**Supplement S1.4 to Chapter 1.4: Hydrography – Physical description of the North Sea**

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**Fig. S1.4.1** Net transport out of the North Sea (Schrum and Siegismund 2001)

**Fig. S1.4.2** Correlation between NAOI and annual SST anomalies (Löwe and Koslowski 1993)

**Fig. S.1.4.3** Profile of climatological monthly mean temperature and salinity from the Belgium coast (*left*) to the northern North Sea (*right*) for January (*upper*) and August (*lower*) (data collected during the period 1900 to 1996; Janssen et al. 1999)

**Fig. S1.4.4** (a) Monthly mean of the baroclinic-geostrophic part of the flow in the surface layer for August 1991 and (b) difference between the monthly means of the total flow and the baroclinic-geostrophic part in the surface layer (Pohlmann 2003)

**Fig. S1.4.5** Tidal ellipses of the M2 constituent near surface (BSH 1963)

**Fig. S1.4.6** Tidal residual currents of the M2 constituent (Brettschneider 1967)

**Fig. S1.4.7** Spreading of river input (Hainbucher et al. 1987). Considered are Rhine, Elbe/Weser, Thames, Humber,Tyne, Firth of Forth. The isolines are based on relative units on a logarithmic scale. Darker colours mean higher concentrations

**Fig. S1.4.8** Mean total suspended matter distribution in the southern North Sea, winter 2000 (RIKZ 2002)

**Fig. S1.4.9** Residence times (months) of water masses (Maier-Reimer 1978)

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