Geophysical Research Abstracts
Vol. 15, EGU2013-13808, 2013
EGU General Assembly 2013

FEWS Vecht, a crossing boundaries flood forecasting system

Klaas-Jan van Heeringen (1), Pieter Filius (2), Gerben Tromp (3), and Tobias Renner (4)

(1) Operational Water Management, Deltares, Rotterdamseweg 185, 2600 MH Delft, The Netherlands, (2) Regional Water Authority Velt en Vecht, Coevorden, The Netherlands, (3) Regional Water Authority Groot Salland, The Netherlands, (4) RoyalHaskoningDHV, Amersfoort

The river Vecht is a cross boundary river, starting in Germany and flowing to the Netherlands. The river is completely dependant on rainfall in the catchment. Being one of the smaller big rivers in the Netherlands, there was still no operational forecasting system avaible because of the hugh number of involved organisations (2 in Germany, 5 in the Netherlands) and many other stake holders. In 2011 a first operational forecasting system has been build by using the Delft-FEWS software. It collects the real time fluvial and meteorological observations from all the organisations, in that sense being a portal where all the collected information is available and can be consistantly interpreted as a whole.
In 2012 an HBV rainfall runoff model and a Sobek 1D hydraulic model has been build. These models have been integrated into the FEWS system and are operationally running since the 2012 autumn. The system forecasts 5 days ahead using a 5 days ECMWF rainfall ensemble forecast. It enables making scenarios, especially useful for the operation of storage reservoirs. During the 2012 Christmas days a (relatively small) T=2 flood occurred (Q=175-200 m3/s) and proved the system to run succesfully.
Dissemination of the forecasts is performed by using the FEWS system in all organisations, connected to the central system through internet. There is also a (password protected) website available that provides the current forecast to all stake holders in the catchment.
The challenge of the project was not to make the models and to build the fews, but to connect all data and all operators together into one system, even cross boundary. Also in that sense the FEWS Vecht system has proved to be very succesful.