

# Flood early-warning System



*ELPAM Electronics Ltd. provided a system to warn residents of tsunamis, earthquakes, floods and other natural disasters.*



## Typical hazards

Since time out of mind, floods, mainly caused by rain storms, melting snow or long-term rainy weather, have represented a serious hazard to the both property and human lives in some regions.

The level of preciseness, with which meteorologists forecast such events, is reasonably high nowadays despite the fact that it is quite difficult to forecast intensive local rainfall.

It requires expensive technical equipment designed to monitor weather conditions.

Since storm water can represent very sudden danger, it is necessary to warn people in danger very fast and in an efficient manner.



## Solution description

This solution integrates a warning and notification system with a monitoring systems.

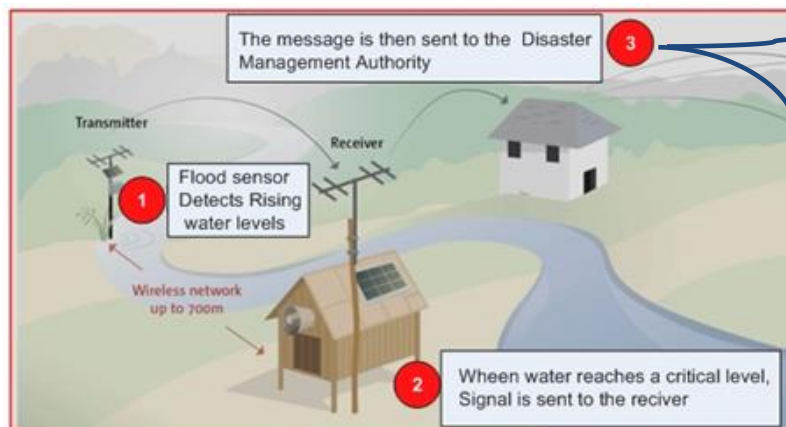
The warning and notification part of the system is used to warn and notify people in danger in several stages based on information from a monitoring system.

Monitoring systems provides information in two basic ways:

- Forecast flood conditions on the basis of information obtained from special meteorological stations
- Inform on actual water levels in rivers, creeks or in points, down which rain storm water usually flows

This solution of a flood early-warning system can work with information from meteorological stations and from existing monitoring systems. It can also use its own system for water level monitoring.

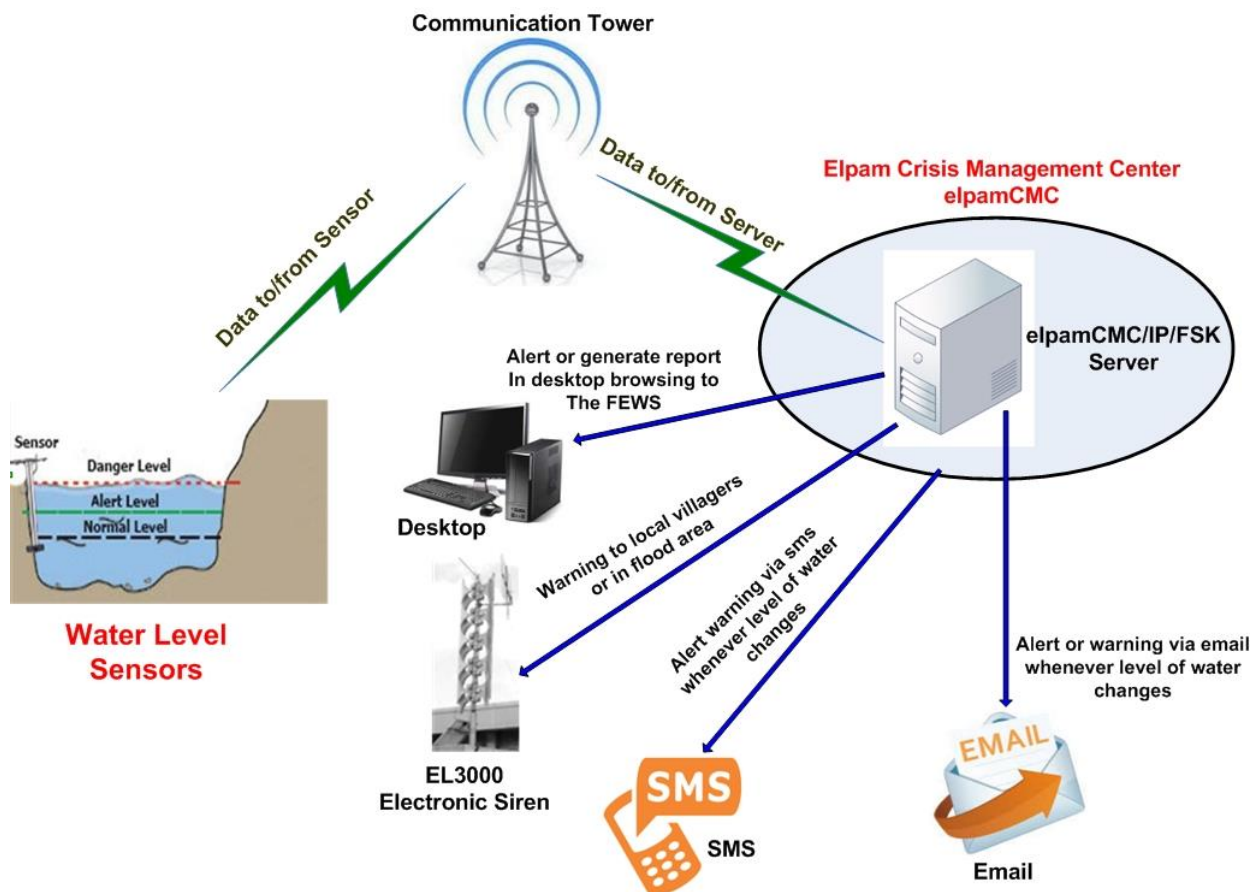
Elpam systems can be able to monitor the water level of the selected river in different points, 24 hours a day, 365 days a year. The system can identify an increase or decrease on water level and flow of the river and send the information, on real time, to a central command controller which will be in charge of activating sirens that will alert communities living near the river bank. The warnings provided in English and local language.



**EL3000 High Power Electronic Sirens**

Our **Flood Early Warning System (FEWS)** is based on Communication infrastructure (GPRS, GPS, TDMA, FSK, IP) equipped with real-time transmission to central server, to provide real-time, web based information, and SMS and EMAIL alerts, with alert transmission to SIRENS for audio alert/message.

### FEWS Diagram



### The system consists of:

- Level sensors - Water level radar sensors.
- An evaluation and warning centre, which can be fully automated – elpam CMC (**Crisis Management Centers**).  
This consist of a computer equipped with Elpam software, of a central communication unit for siren radio control and for gathering data from sensors and of other notification hardware
- Communication infrastructure :  
A designated radio channel is used as a main communication channel. It is to control sirens and transmission of data from sensors.  
The Communication for the Public Warning Systems is based on **elpam CMC system (Crisis Management Centers)** was created using the most up-to-date technologies which uses analogue and digital radio communication.
- **EL-3000 electronic sirens** and **EL-M Mobile Siren Systems** accompanied by an Independent power supply supplied from solar panels & power generator.

*All rights reserved. Features, Specifications and Content may be changed without prior notice. Pictures, drawings and other graphic images are for illustration only and do not represent product configuration.*