



FLOWS

FLOOD WARNING SYSTEM

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T H E P A T H F I N D E R S

Climate change-induced flooding in Nigeria leads to significant destruction of lives, properties, and agricultural lands.

Our GCGO is Climate Change

Addressing this problem is crucial to protect vulnerable communities, preserve livelihoods, and minimize the loss of lives and financial Assets caused by floods in Nigeria



Person Impacted

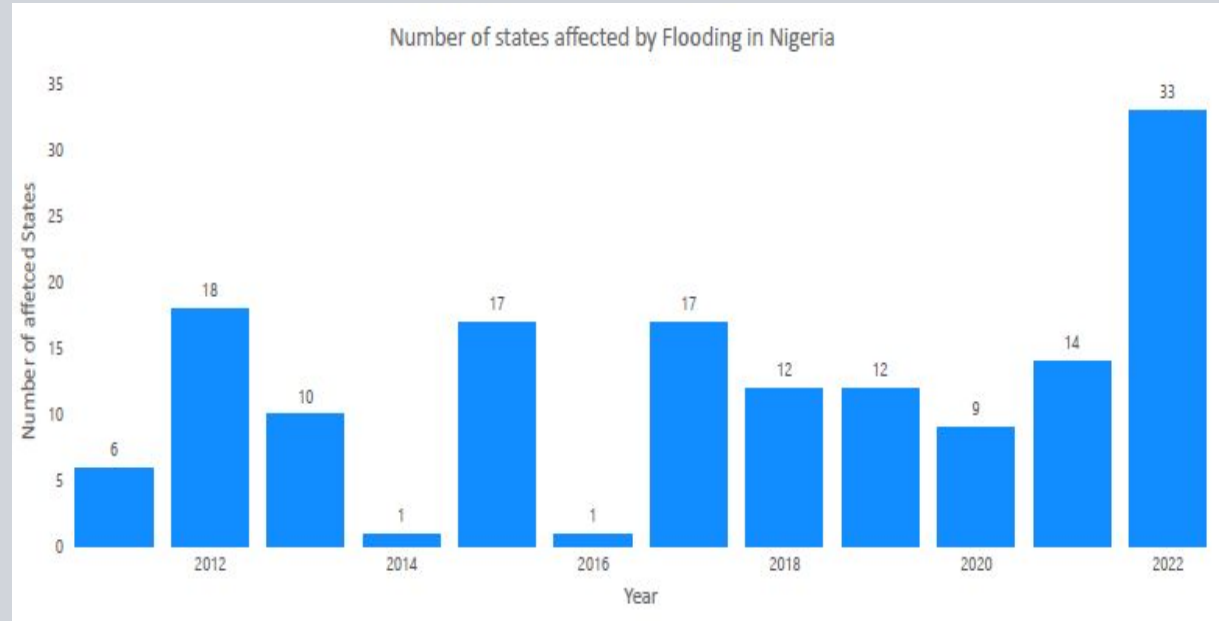
Ada Okonkwo, a small-scale farmer residing in a Akuku Toru Local Government, Rivers state, Nigeria.

Impact

Flooding destroys Ada's crops, leading to income loss and food insecurity, while damaging her home and forcing her family to evacuate.

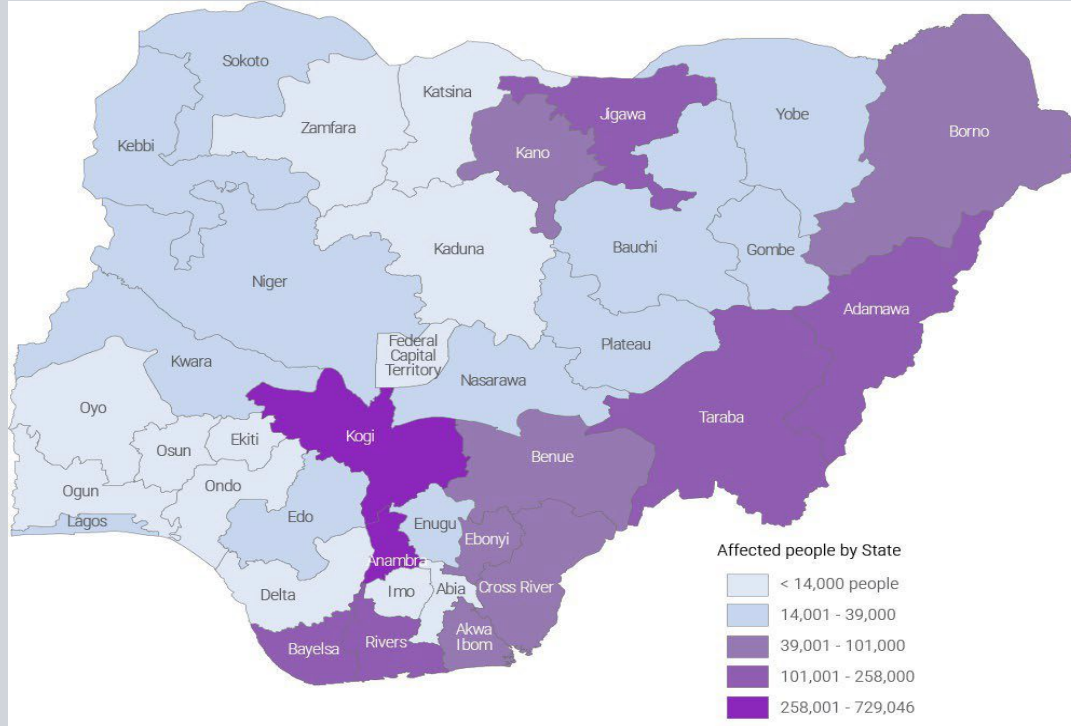
Frequency of Flooding Events

There have been over 134 flooding events recorded in Nigeria, from 2011 to 2022.



Source: Numar Umar & Allson J. Gray 2022. Flooding in Nigeria: a review of its occurrence and impacts and approaches to modelling flood data

People affected by Flood by State

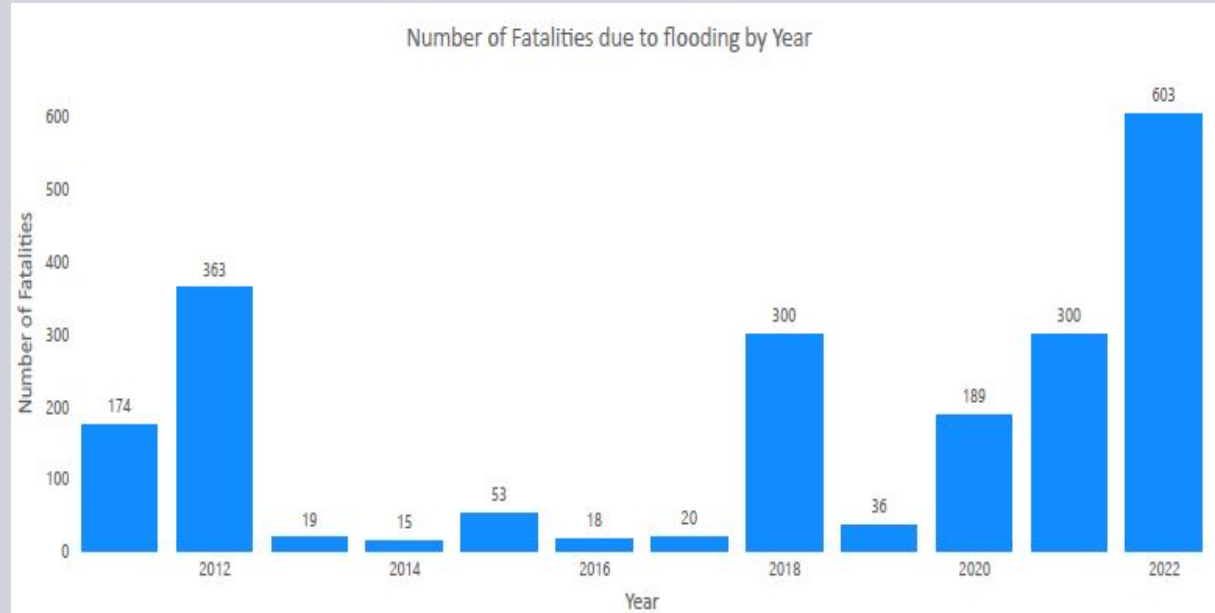


According to NEMA
over 1.4 million
Nigerians have been
affected by the
flooding for 2022.

According to NEMA as of 19th of October 2022

Annual Flood Casualties

There have been at least 2090 fatalities resulting from flooding events in Nigeria from 2011 to 2022.



Source: Numar Umar & Allison J. Gray 2022. Flooding in Nigeria: a review of its occurrence and impacts and approaches to modelling flood data

PROPOSED SOLUTION

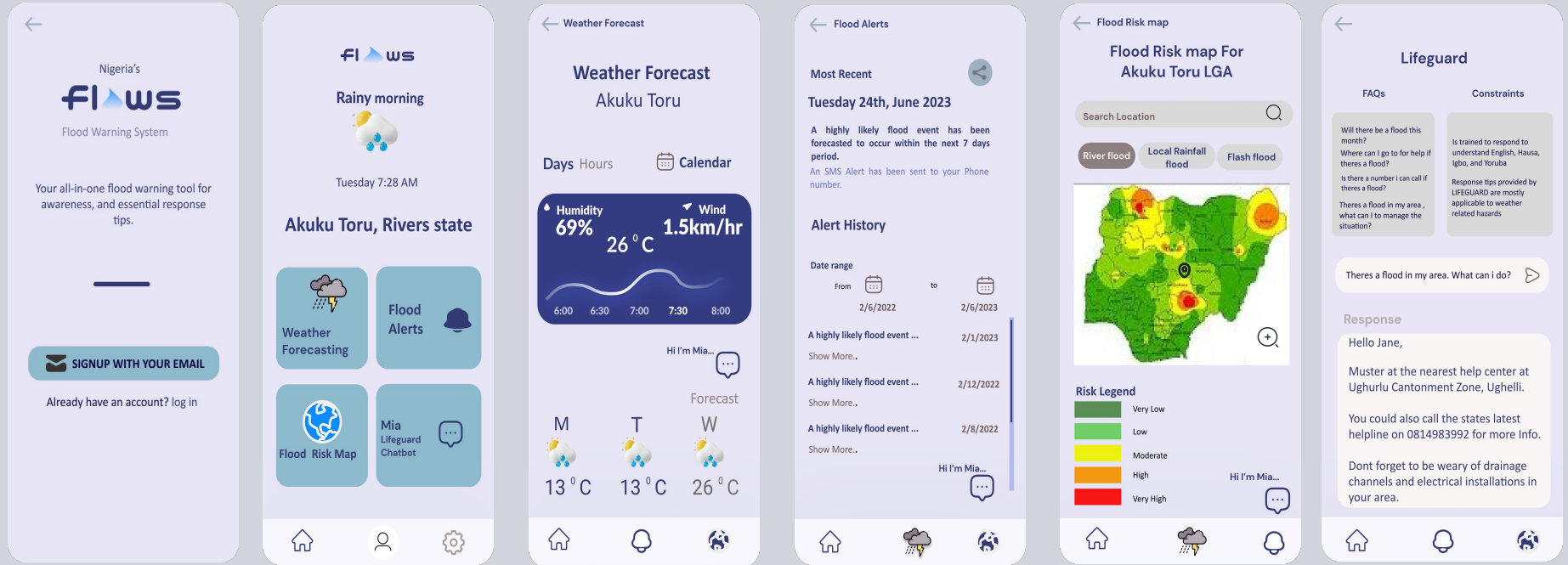
Flood Warning System (FLOWS) which leverages machine learning to detect and predict floods, sending alerts to the government and citizens in flood prone areas, and guiding to safer locations.



We chose this solution because it offers the most immediate result to reducing the number of fatalities and economic losses due to flooding.

This solution is likely effective because it is driven by data at the local government level. This will allow highly accurate flood predictions. Additionally, It allows easy dissemination of flood awareness and response actions directly to the citizens

Prototype-FLOWS



PAIN POINTS

1

My users want to be able to forward the alerts gotten from the tool directly to their social media platforms

2

My users want to receive alerts as a pop up on their phone screen or sms in different languages for people without access to smartphones

3

My users want to be able to easily ask the chatbot questions from any page of the Tool when necessary

FEEDBACK RECOMMENDATIONS

1

We have implemented a “share” option on the alert page

2

We will include a settings option for users to give the Tool permission to give popup/notification messages on their phone screens and also implement SMS feature for users.

3

We have made the chatbot button available on all the screens

If my TEAM is funded?



If my team is funded, we would further enhance the FLOWS system and implement it. We would collaborate with field experts, extensive user testing and facilitate community outreach. We would also enhance FLOWS predictive capabilities by installing renewable energy weather monitoring devices

WHY THE SOLUTION?

We chose this solution because it offers the most immediate impact in reducing the number of fatalities and economic losses due to flooding.

The solution can make a significant difference by offering **timely, accurate and direct** warning to citizens and businesses of impending floods so as to save lives and business assets. Also, the tool will give the Government accurate information for planning effective flood management & support programmes



APPENDIX

FLOWS' Alert Sharing Feature

