The earthquake-generated tsunami that hit Japan on 11th March 2011 represents a devastating event for the Japanese community and a shock for the entire mankind. The worldwide public opinion faced impressive images of destruction and an increasing concern related to the Fukushima nuclear plant emergency. The scientific community confronts an unexpected event in terms of magnitude of the earthquake and of size of the generated tsunami. Researchers have an unprecedented amount of data at disposal thanks both to the very dense observation networks (seismic, geodetic, marine) installed in and around Japan and to the increasing availability of satellite images documenting the coastal zone inundation. We perform preliminary simulations of the tsunami at a Pacific-wide scale and at a local level involving the Miyagi Prefecture. Taking advantage of the preliminary fault slip distributions published online by different institutions (USGS, Caltech, UCSB), we compute the tsunami initial conditions and simulate the ensuing tsunamis by means of the in-house finite-differences UBO-TSUFD code. A version solving the linear shallow-water equations (SWE) in geographical coordinates is used for the Pacific-wide computations, while a version working in Cartesian coordinates and implementing the non-linear SWE including run-up and inundation is applied to a smaller domain focussed on the source region, described by means of nested grids of variable resolution. We compare the simulated results with the sea-level signals recorded by coastal tide gauges and by offshore DART buoys, and with run-up and inundation measured by survey teams or deducible by satellite images.