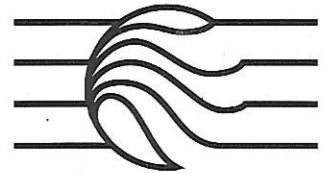


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**PROGRAMME**  
and  
**ABSTRACTS**

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## **Potential for the installation of a system in northern Costa Rica for early warning to the capital city of San José, from large subduction earthquakes under the Nicoya peninsula**

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A mature seismic gap exists under and off the Nicoya peninsula in northwestern Costa Rica. This gap, the Nicoya seismic gap, is a subduction segment of the Middle American Trench where the Cocos plate subducts under the Caribbean plate. Large earthquakes have occurred in this segment in 1853, 1900 and 1950. The strong coupling of the Nicoya segment contrasts with the immediately adjacent weak segments: Nicaragua to the NW and Central Costa Rica to the SE. The distribution of aftershocks of recent earthquakes on these weak segments allowed us to map the along-the-trench extend of the Nicoya gap. Without significant slip since 1950, with a convergence rate around 88 mm/yr. and an area ranging from 5000 to 10000 km<sup>2</sup>, the Nicoya gap has already potential to generate an earthquake with moment magnitude above 7.5. Giving the high seismic potential, the amount of available data and specially the fact that the Nicoya peninsula extends over large part of the rupture area, the Nicoya gap was selected as one of the two sites for a SEIZE experiment.

San José, the capital of Costa Rica, is located between 100 and 250 km from the potential rupture area of the Nicoya seismic gap. These distances are within the range of tested earthquake early warning systems and therefore make this region a potential good site for the operation of one of such systems.

## **International polygon on earthquake monitoring in Garni, Armenia**

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The international polygon on earthquake monitoring in Garni/Armenia is supposed to become a modern observatory with a net of observations doing seismological, geodetic, geo-deformational, hydrogeological, hydrological, hydro-geochemical, geophysical and other observations, being equipped with newest devices, means of telecommunication, data processing and exchange. Integrity of surface and space observations is supposed to be implemented. Observation results will provide fertile background for solving fundamental problems related to geo-dynamics of earthquake epicentres, predictive processes and structure of the lithosphere.

The suggested program of creating an international polygon was to a considerable extent organised by the efforts of six Scandinavian countries, as well as by a party in Tadjikistan, under the leading role of Russia, and with participation of the USA. The establishment of such an international polygon is supported by the conception, which successfully passed through the time test during the last decade.