The use of OPenDAP in the generation of climate scenarios by multiple institutes in The Netherlands.

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For western Europe a large amount of regional climate model runs have been made available over that last years. In addition, the KNMI provides climate scenarios specifically tailored to The Netherlands. This also means that the derived water scenarios for The Netherlands that deal with expected discharge in the Rhine/Meuse basin, the water within The Netherlands and the expected change in sea level and storm tide at the coast will have to be regenerated. To do so a system is made that links a suite of models via Delft-FEWS describing the hydrological system from the Alps to the North Sea including detailed modeling within The Netherlands. These models are linked via the Delft-FEWS published interface. This system runs at several institutes in The Netherlands. It is one of the building blocks of the new Dutch National Model and Data Centre (NMDC). By using OPenDAP it can get the ensemble of regional climate models directly from the servers where they are hosted and drive the suite of models. Similarly, the linkage of the LOTOS-EUROS air quality model to the regional climate model RACMO is being reworked. All results are stored on servers that expose the data between the institutes using the OPenDAP protocol. The use of standard (and open) protocols allows us the decrease the amount of data being transferred between the cooperating institutes. At the same time clear ownership of data is maintained by storing the data at the responsible institutes while decreasing the burden of having to maintain a number of scripts and programs that routinely copy data between servers at different locations. It also allows other researchers to get instant and easy access to the generated scenarios.