15th Biennial Conference of the Euromediterranean Network of Experimental and Representative Basins
Advances in Hydrologic Research on Pristine, Rural and Urban Small Basins

Programme Overview

Tuesday, 9 September: Ice Breaker Reception, 19:00-20:00
(Department of Civil Engineering, Campus II of the University of Coimbra – Hall, 4th floor)

<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday, 10 Sept</th>
<th>Thursday, 11 Sept</th>
<th>Friday, 12 Sept</th>
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<td>9:00-9:30</td>
<td>Registration and welcome to participants</td>
<td>Topic 3 Effects of climate forcing and human activities on hydrological processes and prediction in ungauged basins (PART 1)</td>
<td>Topic 4 Transport processes in small basins</td>
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<td>9:30-9:45</td>
<td>Opening session</td>
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Session rooms:
Oral sessions: Auditório Laginha Serafim, 3rd Floor
Poster session: Hall, 4th Floor

ERB 2014, 9-13 September, Coimbra, Portugal
Wednesday, 10 September 2014

9:00-9:30
Registration and welcome to Participants

Opening Session
Room: Auditório Laginha Serafim
9:30-10:00
Director of the Department of Civil Engineering, Univ. Coimbra
President of IMAR - Institute of Marine Research
Director of the Laboratory of Hydraulics, Water Resources and Environment, Univ. Coimbra
Coordinator of ERB
ERB 2014 Conveners

Topic 1 Hydrological modelling at different temporal and spatial scales (PART 1)
Room: Auditório Laginha Serafim
Chairperson: João de Lima

10:00-10:15: ERB2014-38
Importance of 'initial abstractions' in the genesis of flash floods in mountainous basins: Venero Claro experimental basin
J.M. Bodoque, A. Díez-Herrero, V. Ruiz-Villanueva, E. Aroca-Jiménez

10:15-10:30: ERB2014-51
Assimilation of in situ soil moisture for improving rainfall and discharge prediction in small experimental basins
C. Massari, L. Brocca, A. Tarpanelli, T. Moramarco, D. Penna, M. Borga, P. Matgen, J. Martinez-Fernández

10:30-10:45: ERB2014-44
Spatio-temporal variability of throughfall and soil moisture at the plot scale in the Italian pre-Alps
D. Penna, G. Zuecco, O. Oliviero, H.J. van Meerveld, L. Hopp, G. Dalla Fontana, M. Borga

10:45-11:00: ERB2014-12
Influence of the riparian zone on the stream water export from a headwater Mediterranean catchment during the vegetative period
A. Lupon, S. Bernal, M. Erlandsson, S. Poblador, A. Wade, F. Sabater

11:00-11:30 Coffee break

11:30-11:45: ERB2014-81
Hydrological response of a mountain catchment
L. Holko, M. Danko, J. Hlavéo, Z. Kostka

11:45-12:00: ERB2014-78
Runoff generation mechanisms in a Swiss pre-alpine catchment - results based on a blend of hydrological data at different spatio-temporal scales
B. Fischer, J. Seibert, M. Stähli

12:00-12:15: ERB2014-50
Influence of wind-driven-rain on the rainfall-runoff process in urban areas
J.M.G.P. Isidoro, J.L.M.P. de Lima

12:15-12:30: ERB2014-20
Methods of processing hydrometeorological data based on Tinoasa–Ciurea representative basin using GIS techniques
G. Neculau, C. Pricop

12:30-12:45: ERB2014-61
Physically-based and distributed models versus conceptual and lumped models: evaluation of performance and applicability in a case-study
P.G. Filianoti, D.A. Zema, C. Denisi, L. Gurnari

END OF ORAL PROGRAMME TOPIC 1

13:00-14:30 Lunch break

14:30-16:00 POSTER SESSION
**Topic 6  Reflections on the past, present and future of experimental basins’ networks**

Room: Auditório Laginha Serafim  
Chairperson: Hubert Holzmann

**16:00-16:15: ERB2014-39**

The Venero Claro monitored basin and the web page of public distribution of hydrological and meteorological data  

**16:15-16:30: ERB2014-74**

Hydrological studies in experimental and representative basins in Brazil: the experience of the REHIDRO network  

**16:30-16:45: ERB2014-48**

What future for small research basins?  
S. Chersich, F. Maraga, F. Zucca, L. Brocca

**16:45-17:00: Discussion**

END OF ORAL PROGRAMME TOPIC 6

**17:00-17:30 Coffee break**

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**Topic 2  New instrumentation and monitoring developments**

Room: Auditório Laginha Serafim  
Chairperson: Andreas Herrmann

**17:30-17:45: ERB2014-2**

Combining stable isotopes and hydrometric data to investigate the stormflow response of a Mediterranean mountain catchment (Vallecebre Research Catchments, Spain)  

**17:45-18:00: ERB2014-92**

Can we use trace metals for tracing hydrological processes? Example of Rare Earth Elements for river basins heavily impacted by anthropogenic activities  
C. Hissler, P. Stille, C. Guignard, J.F. Iffly, L. Pfister

**18:00-18:15: ERB2014-30**

Rainfall estimation from in situ soil moisture observations: is it feasible?  

**18:15-18:30: ERB2014-71**

Infrared thermography as a heat tracer method for velocity estimation in shallow flows  
R.L.P. de Lima, T.G. Cleveland, R.F. de Carvalho

**18:30-18:45: ERB2014-26**

TMS3: Temperature and moisture system for spatially distributed measurements  
M. Šanda, T. Haase, J. Wild, J. Jankovec

**18:45-19:00: ERB2014-45**

Locating soil macropores with thermography  
J.L.M.P. de Lima, J.R.C.B. Abrantes, V.P. Silva Jr., M.I.P. de Lima, A.A.A. Montenegro

END OF ORAL PROGRAMME TOPIC 2
Thursday, 11 September 2014

**Topic 3  Effects of climate forcing and human activities on hydrological processes and prediction in ungauged basins (PART 1)**

**Room:** Auditório Laginha Serafim  
**Chairperson:** Luca Brocca

- **9:30-9:45:** ERB2014-76  
  Assessing changes in drought/wetness episodes in drainage basins, in Portugal, using the Standardized Precipitation Index  
  Á. Silva, M.I.P. de Lima, F. Espírito Santo, V. Pires

- **9:45-10:00:** ERB2014-89  
  Assessment of the Floods Occurrence Potential in the Representative Basin of the Upper Teleajen River – Romania  
  M. Borcan, M. Retegan

- **10:00-10:15:** ERB2014-5  
  Modelling and estimation of possible future changes of average annual runoff in the Rika River basin  
  L. Gorbachova

- **10:15-10:30:** ERB2014-33  
  Changes in the river flow regime in the Raba Basin (Poland’s Western Carpathians)  
  M. Kędra

- **10:30-10:45:** ERB2014-6  
  Description of a field experiment on the warming up of a mountain stream reach  
  J.L.M.P. de Lima, C. Canhoto

- **10:45-11:00:** ERB2014-49  
  Testing a method to classify flow regime alterations in a temporary river  
  A.M. De Girolamo, A. Lo Porto, G. Pappagallo, F. Gallart

**11:00-11:30** Coffee break

**11:30-11:45** ERB2014-34  
The influence of climatic, environmental and anthropogenic factors on flow regime changes in the Raba Basin (Poland’s Western Carpathians)  
M. Kędra, J. Korpak

**11:45-12:00:** ERB2014-52  
Monitoring of streamflow along a brook from natural forest to urban area  
P. Kalicz, P. Csáfordi, G. Király, R. Szita, A. Herceg, B.K. Szegedi, Z. Gribovszki

**12:00-12:15:** ERB2014-59  
Modelling the impacts of climate change on a small basin under the influence of intensive vineyard culture  
D. Serpa, J.P. Nunes, V. Silva, M.E. Rial-Rivas, J.J. Keizer, N. Abrantes

**12:15-12:30:** ERB2014-10  
Impacts on surface hydrology and flow connectivity of land use changes in periurban small basin under Mediterranean climate  

**12:30-12:45:** ERB2014-22  
Contribution of forest road network to the flash flood in Pila village in June 2011 (first approximation)  
T. Orfanus

**12:45-14:00** Lunch break

**14:00** Departure to **Technical Visit 1**
Friday, 12 September 2014

**Topic 4  Transport processes in small basins**
Room: Auditório Laginha Serafim  
*Chairperson:* Jérôme Latron

9:30-9:45: **ERB2014-7**  
Experimental research and mathematical modeling of nutrients release in a small watershed  
N. Osadcha, V. Osadchyy, V. Lutkovsky, Y. Luzovitska, V. Artemenko

9:45-10:00: **ERB2014-11**  
Longitudinal dispersion coefficient in natural streams in Slovakia  
D. Halmova, P. Miklanek, J. Pekar, B. Pramuk, P. Pekarova

10:00-10:15: **ERB2014-66**  
Organic carbon losses by runoff and erosion on biocrusts in a semiarid badlands microcatchment: consequences of their disturbance  
Y. Cantón, J.R. Román, S. Chamizo, E. Rodríguez-Caballero

10:15-10:30: **ERB2014-67**  
Hydrologic behaviour and dynamics of pollutants in a small agro-forested basin in Portugal  
A.C. Duarte, L.M. Íñiguez, J.L.M.P. de Lima

10:30-10:45: **ERB2014-15**  
Fully distributed (MOHID) and semi distributed (SWAT) modeling approaches for hydrology and nitrate transport simulation in an agricultural watershed  

10:45-11:00: **ERB2014-84**  
Flow connectivity affects the main hydrological drivers that control runoff generation and water erosion  
E. Rodríguez-Caballero, Y.C. Castilla, S.C. de la Piedra, A.S. Benet

END OF ORAL PROGRAMME TOPIC 4

11:00-11:30  Coffee break

**ERB General Assembly**
Room: Auditório Laginha Serafim
11:30-13:00  
*Best Poster Award ERB 2014*  
*ERB Medal Award 2014*  
*Lecture by ERB medalist Piet Warmerdam*

13:00-14:30  Lunch break

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**Topic 5  Uncertainties in surface and groundwater interactions**
Room: Auditório Laginha Serafim  
*Chairperson:* Ladislav Holko

14:30-14:45: **ERB2014-1**  
Groundwater flow paths in glacially affected areas: a hydrogeological investigation of flow in fluvio-glacial deposits  
R. Dijksma, S.H. Menkveld, G. Bier, A.T. Oosterhof

14:45-15:00: **ERB2014-21**  
Riverbed groundwater interaction – how to estimate groundwater recharge  
H. Holzmann

15:00-15:15: **ERB2014-63**  
Critical rainfall thresholds for debris flow initiation in a small catchment of Western Italian Alps  
L. Turconi, V. Coviello, M.R. Palladino, M. Arattano, G. Savio, D. Tropeano

15:15-15:30: **ERB2014-64**  
Rainfall, Runoff and Soil Erosion Processes on Small Arable Catchment  
D. Zumr, J. Devaty, V. Klipa, P. Kavka, J. Dusek, T. Dosta

END OF ORAL PROGRAMME TOPIC 5

**Closing Session**
Room: Auditório Laginha Serafim
15:30-15:45  
Hubert Holzmann, ERB coordinator  
João de Lima, Convener  
Isabel de Lima, Convener

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**Other events:**
Reception – Water Museum, 16:00-17:00  
Conference Dinner, 19:00-22:00

**Saturday, 13 September 2014**
Departure to Technical Visit 2 from city center: 9:30
ERB 2014 Poster Programme

Poster Programme

Poster Exhibition Hall: 4th Floor

Display time:
Posters will be on display during the conference (from Wednesday, 9:30, to Friday, 15:30).

Authors in Attendance Time:
Wednesday, 10 September, 14:30-16:00.

Chairpersons: Abelardo Montenegro and Isabel de Lima

P1: ERB2014-3
Seasonal and storm dynamics of Dissolved Organic Carbon in a Mediterranean mountain catchment (Vallcebre Research Catchments, Spain)
M. Roig-Planasdemunt, P. Llorens, J. Latron

P2: ERB2014-4
Two adjacent experimental torrential watersheds in Slovenia
N. Bezak, S. Rusjan, A. Vidmar, M. Kogoj, M. Šraj, M. Mikloš

P3: ERB2014-8
Mulch effect on soil and water dynamics for rainfall bursts and long low intensity events
A.A.A. Montenegro, J.R.C.B. Abrantes, V.P. Silva Jr., J.L.M.P. de Lima

P4: ERB2014-9
Analysis of the components of soil water regime in the process of soil drought formation
M. Gomboš, B. Kandra, I. Vasífová

P5: ERB2014-13
Modelling catchment behavior by streamflow component mixing approach
S. Rusjan, M. Mikloš

P6: ERB2014-14
Analysis of structural changes in hydrometeorological time series using a wavelet transform
P. Sleziak, Z. Studvova

P7: ERB2014-16
Biological indicators based on benthic macroinvertebrates traits: a good tool for assessing urban stream disturbance?
P. Isidoro, C. Canhoto, M. Abelho

P8: ERB2014-18
Using observations in the Hupsel Brook catchment and Cabauw polder (Netherlands) to develop the Wageningen Lowland Runoff Simulator (WALRUS), a new rainfall-runoff model for catchments with shallow groundwater
C.C. Brauer, P.J.J.F. Torfs, A.J. Teuling, R. Uijlenhoet

P9: ERB2014-19
Mapping soil permeability using infrared thermography
J.R.C.B. Abrantes, J.L.M.P. de Lima, V.P. Silva Jr., A.A.A. Montenegro

P10: ERB2014-23
Cartography of erosive status using a neuro-fuzzy technique: The Ria Formosa basin

P11: ERB2014-24
Projections of peak flow changes in 21st century in rural and urban parts of small Lithuanian catchment
E. Stonievicius

P12: ERB2014-27
TMS3: Calibration of soil moisture measurements on variety of soil classes and testing of temperature measurements in vast fields
J. Jankovec, M. Šanda, J. Wild

P13: ERB2014-28
Modelling and classification of geoforms: The Ria Formosa basin

P14: ERB2014-29
Water and energy fluxes of grasslands in representative basin in Pernambuco state - Brazil

P15: ERB2014-35
Spatial and seasonal variability of concentration and composition of suspended load in the Vistula river between Wyszogród and Chelmno (Poland)
M. Kaszubski

P16: ERB2014-37
The influence of modern and paleolakes on the outflow and chemical properties of river waters – an example from Pomerania, Poland
P. Gierszewski, D. Brykala, M. Kaszubski
P17: ERB2014-36
Human impact on the temporal and spatial conditions of the outflow from the Skrwa Lewa river basin (central Poland)
D. Brykala

P18: ERB2014-40
Antecedent moisture and rainfall thresholds for runoff generation in a humid rural catchment in NW Spain
M.L. Rodríguez-Blanco, M.M. Taboada-Castro, M.T. Taboada-Castro

P19: ERB2014-41
Analysis of climate change effects on the hydrology of a small headwater catchment in NW Spain using SWAT model

P20: ERB2014-42
Mercury mobilisation after wildfire and rainfall in eucalypt and pine forests
I. Campos, C. Vale, N. Abrantes, J.J. Keizer, P. Pereira

P21: ERB2014-43
Toxic effects of wildfires on aquatic ecosystems

P22: ERB2014-46
The hydrological research and related ecological issues in a Prealpine Italian small basin: the hydrological change related with soils, soil available water content, morphology and vegetation
S. Chersich, F. Maraga

P23: ERB2014-47
Educational experiences as enhancement of the environment in the Prealpine Gallina valley basin
S. Chersich, F. Maraga

P24: ERB2014-53
Effects of soil management on runoff, soil erosion and landslides occurrence in vineyards
M. Biddoccu, F. Opsi, S. Ferraris, L. Turconi, E. Cavallo

P25: ERB2014-54
Development of forest litter interception relationship
K.A. Zagyvainé-Kiss, Z. Gribovszki, P. Kalicz

P26: ERB2014-55
Morphometric characterization of a small drainage basin in Montouro (Cantanhede, Portugal) – surface and groundwater interactions

P27: ERB2014-56
Temporal changes of near-saturated hydraulic conductivity in a small arable catchment
D. Zumr, V. Klipa, M. Snehota, M. Dohnal

P28: ERB2014-57
Assessing the impact of climate change scenarios on water quality patterns on the Vouga catchment (Central Portugal)
J. Rocha, P. Roebeling, M.C. Cunha, J.P. Nunes, R. Jacinto

P29: ERB2014-58
The ground water component during snowmelt events in The Tatra Mountains (Poland)
J. Siwek, M. Żelazny

P30: ERB2014-60
Overland flow processes in eucalyptus plantations in north-central Portugal

P31: ERB2014-62
The importance of subsurface flow in streamflow generation in an eucalypt-dominated catchment in north-central Portugal

P32: ERB2014-63
Critical rainfall thresholds for debris flow initiation in a small catchment of Western Italian Alps
L. Turconi, V. Coviello, M.R. Palladino, M. Arattano, G. Savio, D. Tropeano

P33: ERB2014-65
Using SWMM to model surface runoff from intermittent rainfall patterns on soils covered with mulch: comparison with results from laboratory soil flume experiments
J.R.C.B. Abrantes, N.E. Simões, J.L.M.P. de Lima

P34: ERB2014-68
Kinetic energy of simulated rain resulting from combining nozzles and meshes
S.C.P. Carvalho, J.L.M.P. de Lima, M.I.P. de Lima

P35: ERB2014-70
Temporal and spatial behaviour of soil moisture in the experimental basin of Jatobá
V.P. Silva Jr., A.A.A. Montenegro, P.S. Duarte

P36: ERB2014-72
Assessment of the applicability of the SWAT model to simulate the streamflow in a small rural catchment in the Federal District (Brazil)
S. Ferrigo, R. Minoti, S. Koide

P37: ERB2014-77
Variability of extreme precipitation over mainland Portugal and its relationships with teleconnection patterns
M.I.P. de Lima, F. Espírito Santo, Á. Silva, S. Cunha

P38: ERB2014-79
Ice phenomena on a small stream in the zone of intermittently frozen ground
A.M. Tarbeeva, I.V. Krylenko, V.V. Surkov
P39: ERB2014-82
Evaluation of mulching as conservation technique for soil loss and soil moisture maintenance in plots under simulated rainfall

P40: ERB2014-83
Effect of conservation practices for reducing soil and nutrients losses on cassava cropping

P41: ERB2014-85
Variations in water availability as a consequence of run-off run-on processes that control vegetation dynamics in Drylands
E. Rodríguez-Caballero, M. García, A. Casas, S. Chamizo, Y. Cantón, D. Riaño, S. Ustin

P42: ERB2014-86
Generation of urban flood risk maps using a dual drainage model in SWMM
T.J. Paula, N.E. Simões, J.A. Sá Marques

P43: ERB2014-87
Development of a new device for continuous measurement of snow water equivalent
A. Kulasová, Z. Bagal, O. Špulák, V. Černohous, J. Souček, L. Daneš, Š. Blažková

P44: ERB2014-88
Impact of climate change in the drainage of a Portuguese urban catchment
S. Dias, D. Santos, N.E. Simões, J.A. Sá Marques, J.P. Leitão

P45: ERB2014-90
Urban floods of combined sewer systems: Hydraulic and quality modelling of an extreme rainfall event in Coimbra, Portugal
L. Girão, N.E. Simões, J.A. Sá Marques

P46: ERB2014-91
Revisiting the perceptual model of a schistous catchment (Weierbach, Attert River basin, Luxembourg)
J.F. Iffly, F. Barnich, L. Gourdol, C. Hissler, J. Juilleret, J. Klaus, N. Martinez-Carreras, L. Pfister

P47: ERB2014-93
The potential of a novel plastic optical fiber turbidity sensor to estimate sediment yields from recently burnt areas
J.J. Keizer, M. Martins, S. Prats, D. Vieira, R. Nogueira, L. Biro

END OF POSTER PROGRAMME