

Annual Report 2017
of the IAHS-ICT activities

Prepared by Christine Stumpp

International Commission on Tracers - members:

Piotr Maloszewski (†March 2017)	Germany	President, 2011-2017
Przemyslaw Wachniew	Poland	Secretary, 2015-2019
Josep Mas Pla	Spain	Vice President, 2015-2019
Maki Tsujimura	Japan	Vice President, 2015-2019
Zhonghe Pang	China	Vice President, 2015-2019
Christine Stumpp	Germany	President Elect, 2017-2021

Period: May 2016 – June 2017

1) Commission members' individual activities

The members of the commission have organized special sessions and/or lectures related to the application and development of tracer methods in the hydrology by national geological/geophysical congresses and at the home universities. They have performed several training courses, established scientific sessions and had oral presentations on tracer methods by national and international symposia and university workshops, e.g.: (i) “Use of isotope techniques for the study of groundwater recharge and dynamics”, Nov 2016, regional training course (2 weeks programme) for the International Atomic Energy Agency (IAEA); 50 participants from 15 countries of the Asian and Pacific region; (ii) Invitation with key note lecture, 24th UNESCO IHP-Regional Steering Committee Meeting in Conjunction with the International and National Water Dialogue on the Delivery of SDG 6 in Mongolia and Wider Asia and the Pacific Region, Oct 2016, Ulaanbaatar, Mongolia; (iii) Invitation with key note lecture, Meeting on “Water Harvesting and Groundwater Recharge”, Khartoum, Sudan, Dec 2016, organized by UNESCO Regional Center on Capacity Development and Research in Water Harvesting, Sudan; (iv) participation to IAEA RCA project “Assessing Deep Groundwater Resources for Sustainable Management Through the Utilization of Isotopic Techniques”; (v) participation to IAEA CRP “Application and development of isotope techniques to evaluate human impacts on water balance and nutrient dynamics of large river basins”; (vi) participation to IAEA Technical Meeting on “Reappraising the Use of Data on Isotopes in Precipitation”; (vii) “Isotope and tracer methods: flow paths characterization, catchment response and transformation processes”, EGU conference session, April 2016 and 2017; more than 40 abstracts for oral and poster presentations; (viii) organization of the international EGU Leonardo Conference 2017 (“Water stable isotopes in the hydrological cycle”) and follow-up workshop on “Water ages in the hydrological cycle”, Oct 2017, Germany; (ix) co-organization of the conference “Towards sustainable groundwater in agriculture - An international conference linking science and policy 2016”, San Francisco, USA, June 2016.

The ICT officers were also active promoting the use of tracers at local training courses and workshops in China (national workshop on isotope hydrology and applications in water resources and environment with 120 participants). They supervised several PhD students and published papers about application and modelling of tracer (e.g. a critical review on the use of tracers for assessing the intrinsic groundwater vulnerability). Simultaneously the ICT officers have organized programs and projects such e.g.: EU Water JPI program, PERSIST on the occurrence and persistence of emerging contaminants in groundwater; Spanish National Program on Water Resources, REMEDIATION, focused on developing strategies for water resources remediation, specifically nitrate and emerging contaminants; and disseminated of the application of tracer techniques within the framework of the EU research project BONUS Soils2Sea.

2) Joint session of the IAH and the ICT-IAHS by 43rd IAH Congress in Montpellier, Italy

The commission has convened the session “Isotopic and residence time tracers” (S8.04) at the 43rd IAH Congress, which was held in Montpellier, France, in September 2016. The joint IAH-IAHS session was held during three days and included 16 oral and 8 poster presentations. Each session was attended by 30-40 participants. During oral and poster presentations, the application of isotopes and tracers to characterize groundwater flow-paths, estimate residence times and system parameters were widely discussed.

3) ICT Workshop for IAHS Scientific Assembly, July 2017, Port Elizabeth, South Africa

The commission has organized the workshop “Environmental and artificial tracers as indicators in hydrology” for the IAHS Scientific Assembly. The workshop focuses on using environmental and artificial tracers to provide insights into functioning of different compartments of the hydrological cycle and assist the development of their conceptual and numerical models. Nine (9) oral presentations demonstrate the application and recent developments of tracer techniques in field studies or modelling in all areas of the surface and sub-surface hydrology.

4) International Commission on Tracers

The ICT president, Piotr Maloszewski, passed away in March 2017. The IAHS bureau sent condolences in the name of the entire IAHS to his family.