



First Circular Workshop – Expert consultation Low flows and droughts

Background

Drought is considered a major natural hazard affecting large areas and millions of people every year. It is a regularly recurring phenomenon with strong environmental and socio-economic impacts. The decade 1996-2005 was globally the warmest since systematic monitoring started in 1850. According to the latest information, global warming will continue and as a result the hydrological cycle is expected to intensify. The hydrological prospects for summer periods, however connected to uncertainties, indicate more frequent low flows and stream flow droughts in the Rhine basin. The recent occurrence of severe and prolonged drought conditions in various regions of Europe and throughout the world has again emphasized the need for in-depth research on the causes as well as the environmental and socio-economic impact of drought. Appropriate tools for drought alert, monitoring and assessment are urgently needed. Such information is essential to manage and implement adequate mitigation and adaptation strategies.

Objectives

- To exchange knowledge about historic low flow and drought periods.
- To discuss local and regional analysis methods of low flow and drought indices and related processes.
- To exchange knowledge about seasonal weather prediction and low flow forecasts.
- To exchange knowledge about the influence of climate variability and climate change on future low flow and drought periods.
- To discuss decision-making procedures, the role of stakeholders and the public.
- To detect research deficits.

The International Commission for the Hydrology of the Rhine Basin (CHR) invites scientists, decision makers and stakeholders in the field of low flow and drought management to discuss these issues during a two-day workshop.

Structure and workshop themes

The workshop is divided in three plenary working sessions:

Theme 1: Observed low flow and drought periods

Keywords: At site and regional indices
Case studies
Data quality

Theme 2: Impact of climate change on low flow and drought

Keywords: Recent developments in climate scenarios
Effects on the hydrological cycle
Effects on water user functions

Theme 3: Management and adaptation strategies

Keywords: Seasonal predictions and real-time forecasts (incl. water temperature)
Prediction at ungauged sites
Risk and crisis management
The role of stakeholders and the public in decision-making procedures

Provisional programme and timetable

Day 1 – 25 September 2007

Registration – from 08.30 a.m.

09.00	Welcome by Prof. Dr. Manfred Spreafico, president of CHR
09.15	Keynote by Lena M. Tallaksen, Department of Geosciences, University of Oslo: Key aspects of low flow and droughts
<i>Theme block 1 – Observed low flow and drought periods</i> Chair: Hans Moser / Rapporteur: Caroline Kan	
10.00 – 10.30	At site and regional indices of low flow and drought periods: Walter Finke, Federal Institute of Hydrology, Koblenz
10.30 – 11.00	Low flow conditions in the Rhine basin – Developments in the 20th century: Jörg U. Belz, Federal Institute of Hydrology, Koblenz
11.00 – 11.30	Tea/Coffee – Posters
11.30 – 12.00	The low flow period of 2003 in Austria: Reinhold Godina, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna
12.00 – 12.30	Meteorological conditions leading to the hydrological droughts in Central Europe – Three case studies: 2003, 2005 and 2006: Bruno Rudolf, German Weather Service, Offenbach
12.30 – 13.15	Discussion of theme 1
13.15 – 14.30	Lunch
<i>Theme block 2 – Impact of climate change on low flow and drought</i> Chair: Siegfried Demuth / Rapporteur: Peter Krahe	
14.30 – 15.00	Recent developments in climate scenarios in The Netherlands: Bart van den Hurk, Royal Dutch Meteorological Institute, De Bilt
15.00 – 15.30	Effects of climate change and climate variability on hydrology: Jaap Kwadijk, WL Delft Hydraulics
15.30 – 16.00	2 min. oral poster presentations
16.00 – 16.30	Tea/Coffee - Posters
16.30 – 17.00	Effects of climate change and climate variability on water user functions: Joergen E. Olesen, University of Aarhus – Department of Agroecology and Environment
17.00 – 17.30	Effects of climate change and climate variability for the delta area of the River Rhine: Vincent Beijck, RWS RIZA Institute for Inland Water Management and Waste Water Treatment, Rotterdam
17.30 – 18.15	Discussion of theme 2
19.30	Participants' dinner

Day 2 – 26 September 2007

Theme block 3 – Management and adaptation strategies

Chair: Henk Wolters / Rapporteur: Gabriela Müller

09.00 – 09.30	Developments in seasonal to decadal predictions: Daniela Jacob, Max-Planck-Institute for Meteorology, Hamburg
09.30 – 10.00	Low flow estimation at ungauged sites: Günter Blöschl, Technical University Vienna
10.00 – 10.30	Operational low flow forecasts: Silke Rademacher, Federal Institute of Hydrology, Koblenz
10.30 – 11.00	Tea/Coffee – Posters
11.00 – 11.30	Predicting low flows – so what?: Undala Alam, Cranfield University, Centre for Water Science
11.30 – 12.00	The seven rules for hydrologists wanting to make an impact on water management, Erik Mostert, Technical University Delft - Centre for Research on River Basin Administration, Analysis and Management
12.00 – 12.30	Discussion of theme 3
12.30 – 13.00	Summary and conclusions of the workshop
13.00	Closing of the workshop
13.15	Lunch

Evening event

Participants' dinner near the conference centre on 25 September at 19.30 pm

Language

Working language of the workshop will be English.

Registration and organizational details

Participation is limited to approximately 50 persons. Please confirm your participation to the workshop, indicating on the registration form if you would like to contribute with a poster.

Oral presentations will be given by invited speakers only. The standard time for presentations is 30 minutes, including 5 minutes for clarifying questions. There will be time for a 2 minute oral presentation of your poster. Speakers and participants who present a poster will be asked to submit an extended abstract of their contribution. The abstracts will be collected in a book of abstracts and handed out to the workshop participants. The abstracts as well as a pdf version of the contributions will be published on the CHR website. After the workshop a final report will be compiled by the three rapporteurs of the thematic blocks. This report will contain a synthesis of the contributions in each block as well as the knowledge gaps and research deficits that were found during the workshop.

Deadlines

Registration before **1st June 2007**

(or earlier if the maximum number of participants is exceeded)

Submission of extended abstracts of presentations and posters before **1st September 2007**

Venue

Wasser- und Schifffahrtsdirektion Süd
Donausaal
Wörthstrasse 19
97082 Würzburg, Germany

Fees

There are no fees for attendance. The organisers of the event will meet the event-related and catering costs. Overnight accommodation must be arranged and paid for by the participants themselves. The organisers will provide suggestions for hotels in Würzburg near the conference site.

Organisers

The invitation to the event is issued by the International Commission for the Hydrology of the Rhine Basin (CHR) in cooperation with UNESCO IHP Paris and the German IHP/HWRP Secretariat. For further information about CHR and about the workshop, please visit our website at www.chr-khr.org.

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For further information, please contact either the CHR/KHR secretariat or one of the members of the coordination committee.