



The North Sea storm surge of Oct 31-Nov 1, 2006 during Storm Britta

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Offshore energy infrastructure, including the hydrocarbon extraction and wind energy sectors, are susceptible to damage and interruption by extreme meteorological events. In northwest Europe, these extreme meteorological events are mostly associated with severe storms in the autumn and winter seasons. Offshore energy infrastructure comprises petroleum platform/wind turbines, sea floor pipelines/cables, as well as ports and service facilities on the coast. The various elements of this infrastructure may be impacted by high winds, wave field, and ocean currents. Storm surges are potentially damaging for their effect on port facilities. Storm Britta in northern Europe on Oct.31–Nov 1, 2006 was a powerful storm that caused flooding in coastal areas and ports in the northern Netherlands and the German North Sea coast. This contribution presents a retrospective look back at the old storm event, focusing on a re-analysis of tide gauge records. The progress of the storm surge is traced from Scotland and along the coasts of eastern England, the Netherlands, Germany, and Denmark. The surge attained high levels across most coastal areas of the southern North Sea, but certain local areas showed evidence of unexpected high water levels, possibly due to the additional effect of wave run-up. In addition to the expected progression of the high tide and storm surge residual, the tide gauge records also suggest that the storm induced resonances or seiches in certain harbours. The storm surge for Britta is compared with surge events for other serious storms of the late twentieth century.