

22 March 2015

Regional DROUGHT workshop

**Asia Pacific Center for Ecohydrology (APCE),
International Center for Interdisciplinary and
Advanced Research (ICIAR), Indonesian Institute of
Sciences (LIPI), Cibinong, Indonesia**

3-5 August 2015

FLYER

Support:



KONINKLIJKE NEDERLANDSE
AKADEMIE VAN WETENSCHAPPEN



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Background

Natural climate variability causes regular lack of rainfall leading to temporal soil moisture limitation, reduces recharge to groundwater systems and below normal water tables. Eventually, this leads to reduced streamflow and lower water stages. Droughts in the Southeast Asian and Pacific region have links with the El Niño phase of the Southern Oscillation. In tropical peatland areas, which are important reservoirs of biodiversity and carbon dioxide, drought as response to climate variability has many implications, among other is increasing fire risk. Additionally, human intervention has degraded extensive areas of peatland (e.g. forest logging, drainage), which is associated with more permanent below optimal soil moisture contents and water tables leading to both at-site and remote environmental and socio-economic impacts. Restoration measures are urgently required.

This 3-day workshop aims to increase knowledge on drought, including drought in groundwater and river flow (hydrological drought). Underlying hydroclimatological processes will be identified and discussed, methods to identify drought and to assess fire risk will be tested with time series of hydroclimatic data. Impact of global change (e.g. climate and landuse) on future drought and fire risk will be investigated and linked to water scarcity (higher water use than water available).

The workshop is not a straightforward workshop with presentation of experts only. It offers the participants a dynamic, interactive learning work environment, where active participation is required. The lecturers will provide the background on the drought and water scarcity in different parts of the world (humid tropics, (semi-)arid, temperate humid) and initiate participant's own input through supervised assignments, incl. presentation of outcome. Moreover, a poster presentation of own research will ensure sharing of knowledge among all participants.

The workshop is an international training event and is organized in the context of the subproject "Hydrological drought in the Kapuas river basin (West Kalimantan): understanding the role of subsurface water" as part of the Joint Research Projects SPIN¹ 2012-2016 "Hydrology-geomorphology links in the Kapuas River system", Kalimantan, Indonesia. In this programme there is cooperation between Indonesia (Research Center for Geotechnology, LIPI, Indonesian Institute of Sciences, Bandung; Research Centre for Limnology, LIPI, Indonesian Institute of Sciences, Cibinong; ITB Bandung Institute of Technology; UNTAN Tanjungpura University,

¹ The Scientific Programme Indonesia -Netherlands (SPIN) is a cooperation of Indonesian and Dutch partners (Ministry for Research and Technology (RISTEK), Ministry of Education and Culture (DIKTI), Royal Netherlands Academy of Arts and Sciences (KNAW) and Netherlands Organization for Scientific Research (NWO)). SPIN stimulates and funds long-term scientific cooperation between researchers and research consortia from Indonesia and the Netherlands, through integrated bilateral research programmes and supporting activities, based on the principles of reciprocity and mutual benefit.

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Pontianak) and the Netherlands (Wageningen University; Delft University of Technology). The workshop also receives strong support from the Asia Pacific Centre for Ecohydrology (APCE), International Center for Interdisciplinary and Advanced Research (ICIAR) and the UNESCO Regional Office in Jakarta (Indonesia). UNESCO will support participants from Pakistan and Mongolia.

Who should attend?

PhD students, postdocs or junior scientist from the Asian and the Pacific region are encouraged to apply, i.e. people in their early academic career working in the field of drought and water scarcity. Max. 20-25 participants will be invited. We also strive to achieve a good gender balance.

Programme

Participants will attend lectures, work on assignments in groups of 4-5 students, present the outcome of the assignments in a plenary session, and presentation of own research in a poster session and share knowledge with other participants. Participants will work on their own laptop and are encouraged to bring own hydro-climatic data (time series of precipitation, temperature and discharge). If no own data are available, hydro-climatic data from the Southeast Asian and Pacific region will be provided. Furthermore tools to identify different drought types and to assess fire risk will be given.

Monday, 3 August

- 09:00 Registration
- 10:00 Opening ceremony (a.o. Prof. Hery Harjono, Director APCE tbc)
- 11:00 Lectures Session I
 - Managing floods and droughts in the Asia-Pacific region: Prof. Shahbaz Khan
 - Climate anomalies and peat formation and distribution in West Kalimantan: Prof. Gusti Z Anshari
- 12:00 Lunch
- 13:00 Lectures Session II
 - The role of groundwater in fulfilling water need during the drought season in Indonesia: Prof. Robert M. Delinom
 - Water scarcity and drought in a semi-arid and arid region: case of Iran: Dr. Arash Malekian
- 15:00 Introduction to Assignments
- 16:00 Plenary: brief introduction to posters in plenary room (1st group of workshop participants)
- 17:00 Closure 1st day.

Evening: joint dinner

Tuesday, 4 August

- 09:00 Lectures Session III
 - Water scarcity and drought in Europe: Dr. Henny A.J. Van Lanen
- 09:30 Working on Assignments I

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- 12:00 Lunch
- 13:00 Poster session in poster hall (poster presentation of 1st group)
- 14:00 Working on Assignments II
- 16:00 Brief introduction to posters in plenary room (2nd group of workshop participants)
- 17:00 Closure 2nd day.

Wednesday, 5 August

- 09:00 Poster session in poster hall (poster presentation of 2nd group)
- 10:00 Working on Assignments III
- 11:00 Preparation of presentation by each group (outcome of assignment)
- 12:00 Lunch
- 13:00 Plenary presentation by each group
- 14:30 Evaluation of workshop
- 15:00 Closure workshop.

Lecturers/presenters

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| Prof.dr. Shahbaz Khan | UNESCO Regional Science Bureau for Asia and the Pacific, Jakarta, Indonesia |
| Prof.dr. Robert M. Delinom | International Center for Interdisciplinary and Advanced Research (ICIAR), Jakarta, Indonesia / Research Center for Geotechnology, LIPI, Indonesian Institute of Sciences, Bandung, Indonesia |
| Prof.dr. Gusti Z. Anshari | Tanjungpura University, West Kalimantan, Indonesia |
| Dr. Arash Malekian | College of Agriculture and Natural Resources University of Tehran, Karaj, Iran |
| Dr.ir. Henny A.J. van Lanen | Wageningen University, the Netherlands/ Coordinator European Drought Centre |
| Muh Taufik, MSc | Bogor Agricultural University (IPB), Indonesia / Wageningen University, the Netherlands (DIKTI PhD candidate) |

Course material

Participants will receive course material (i.e. handouts) before the start of the course. The course material will consist of: (i) relevant material from the Textbook on Hydrological Drought (Elsevier, Tallaksen & Van Lanen, 2004), (ii) relevant material from the Textbook on Prevention of hydrometeorological extreme events – Drought (Wiley, Van Lanen, 2015), (iii) papers on hydrological drought (e.g. Van Loon; Van Huijgevoort, Wanders, Prudhomme), (iv) papers on water scarcity (e.g. van Loon), (v) description of the assignments (e.g. identification of different drought types, assessment of peatland fire risk). Participants will also receive a copy of the presentations.

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Application form

Interested people are requested to complete the attached application form. It includes personal details (e.g. full name, institute, address), brief motivation, area of research you are currently working in and provisional title of your poster presentation. In addition you are asked for to submit a brief Curriculum Vita (max. 2 pages). You are requested to submit your application not later than 31/05/2015. Applicants will be notified of acceptance or otherwise by 19/06/2015.

Venue

The workshop will be hosted by the Asia Pacific Centre for Ecohydrology (APCE), Research Center for Limnology Complex, CSC, Jl. Raya Bogor Km. 46, Cibinong - Bogor 16911, West Java, Indonesia.

Accommodation

The LOC will book and pay accommodation for Indonesian participants. Pre-paid rooms will be booked for participants who are supported by UNESCO.

Costs

No workshop fee applies and course material is provided free of charge. Participants are supposed to pay travel costs from own resources (except international participants supported by UNESCO).

Local Organizing Committee (LOC)

Prof.dr. Robert M. Delinom	Research Center for Geotechnology, LIPI, Indonesian Institute of Sciences, Bandung, Indonesia
Dr. Hidayat	Research Center for Limnology, LIPI, Indonesian Institute of Sciences, Bandung, Indonesia
Dr.ir. Henny A.J. van Lanen	Wageningen University, the Netherlands/ Coordinator European Drought Centre
Muh Taufik, MSc	Bogor Agricultural University (IPB), Indonesia/ Wageningen University, the Netherlands (DIKTI PhD candidate)

Contact

Further information: taufik.muh@wur.nl (copy to: hidayat.hidayat@wur.nl)
Chair Group Hydrology and Quantitative Water Management, Wageningen University, Droevendaalsesteeg 3a, 6708 PB Wageningen, The Netherlands / Bogor Agricultural University (IPB), Indonesia / Research Center for Limnology, LIPI, Indonesian Institute of Sciences, Bandung, Indonesia.