Supplementary Materials

Description of the triangulation methodology process.

The principle of triangulation methodology is the velocity components combination of three GNSS stations, and their errors, leading to the total velocity calculation. In particular, these stations form a triangle (in almost all cases equilateral triangle), while each of them is considered as a triangle vertex. Then, the triangle is spatially subsistent to a Cartesian coordinate system and the triangle barycenter, based on the medians intersection, is determined. The triangle barycenter is defined as "triangle centroid", which is unique and representative for each triangle [57], while it is located at the (0,0) point of the Cartesian coordinate system. Then, the inner triangle circle is inscribed, as well as the four velocity vectors (three on the triangle vertices and one on triangle centroid, respectively); the triangle centroid vector value receives the mean value of the three triangle vertices vectors and is defined as "translation vector".
The deformation occurrence results in the spatial displacement of each triangle vertex, which is expressed by the terminal point of each velocity vector, leading to the formation of the deformed triangle. Moreover, the inner circle turns into an ellipse, while the triangle centroid vector maintains the initial properties [104,105]. Then, the translation vector subtraction is carried out, in order to emplace the deformed triangle centroid on the corresponding undeformed triangle centroid, while the same subtraction is also performed for the remaining three vertices. Eventually, the aforementioned process resulted in the estimation of the major and minor axes of inner circle (undeformed triangle), as well as the corresponding ones of ellipse (deformed triangle). The inner circle and ellipse axes combination lead to the strain parameters extraction.

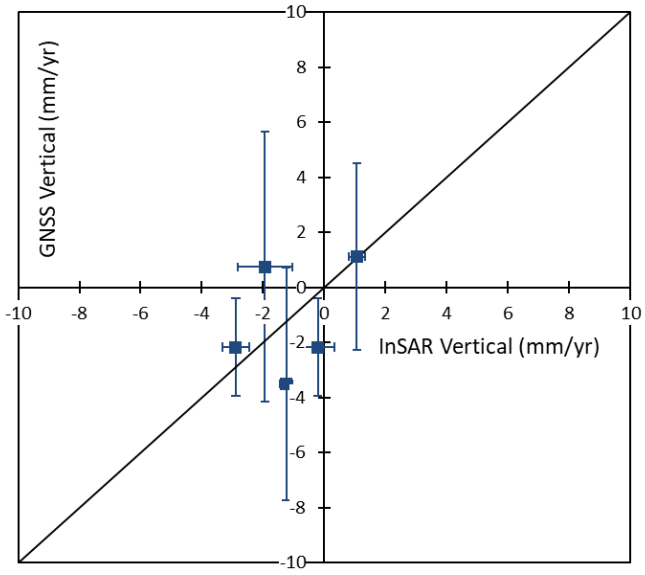

Figure S1. Intercomparison between GNSS and InSAR annual motion rates (vertical component), for GNSS sites located over the InSAR processing extend. The closest PS target to the GNSS sites, within a search radius of 200 m, was considered. The corresponding measurements' uncertainties for each technique are also shown (error bars).

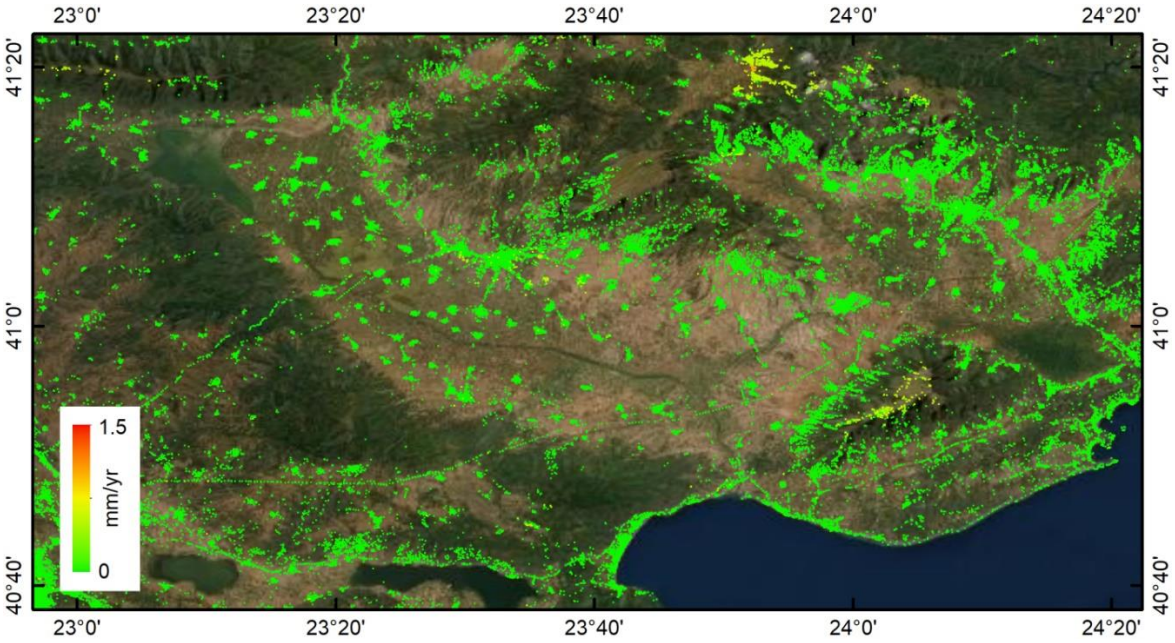

Figure S2. Uncertainties of PSI displacement rates for Sentinel-1 ascending track 102 (2015-2020).

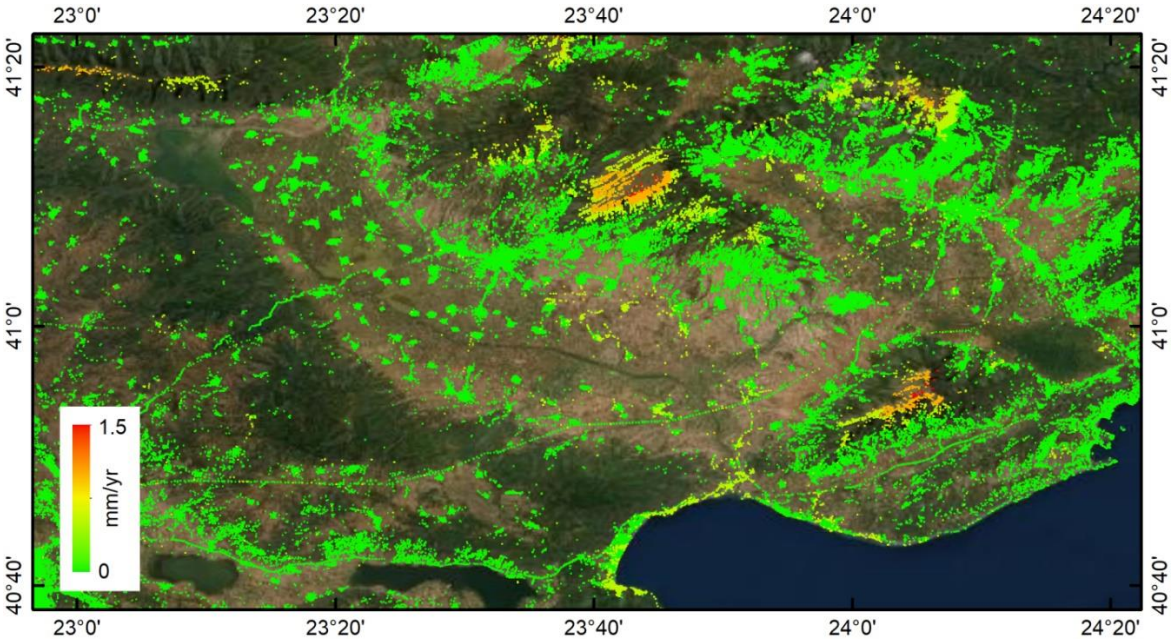

Figure S3. Uncertainties of PSI displacement rates for Sentinel-1 descending track 7 (2015-2020).

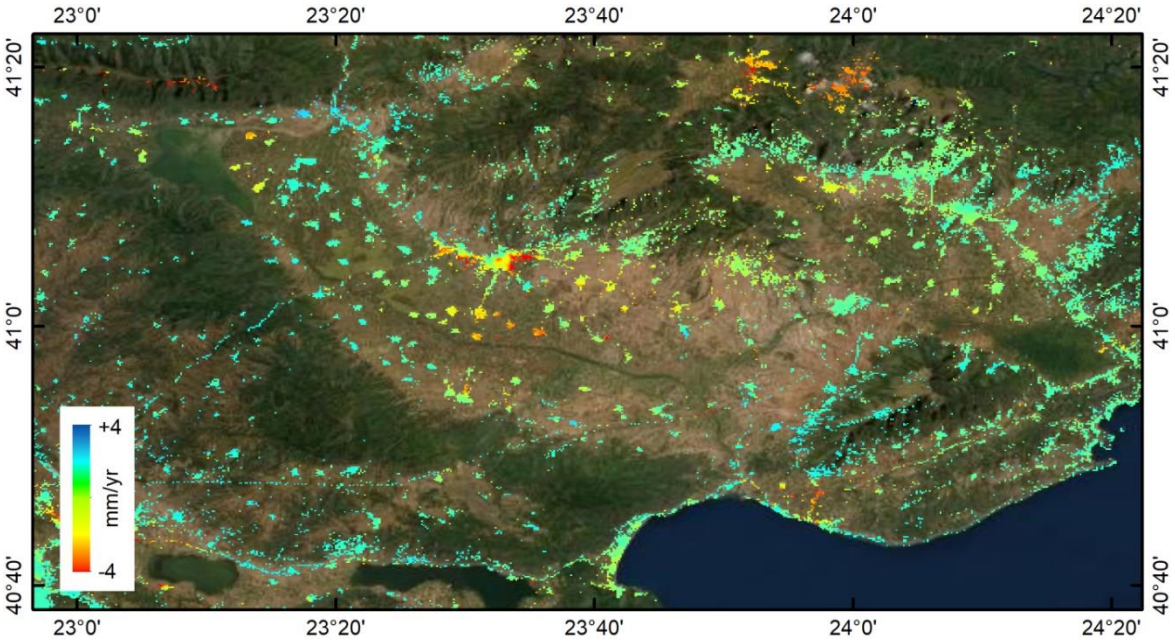

Figure S4. Vertical displacement rates for the period 2015-2020 at 200m spatial resolution, as derived by combining ascending and descending PSI measurements. Positive values correspond to uplift, whereas negative values to subsidence.

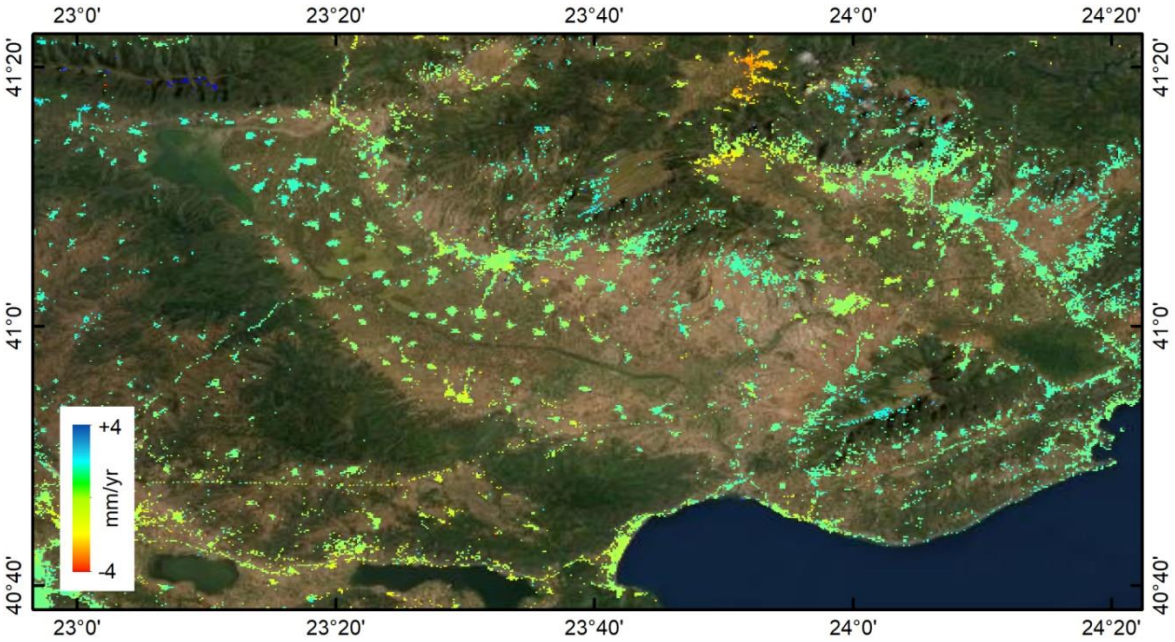

Figure S5. E-W displacement rates for the period 2015-2020 at 200m spatial resolution, as derived by combining ascending and descending PSI measurements. Positive values correspond to motion towards East, whereas negative ones to westward motion.