

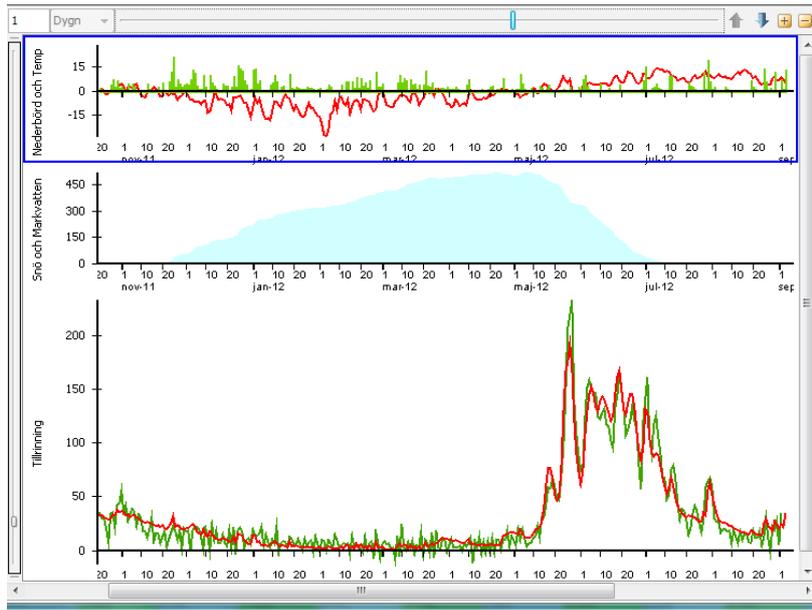
PRODUCT SHEET

HBV – State of the art hydrological modelling

The HBV model was originally developed by SMHI in the early 70's to assist hydropower operations. The aim was to create a conceptual hydrological model with reasonable demands on computer facilities and calibration data.

The HBV approach has proved flexible and robust in solving water resources problems, and applications now span a broad range.





The HBV model is today an Integrated Hydrological Modelling System: a modern, well tested and operational tool that can be linked with Real Time Weather Information and Forecast systems.

The HBV model and forecasts assist management, enhance safety and optimise production.

THE HBV MODEL INCLUDES FEATURES SUCH AS

- data base and data quality control modules
- area-elevation distribution and snow-routines
- parameter setting with respect to land classification and use
- response and river routing sub-routines
- menu-driven user interface under Windows™
- automatic updating procedures
- reservoir management/operation strategies
- option for automatic model calibration and model runs

DEVELOPMENT AND FUTURE

On-going improvements include hydrometeorological information systems, the new spatially distributed HBV model, and the combination of forecasts with optimisation software.

CHOOSING SMHI AS YOUR SUPPLIER GIVES YOU ACCESS TO

- the original HBV model under continuous development
- a model of proven quality, successfully applied in more than 30 countries around the world
- integrated hydrometeorological knowledge in both operational services and development
- hydrological consulting with experience from many parts of the world

HBV APPLICATIONS

Hydropower short term inflow forecasts for operational hydropower planning at dispatch centres and volume forecasts of up to a year for seasonal reservoir planning. This is used by the hydropower industry both in Sweden and world wide.

Dam safety: Design flood computations including reservoir management strategies.

Climate change: Studies of the effect of changing climate conditions on run-off patterns, soil moisture, ground water recharge and evapotranspiration.

Flood warnings: Stream flow and volume forecasting for appraisal of flood risks and development of flood risk maps.

Pre feasibility studies: Quality control of water stage and discharge records, extension of historical records and ground water simulations.

Water supply: Soil moisture simulations, water balance mapping for water demand planning, drought studies and water availability assessments.

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