

You are here!



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Göteborg

Malmö

SMHI – past, present and future

SOCIETY

Transport, Agriculture: shipping, log driving, building canals

Famine:
More arable land

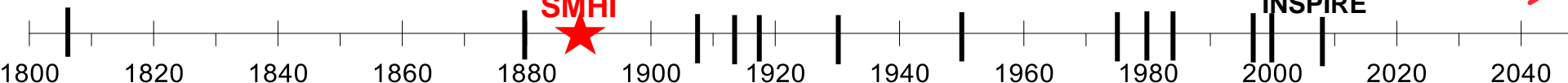
Industrialisation:
Energy problem

Urbanisation:
Sanitary problems (fishing, recreation)

Sustainability:
infrastructure; water quality

Climate change

Cities Adaptation Multiple use Globalisation



SMHI ★

Depression:
Land drainage

Oil crisis

Warning Service for floods

EU: WFD INSPIRE →

HYDROLOGY SERVICE

Countinuous **monitoring** of River flow;
Compiling **statistics** for infrastructure

Observing effects of lake drainage

Monitoring ice (cover, break-up, thickness)

Spring-flood forecasts

Mapping hydropower potential (water divides, falls, flow)

Water as a recipient; environmental assessments

HBV model: monthly forecasts

Design floods for dam safety and areal planning;
Pollution transport and integrated river-basin management

Downscaling & Effect modelling

PUB Multi-basin models

Climate services



- **National Agency under Ministry of Environment**
- **Experts in meteorology, hydrology, oceanography and climatology**
- **Some 670 employees**
- **Services includes:**
 - ✓ **Core Infrastructure;** Observations, data and forecasting/warnings operations which are mainly financed by government grants. Part of WMO, ECMWF, EUMETSAT.
 - ✓ **Business and Commissioned works;** SMHI is to provide, at cost price, certain public services, often for other national agencies or international organisations, also internationally.
 - ✓ **Research;** in total 110 scientists in meteorological modelling, remote sensing, air quality, climate modelling, oceanography and hydrology. International cooperations.

Hydrological Research 2015



Staff of 21 researchers

- 15 permanent senior scientists (Ph.D.)
- 1 doctoral candidate
- 3 research engineers
- 2 temporary post-doc's

Tasks

- Produce new water info. (*Sweden, Europe, the world*)
- Develop tools and methods ("open data")
- Explore scientific questions
- Commissions in external networks

Funding

- Only external projects
- "In kind" by the SMHI – *to cover 100% OH!*

Outreach

www.smhi.se

www.smhi.se/hydrology-research

<http://hype.sourceforge.net/>

<http://hypeweb.smhi.se/>

Sharing model codes: <http://hype.sourceforge.net/>

ct=j&q=&esrc=s&source=web&cd=1&ved=0CBwQFjAAahUKEwi0iZKksNLHAhVDCSwKHYUPAbs&url=http%3F

hypeweb

HYdrological Predictions for the Environment (HYPE) HYdrological Simulation System (HYSS)

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News

May 2015:

Registration for the [HYPE course](#) Sept 24-25 2015 is now available

Apr 2015:

Next HYPE course will be held Sept 24-25 2015 at SMHI in Norrköping.

Jan 2015:

New release HYPE 4.10.0 available.

Dec 2014:

New tool [HYPE runoff explorer](#) available.

Annual course

Multi-basin modelling at the large scale using HYPE

Special focus on:

processes in the cold regions (ice, snow) and spring flood forecasting

September 24-25th 2015 in Norrköping (SMHI)

Welcome to the 2015 course about the HYPE model and its world-wide application.

In this course, we will present the model structure and give examples of model setup in different regions across the globe. In particular, this year we will focus on:

- (a) hydrological processes at high altitudes, including snow and ice, and
- (b) spring flood forecasting, including E0 data assimilation and seasonal weather forecasts

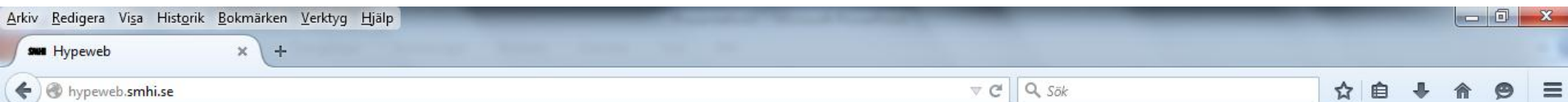
The course is free and open to anyone interested in learning more about the HYPE model and its application at the large scale. For more information please contact [Lena Strömbäck](#).

For registration please fill in [this form](#)

Content:

- Introduction to HYPE and examples of HYPE applications
- HYPE modelling concepts
- Running HYPE – input and output files

Sharing model data: <http://hypeweb.smhi.se/>



Find world-wide water information!

Download computed data for free, and visualize various hydrological variables and how they vary in time and space for each region.

The data can be used in decision-support systems for environmental management and awareness.

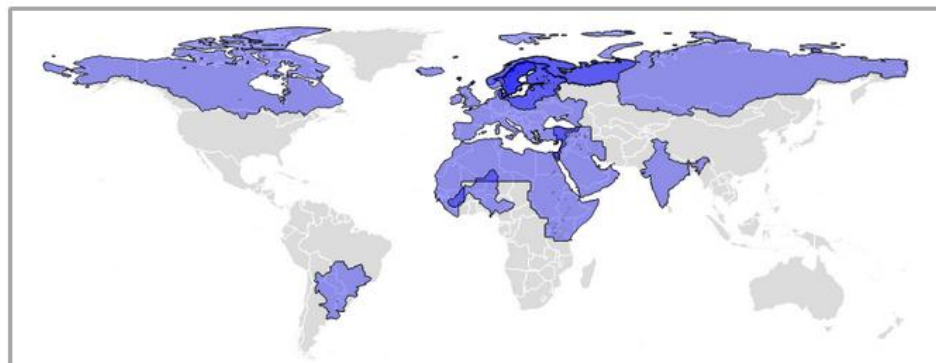
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Tailor your service

Please, contact us to get customized development tailored to your specific needs!

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[La Plata Basin](#) [Niger River](#) [MENA](#) [India](#)

Explore the HYPE

See how water flow is calculated in the model by using the [HYPE Runoff Explorer!](#)

Read more

[HYPE large-scale applications](#)

[The HYPE model](#)

[HYPE open source community](#)

[Usefulness of open data in water modelling \(SWITCH-ON\)](#)

[Other Open Data from SMHI](#)

About us

[Swedish Meteorological and Hydrological Institute \(SMHI\)](#)

[Hydrology Research at SMHI](#)