SMHI

You are here!

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# SMHI – past, present and future

*SOCIETY*

**Sustainability:**
infrastructure; water quality

**Industrialisation:**
Energy problem

**Urbanisation:**
Sanitary problems
(fishing, recreation)

Climate
change

Hydropower
operation

**Transport, Agriculture:** shipping,
log driving, building canals

**Oil crisis**

Hydropower
*vs* ice stability

***Cities***
***Adaptation***
***Multiple use***
***Globalisation***

**Famine:**
More arable land

**Depression:**
Land drainage

Warning Service
for floods

**EU: WFD**
**INSPIRE**

**SMHI**

1800 1820 1840 1860 1880 1900 1920 1940 1960 1980 2000 2020 2040

*HYDROLOGY SERVICE*

Monitoring ice
(cover, break-up,
thickness)

HBV **model:**
monthly forecasts

**PUB**
Multi-basin models

Observing effects
of lake drainage

Water as a recipient;
environmental
assessments

Downscaling &
Effect modelling

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

Spring-flood
forecasts

**Climate services**

**Mapping** hydropower
potential
(water divides, falls, flow)

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


SMHI

- **National Agency under Ministry of Environment**
- **Experts in meteorology, hydrology, oceanography and climatology**
- **Some 670 employees**
- **Sevices 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

**Funding**

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

**Tasks**

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

**Outreach**

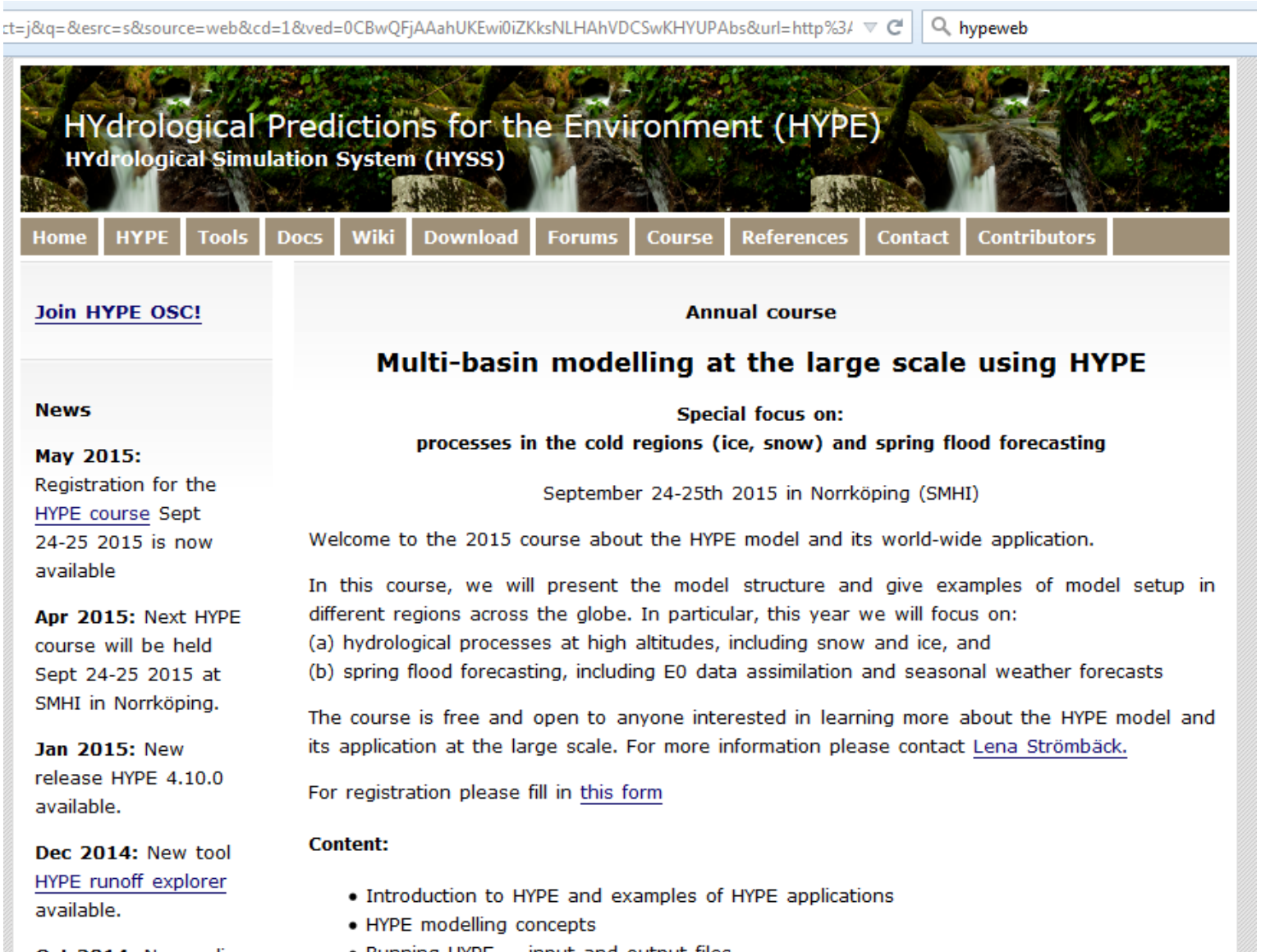
www.smhi.se

www.smhi.se/hydrology-research

http://hype.sourceforge.net/

http://hypeweb.smhi.se/

# Sharing model codes: http://hype.sourceforge.net/



# Sharing model data: http://hypeweb.smhi.se/