MAPS AND DATABASES OF QUATERNARY FAULTS AND FOLDS IN PANAMA AND COSTA RICA AND ADJOINING OFFSHORE REGIONS

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Costa Rica and Panama are situated in a geologically dynamic and complex region of southern Central America, characterised by active subduction, collision and shear deformation among the intersecting Cocos, Nazca, Caribbean and South American plates. Information on late Quaternary faulting, folding, neotectonics, paleoseismology and seismology has been compiled for the republics of Costa Rica and Panama and their offshore regions, in a project sponsored by the International Lithosphere Program.The project has created the first modern, digital maps and databases for Quaternary and active faulting in the region. These are intended to facilitate better assessments of potentially active faults for seismic hazard analysis. The maps were compiled on and digitized from base maps at 1:200,000 scale, allowing for output as a single-country map (1:500,000 to 1:750,000 scale) or provincial and regional maps (1:200,000 to 1:500,000 scale) while retaining all significant digital information. In addition to fault and fold location and style, each map shows the time of most recent movement and estimates of slip rate where these are known. The accompanying databases provide fault data that can be readily accessed using a variety of search parameters. The maps and databases are helping to extend the relatively short record of instrumental and felt seismicity in Panama and Costa Rica, by creating a record of surface deformation associated with large (M6.5) prehistoric earthquakes. We anticipate that the project will help to identify shortcomings or gaps in existing information and promote new efforts to collect data in previously neglected or known critical areas.