Smart Flood Management

Adudu, Gracia
Badru, Zainab
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The rapid growth in population in many parts of the world and climatic change has resulted in flooding and its attendant challenges. The project seeks to minimize loss of lives and properties due to flooding by alerting residents on time, indicating the areas being flooded which will guide response and rescue operations. The device was divided into segments indicating areas prone to flooding, fitted with water level detectors. Signals are triggered when the water exceeds the prescribed level. The signals generated are synchronized with the phase lock loop and super-imposed on the mains by the isolating transformer. An LM555 timer generates a 60 KHz frequency which is interpreted by the decoder LM567, causing the transistor to switch on the light emitting diode and the buzzer in the modules located in all houses and monitoring office, indicating the particular area being affected. Furthermore, the system has a GSM module interfacing with the Mobile App which was designed JAVA and PHP. Signals are sent from the GSM base stations to the Apps on the phones and tablets which decode the signs and present flooded areas and other vital information in a user friendly format. The device does not generate any toxic products and need no extra connections between the homes and regions being monitored as it work along with the mains, and signals can be transmitted over long distance using radio signals thereby making it cheap, durable and sustainable and at the same time prevent loss of lives and properties.

Awards Won: