SMHI

HYDROLOGICAL PREDICTIONS FOR THE ENVIRONMENT

HYPE – OPEN SOURCE COMMUNITY

Welcome to be an active part of HYPE Open Source Community. HYPE Open Source Community is open to anyone interested in hydrology, operational hydrological modelling, research and source code development - e.g. scientists, consultancies, national agencies and regional authorities.

NEW PLATFORM FOR COOPERATION

The main objective is to provide cost free public access to a state of-the-art operational hydrological model while encouraging hydrologic and programming expertise from different parts of the world to contribute to model improvement. An open source community facilitates transparency of use, model development and also enables ensemble modelling through free access to modifiable codes. HYPE is a platform for international cooperation, networking, regional operations, knowledge exchange and collective source code development.

AN OPEN SOURCE INITIATIVE

HYPE Open Source Community is an open source initiative under the Lesser GNU Public License taken by SMHI to strengthen international collaboration in operational hydrological modelling and hydrological data production. New versions of the main code will be delivered frequently.

THE HYPE MODEL FULFILLS DIRECTIVES

In Sweden, the model is used by water authorities to fulfill the Water Framework Directive and the Marine Strategy Framework Directive. It is used for characterization, forecasts, and scenario analyses. Model data is also distributed for free for Europe.

Europe: e-hypeweb.smhi.se
Sweden: vattenweb.smhi.se

The model systems are continuously updated in new versions for Sweden, Europe, Arctic, India, Niger basin in West Africa and the North Africa - Middle East region.
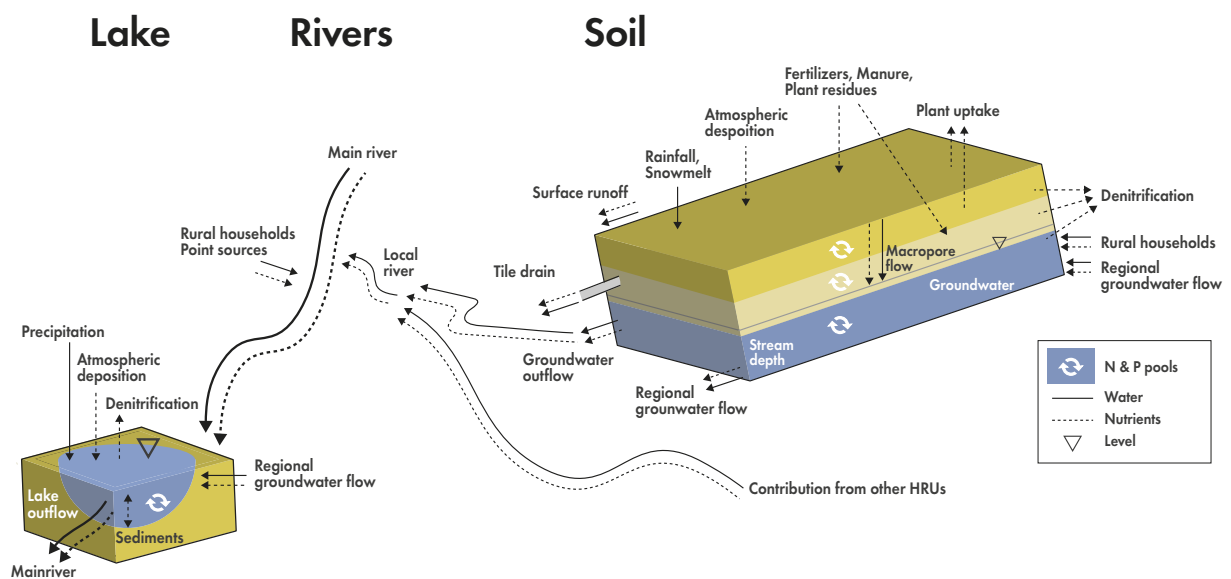
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THE HYPE MODEL

The Hydrological Predictions for the Environment (HYPE) model is a dynamic, semi-distributed, process-based, integrated catchment model.

It uses well-known hydrological and nutrient transport concepts and can be applied for both small and large scale assessments of water resources and status.

In the model, the landscape is divided into classes according to soil type, vegetation and altitude. The soil representation is stratified and can be divided in up to three layers. Water and substances are routed through the same flow paths and storages (snow, soil, ground-water, streams, rivers, lakes) considering turn-over and transformation on the way towards the sea.

Community website: hype.sourceforge.net
SMHI hypeweb: hypeweb.smhi.se

Lake   Rivers   Soil