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TITLE OF DIPLOMA THESIS:

Flood Risk and Hazard Management on Coastal Areas Under Extreme Storm Surge Conditions

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ABSTRACT:

The current Master Diploma Thesis focuses on Flood Risk and Flood Hazard Management under the Threat of Extreme Storm Surge Conditions. The Thesis is based on Greek and English language academic, legislative and web bibliography.

At the beginning of the Thesis, theoretical and legislative manners are described, as they have been published by the European Union and Directives. At the same time, official terms are defined, as they appear on the European and Greek documents, as well as in the Web, under a more folksy way, so that they are easily comprehensible.

Next, flood, coastal vulnerability, risk and hazard management are analyzed. There is also further analysis as to the difference between risk and hazard management, as it is presented in the bibliography. The theoretical analysis is also accompanied by the presentation of practical examples, as they exist in the academic bibliography.

Afterwards, the official Greek position of Flood Risk and Flood Hazard Management is analyzed as the way the country has adopted and implemented the European Directives, prior to the deadline year of 2015.

The next chapters focus on Lesvos Island of Aegean Sea, an island that has suffered severe floods during the last decade, and has been a target of intense and academic research, as far as Flood Risk and Flood Hazard Management are concerned. In the beginning, information about Lesvos Island are presented, such as geographic and bathymetric characteristics, as well as demographic and economic criteria. Afterwards, research programs and academic seminars about Lesvos Island are reported, and their exported arithmetic data such as mean sea level, significant wave height, coastal vulnerability index and storm surge index are derived, as bibliographic sources.

The last chapter of the current Master Diploma Thesis refers to the implementation of the above data, in relation to the current and future situation of Lesvos island. In particular, the imminent flood event on the island is calculated and presented under terms of Flood Risk and Flood Hazard Management.

Last but not least, the Appendix presents the Flood Risk Maps of Greece as far as the Preliminary Assessment is concerned. The situation presented on the maps is based on data prior to 2015.

KEY WORDS:

flood risk management, flood hazard management, risk analysis, flood, storm surge, climate change, Lesvos island