EMS Annual Meeting Abstracts
Vol. 10, EMS2013-805, 2013
13th EMS / 11th ECAM

A role of New Media in warning against extraordinary atmospheric and hydrospheric hazards Model of effective communication against extreme hazards on the example of Mobile Apps Case study: Both Text Messaging and Mobile Apps create a perfect severe storm alarm system for urban and rural areas in Poland

L. Legutko, A. Plygawko, and M. Ostojski
Institute of Meteorology and Water Management PIB, Poland (aleksander.plygawko@imgw.pl)

The New Media as a tool of effective communication against extreme atmospheric and hydrospheric phenomena.
The world struggles with lack of an effective communication system between scientific research centers, decision-makers and the public. It turns out that often the results of the work of scientific institutes are not fully utilized, properly communicated, and in most cases unclear. Frequently decision makers receive an information they do not need at all, and the information is unintelligible, that is, e.g., delivered too late to take appropriate actions. A drawback is the poor public awareness of the phenomena and what to do if they occur. The Polish Institute of Meteorology and Water Management (IMGW) has now started works on creating the most effective Poland communication model / system of dangerous hydrospheric and atmospheric phenomena with the use of new tools which are the New Media. Works on the creation of an effective communication system were initiated on the study of public awareness about the dangerous phenomena, that is whether people understand them and how they understand and then about the shortcomings in communicating them to the public and decision-makers to protect against extraordinary phenomena. The aim of the research is to understand the needs, i.e. what messages are expected, if they are clear, what language should be used and how they should be communicated:
- a study will show advantages and disadvantages of existing tools;
- it will demonstrate a potential need for additional other tools;
- then one might be tempted to develop criteria for evaluation of scenarios to inform on extraordinary phenomena, estimation of criteria weights and their selection. As a result of these measures the best information system on dangerous meteorological and hydrological phenomena can be developed and selected. A scenario of communication and information about this phenomenon can be suggested and an appropriate tool identified. Currently IMGW is implementing various communication tools and is testing their effectiveness. The first step was to create a warning system via mobile phones.

Case study
"Text Messaging and Mobile Apps" as a tool in warning against extraordinary hazards.

IMGW-PIB operates a one-platform system with integrated Text Messaging and Mobile Apps which alerts the society against severe storms. The combination of technology and targeted warnings provide a perfect system for urban and rural areas in Poland. For two years, IMGW-PIB has been experimenting with various technologies that ensure protection of lives, livelihoods and property against extreme weather events. While people are in motion, the mobile apps track their position and store information in the central database. This information is used to send alerts to users who are in the storm affected area. The delivery product depends on the type of the mobile phone in use. Smartphone users will receive notifications while regular users will receive text messages. The system is based on meteorological information derived from numerical models, satellite imagery, radar data and telemetry network. IMGW-PIB generates alerts before the storm impacts; and since that moment a sophisticated technology is starting to inform people located
within the risk area about the incoming danger.