

The southeastern parts of the Adriatic Sea coastline were severely polluted by large amounts of accumulated waste material in the second half of November 2010. The waste, reported by major news agencies, accumulated dominantly during 21 November 2010 by favourable wind – ocean current transport system (the East Adriatic current is northwest so advects floating objects from southeast). In the study we analysed meteorological and oceanographic conditions that lead to the waste deposition using available in situ measurements, remote sensing data as well as numerical models of the ocean and the atmosphere. The measured data reveal that an intensive rainfall event from 7 till 10 November 2010, over the parts of Montenegro and Albania, was followed by a substantial increase of the river water levels indicating a possibility of flash floods that could have splashed the waste material into a river and after to the Adriatic Sea (or to the sea directly). The currents that can bring this waste to Croatia could have been intensified by the strong wind from southeast. In order to test these two hypotheses we set a number of numerical drifter experiments with trajectories initiated over southeast Adriatic during the intensive rainfall events following their faith in space and time. The numerical drifter trajectory experiments that resulted with drifters that reached the right position (southeastern Adriatic coast) and time (exactly by the time the waste was observed) were initiated on 00:00 and 12:00 UTC of 10 November 2010 during the mentioned high precipitation event.