### **HS – Hydrological Sciences – Orals**

	Monday, 28 April
<b>MO1</b> , 08:30–10:00	HS1.1, Panta Rhei: a vision and an agenda for the next 10 years of hydrological research in support of society, 08:30–12:00, Room R6
	HS2.3.8, Catchment Organisation and Similarity, 08:30–12:00, Room R13
	HS2.4.3, Monitoring Strategies: temporal trends in groundwater and surface water quality and quantity, 08:30–12:00, Room R11
	HS7.8, Precipitation and urban hydrology, 08:30–10:00, Room R4
	HS8.2.1, Groundwater resources in a changing environment, 08:30–12:00, Room R1
	HS10.2, Lakes and inland seas in a changing environment, 08:30–10:00, Room R8
	SSS10.10/HS8.3.20, Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity (co-organized), 08:30–15:15, Room B9
<b>MO2</b> , 10:30–12:00	HS1.1, Panta Rhei: a vision and an agenda for the next 10 years of hydrological research in support of society, 08:30–12:00, Room R6
	HS2.3.8, Catchment Organisation and Similarity, 08:30–12:00, Room R13
	HS2.4.3, Monitoring Strategies: temporal trends in groundwater and surface water quality and quantity, 08:30–12:00, Room R11
	HS7.5/NP8.3, Hydroclimatic stochastics (co-organized), 10:30–12:00, Room R4
	HS8.2.1, Groundwater resources in a changing environment, 08:30–12:00, Room R1
	HS10.7/BG2.16, Redistribution of rain in vegetation: Patterns, processes, and interactions at the soil-atmosphere interface (co-organized), 10:30–12:00, Room R8
	<b>PSD9.9</b> , SSS7.4/HS8.3.14 - Soil water repellency in a changing climate: occurrence and interactions with extreme meteorological and hydrological events, <b>10:30–11:15</b> , <b>Room B4</b>
	SSS2.5/GM6.10/HS8.3.7/SSP3.1.20, The behaviour of soils, sediments and water within the 3D landscape: The use and mis-use of modelling and other approaches. (co-organized), 10:30–12:15, Room B8
	SSS10.10/HS8.3.20, Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity (co-organized), 08:30–15:15, Room B9
<b>MO3</b> , 13:30–15:00	HS2.3.2, Multiscale hydrology: using large data sets and combining bottom-up and top-down modelling approaches to improve process understanding, 13:30–17:00, Room R13
	HS2.4.4, Large scale hydrology, 13:30–15:00, Room R11
	HS6.5, The Third Pole Environment - Observation and modelling of hydrometeorological processes in high elevation areas, 13:30–15:00, Room R4
	HS7.1/AS1.9/NH1.12/NP3.9, Precipitation: from measurement to modelling and application in catchment hydrology (co-organized), 13:30–17:00, Room R6
	HS8.2.3, Stochastic groundwater hydrology, 13:30–17:00, Room R1

	HS10.1/GM8.4, Estuarine processes (co-organized), 13:30–17:00, Room R8
	PSD21.7, HS7.8 - Precipitation and urban hydrology, 13:30–14:15, Room R7
	SSS7.4/HS8.3.14, Soil water repellency in a changing climate: occurrence and interactions with extreme meteorological and hydrological events (co-organized), 13:30–17:15, Room B8
	SSS10.10/HS8.3.20, Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity (co-organized), 08:30–15:15, Room B9
<b>MO4</b> , 15:30–17:00	HS2.3.2, Multiscale hydrology: using large data sets and combining bottom-up and top-down modelling approaches to improve process understanding, 13:30–17:00, Room R13
	HS2.4.7, Decadal flood risk changes: from detection to attribution, 15:30–16:45, Room R11
	HS6.7, Remote sensing of soil moisture, 15:30–17:00, Room R4
	HS7.1/AS1.9/NH1.12/NP3.9, Precipitation: from measurement to modelling and application in catchment hydrology (co-organized), 13:30–17:00, Room R6
	HS8.2.3, Stochastic groundwater hydrology, 13:30–17:00, Room R1
	HS10.1/GM8.4, Estuarine processes (co-organized), 13:30–17:00, Room R8
	<b>PSD9.12</b> , SSS10.10/HS8.3.20 - Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity, <b>15:30–16:15</b> , <b>Room R5</b>
	PSD21.9, HS8.2.7 - Mountainous Catchment Hydrogeology, 16:30–17:15, Room R12
	PSD21.11, HS10.2 - Lakes and inland seas in a changing environment, 16:30–17:15, Room R7
	SSS7.4/HS8.3.14, Soil water repellency in a changing climate: occurrence and interactions with extreme meteorological and hydrological events (co-organized), 13:30–17:15, Room B8
	Tuesday, 29 April
<b>TU1</b> , 08:30–10:00	CR2.2, Glacier Monitoring from In-situ and Remotely Sensed Observations (co-listed), 08:30–12:00, Room Y11
	HS2.3.6, Water quality at the catchment scale: measuring and modeling of nutrients, sediment and eutrophication impacts, 08:30–12:00, Room R13
	HS3.1, HydroInformatics: computational intelligence, systems analysis, optimisation and geostatistics, 08:30–12:00, Room R11
	HS6.2, ESA's SMOS and NASA's SMAP missions: providing global observations of soil moisture and ocean salinity and beyond, 08:30–12:00, Room R4
	HS7.1/AS1.9/NH1.12/NP3.9, Precipitation: from measurement to modelling and application in catchment hydrology (co-organized), 08:30–10:00, Room R6
	HS8.1.2, Hydrogeophysics: From non-invasive site characterization to improved process understanding, 08:30–10:00, Room R1
	HS9.2/GM7.8/SSS7.20, Modeling the experiment, experimenting the models: experiment and model to connect geophysical flows from grains to landscapes (co-organized), 08:30–12:00, Room Y1

**HS10.6**, Peatland Hydrology, **08:30–12:00**, **Room R8** 

**PSD21.6**, HS7.4/AS4.21/CL3.8 - Change in climate, hydrology and society, **08:30–09:15**, **Room R12** 

SC2/HS11.1, Meet the expert in hydrology - How young scientists can contribute to 'Hydrology in a changing world' (Open Discussion) (co-organized), 08:30-10:00, Room Y7

SSS0.4/HS8.3.10, Spatial and Temporal Patterns in Soil Systems: Monitoring, Modeling and Characterization of Soil Water Contents and coupled biogeochemical properties (co-organized), 08:30-10:15, Room B6

SSS0.8/BG9.6/ESSI1.10/GI3.10/GM2.5/GMPV60/HS8.3.6/SSP3.1.18/TS9.14, Platforms, Sensors and Applications with Unmanned Aerial Systems in the geosciences (co-organized), 08:30–12:15, Room B5

SSS7.2/GM6.12/HS8.3.8, Dynamic soil properties for understanding flow and transport in the landscape (co-organized), 08:30–10:00, Room B8

TU2, 10:30–12:00 | CR2.2, Glacier Monitoring from In-situ and Remotely Sensed Observations (co-listed), 08:30–12:00, Room Y11

GI1.4, Geoscience processes related to Fukushima nuclear accident (co-listed), 10:30–17:00, Room B2

GM7.2, The Quaternary History of the River Nile (co-listed), 10:30–12:00, Room G2

HS2.3.6, Water quality at the catchment scale: measuring and modeling of nutrients, sediment and eutrophication impacts, 08:30–12:00, Room R13

HS3.1, HydroInformatics: computational intelligence, systems analysis, optimisation and geostatistics, 08:30–12:00, Room R11

HS6.2, ESA's SMOS and NASA's SMAP missions: providing global observations of soil moisture and ocean salinity and beyond, 08:30–12:00, Room R4

HS7.4/AS4.21/CL3.8, Change in climate, hydrology and society (co-organized), 10:30–17:00, Room R6

HS9.2/GM7.8/SSS7.20, Modeling the experiment, experimenting the models: experiment and model to connect geophysical flows from grains to landscapes (co-organized), 08:30-12:00, Room Y1

**HS10.6**, Peatland Hydrology, **08:30–12:00**, **Room R8** 

PSD9.8, SSS7.2/GM6.12/HS8.3.8 - Dynamic soil properties for understanding flow and transport in the landscape, 10:30–11:15, Room B7

PSD21.5, HS6.1 - Open session on remote sensing applications in hydrology and climate studies, 10:30–11:15, Room R12

SSS0.8/BG9.6/ESSI1.10/GI3.10/GM2.5/GMPV60/HS8.3.6/SSP3.1.18/TS9.14, Platforms, Sensors and Applications with Unmanned Aerial Systems in the geosciences (co-organized), 08:30-12:15, Room B5

SSS9.12/BG2.18/GM4.7/HS8.3.23, Coevolution of soils, landforms and vegetation: ecosystem stability thresholds and critical zone observatories (co-organized), 10:30-17:15, Room B6

TU3, 13:30–15:00 GI1.4, Geoscience processes related to Fukushima nuclear accident (co-listed), 10:30–17:00, Room B2

GM7.3/HS9.9/SSP3.2.2, Sedimentary source-to-sink fluxes and sediment budgets (co-organized), 13:30–15:00, Room G2

HS2.2.2, Mountain Hydrology: Monitoring and modeling of snow, 13:30–17:00, Room R4

HS2.3.5, Isotope and tracer methods: flow paths characterization, catchment response and transformation processes, 13:30–17:00, Room R13

	HS6.1, Open session on remote sensing applications in hydrology and climate studies, 13:30–17:00, Room R1
	HS7.4/AS4.21/CL3.8, Change in climate, hydrology and society (co-organized), 10:30–17:00, Room R6
	HS8.2.4, Fissured and karstified aquifers, 13:30–15:00, Room R8
	HS10.3, General Ecohydrology, 13:30–15:00, Room R11
	PSD21.8, HS8.1.6/SM5.3/SSP3.2.5/TS2.5 - Fluid processes on different spatiotemporal scales: from colloids to sedimentary basins, 13:30–14:15, Room R5
	PSD21.12, HS10.4/GM7.13 - Linking river ecology, hydrology, and geomorphology for integrated river management, 13:30–14:15, Room R7
	SSS9.12/BG2.18/GM4.7/HS8.3.23, Coevolution of soils, landforms and vegetation: ecosystem stability thresholds and critical zone observatories (co-organized), 10:30–17:15, Room B6
<b>TU4</b> , 15:30–17:00	GI1.4, Geoscience processes related to Fukushima nuclear accident (co-listed), 10:30–17:00, Room B2
	HS2.2.2, Mountain Hydrology: Monitoring and modeling of snow, 13:30–17:00, Room R4
	HS2.3.5, Isotope and tracer methods: flow paths characterization, catchment response and transformation processes, 13:30–17:00, Room R13
	HS6.1, Open session on remote sensing applications in hydrology and climate studies, 13:30–17:00, Room R1
	HS7.4/AS4.21/CL3.8, Change in climate, hydrology and society (co-organized), 10:30–17:00, Room R6
	HS8.2.5, Thermal and mechanical processes and energy storage in porous and fractured aquifers, 15:30–17:00, Room R8
	HS10.4/GM7.13, Linking river ecology, hydrology, and geomorphology for integrated river management (co-organized), 15:30–17:00, Room R11
	SSS9.12/BG2.18/GM4.7/HS8.3.23, Coevolution of soils, landforms and vegetation: ecosystem stability thresholds and critical zone observatories (co-organized), 10:30–17:15, Room B6
<b>TU6</b> , 19:00–20:00	ML18, John Dalton Medal Lecture by Hoshin V. Gupta (co-listed), 19:00–20:00, Room R1
	Wednesday, 30 April
<b>WE1</b> , 08:30–10:00	CL6.6/HS7.9, Improving the representation of climate using high resolution climate and NWP models. (co-organized), 08:30–10:00, Room Y6
	HS2.3.7, Water quality at the catchment scale: monitoring and modeling of micropollutants, 08:30–12:00, Room R13
	HS2.3.9, GW-SW interactions: concepts, methods and biogeochemical and ecologic implications, 08:30–15:00, Room R6
	HS2.4.5, Hydrological change: Regional hydrological behaviour under transient climate and land use conditions, 08:30–12:00, Room R1
	HS6.6, Flood inundation modelling and mapping from local to global scales and the future SWOT mission, 08:30–10:00, Room R8
	HS7.2/AS1.10/CL3.7/NH1.13/NP3.10, Precipitation uncertainty and variability: observations, ensemble simulation and downscaling (co-organized) 08:30–12:00, Room R4
	HS10.8, Environmental and anthropogenic change: adaptation and co-evolution in ecohydrological systems, 08:30–10:00, Room R11
	SC3/HS11.2, How to write (and publish) a scientific paper in hydrology (co-organized), 08:30–10:00, Room R3

	SSS9.9/GM6.3/HS9.14/SSP3.1.23, Connectivity in hydrology and sediment dynamics: how do we move forwards? (co-organized), 08:30–12:15, Room B6
<b>WE2</b> , 10:30–12:00	CL2.14, Paleoflood dynamics throughout the Holocene (co-listed), 10:30–12:00, Room Y8
	HS2.3.7, Water quality at the catchment scale: monitoring and modeling of micropollutants, 08:30–12:00, Room R13
	HS2.3.9, GW-SW interactions: concepts, methods and biogeochemical and ecologic implications, 08:30–15:00, Room R6
	HS2.4.5, Hydrological change: Regional hydrological behaviour under transient climate and land use conditions, 08:30–12:00, Room R1
	<b>HS4.2</b> , Hydrological forecasting: Untangling and reducing predictive uncertainty through improved model process description, data assimilation and post-processing, <b>10:30–12:00</b> , <b>Room R11</b>
	HS6.8, Assimilation of hydrological remote sensing data, 10:30–12:00, Room R8
	HS7.2/AS1.10/CL3.7/NH1.13/NP3.10, Precipitation uncertainty and variability: observations, ensemble simulation and downscaling (co-organized), 08:30–12:00, Room R4
	PSD21.13, HS10.8 - Environmental and anthropogenic change: adaptation and co-evolution in ecohydrological systems, 10:30–11:15, Room R7
	SSS9.9/GM6.3/HS9.14/SSP3.1.23, Connectivity in hydrology and sediment dynamics: how do we move forwards? (co-organized), 08:30–12:15, Room B6
<b>WEL</b> , 12:15–13:15	ML1, Alfred Wegener Medal Lecture by Eric F. Wood (co-listed), 12:15–13:15, Room R1
<b>WE3</b> , 13:30–15:00	HS2.3.9, GW-SW interactions: concepts, methods and biogeochemical and ecologic implications, 08:30–15:00, Room R6
	HS4.4, Drought and water scarcity: hydrological monitoring, modelling and forecasting to improve water management, 13:30–17:00, Room R8
	HS5.7, Design and Operation of Water Resource Systems: Computer Based Control and Optimization, 13:30–15:00, Room R11
	HS7.3/CL3.6/NP1.4, Water, climate and health (co-organized), 13:30–15:00, Room R4
<b>WE4</b> , 15:30–17:00	HS4.4, Drought and water scarcity: hydrological monitoring, modelling and forecasting to improve water management, 13:30–17:00, Room R8
	HS5.11, Advances in Modeling of Coupled Hydrologic-Socioeconomic Systems, 15:30–17:00, Room R11
	HS8.2.2/IG13, Residence times of groundwater, surface water and atmospheric water across hydrological scales (co-organized), 15:30–17:00, Room R4
	IG8/HS2.1.3, Isotopes in the global water cycle: natural and anthropogneic fingerprinting in surface and groundwater at the catchment scale (co-organized), 15:30–17:00, Room R14
	Thursday, 01 May
<b>TH1</b> , 08:30–10:00	ESSI2.7, Free and Open Source Software (FOSS) for Geoinformatics and Geosciences (co-listed), 08:30–10:15, Room G1
	GM4.1/HS9.12/SSS9.18, Human-Earth interaction from the Pleistocene to the Anthropocene: state of the science and future direction (co-organized) (co-organized), 08:30–15:03, Room G10
	HS2.3.4, Innovative sensing techniques and data analysis approaches to increase hydrological process understanding, 08:30–10:00, Room R11

	HS4.3/AS1.17/NH1.10, Ensemble hydro-meteorological forecasting (co-organized), 08:30–12:00, Room R6
-	HS5.1, Catchment Science and management: providing evidence for environmental directives, 08:30–12:00, Room R8
	HS8.1.4/SSS7.16, Parameter Estimation, Inverse Modelling and Data Assimilation in Subsurface Hydrology (co-organized), 08:30–12:00, Room R4
	HS8.1.8, The role of interfaces in flow and transport in porous media, 08:30–10:00, Room R13
	SM4.5/HS12.2, Imaging the shallow subsurface with seismic and other geophysical methods (co-organized), 08:30–15:00, Room G12
	SSS6.1/GM4.9/HS8.3.12, Soil carbon sequestration and greenhouse gas emissions: sources, mechanisms, processes and management practices effects (co-organized), 08:30–12:15, Room B5
<b>TH2</b> , 10:30–12:00	GM4.1/HS9.12/SSS9.18, Human-Earth interaction from the Pleistocene to the Anthropocene: state of the science and future direction (co-organized), 08:30–15:03, Room G10
	HS2.3.1, Understanding catchment and hillslope responses: from changing states and non-linearities to emergent behaviours, 10:30–12:00, Room R11
	HS4.3/AS1.17/NH1.10, Ensemble hydro-meteorological forecasting (co-organized), 08:30–12:00, Room R6
	HS5.1, Catchment Science and management: providing evidence for environmental directives, 08:30–12:00, Room R8
	HS8.1.4/SSS7.16, Parameter Estimation, Inverse Modelling and Data Assimilation in Subsurface Hydrology (co-organized), 08:30–12:00, Room R4
	<b>HS8.1.9</b> , Physical, chemical, microbial and isotopic processes in groundwater; from soil contamination to shale gas impacts (co-sponsored by EuroGeoSurveys), <b>10:30–12:00</b> , <b>Room R13</b>
	PSD21.4, HS5.8 - Stakeholders, public involvement and collaborative processes in hydrology research and water management, 10:30–11:15, Roor R7
	SM4.5/HS12.2, Imaging the shallow subsurface with seismic and other geophysical methods (co-organized), 08:30–15:00, Room G12
	SSS6.1/GM4.9/HS8.3.12, Soil carbon sequestration and greenhouse gas emissions: sources, mechanisms, processes and management practices effects (co-organized), 08:30–12:15, Room B5
<b>THL</b> , 12:15–13:15	PSD21.2, HS4.3/AS1.17/NH1.10 - Ensemble hydro-meteorological forecasting, 12:15–13:00, Room R12
<b>TH3</b> , 13:30–15:00	GM4.1/HS9.12/SSS9.18, Human-Earth interaction from the Pleistocene to the Anthropocene: state of the science and future direction (co-organized), 08:30–15:03, Room G10
	HS4.5, Hydrology for decision-making: the value of forecasts, predictions, scenarios, outlooks and foresights, 13:30–15:00, Room R11
	HS5.6, Water and food security: integrating perspectives from geophysics and social sciences, 13:30–17:00, Room R8
	HS8.1.1, Subsurface flow, solute transport, and energy processes: Concepts, modelling, and observations, 13:30–17:00, Room R13
	HS8.1.7, Fate and transport of biocolloids and nanoparticles in soil and groundwater systems, 13:30–17:00, Room R6
	HS9.4/GM7.10, Measurement and monitoring techniques for evaluating sediment transport and dynamic processes in open-water environments (co-organized), 13:30–15:00, Room R4

	PSD21.1, HS4.1/AS4.18/GM7.14/NH1.7 - Flash floods and associated hazards: monitoring, forecasting, preparedness and coping strategies, 13:30–14:15, Room R7
	PSD21.10, HS9.3/GM7.9 - Climatic and geodynamic record from the sediments and suspended load of large rivers, 13:30–14:15, Room R5
	SM4.5/HS12.2, Imaging the shallow subsurface with seismic and other geophysical methods (co-organized), 08:30–15:00, Room G12
	SSS2.3/HS8.3.11, Soil and water conservation for sustainable land management (co-organized), 13:30–15:15, Room B6
<b>TH4</b> , 15:30–17:00	HS4.1/AS4.18/GM7.14/NH1.7, Flash floods and associated hazards: monitoring, forecasting, preparedness and coping strategies (co-organized), 15:30–17:00, Room R11
	HS5.6, Water and food security: integrating perspectives from geophysics and social sciences, 13:30–17:00, Room R8
	HS8.1.1, Subsurface flow, solute transport, and energy processes: Concepts, modelling, and observations, 13:30–17:00, Room R13
	HS8.1.7, Fate and transport of biocolloids and nanoparticles in soil and groundwater systems, 13:30–17:00, Room R6
	HS9.3/GM7.9, Climatic and geodynamic record from the sediments and suspended load of large rivers (co-organized), 15:30–17:00, Room R4
	PSD5.1, GM9.2/HS9.11/NH3.12 - Geomorphic and hydrological processes in proglacial areas under conditions of (rapid) deglaciation, 15:30–16:15, Room B7
	PSD21.3, HS5.1 - Catchment Science and management: providing evidence for environmental directives, 16:30–17:15, Room R7
<b>TH6</b> , 19:00–20:00	ML19, Henry Darcy Medal Lecture by Upmanu Lall (co-listed), 19:00–20:00, Room R1

### Friday, 02 May

FR1, 08:30–10:00 BG2.5/SSS7.19, Earth observation for monitoring and modeling the global energy, water and carbon cycles over land using model-data integration (co-listed), 08:30-12:00, Room G4

HS2.4.2, Hydrological extremes: from droughts to floods, 08:30-17:00, Room R1

HS5.3, Assessment and management of water resources in the Mediterranean and (semi-)arid regions, 08:30–10:00, Room R11

HS8.3.3/SSS7.13, Patterns in Soil-Vegetation-Atmosphere Systems: Monitoring, Modelling, and Data Assimilation (co-organized), 08:30–10:00, Room R4

HS9.5/GM7.11, Numerical modelling and experiments in river morphodynamics (co-organized), 08:30–12:00, Room R6

HS9.7/GM7.7/SSP3.1.17/SSS7.10, Revisiting techniques for quantifying sources and travel times of fine sediment from catchment to coast (co-organized), 08:30–10:00, Room R8

SSS2.10/BG9.7/GM4.8/HS8.3.9/NH3.9, How vegetation influences soil erosion and slope stability: monitoring and modeling eco-hydrological and geo-mechanical factors (co-organized), 08:30-12:15, Room B6

FR2, 10:30–12:00 BG2.5/SSS7.19, Earth observation for monitoring and modeling the global energy, water and carbon cycles over land using model-data integration (co-listed), 08:30-12:00, Room G4

GI2.5, Scientific Exploitation of Copernicus – EO Research and Innovation supporting Societal Challenges (co-listed), 10:30–12:00, Room B2

HS2.4.2, Hydrological extremes: from droughts to floods, 08:30-17:00, Room R1

HS2.4.6, Climate Change and Water Resources in Central Asia and Caucasus, 10:30–12:00, Room R8

HS5.5, Socio-hydrology and river basin development; scaling and sustainability issues, 10:30–12:00, Room R11

HS8.3.5/SSS7.12, Estimation of soil-atmosphere and vadose zone water fluxes by use of precision lysimeter measurements (co-organized), 10:30-12:00, Room R4

HS9.5/GM7.11, Numerical modelling and experiments in river morphodynamics (co-organized), 08:30–12:00, Room R6

SSS2.10/BG9.7/GM4.8/HS8.3.9/NH3.9, How vegetation influences soil erosion and slope stability: monitoring and modeling eco-hydrological and geo-mechanical factors (co-organized), 08:30-12:15, Room B6

FRL, 12:15–13:15 ML4, Alexander von Humboldt Medal Lecture by Pradeep Mujumdar (co-listed), 12:15–13:15, Room R1

FR3, 13:30–15:00 AS4.14/BG7.4/CL3.10, Methane and other greenhouse gases in the Arctic (co-listed), 13:30–15:00, Room B11

GM9.2/HS9.11/NH3.12, Geomorphic and hydrological processes in proglacial areas under conditions of (rapid) deglaciation (co-organized), 13:30-15:00, Room G2

HS2.1.2, Advances in Integrated Process-Based Distributed Hydrologic Modeling, 13:30–15:00, Room R11

HS5.4/CL4.8/ERE1.16, Hydropower and other renewable sources of energy for a sustainable future: modeling and management issues (co-organized), 13:30-16:45, Room R8

	HS8.3.2/SSS7.14, Monitoring and modelling transfer processes in the soil-plant-atmosphere continuum across scales (co-organized), 13:30–17:00, Room R4
	HS9.8/GM7.6, Transfer of sediments and associated substances in catchment and river systems (co-organized), 13:30–17:00, Room R6
	NH9.13, Global and continental scale risk assessment for natural hazards: methods and practice (co-listed), 13:30–17:00, Room G8
FR4, 15:30–17:00	HS2.2.1, Historical hydrology, 15:30–17:00, Room R11
	HS2.4.2, Hydrological extremes: from droughts to floods, 08:30–17:00, Room R1
	HS5.4/CL4.8/ERE1.16, Hydropower and other renewable sources of energy for a sustainable future: modeling and management issues (co-organized), 13:30–16:45, Room R8
	HS8.3.2/SSS7.14, Monitoring and modelling transfer processes in the soil-plant-atmosphere continuum across scales (co-organized), 13:30–17:00, Room R4
	HS9.8/GM7.6, Transfer of sediments and associated substances in catchment and river systems (co-organized), 13:30–17:00, Room R6
	NH9.13, Global and continental scale risk assessment for natural hazards: methods and practice (co-listed), 13:30–17:00, Room G8
	NP2.4, Complex networks and data-driven knowledge discovery in climate and geosciences (co-listed), 15:30–17:00, Room B3
	PSD9.5, SSS2.10/BG9.7/GM4.8/HS8.3.9/NH3.9 - How vegetation influences soil erosion and slope stability: monitoring and modeling eco-hydrological and geo-mechanical factors, 15:30–16:15, Room B7

## **HS – Hydrological Sciences – PICOs**

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	Monday, 28 April	
<b>MO3</b> , 13:30–15:00	HS1.5/GI1.9, Data & Models, Induction & Prediction, Information & Uncertainty: Towards a common framework for model building and predictions in the Geosciences (co-organized), PICO Spot 1	
·	<b>HS1.5/GI1.9</b> , Data & Models, Induction & Prediction, Information & Uncertainty: Towards a common framework for model building and predictions in the Geosciences (co-organized), <b>PICO Spot 1</b>	
	Tuesday, 29 April	
<b>TU3</b> , 13:30–15:00	HS3.3, Open Source Computing in Hydrology, PICO Spot 1	
	Wednesday, 30 April	
<b>WE3</b> , 13:30–15:00	SM5.2/HS8.1.3, Integrated modelling of densely spaced near-surface geophysical data and geological and hydrogeological information (co-organized), PICO Spot 2	

# HS – Hydrological Sciences – Posters

	Monday, 28 April
<b>MO2</b> , 10:30–12:00	<b>PSD9.9</b> , SSS7.4/HS8.3.14 - Soil water repellency in a changing climate: occurrence and interactions with extreme meteorological and hydrological events, <b>10:30–11:15</b> , <b>Room B4</b>
<b>MO3</b> , 13:30–15:00	PSD21.7, HS7.8 - Precipitation and urban hydrology, 13:30–14:15, Room R7
<b>MO4</b> , 15:30–17:00	<b>PSD9.12</b> , SSS10.10/HS8.3.20 - Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity, <b>15:30–16:15</b> , <b>Room R5</b>
	PSD21.9, HS8.2.7 - Mountainous Catchment Hydrogeology, 16:30–17:15, Room R12
	PSD21.11, HS10.2 - Lakes and inland seas in a changing environment, 16:30–17:15, Room R7
<b>MO5</b> , 17:30–19:00	GI1.4, Geoscience processes related to Fukushima nuclear accident (co-listed), Red Posters, R80–R117   Related: PSD11.1, see MO4
	HS1.4, Innovative techniques and unintended use of measurement equipment, Red Posters, R184–R195
	HS2.2.2, Mountain Hydrology: Monitoring and modeling of snow, Red Posters, R196–R212
	HS2.3.2, Multiscale hydrology: using large data sets and combining bottom-up and top-down modelling approaches to improve process understanding, Red Posters, R213–R226
	HS2.3.8, Catchment Organisation and Similarity, Red Posters, R227–R244
	HS2.4.3, Monitoring Strategies: temporal trends in groundwater and surface water quality and quantity, Red Posters, R245–R257
	HS2.4.4, Large scale hydrology, Red Posters, R258–R275
	HS2.4.7, Decadal flood risk changes: from detection to attribution, Red Posters, R276–R290
	HS6.5, The Third Pole Environment - Observation and modelling of hydrometeorological processes in high elevation areas, <b>Red Posters</b> , R291–R307
	HS6.7, Remote sensing of soil moisture, Red Posters, R308–R324
	HS7.5/NP8.3, Hydroclimatic stochastics (co-organized), Red Posters, R325–R336
	HS7.8, Precipitation and urban hydrology, Red Posters, R337–R356   Related: PSD21.7, see MO3
	HS8.2.1, Groundwater resources in a changing environment, Red Posters, R357–R383
	HS8.2.3, Stochastic groundwater hydrology, Red Posters, R384–R396
	HS8.2.7, Mountainous Catchment Hydrogeology, Red Posters, R397–R409   Related: PSD21.9, see MO4
	HS10.1/GM8.4, Estuarine processes (co-organized), Red Posters, R410–R423
	HS10.2, Lakes and inland seas in a changing environment, Red Posters, R424–R445   Related: PSD21.11, see MO4

	HS10.7/BG2.16, Redistribution of rain in vegetation: Patterns, processes, and interactions at the soil-atmosphere interface (co-organized), Red Posters, R446–R458
	SSS2.5/GM6.10/HS8.3.7/SSP3.1.20, The behaviour of soils, sediments and water within the 3D landscape: The use and mis-use of modelling and other approaches. (co-organized), Blue Posters, B1–B17
	SSS7.4/HS8.3.14, Soil water repellency in a changing climate: occurrence and interactions with extreme meteorological and hydrological events (co-organized), Blue Posters, B56–B71   Related: PSD9.9, see MO2
	SSS10.10/HS8.3.20, Irrigated Agriculture: Natural Resources Management for the Sustainability of the Ecosystem Maintaining Productivity (co-organized), Blue Posters, B72–B105   Related: PSD9.12, see MO4
	Tuesday, 29 April
<b>TU1</b> , 08:30–10:00	PSD21.6, HS7.4/AS4.21/CL3.8 - Change in climate, hydrology and society, 08:30–09:15, Room R12
<b>TU2</b> , 10:30–12:00	PSD9.8, SSS7.2/GM6.12/HS8.3.8 - Dynamic soil properties for understanding flow and transport in the landscape, 10:30–11:15, Room B7
	PSD21.5, HS6.1 - Open session on remote sensing applications in hydrology and climate studies, 10:30–11:15, Room R12
<b>TU3</b> , 13:30–15:00	PSD21.8, HS8.1.6/SM5.3/SSP3.2.5/TS2.5 - Fluid processes on different spatiotemporal scales: from colloids to sedimentary basins, 13:30–14:15, Room R5
	PSD21.12, HS10.4/GM7.13 - Linking river ecology, hydrology, and geomorphology for integrated river management, 13:30–14:15, Room R7
<b>TU5</b> , 17:30–19:00	CR2.2, Glacier Monitoring from In-situ and Remotely Sensed Observations (co-listed), Blue Posters, B921–B938
	GM7.2, The Quaternary History of the River Nile (co-listed), Blue Posters, B391–B401
	GM7.3/HS9.9/SSP3.2.2, Sedimentary source-to-sink fluxes and sediment budgets (co-organized), Blue Posters, B402–B418
	HS2.2.3, Advances in hydrology using numerical weather models, Red Posters, R169–R177
	HS2.3.5, Isotope and tracer methods: flow paths characterization, catchment response and transformation processes, Red Posters, R178–R204
	HS2.3.6, Water quality at the catchment scale: measuring and modeling of nutrients, sediment and eutrophication impacts, Red Posters, R205–R229
	HS3.1, HydroInformatics: computational intelligence, systems analysis, optimisation and geostatistics, Red Posters, R230–R263
	HS6.1, Open session on remote sensing applications in hydrology and climate studies, Red Posters, R264–R279   Related: PSD21.5, see TU2
	<b>HS6.2</b> , ESA's SMOS and NASA's SMAP missions: providing global observations of soil moisture and ocean salinity and beyond, <b>Red Posters</b> , <b>R280–R294</b>
	HS7.1/AS1.9/NH1.12/NP3.9, Precipitation: from measurement to modelling and application in catchment hydrology (co-organized), Red Posters, R295–R328
	HS7.4/AS4.21/CL3.8, Change in climate, hydrology and society (co-organized), Red Posters, R329–R352   Related: PSD21.6, see TU1
	HS8.1.2, Hydrogeophysics: From non-invasive site characterization to improved process understanding, Red Posters, R353–R370

HS8.1.5, Pore Scale Characterization and Upscaling of Flow and Transport in Porous Media, Red Posters, R371–R382

HS8.1.6/SM5.3/SSP3.2.5/TS2.5, Fluid processes on different spatiotemporal scales: from colloids to sedimentary basins (co-organized), Red Posters, R383-R394 | Related: PSD21.8, see TU3

HS8.2.4, Fissured and karstified aguifers, Red Posters, R395–R410

HS8.2.5, Thermal and mechanical processes and energy storage in porous and fractured aquifers, Red Posters, R411–R425

**HS10.3**, General Ecohydrology, **Red Posters**, **R426–R440** 

HS10.4/GM7.13, Linking river ecology, hydrology, and geomorphology for integrated river management (co-organized), Red Posters, R441–R459 Related: PSD21.12, see TU3

HS10.6, Peatland Hydrology, Red Posters, R460–R482

SSS0.4/HS8.3.10, Spatial and Temporal Patterns in Soil Systems: Monitoring, Modeling and Characterization of Soil Water Contents and coupled biogeochemical properties (co-organized), Blue Posters, B114-B128

SSS0.8/BG9.6/ESSI1.10/GI3.10/GM2.5/GMPV60/HS8.3.6/SSP3.1.18/TS9.14, Platforms, Sensors and Applications with Unmanned Aerial Systems in the geosciences (co-organized), Blue Posters, B129-B151

SSS7.2/GM6.12/HS8.3.8, Dynamic soil properties for understanding flow and transport in the landscape (co-organized), Blue Posters, B236-B250 Related: PSD9.8, see TU2

SSS9.12/BG2.18/GM4.7/HS8.3.23, Coevolution of soils, landforms and vegetation: ecosystem stability thresholds and critical zone observatories (co-organized), Blue Posters, B267-B290

### Wednesday, 30 April

WE2, 10:30–12:00 | PSD21.13, HS10.8 - Environmental and anthropogenic change: adaptation and co-evolution in ecohydrological systems, 10:30–11:15, Room R7

WE5, 17:30–19:00 | CL2.14, Paleoflood dynamics throughout the Holocene (co-listed), Yellow Posters, Z267–Z279

CL6.6/HS7.9, Improving the representation of climate using high resolution climate and NWP models. (co-organized), Yellow Posters, Z360–Z370

ESSI2.7, Free and Open Source Software (FOSS) for Geoinformatics and Geosciences (co-listed), Red Posters, R149–R161 | Related: PSD6.2, see TU1

HS2.3.7, Water quality at the catchment scale: monitoring and modeling of micropollutants, Red Posters, R174–R188

HS2.3.9, GW-SW interactions: concepts, methods and biogeochemical and ecologic implications, Red Posters, R189–R228

HS2.4.5, Hydrological change: Regional hydrological behaviour under transient climate and land use conditions, Red Posters, R229-R262

HS4.2, Hydrological forecasting: Untangling and reducing predictive uncertainty through improved model process description, data assimilation and post-processing, Red Posters, R263–R275

HS4.4, Drought and water scarcity: hydrological monitoring, modelling and forecasting to improve water management, Red Posters, R276–R294

HS5.7, Design and Operation of Water Resource Systems: Computer Based Control and Optimization, Red Posters, R295–R306

- - - - -	HS5.11, Advances in Modeling of Coupled Hydrologic-Socioeconomic Systems, Red Posters, R307–R321  HS6.6, Flood inundation modelling and mapping from local to global scales and the future SWOT mission, Red Posters, R322–R339  HS6.8, Assimilation of hydrological remote sensing data, Red Posters, R340–R355
-	HS6.8, Assimilation of hydrological remote sensing data, Red Posters, R340–R355
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	HS7.2/AS1.10/CL3.7/NH1.13/NP3.10, Precipitation uncertainty and variability: observations, ensemble simulation and downscaling (co-organized), Red Posters, R356–R393
	HS7.3/CL3.6/NP1.4, Water, climate and health (co-organized), Red Posters, R394–R409
	HS8.2.2/IG13, Residence times of groundwater, surface water and atmospheric water across hydrological scales (co-organized), Red Posters, R410–R425
	<b>HS10.8</b> , Environmental and anthropogenic change: adaptation and co-evolution in ecohydrological systems, <b>Red Posters</b> , <b>R426–R439</b>   Related: PSD21.13, see WE2
	SSS9.9/GM6.3/HS9.14/SSP3.1.23, Connectivity in hydrology and sediment dynamics: how do we move forwards? (co-organized), Blue Posters, B150–B174
	Thursday, 01 May
	PSD21.4, HS5.8 - Stakeholders, public involvement and collaborative processes in hydrology research and water management, 10:30–11:15, Roor R7
<b>THL</b> , 12:15–13:15	PSD21.2, HS4.3/AS1.17/NH1.10 - Ensemble hydro-meteorological forecasting, 12:15–13:00, Room R12
	PSD21.1, HS4.1/AS4.18/GM7.14/NH1.7 - Flash floods and associated hazards: monitoring, forecasting, preparedness and coping strategies, 13:30–14:15, Room R7
	PSD21.10, HS9.3/GM7.9 - Climatic and geodynamic record from the sediments and suspended load of large rivers, 13:30–14:15, Room R5
	PSD5.1, GM9.2/HS9.11/NH3.12 - Geomorphic and hydrological processes in proglacial areas under conditions of (rapid) deglaciation, 15:30–16:15 Room B7
	PSD21.3, HS5.1 - Catchment Science and management: providing evidence for environmental directives, 16:30–17:15, Room R7
	BG1.1/AS4.26/CL5.15/ERE5.5/HS10.9/IG10/OS3.4/SSP4.7/SSS4.12, Open session on Biogeosciences (Posters only) (Sponsored by PalAss) (co-organized), Green Posters, G1–G39
	GI2.5, Scientific Exploitation of Copernicus – EO Research and Innovation supporting Societal Challenges (co-listed), Red Posters, R132–R140
	GM4.1/HS9.12/SSS9.18, Human-Earth interaction from the Pleistocene to the Anthropocene: state of the science and future direction (co-organized (co-organized), Blue Posters, B243–B279
	HS2.3.1, Understanding catchment and hillslope responses: from changing states and non-linearities to emergent behaviours, Red Posters, R141–R156
	HS2.3.4, Innovative sensing techniques and data analysis approaches to increase hydrological process understanding, Red Posters, R157–R169

HS4.1/AS4.18/GM7.14/NH1.7, Flash floods and associated hazards: monitoring, forecasting, preparedness and coping strategies (co-organized), Red Posters, R170–R190 | Related: PSD21.1, see TH3

HS4.3/AS1.17/NH1.10, Ensemble hydro-meteorological forecasting (co-organized), Red Posters, R191–R216 | Related: PSD21.2, see THL

HS4.5, Hydrology for decision-making: the value of forecasts, predictions, scenarios, outlooks and foresights, Red Posters, R217–R227

HS5.1, Catchment Science and management: providing evidence for environmental directives, Red Posters, R228–R246 | Related: PSD21.3, see TH4

HS5.6, Water and food security: integrating perspectives from geophysics and social sciences, Red Posters, R247–R264

HS5.8, Stakeholders, public involvement and collaborative processes in hydrology research and water management, Red Posters, R265–R273 | Related: PSD21.4, see TH2

HS8.1.1, Subsurface flow, solute transport, and energy processes: Concepts, modelling, and observations, Red Posters, R274–R286

HS8.1.4/SSS7.16, Parameter Estimation, Inverse Modelling and Data Assimilation in Subsurface Hydrology (co-organized), Red Posters, R287-R302

HS8.1.7, Fate and transport of biocolloids and nanoparticles in soil and groundwater systems, Red Posters, R303–R317

HS8.1.8, The role of interfaces in flow and transport in porous media, Red Posters, R318–R332

HS8.1.9, Physical, chemical, microbial and isotopic processes in groundwater; from soil contamination to shale gas impacts (co-sponsored by EuroGeoSurveys), Red Posters, R333–R348

HS9.2/GM7.8/SSS7.20, Modeling the experiment, experimenting the models: experiment and model to connect geophysical flows from grains to landscapes (co-organized), Red Posters, R349–R376

HS9.3/GM7.9, Climatic and geodynamic record from the sediments and suspended load of large rivers (co-organized), Red Posters, R377–R397 Related: PSD21.10, see TH3

HS9.4/GM7.10, Measurement and monitoring techniques for evaluating sediment transport and dynamic processes in open-water environments (co-organized), Red Posters, R398–R411

IG8/HS2.1.3, Isotopes in the global water cycle: natural and anthropogneic fingerprinting in surface and groundwater at the catchment scale (co-organized), Red Posters, R119-R131

SSS2.3/HS8.3.11, Soil and water conservation for sustainable land management (co-organized), Blue Posters, B56–B68

SSS6.1/GM4.9/HS8.3.12, Soil carbon sequestration and greenhouse gas emissions: sources, mechanisms, processes and management practices effects (co-organized), Blue Posters, B124-B140

### Friday, 02 May

FR1, 08:30–10:00 SM4.5/HS12.2, Imaging the shallow subsurface with seismic and other geophysical methods (co-organized), Blue Posters, B703–B715

FR2, 10:30–12:00 | HS2.1.2, Advances in Integrated Process-Based Distributed Hydrologic Modeling, Red Posters, R183–R199

HS5.3, Assessment and management of water resources in the Mediterranean and (semi-)arid regions, Red Posters, R277–R295

	HS5.4/CL4.8/ERE1.16, Hydropower and other renewable sources of energy for a sustainable future: modeling and management issues (co-organized), Red Posters, R296–R310
	HS8.3.2/SSS7.14, Monitoring and modelling transfer processes in the soil-plant-atmosphere continuum across scales (co-organized), Red Posters, R325–R344
	<b>HS8.3.3/SSS7.13</b> , Patterns in Soil-Vegetation-Atmosphere Systems: Monitoring, Modelling, and Data Assimilation (co-organized), <b>Red Posters</b> , <b>R345–R361</b>
	HS9.7/GM7.7/SSP3.1.17/SSS7.10, Revisiting techniques for quantifying sources and travel times of fine sediment from catchment to coast (co-organized), Red Posters, R402–R416
	HS9.8/GM7.6, Transfer of sediments and associated substances in catchment and river systems (co-organized), Red Posters, R417–R438
	SM4.5/HS12.2, Imaging the shallow subsurface with seismic and other geophysical methods (co-organized), Blue Posters, B716–B727
<b>FR3</b> , 13:30–15:00	<b>BG2.5/SSS7.19</b> , Earth observation for monitoring and modeling the global energy, water and carbon cycles over land using model-data integration (co-listed), <b>Green Posters</b> , <b>G15–G35</b>
	HS2.2.1, Historical hydrology, Red Posters, R200–R215
	HS2.4.2, Hydrological extremes: from droughts to floods, Red Posters, R216–R258
	HS2.4.6, Climate Change and Water Resources in Central Asia and Caucasus, Red Posters, R259–R276
	HS8.3.5/SSS7.12, Estimation of soil-atmosphere and vadose zone water fluxes by use of precision lysimeter measurements (co-organized), Red Posters, R362–R378
	HS9.5/GM7.11, Numerical modelling and experiments in river morphodynamics (co-organized), Red Posters, R379–R401
FR4, 15:30–17:00	HS5.5, Socio-hydrology and river basin development; scaling and sustainability issues, Red Posters, R311–R324
	<b>PSD9.5</b> , SSS2.10/BG9.7/GM4.8/HS8.3.9/NH3.9 - How vegetation influences soil erosion and slope stability: monitoring and modeling eco-hydrological and geo-mechanical factors, <b>15:30–16:15</b> , <b>Room B7</b>
FR5, 17:30–19:00	AS4.14/BG7.4/CL3.10, Methane and other greenhouse gases in the Arctic (co-listed), Yellow Posters, Z256–Z269
	GM9.2/HS9.11/NH3.12, Geomorphic and hydrological processes in proglacial areas under conditions of (rapid) deglaciation (co-organized), Blue Posters, B433–B447   Related: PSD5.1, see TH4
	NH9.13, Global and continental scale risk assessment for natural hazards: methods and practice (co-listed), Blue Posters, B339–B354
	NP2.4, Complex networks and data-driven knowledge discovery in climate and geosciences (co-listed), Blue Posters, B935–B945
	SSS2.10/BG9.7/GM4.8/HS8.3.9/NH3.9, How vegetation influences soil erosion and slope stability: monitoring and modeling eco-hydrological and geo-mechanical factors (co-organized), Blue Posters, B49–B69   Related: PSD9.5, see FR4