

High-resolution imaging of the seismic structure and activity of the Western Hellenic subduction zone.

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We study the Western Hellenic subduction zone for over 25 years in the frame of european and bilateral collaborations by using methodologies with different resolution and penetration capacities :

- i) Marine multichannel reflection seismics,
- ii) OBS and offshore-onshore refraction seismics,
- iii) Teleseismic converted waves imaging of deep interfaces (e.g. RF receiver function),
- iv) local earthquakes high-resolution location by OBS and land arrays.

Each of the studies but also their joint use allowed to resolve at different scales structural heterogeneities such as : sediments infill and basement crustal faults (GoC), crustal thickness variations through the topography of the Aegean plate Moho, topography of the descending slab top of the Hellenic subduction, which is revealed as segmented by tear-faults.