will be the site of a large shallow earthquake during the time period 1986-2006 was calculated for various magnitude levels. Based on the assumption that the time dependent seismicity model has a more physical meaning than the memoryless seismicity models, a map was compiled depicting the probability that a seismic zone will be experienced earthquake with $M_s \geq 8.0$ in the given time period. As an evidence, of the above considerations, we constructed a map which presents the occurrence of earthquakes with $M_s \geq 7.5$ in the world's seismic zones starting at 1986. It can be seen that a strong earthquake with M_s=8.1 occurred in 1986 within zone 19 (Kermadec and Tonga Islands), while earthquakes with $M_s \geq 7.5$ occurred in some parts of the circum-Pacific (Alaska and Aleutian islands, Taiwan, Philippines islands, New Britain and Solomon islands, Costa-Rica) which is the most seismogenic region of the world. An earthquake of the same magnitude intervals was also occurred in Iran, which belongs to the Eurasian seismic belt. It was also observe that all seismic regions of the world have at least once experienced, during the present century, and earthquake with $M \geq 8.0$.

RECENT ACTIVITY ON EARTHQUAKE PREDICTION RESEARCH CARRIED OUT BY THE SEISMOLOGICAL INSTITUTE

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The Seismological Institute of the National Observatory of Athens is the responsible center in Greece to carry out continuously the routine seismic observations. Recently the Institute completed the installation of a modern, real time, telemetric network which results in a better detectability of earthquakes and in a more accurate determination of their parameters.

The material collected gave the opportunity to perform earthquake prediction research by examining seismicity patterns in a systematic way with the help of some modern techniques.

The v-value method is used to discover temporal changes in the present seismicity level as well as the technique proposed by Matsu'ura to investigate anomalous seismicity changes before the occurrence of the large aftershocks.

These methods seem to be promising and the obtained results are quite encouraging in areas where dense seismological network is established and the seismological data are observed in real time.

Attention has been also given to eartquake prediction which is characterized as intermediate-term. For this research the M8 algorithm is the most common and examins several seismicity patterns in order to define the Time of Increased Probability (TIP).

The algorithm M8 has been successfuly tested to the earthquakes of M>7.0 which occurred in Greece from 1973 till 1983 and the applicability of this alogirthm for smaller earthquakes was explored. This application is considered to be of practical importance for the area of Greece due to their frequent occurrence. After that the algorithm M8 used to diagnose current TIP's for the area of Greece by using recent complete data.

The Seismological Institute will continue the research on earthquake prediction by using these methods. Our intension is the help of complementary methods for the areas which are considered as canditate for the occurrence of large shocks in the comming years as well as their continous seismicity check by using these methods in real time.

GEOTECTONIC EVOLUTION OF THE AEGEAN

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The Aegean area has been for long considered as an old crustal area stabilised before the alpine cycle with only minor block movements creating transgressions and regressions of the sea with final charecteristic event the Quetemary subsidence of major parts of the present day Aegean. These views were based on immobilistic concepts and on the assumption thet the metamorphic rocks of the Aegean were of pre-Alpidic age.

The plate-tectonics theory in the Aegean eccepted thet the Axios ocean separeted Rhodope end adjacent erees to the North from "Pelegonian" and the Extemal Hellenides to the South in the period Triassic-Early Cretaceous. Lateron enother ocean was considered, developed during Triassic-Late Cretaceous more to the South, running along the ophiolitic outcrops of Northern Pindos-Cyclades-Izmir.

The new concept of tectonostratigraphic terranes introduced the existence of several large Continental fragments within the Aegean area which are of African origin and heve been rifted and drifted northwards during Late Paleozoic - Triassic and then they have successively collided and accreted to the Southern European margin during Jurassic - Tertiary.

Thus, from the Upper Rhodopean units to the lower units of Crete we can distinguish the large Pre-Alpine crustal fragments separated by the oceanic material of the temporary basins of the Tethyan ocean that separated them.

The genesis of the present day Aegean aree is due to the combination of distinct micro collision events and rather continuous subduction of southward derived lithosphere beneath the European margin in the North.

