Geospatial Information System Application in Earthquake Disaster Management in Albania

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Albania is situated in an Alpine-Mediterranean seismic belt comprising the zone of contact between the lithospheric plates of Africa and Eurasia, which extends from the Azores Islands to the eastern border of the Mediterranean basin. Its most active part is the Aegean Sea and the surrounding area. The collision between Adria and Albanides mountains is the main generator of seismic activity. Between the third century BC until the present, Albania has been struck by 55 strong earthquakes with MSK-64 intensities I0 e" VIII degree, of which 15 were with intensities of I0 e" IX0 MSK-64. Out of these 55 large earthquakes spanning the period of 2000 years, 36 took place in the nineteenth century. This fact indicates that the number of strong historic earthquakes affecting Albania is underestimated. Albania belongs to Ionia-Adriatic seismologic zone (regionof Shkoder, Western Albania, Kor]e-Odrid-Peshkopi zone and withactual lines in Lushnje, Elbasan, Diber, Vlore, Tepelene and Erseke. The Albanian Alps are less touched by earthquakes. Approximately 4-5 earthquakes estimated at 4-5 degrees on Richter scale occur every year in Albania and every 25 yearoccurs an earthquake measuring 9 degrees on Richter scale. So Albania is a region with a high seismic activity.In the ancient times the Apolloni earthquake occurring in217 A.D is known as the most powerful earthquake. In Durres earthquakes have struck the city in the years 334 and 506 of ourarea and in 1273. In the ancient times are also mentioned the earthquakes of Butrinti in 1153 and those of Kruje in 1617.A few studies which have reached our time result that during the 19th century in Albania are registered 77 earthquakes more than 7 degrees on Richter scale. Natural disasters are inevitable and they cause lots of damages and problems to the economy, environment and the whole life of people. It is almost impossible to fully recoup the damage caused by the disasters. But it is possible to minimise the potential risk by developing disaster early warning strategies, prepare and implement developmental plans to provide resilience to such disasters and to help in rehabilitation and post disaster reduction. Space technology plays a crucial role in efficient mitigation and management of disasters. Earthquake is one of the inevitable natural hazards that cause lots of damages and problems to the economy, environment and the whole life of people. Therefore, it is necessary to use all available knowledge and technologies for saving people and their assets through an efficient disaster management. GIS has emerged as a very important tool for effective planning, communication, and training in the various stages of the disaster management cycle. The prime concern during any disaster is the availability of the spatial in-

formation, and the dissemination of this information to all concerned. Internet-based GIS can play a key role in this aspect by providing cost-effective information at various stages of the disaster life cycle, with a much wider reach.