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New monitoring of physical and biochemical environment in the area north of Svalbard

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The Arctic shelf seas contain some of the most biologically productive ecosystems in the world, and also play globally significant roles in heat exchange, ocean circulation, and geochemical cycling. The inflow of Atlantic water (AW) along the shelf break of Svalbard is a major source of heat and biological energy to the Arctic Ocean. Monitoring of this AW slope current with current meter moorings is essential to assess the transport and variability of AW, and associated tracers, into the Arctic Ocean. In 2012, nine moorings were deployed, including three from Fram Centre (Norway), four from WHOI (USA) and two from IOPAS (Poland). Four moorings were re-deployed in the same region in 2013, and in addition about 200 CTD, biological and chemical stations were conducted around the mooring array. Thus during these years we have established new representative site for long-term monitoring of the warm Atlantic Waters north of Svalbard. Based on the data obtained from the mooring stations in 2013 we discuss seasonal changes of the important parameters like water temperature, salinity, currents, heat and salt fluxes of the Atlantic water to the Arctic Ocean.