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Sommario/riassunto	In the framework of the Terrafirma project, Persistent Scatterers Interferometry (PSI) has be used for mapping land subsidence at basin scale in Gioia Tauro plain (Italy). The investigated area is built over unconsolidated fine-grained sediments, where the increasing groundwater demands for irrigation have caused the natural sediment consolidation to progressively accelerate. Both historical (1992-2001; ERS1/2 images) and recent (2002-2006; ENVISAT images) scenarios are analyzed to solve the spatial variability and temporal evolution of ground displacements affecting the plain. The results show deformation rates as high as 10-12 mm/yr in 1992-2007, with highest velocities occurred between 1992 and 2000 within the central part of the basin, in the area of Rizziconi (5 km ESE of Gioia Tauro). The outcomes of this PSI study could support the future improvement of groundwater management and the implementation of best strategies for land use planning and sustainable use of groundwater resources.