Delft-FEWS HydroNET
Water Control Room
YOUR INTEGRATED ONLINE
WATER MANAGEMENT SOLUTION
WaterCONNECT: EMPOWERING WATER MANAGEMENT PROFESSIONALS

All around the world we are seeing more and more extreme rainfall, floods, water quality issues and drought due to climate change and the increasing global population. That’s why water professionals need to make responsible, time-critical decisions, based on recent observations and accurate predictions. However, the data they use to support decisions are often fragmented, while the forecasting process can be manual and cumbersome. Effectively managing your water resources means structuring your data efficiently and providing staff and other stakeholders with easy access to the right information. Deltares and HydroLogic have therefore joined forces in the WaterCONNECT consortium to provide an integrated, online solution to help you improve your water management decision-making.

WELL-INFORMED, ACCOUNTABLE DECISIONS

A unique feature of the WaterCONNECT consortium is that it connects data, knowledge and software from local and international partners and co-creates solutions with clients. The Delft-FEWS and HydroNET platforms are the key components of these solutions. Delft-FEWS is an open platform that handles large amounts of big datasets efficiently and performs massive computations, while HydroNET uses data-mining algorithms and analytics to combine and enhance datasets. The Delft-FEWS HydroNET Water Control Room then makes this enhanced information available in online personalised dashboards and reports that are easily accessible for water professionals and stakeholders wanting to make well-informed, accountable decisions.

ONLINE SOLUTION, CUSTOMISED TO YOUR NEEDS

With over 6,300 users in 59 countries, the online Delft-FEWS HydroNET Water Control Room uses cutting-edge technology to provide solutions for water management professionals. These include dashboards and reports tailored to your needs and that can also be customised to meet individual stakeholders’ requirements. The Water Control Room runs in the cloud and so you can consult it on your PC, tablet or smartphone.
**BENEFITS OF THE DELFT-FEWS HYDRONET WATER CONTROL ROOM:**

- **IMPROVED ORGANISATION**
  Handle large amounts of data efficiently

- **TIME-SAVING**
  Automatically generate customised web and word reports and PowerPoint presentations

- **AWARD-WINNING AND PROVEN TECHNOLOGY**
  Co-created with water professionals

- **EASY TO USE**
  Simplify and enhance your data use and accessibility

- **REMOTE COLLABORATION**
  Share relevant information with internal and external stakeholders

- **IN CONTROL**
  Keep a close eye on your water systems and receive timely alerts

- **NO MORE TIME-CONSUMING DATA SEARCHES**
  Use your personalised dashboards and reports to find and organise the information you need

- **BETTER PREPARED**
  Inform the right staff and stakeholders in emergencies

JOIN THE WATERCONNECT COMMUNITY

- **59 COUNTRIES**
- **6,300 USERS**

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Success story: Water Control Room in Colombia

The HERMANA Water Control Room helps water managers from the Cauca Valley area in Colombia to make operational, tactical and strategic decisions for sustainably managing their water resources. It combines Delft-FEWS data on weather and surface and groundwater levels with satellite-based drought information from InfoSequia. HERMANA consists of a set of tailored dashboards - including drought, meteorology and water supply dashboards - that are optimally tailored to the Colombian water authorities’ decision-making processes. In this way, it contributes to a more balanced management of surface and groundwater resources and improves water security.
Step 1
Join our collaborative modelling approach
The first step to successfully implementing your Water Control Room is to understand the information needs of your staff and stakeholders and also your organisation’s decision-making processes. The WaterCONNECT consortium uses collaborative modelling to design tailored workflows and strengthen stakeholder participation and ownership. Co-creation is a key element of this interactive and iterative approach, which combines stakeholder engagement with analytical modelling, visualisation and communication tools.

Collaborative modelling means:
• Understanding the water system, organisation and context
• Recognising information needs and user requirements
• Transparency and consensus in decision-making processes
• Acceptance and ownership of the system and approach
• Improved stakeholder relations

Step 2
Use Delft-FEWS to structure your data streams and models
Delft-FEWS comprises a sophisticated set of configurable modules for building a hydrological forecasting system customised to your organisation’s specific requirements. The second step, therefore, is to create a dedicated Delft-FEWS configuration for your area of interest and to integrate your historical observations, external forecast data and model simulations.

You can use the Delft-FEWS modules to import your relevant data efficiently and to define workflows for centrally managing your data. You can then set up a system for distributed or cloud computing and multi-user access.

Delft-FEWS allows you to:
• Handle wide-ranging datasets
• Ensure quality control and to process your data exactly the way you want
• Integrate your numerical models and scripts
• Apply advanced data assimilation techniques
• Disseminate and archive your forecasting information for analyses and evaluations

Step 3
Configure your online HydroNET Water Control Room
Setting up your HydroNET Water Control Room means establishing a secure connection with Delft-FEWS via advanced webservices. HydroNET offers a range of web-based tools so that you can configure customised reports, dashboards, alerts and story maps for staff and stakeholders.

HydroNET combines weather and water information from Delft-FEWS with your or other providers’ data. You can then add local knowledge about your water systems, preferences, priorities and stakeholders. HydroNET automatically combines all information and knowledge collected and generates enhanced warnings, forecasts and overviews of your water system.

These dashboards and reports:
• are available online via your PC, tablet or phone
• are tailored to your needs and in a format enabling you to take well-informed, transparent and accountable decisions
• can be easily shared online with your stakeholders and community

Once your HydroNET Water Control Room has been configured, we offer customised, on-site training free of charge. And you are then ready to get started.
Success story: Emergency Control Room for Dutch waterboards

Timely and accurate information about water systems and crisis management procedures is crucial before, during and after water-related disasters such as flash floods, droughts and pollution emergencies. The Emergency Control Room helps water managers in the Netherlands to prepare for, upscale, monitor and evaluate water-related disasters. The Delft-FEWS system collects the data and runs the forecasting models, while the HydroNET Water Control Room:

- shows the current and forecast status of the water system and relevant objects
- provides customised warnings and alerts, based on advanced algorithms and multiple datasets
- provides a personalised task list for each staff member
- shows the status of all actions and measures
- provides advanced tools for crisis monitoring purposes
WaterCONNECT.
The Delft-FEWS HydroNET Water Control Room has been developed by the WaterCONNECT consortium. WaterCONNECT involves international partners from private, public and research organisations working with clients to co-create local and customised solutions empowering water professionals to make better decisions. All these services are available in an online Water Control Room. This way, WaterCONNECT is helping to ensure precious water resources are sustainably managed in a water-safe environment and with sufficient clean water for us all.

HydroLogic
Leanne Reichard - Business Director
T: +31 (0)33 475 35 35
I: www.hydronet.com
E: leanne.reichard@hydronet.com

Deltares
Nadine Slootjes - Operational Team Leader
Water Management & Early Warning
T: +31 (0)6 2234 68 65
I: www.deltares.com
E: Nadine.Slootjes@deltares.nl

www.waterconnect.net