized Water Management and Efficiency



Improve water quality

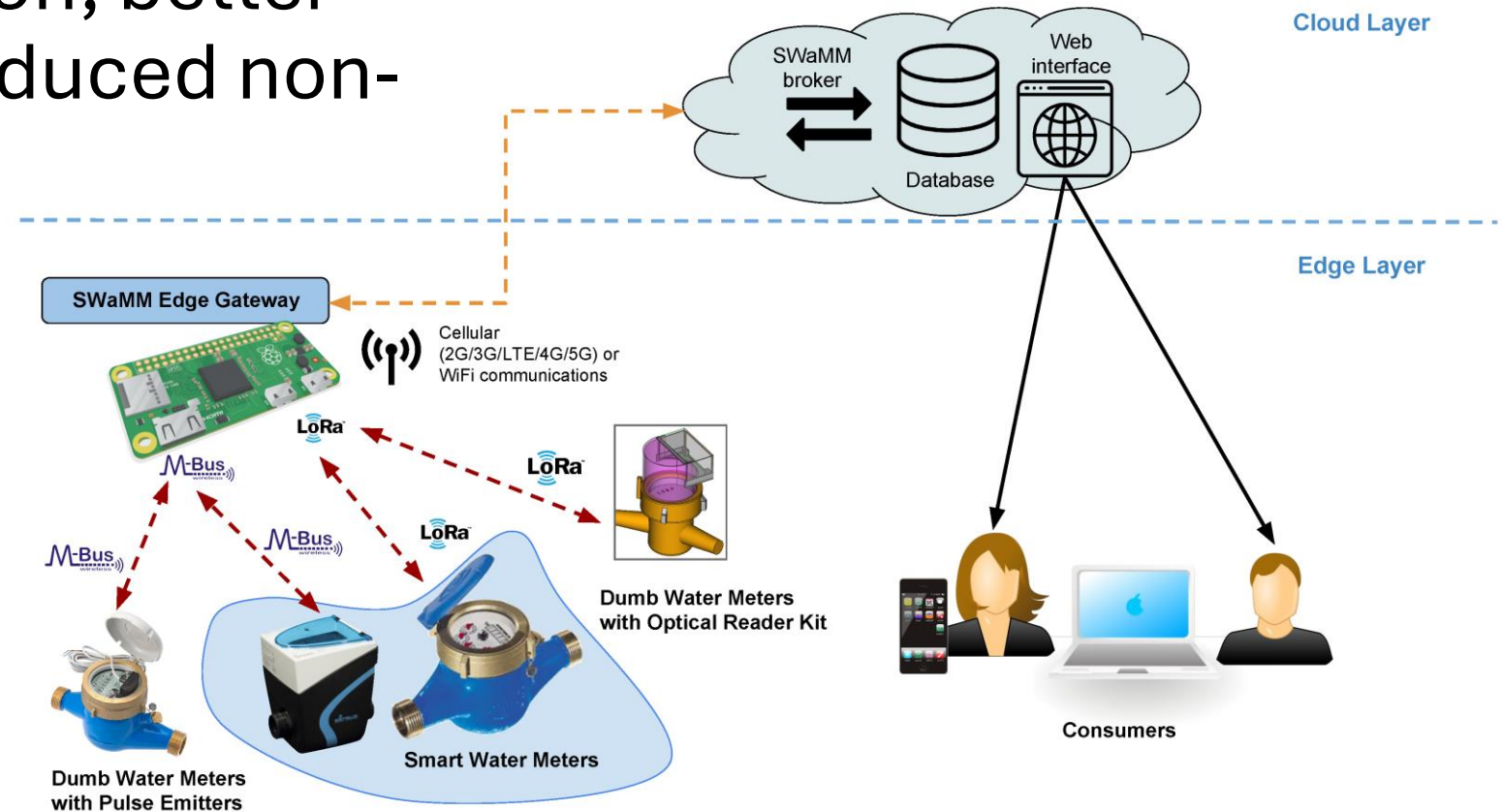


Climate resilience



Transparency and accountability

Smart Metering: Real-time water usage data leads to more informed consumer consumption, better leak detection, and reduced non-revenue water loss.



Saving water: Reducing waste and optimizing for every drop

Smart Irrigation: Precision irrigation systems powered by sensors optimize water use in agriculture, one of the biggest water consumers.

In the US, the economic value created by irrigated agriculture estimated at an almost \$9 billion direct economic impact and a \$23.3 billion impact when including indirect induced impacts and created over 167,000 jobs when secondary impacts are included (2021 report)

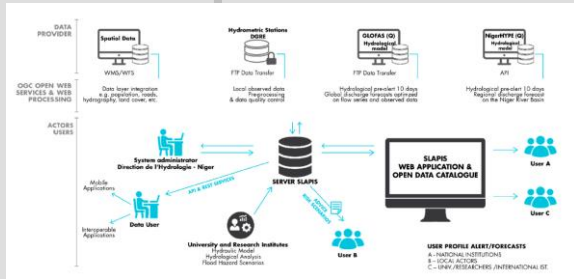


AI for solving problems across water systems.

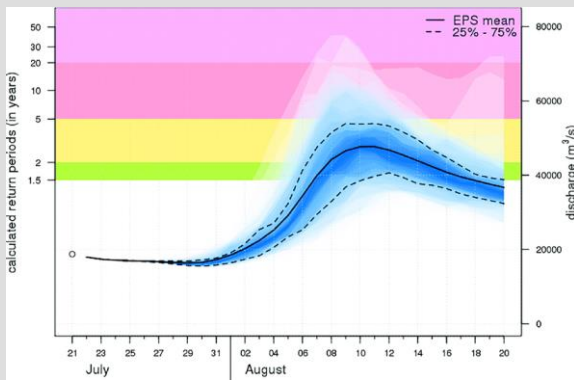
AI-powered tools help anticipate potential leaks and proactively manage infrastructure, reducing water wastage.

What do the emerging flood risk technologies look like?

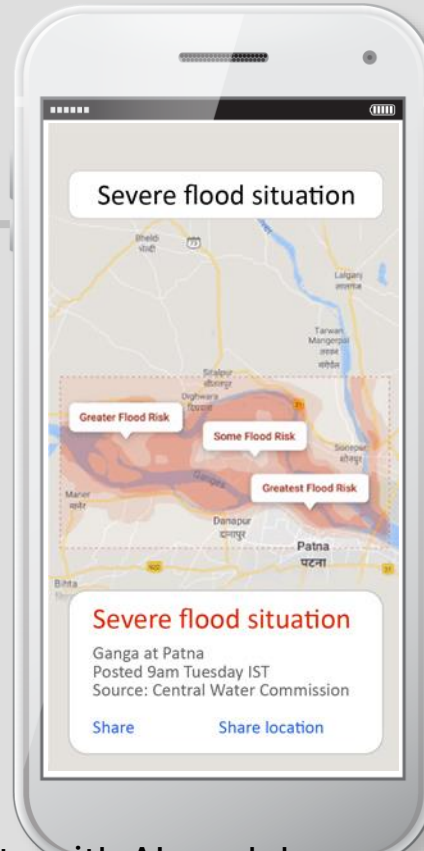
AI-based Prediction System



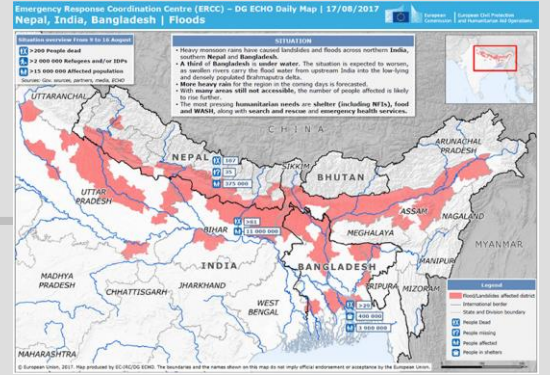
Flood Forecast



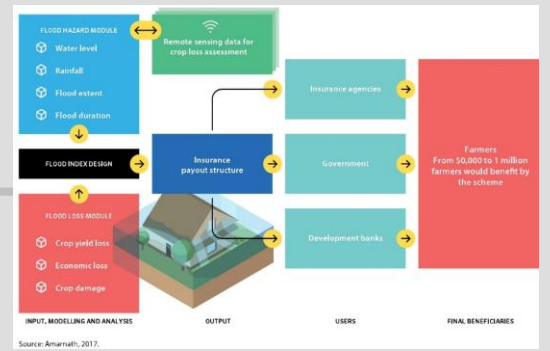
Flood Alert



Emergency maps



Risk-financing instrument



Flood Forecasting & Early Warning: Enhanced data with AI models more accurately predict floods and send alerts, allowing better preparedness.



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West and Central African
Food Systems Transformation

IWMI
International Water
Management Institute

CGIAR AWARE Platform

Early Warning - Early Action – Early Finance

- Real-time monitoring of floods and drought
- ML models for health risk predictions
- Translate early warning to early action
- Data sharing platforms
- Improve accountability and transparency
- Community engagement



Country Focus: Zambia, Senegal, Nigeria, Rwanda, Sri Lanka

<https://awaredemo.iwmi.org/climber>

Future Outlook

- **Global digital water solutions market is growing rapidly, with a projected CAGR (Compound Annual Growth Rate) of 30.8% between 2024 and 2029.**
- **Market size is expected to reach \$150.96 billion by 2029, up from \$40.54 billion in 2023.**
- **Investment Trends: Expenditure by water and wastewater utilities on digital solutions is forecasted to increase at 8.8% annually, climbing from \$25.9 billion in 2021 to \$55.2 in 2030.**