



Design and proposal of the AHEWS (Atmospheric Hazards Early Warning System) related to the new Greek Regional Administrative structure

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Natural hazards pose an increasing threat to society and it is necessary to develop models and methodologies for the better understanding, forecasting, hazard prevention of weather induced extreme events and assessment of disaster risk. In addition, early warning systems are required to allow potentially affected societies to react appropriately before the event happens.

A new structure of Greek Regional Administration was established last year based on new geographical criteria in order to create a new, operational and capable administration. An atmospheric hazard early warning system could be characterized as an ultimate tool for the local authorities (first and second level) in order to organize and execute active plans to mitigate the risk. New operation centers with extensive GIS datasets and methodologies for safety plans by government agencies and services are proposed in order to induce extreme events and assessment of disaster risk.

AHEWS involves high-resolution Numerical Weather Prediction (NWP) products, ground observation network, lightning detection network and satellite information in terms of early convective initiation and now casting. Storms, lightnings, gale winds, snow, hail, tornado, low temperatures, heat waves and several others are weather phenomena that AHEWS deals with, in order to prevent and mitigate damage. An automated dissemination procedure is described to single and administrative users followed by safety and active plans respectively.

Additionally ideal modules (general concepts) as components of the AHEWS are presented, associated with other geo-hazard phenomena mitigating the economic costs and other effects from natural hazards.