



Tackling local water security with innovative technologies and approaches

Dulce Soares

Water Engineer

Similie



WATER
WASH 2023
FUTURES

Achieving SDG6 in a Changing Climate



#WaWF23

Over 2 billion people in Asia-Pacific have limited access to water...

- A changing climate is exacerbating this issue for many rural communities
- Lack of adequate and appropriate tools to manage water resources effectively
- Many WASH programs also focus on water supply management, and not the water resources themselves



Similie's Innovative Rural Water Supply Monitoring System

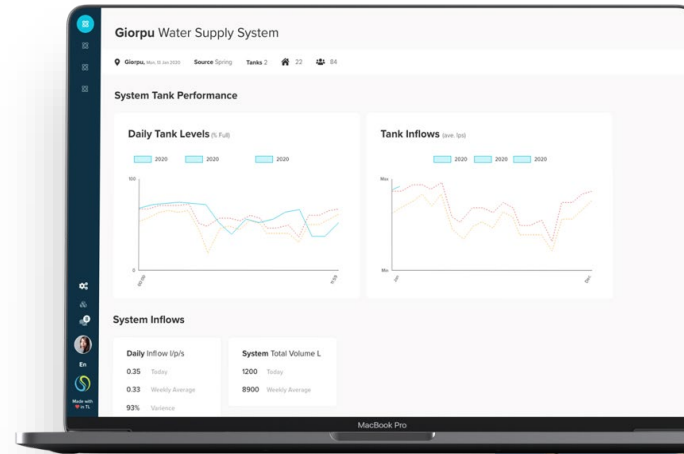
Implemented with the Government of Timor-Leste and WaterAid

Parabl

- › Configurable cloud platform
- › Powerful analytics
- › Visualisation of data
- › Action orientated

Hyphen

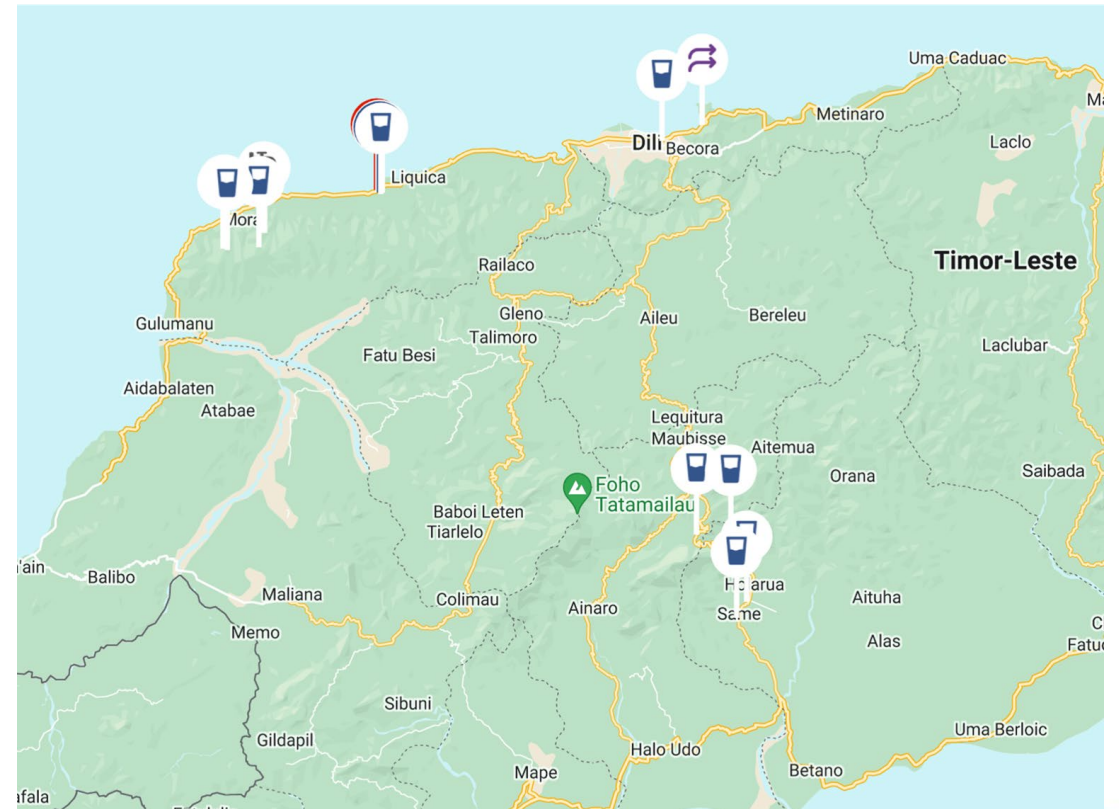
- › Multi-purpose data logger
- › Plug and play sensors
- › Seamless integration to Parabl - cloud platform
- › Remote sensor / logger management
- › 3G/4G. LoRaWAN soon



Similie's Innovative Rural Water Supply Monitoring System

Implemented with the Government of Timor-Leste and WaterAid

- Real-time, remote monitoring of 16 rural water tanks
- Informing WaSH practitioners on the functionality of community water infrastructure.
- Detecting maintenance issues and the effects of climate change on water supply



Configurable Actions

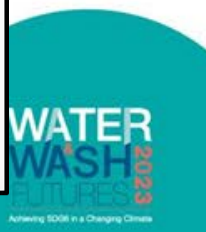
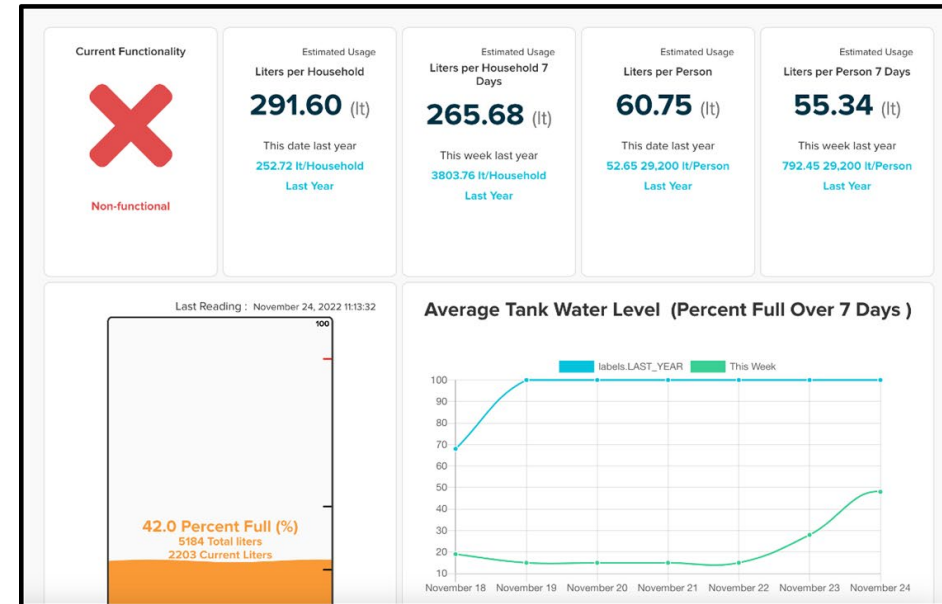
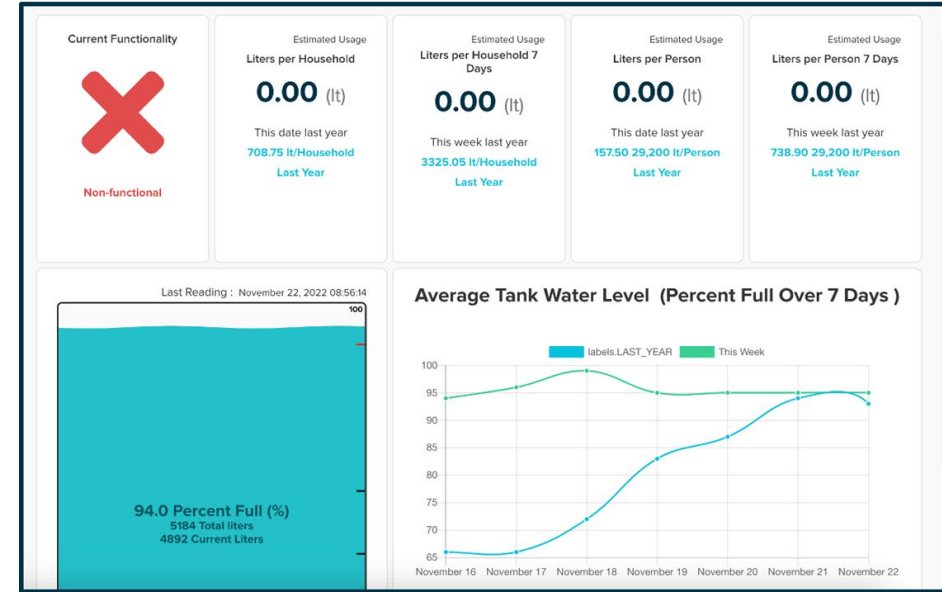
- Users can create thresholds based on all available parameters.
- Once thresholds are reached, actions are automatically triggered.
- Actions include SMS/e-mail alerts, automatic pump action, automatic valve action, etc.
- Messages can be configured to recipient types – improving outcomes driven by data.



Observer	Date	Percent Full (%)	Water Depth (cm)	Hydrometric Level (cm)	Weekly Average (%)	Liters Available (ltr)	Change Velocity since last read (cm)
Simile Network	January 26, 2023 14:36:27	19	31	139	28.3176	1004.4	0
Simile Network	January 26, 2023 14:21:27	18	29	141	28.3847	939.6	0
Simile Network	January 26, 2023 14:06:27	17	28	142	28.4504	907.2	0
Simile Network	January 26, 2023 13:51:27	18	29	141	28.5191	939.6	0
Simile Network	January 26, 2023 13:36:27	18	30	140	28.5878	972	0
Simile Network	January 26, 2023 13:21:27	20	32	138	28.6565	1036.8	0
Simile Network	January 26, 2023 13:06:27	20	33	137	28.7191	1069.2	0
Simile Network	January 26, 2023 12:51:27	21	34	136	28.7136	1101.6	0.0005

Visualised data for faster decision-making

- Similie’s water monitoring system allows for configurable data visualisations based on individual client’s needs
- Tank Functionality:
 - **Functional:** water levels are changing within the tank
 - **Not Functional:** water levels are not changing in the tank




Alerts for Better Water Management

- In Liquisa, WaSH practitioners set-up thresholds to inform water managers on water supply levels:
- **Red:** Be Advised! Water Supply is Low (Bee menus)
- **Blue:** Overflowing Water (Be Nakonu)

PamDeri-Tank04
recurrences.mistrusted.clouded

Aviso! Bee menus
November 22,2022 07:36:39


Parameter	Threshold	Value
Percent Full (%)	20	15

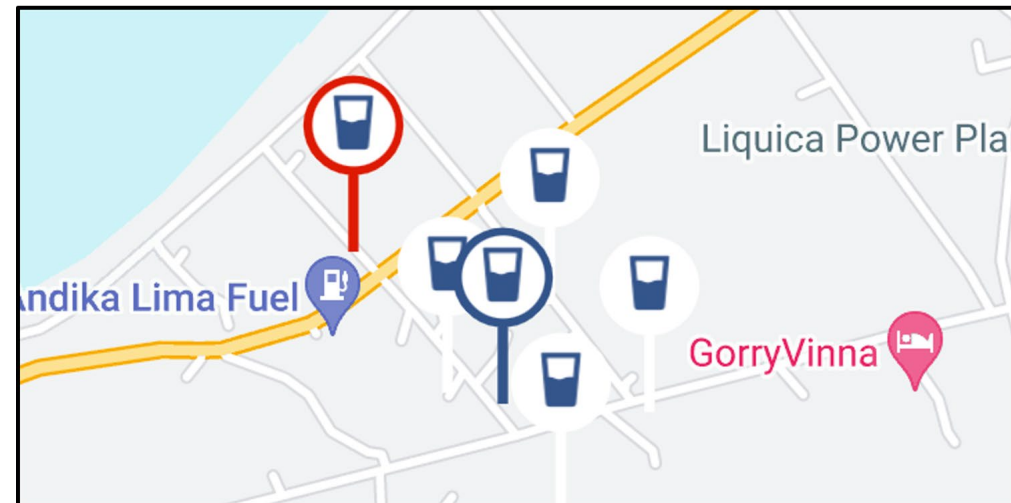
 Water Tanks [Visit →](#)

PamDeri-Tank06
regenerated.verbatim.zombies

Be Nakonu
November 22,2022 05:14:27

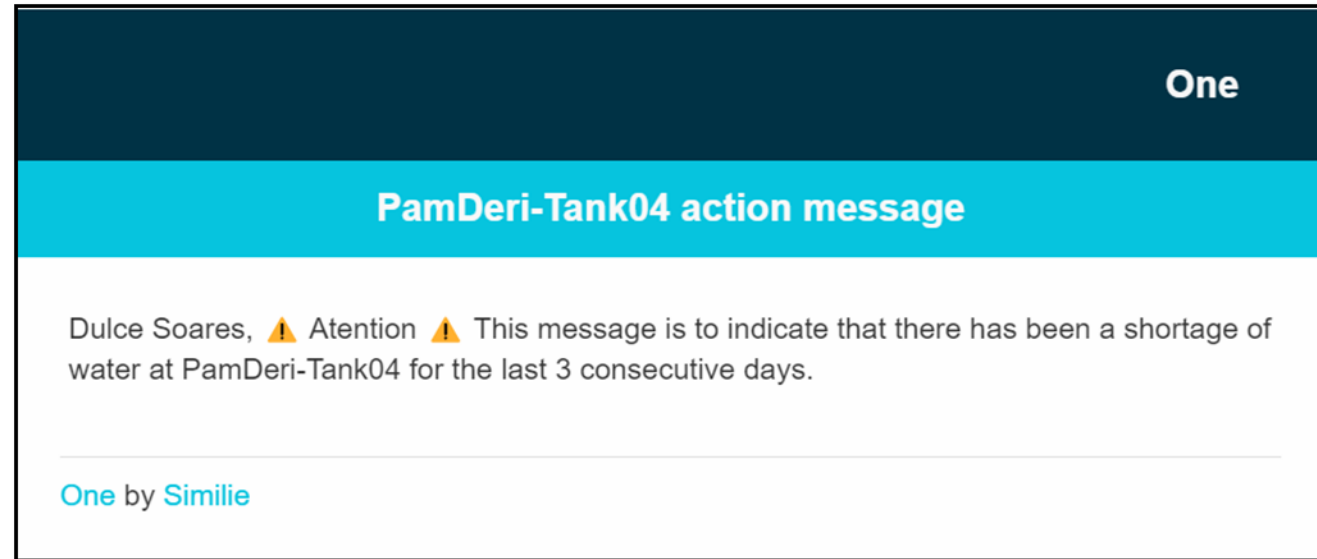
Parameter	Threshold	Value
Percent Full (%)	86	94

 Water Tanks [Visit →](#)



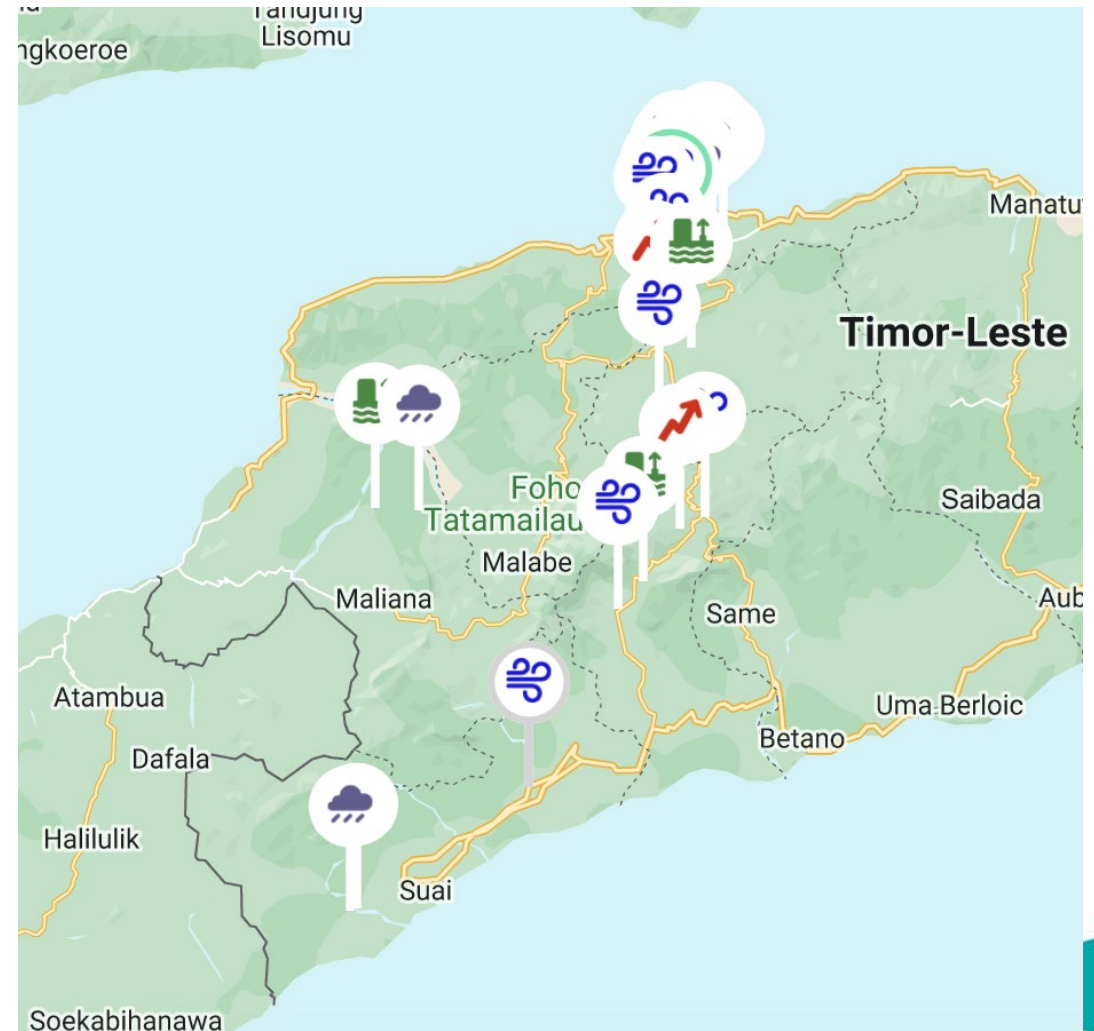
Automatic and Configurable Alerts for Water Managers

- WaterAid Timor-Leste set up thresholds to send e-mails to water managers when water supply has significantly decreased.
- Configurable alerts and thresholds help water managers customize this tool to meet their needs.



Current Developments

- Weather stations near water supply systems inform on climate change
- QR codes allow community members to check water levels and report maintenance issues



Key Takeaways

- To effectively address the impact of climate change, it is crucial that the necessary tools and resources are made available to manage water resources efficiently and sustainably.
- Innovative technologies play an important role in the management of our water resources
- Investing in tools to provide better insights on water resources and supply, improving the government's ability to provide more equitable water supply



Thank you! Obrigada Barak!

Dulce Soares
Water Engineer
dulce.soares@similie.org