



Lundi 2 Octobre - Monday, Oct 2	
8h00	Enregistrement - Registration
9h45	Allocution de bienvenue – Welcome address
Session 1 : Biodiversity, ecosystem functioning and ecosystem services	
Chair : Hideaki Shibata, Professor, Hokkaido University, Sapporo	
10h00	Prof. Christopher Swan: “Biodiversity, ecosystem function and services in urban environment”
10H45	Aquilina L., Dufresne A., Roques C., Bethencourt L., Bochet O., Chatton E., Ben Maamar S., Labasque T., Vergnaud V., Bour O. : <i>Chemical and microbial apparent compartmentalization in hard rock aquifers from Brittany: implications for management</i>
11h00	Giamberini S., Baneschi I., Provenzale A., Tasevska O.: <i>The fate of the iconic <u>Salmo letnica</u> in Lake Ohrid under multiple threats</i>
11h15	Longuevergne L., Pannard A., Chatton E., Labasque T., Amman J., Jaud M., Guillaumot L., Chedanne H., Bailly du Bois L., Petton C., Delacourt C. : <i>Capturing coastal wetland water sources and biological processes from high spatial resolution dissolved gases and hyperspectral observations</i>
11h30	Courbin N., Duncan P., Valeix M., Fritz H., Grange S., Barnier F., Pays O., Ncube S., Périquet S., Patin R., Loveridge A., Macdonald D., Chamaillé-Jammes S. : <i>Large predators as drivers of an herbivore landscape use and dynamics in the Hwange LTSE</i>
11h45	Band L. : <i>Ecosystem processes and services at the watershed scale: The role of hillslope scale forest canopy biodiversity on ecohydrologic dynamics in mountainous watershed</i>
12h00	Aspholm P.E.: <i>Long term monitoring of waterbirds and small rodents & shrews in Pasvik, Northern Norway; indicator of ecosystem services and their conditions</i>
12h15	Gillet F.: <i>Biodiversity and ecosystem services of permanent grasslands in the Jura Mountains: trends and challenges</i>
12h30	Dubois P.: IPEV REVOLTA and PROTEKER programs: <i>Monitoring benthic marine biodiversity in antarctic and subantarctic coastal areas and their responses to environmental changes</i>
12h45	Boulinier T. : <i>Dealing with emerging infectious diseases in wild populations: combining long term monitoring with experimental approaches in the case of albatrosses</i>
13h00	Repas– Lunch

Session 2: Environmental risks & global initiatives of nitrogen assessment

Chair: **Jérôme Gaillardet**, Professor, Institut de Physique du Globe de Paris

14h30	Prof. Daniel Richter : "Darwin, Lyell, Ecosystems, & Earthe's Critical Zone"
15h15	de Dreuzy J.-R. , Marçais J., Kolbe T., Courtois Q., Vautier C., Abbott B.W., Pinay G.: <i>Deciphering the effects of climate, geology, and topography on catchment-scale groundwater flow structure and denitrification with synthetic studies</i>
15h30	Garnier J. , Barles S., Ramarson A., Thieu V., Billen G.: <i>Reinvent the agri-food system for reducing nitrogen losses cascading along the aquatic continuum and coastal eutrophication</i>
15h45	Lischeid G. , Holländer M., Kalettka T., Lehr C., Merz C., Steidl J.: <i>Same source, different trends: Nitrogen in groundwater, streams and small lakes in the Quillow catchment</i>
16h00	Muraoka H. , Shin N., Taku S.: <i>Forest photosynthesis from leaf to region, and from present to future: long-term and multidisciplinary research in Japan</i>
16h15	Salvador-Blanes S. , Evrard O., Cerdan O., Foucher A., Le Gall M., Vandromme R., Grangeon T., Manière L., Lefèvre I., Desmet M. : <i>Sediment transfers in a lowland agricultural catchment</i>
16h30	Imperio S., Provenzale A. , Vivaldo G., Marimon C.D., Palazzi E., Marangi C., Karnieli A., Giamberini M. : <i>Changes in Protected Areas: the ECOPotential view</i>
16h45	Pause-café - Coffee break
Chair: Bill McDowell , Professor, University of New Hampshire	
17h00	Six D., F. Naaim , Schoeneich P.: <i>Involvement of the SOERE CRYOBS-CLIM (CRYosphere, an OBServatory of the CLIMate) in snow and ice related hazards prevention</i>
17h15	Join J.-L. , Ah-Peng C., Wendling V., Giambelluca T.: <i>Cloud forests and water resources in tropical volcanic islands. The CZO "Erorun" strategy to document the impact of climate change</i>
17h30	Rivière A. , Flipo N., Berrhouna A., Simon N., Seraphin P., Cucchi K., Baudin A., Lavenant N., Bour O.: <i>Water and energy fluxes at the surface- subsurface interface of the ORACLE/BVRE Orgeval Observatory</i>
17h45	Ohman M. : <i>State changes in natural ecosystems - a perspective from marine LTER sites in the U.S. network</i>
18h00	Johannet A. , Boudevillain B., Martin P., Delrieu G., Paran F.: <i>OHM-CV and SA-RivCev convergence on a shared area : the three Cevenol rivers</i>
18h15	Braud I. , Nord G., Delrieu G., Boudevillain B., Le Coz J., Dramais G., Legout C., Wijbrans A.: <i>Designing an observation strategy for characterizing the hydro-meteo-sediment fluxes in a flash flood prone catchment of the OHMCV Critical Zone Observatory</i>
18h30	Session posters – Poster session : Sensors and analytical tools for ecosystems exploration
20h30	Diner - Dinner
22h00	Session posters – Poster session : Sensors and analytical tools for ecosystems exploration

Mardi 3 Octobre - Tuesday, Oct 3

8h15	Ouverture et accueil - Opening and welcome
Session 3 : Social-ecological system (SES) research, or “Putting the “S” in LTSER	
Chair: Vincent Bretagnolle, Directeur de Recherche CNRS, Zone Atelier Plaine & Val de Sèvre	
8h30	Bruno Latour : “Why is it so difficult to stitch geochemistry and ethology together? A view from social science”
9h15	Angelstam P., Elbakidze M., Manton M.: <i>LTSER platforms for knowledge production and learning towards sustainable landscapes: comparative and longitudinal analyses of green infrastructure functionality and planning</i>
9h30	Ragueneau O., Raimonet M., Mazé C., Coston-Guarini J., Danto A., Chauvaud L., Grall J., Paulet Y.-M., Thouzeau G.: <i>The impossible sustainability of the Bay of Brest? 40 years of ecosystem evolution, interdisciplinary knowledge construction and key questions at the science-policy-communities interface</i>
9h45	Krauze K. : <i>The blue-green way to reshape nature-water-human interactions in cities. About the process of knowledge and trust building from the City of Lodz LTSER</i>
10h00	Holzer J.: <i>Integrating social science into the LTSER network: An empirical study of three LTSER platforms</i>
10h15	Badariotti D. : <i>Integrating social sciences in an iLTER project : the Juxta Rhenum project</i>
10h30	Benoit M., Fritz H., Bretagnolle V., Lefevre S.: <i>The Human Practices Dynamics: the core of Society – Ecosystem linkage in LTSER ?</i>
10h45	Pause-café - Coffee break
Chair: Daniel Orenstein, Technion – Israel Institute of Technology	
11h00	Meybeck M., Lestel L., Carré C., Bouleau G.: <i>Towards a typology of environmental and social trajectories concerning water quality</i>
11h15	Izakovičová Z., Bezák P., Halada L., Mederly P.: <i>Involvement of stakeholders in the ecosystem services assessment</i>
11h30	Meyer A.: <i>Ecological metering and social perception of the biodiversity in urban green network</i>
11h45	Orenstein D.: <i>Nature, landscapes and biodiversity: what do the 99% (non-ecologists) think?</i>
12h00	Santos-Reis M. : <i>Understanding social perceptions of montado as services provider: a multi-scalar approach</i>
12h15	Anquetin S., Buclet N., Lavorel S., Lutoff C., George E., Thuiller W., Ziebelin D., Prieur C., Wilhelm B., Arnaud F., Reineking B., Judet P.: <i>Trajectories: Social-ecological trajectories of French alpine valleys under climate variability</i>
12h30	Locke D., York A., Grove M.: <i>Baltimore Ecosystem Study and Central Arizona-Phoenix demonstrate residents' environmental knowledge and neighborhood satisfaction</i>
12h45	Ens B., Philippart K., Baptist M., Sijtsma F., Daams M., Meijles E., van der Zee E., Hansen L.: <i>Humans and birds in the Wadden Sea</i>
13h00	Repas– Lunch

Session 4 : Decision making, management and adaptive governance

Chair: **Hervé Fritz**, Directeur de Recherche CNRS, Laboratoire de Biométrie et Biologie Évolutive, Lyons, Zone Atelier Hwange

14h30	Prof. Graeme Cumming: "A long-term perspective on managing protected areas as social-ecological systems"
15h15	Le Page M. , Benjamy B., Oueslati I., Fakir Y., Gosset C., Boone A., Montginoul M., Morardet S., Molle F., Jarlan L., Lili-Chabaane Z., Zribi M.: <i>Modeling and scenaring fragilized agrosystems in the south-Mediterranean area. The example of the Tensift (Morocco) and Merguellil (Tunisia) watersheds</i>
15h30	Fournier M. , Bonnefond M., Gralepois M., Servain-Courant S.: <i>Planning land uses in flood-prone areas: when conflicts contribute to the definition and implementation of urban projects. Two examples from the Loire River basin (Blois, Le Mans - France)</i>
15h45	Dedieu G. , Ceschia E., Dejoux J.-F., Tallec T., Thumerel B.: <i>Decision making and governance: practical experiences and lessons from the Regional Space Observatory (OSR)</i>
16h00	Berthet E. , Bretagnolle V., Segrestin B.: <i>Applying ecological knowledge to the innovative design of sustainable agroecosystems</i>
16h15	Pause-café - Coffee break
Chair: Olivier Ragueneau , Directeur de Recherche CNRS, Laboratoire des Sciences de l'Environnement Marin, Brest	
16h30	Dousset S. : <i>How to link experimental results to the decision making: example of Constructed Wetlands at the outlet of drained plots</i>
16h45	Lin Y.C. : <i>Do reintroduced deer populations alter trajectories of forest dynamics? Evaluating the impact of Formosan sika deer (<i>Cervus nippon taiouanus</i>) on a tropical karst forest</i>
17h00	Boisneau C. : <i>Long term ecological research and partnership with freshwater fisheries. What benefits for fish management and for public policies ?</i>
17h15	Guerbois C., Chamaillé-Jammes S., Perrotton A., Valls-Fox H., de Garine-Wichatitsky M., Chapanda E., Fritz H. : <i>Sustainability transformation for human-elephant co-existence: lessons from the Zone Atelier Hwange</i>
17h30	Chabbi A. , Loescher, H.W.: <i>Combining observation and experimentation approaches: A need to make our tools and science directly relevant to sustainability and the society wellbeing</i>
17h45	Groner E. : <i>Diversity-stability across LTER sites – an idea for a new project</i>
18h00	Beauger A. , Peiry J.-L., Voltaire O., Garreau A.: <i>A transdisciplinary study of an abandoned channel of the Allier River (France)</i>
18h15	<p>Session posters - Posters session :</p> <ul style="list-style-type: none"> • <i>Research trends in our network</i> • <i>Biodiversity and ecosystems</i> • <i>Biogeochemical cycles</i> • <i>Decision making, management and adaptive governance</i> • <i>Environmental risks</i> • <i>Global initiatives</i> • <i>Social-ecological system (SES) research, or "Putting the S" in LTSER</i>
20h30	Diner de gala – Gala dinner

Mercredi 4 Octobre - Wednesday, Oct 4

8h30 Ouverture et accueil - Opening and welcome

Session 5 : Public session of the ILTER Board meeting

Chair: Michael Mirtl, Chair of ILTER & Umweltbundesamt, Vienna

8h40 Shibata H.: *What are the ecosystem responses to reactive nitrogen changes across global ecosystems? - Updates and challenges of the ILTER-Nitrogen Initiative*

8h55 Djukic I., Schmidt I.K., Kepfer-Rojas S., Larsen K.S., Beier C., Berg B., Verheyen K., TeaComposition Network: *Litter decomposition across the biomes: Early stage mass loss from the global TeaComposition initiative*

9h10 Bretagnolle V.: *The French LTSER, conceptual framework (part 1)*

9h20 Gaba S., Bretagnolle V.: *Field socio-ecological experiments in a French LTSER (part 2)*

9h30 Mirtl M.: *Achievements and challenges of the ILTER entering its third decade*

9h45 Muraoka H., Haubold H.: *ILTER's role as GEO Participating Organization*

10h00 Pause-café - Coffee break

10h15 Dr Jill Baron: **"Too much of a good thing: how the International Nitrogen Management System is addressing global nitrogen issues"**

PhD speed talks

Chair: Sabrina Gaba, Directeur de Recherche, INRA Dijon

11h00 Catarino R., Gaba S., Bretagnolle V.: *Relative contributions of pollination versus agrochemicals in rape seed yield and income*

11h05 Marçais J., Gauvain A., Labasque T., Abbott B.W., Aquilina L., Chatton E., Pinay G., de Dreuzy J.-R. : *Geochemical proxies of residence time in crystalline catchments: silica as a proxy for groundwater age*

11h10 Wielgus E., Cornélis D., Caron A., Cain B., de Garine-Wichatitsky, Fritz H., Chamaille Jammes S. : *Fission-fusion dynamics in the African buffalo (*Syncerus caffer*) and epidemiological implications*

11h15 Bourgeois B., Gaba S., Plumejeaud C., Bretagnolle V. : *Ecological mechanisms shaping weed diversity within arable fields – a metacommunity perspective*

11h20 Pacoureaux N.: *Prey, climate and population density shape the dynamics of an apex Antarctic predator*

11h25 Tessier E.: *Investigate the distribution of marine predators as a tool to better understand the ecosystem : a study case in the Kerguelen pelagic ecosystem*

11h30 Meyer-Georg S., Del Nero M., Courson O., Boltoeva M., Fleury G., Barillon R.: *FA composition and mobility of trace metal elements (TME) in surface waters in uranium environments*

11h35 Lambert C., Penaud A., Vidal M., Ragueneau O. : *Holocene paleoenvironmental changes in the Bay of Brest (NW France) over the last 10,000 years: palynological evidences of climate and human forcing*

11h40 Janc A.: *Factors influencing sperm whale (*Physeter macrocephalus*) depredation on Patagonian toothfish fisheries around the French sub-Antarctic islands*

11h45 Le Lay H., Thomas Z., Rouault F., Bour O., Moatar F.: *Assessment of injected warm plumes along a free surface flow channel using fiber optic distributed temperature sensing and numerical simulations*

11h50 Brief general discussion

12h00 Repas– Lunch

Session 6 : Long-term monitoring and global geochemical cycles

Chair: **Marie-Noëlle Pons**, Directeur de Recherches CNRS, Laboratoire Réactions et Génie des Procédés, Nancy

13h00	Prof. Steven Banwart: "Critical Zone Observatories for soil and water resources - experience from the UK-China CZO programme"
13h45	Talleg T. et al.: <i>The OSR : The Regional Space Observatory (OSR) for a sustainable management of territories and their resources in the South-West of France</i>
14h00	Mouchel J.-M. et al.: <i>The contamination of large rivers revealed by sediment cores</i>
14h15	Le Borgne T. , Bochet O., Bethencourt L., Dufresne A., Pedrot M., Farasin J., Labasque T., Chatton E., Lavenant N., Petton C., Abbott B.W., Aquilina L. : <i>Dynamic microbial hot spots sustained by mixing in subsurface fractures</i>
14h30	Caballero Y. , Maréchal J.-C., Amraoui N., Charlier J.-B., Bailly-Comte V., Ducreux L., Lopez B., Mougin B. , Nicolas J., Selles A., Seguin J.-J., Winckel A. : <i>Contribution of groundwater observatories to the monitoring of some key hydrodynamic and geochemical processes in the critical zone</i>
14h45	Grippa M. , Gal L., Hiernaux P., Kergoat L.: <i>Eco-hydrological changes and their consequences on surface water in pastoral Sahel</i>
15h00	Kergoat L. , Hiernaux P., Dardel C., Mougin E., Brandt M., Grippa M., Pierre C.: <i>Sahel and the greening/desertification dilemma: the light shed by long-term surveys and satellites</i>
15h15	Galle S. , Grippa M., Peugeot C., Bouzou Moussa I., Cappelaere B., Demarty J., Mougin E., AMMA-CATCH Team: <i>AMMA-CATCH a long-term hydrological, meteorological and ecological observatory in West Africa : important results and available data</i>
15h30	Pause-café - Coffee break
15h45	Thomas Z. , Abbott B.W., Rousseau-Gueutin P., Kolbe T., Le Lay H., Marçais J., Rouault F., Petton C., Pichelin P., Le Hennaff G., Squidant H., Labasque T., de Dreuzy J.-R., Auilina L., Baudry J., Pinay, G.: <i>Vulnerability of natural systems to climate change and anthropogenic drivers across spatial and temporal scales</i>
16h00	Cauy-Fraunié S. , Trenkel V., Capra H., Olivier J.-M., Daufresne M., Maire A., Gouraud V., Rochet M.-J., Cazelles B., Lobry J., Lamouroux N. : <i>What drives the interannual variability in fish-population time series?</i>
16h15	Champollion C. , Lesparre N., Fores B. : <i>Long term monitoring of groundwater resources in karstic systems from geodesy</i>
16h30	Gascuel-Oudoux C. , Fovet O. , Gruau G., Ruiz L., Durand P., Merot P., Jaffrézic A., Dupas R. : <i>Effect of intra and inter-annual climate variability on nutrients (C, N, P) emissions to stream waters: lessons from an agricultural long-term observatory</i>
16h45	Pons M.-N. , Guérol F., Legout A., Poszwa A.: <i>Long-term monitoring of headwater streams acidification in the Vosges Mountains (France)</i>
17h00	Conclusion - Concluding remarks



Poster session:

Sensors and analytical tools for ecosystems exploration

By alphabetical order of the first author, presenter name in bold

Blanchard G., Claude A., Royer L., Sarramia D.: *From sensor to cloud*

Brut A., Ceschia E., Claverie N., Granouillac F., Ferlicoq M., **Tallec T.**, Zawilski B.: *12-year monitoring of two contrasted crop sites in the ICOS network: FR-Lam & FR-Aur*

Courson O., Fleury G., Meyer-Georg S., Del Nero M., Barillon R.: *Seasonal variation of NOM composition in Vosgian freshwaters: a molecular scale ESI-FTMS study*

Do Huy Minh, Dubreuil B., Peydecastaing J., Vaca Medina G., Tran Thi Nhu Trang, Jaffrezic N., Behra P.: *A bio-sourced detection system for glyphosate monitoring in aquatic systems*

Floury P., Gaillardet J., Bouchez J., Gayer E., Gorge C., Roubaty J.-L., Tallec G., Ansart P., Blanchouin A., Koch F.: *Water chemistry by the River Lab: What can we learn from very high frequency?*

Foissard X., Thomas A., Nabucet J., Quénol H., Dubreuil V., Croci S.: *Has Rennes a heat island? From sensors and climate models to remote sensing and ecology issues*

Gaillardet J., Longuevergne L.: *CRITEX : the need for developing sensors of the Critical Zone*

Gal F., **Negrel P.**: *Characterization of the critical zone through passive sampling system in groundwater*

Flipo N., Mouchel J.-M. *PHRESQUES: Continuous monitoring of the Seine bio-geo-chemical state from its source to the sea*

Marmonier P., Olivier M.-J., Wawrzyniak V., Creuze Des Châtelliers M.: *How to detect hyporheic exchanges of water along a river? Thermal infrared remote sensing versus discrete hyporheic measurements*

Meyer-Georg S., Courson O., Fleury G., Boltoeva M., Del Nero M., Barillon R.: *Influence of FA composition on mobility of trace metal elements (TME) in surface waters*

Ohman M., Davis R., Sherman J., Whitmore B., Ellen J.: *Zooglider – an autonomous ocean glider for in situ optical and acoustic sensing of zooplankton*

Plumejeaud-Perreau C., Linyer H., Pignol C., Cipièrre S., Quinton E., Ancelin J., Heintz W., Rouan M., Damy S., Raoul F., Clémens A., Dujardin F., Le Moal F., Montargès-Pelletier E., Bretagnolle V.: *Towards better traceability of field sampling data*

Pons M.-N., **Durozier M.**, Jost G., Pochet C.: *Adapted metrology for long-term monitoring of a large constructed wetland*

Pons M.-N., Del Nero M., Courson O., Parlanti E., DOM-RZAs: *Dissolved organic matter: from optical methods to high-resolution mass spectrometry*

Pons M.-N., Breil P., Namour P.: *Wooden sticks to monitor the redox/oxygen gradients in hyporheic zones*

Pradalier C., **Merlin C.**, Scornec H., Guilloteau H., Grosheny G., Bellanger X.: *When sub-inhibitory concentrations of antibiotics promote the dissemination of unselected resistance genes*

Pradalier C., Robin V.: *Automated quantification of charcoal-particle content in peat samples for paleo-ecological studies*

Pradalier C., **Chahine G.**: *Long-term quantitative river shore monitoring using a portable imaging suite*

Pradalier C., Richard A., Perez V., Van Couwenberghe R., Durand P.: *Automated recognition of habitat classes from overhead imagery*

Pradalier C., Griffith S.: *Long-term monitoring of a natural environment using an automated data-acquisition system*

Robain H.: *Long term (2006-2016) seasonal and inter-annual variability of soil electrical resistivity in a Laotian catchment of the OZCAR network. Impact of land use change, soil type and rainfall*

Six D., **Naaim F.**, Schoeneich P.: *CRYOBS-CLIM: the CRYosphere, an OBServatory of the CLIMate*

Smith G., Knapp A., Smith M.: *Developing wireless sensors designed for a 10-year lifetime*

Talleg G., Ansart P., Barral H., Baudin A., Berrhouma A., Blanchouin A., Bodet L., Cappeleare B., Chazarin J.-P., Clément R., Cohard J.-M., Cucchi K., Dangeard M., Demarty J., Flipo N., Flourey P., Gaillardet J., Guérin A., Guillon S., Henine H., Mouchel J.-M., Rivière A., Seraphin P., Tales E., Tunqui Neira J.M., Zahm A.: *The high frequency Equipex CRITEX toolbox, an example of Critical Zone instrumental devices, ORACLE/BVRE Orgeval Observatory*

Tunqui Neira J.M., Talleg G., Andréassian V., Mouchel J.M.: *High frequency measurements in water quality: a tool to better understand the concentration-flow relationship*

General poster session

By alphabetical order of the first author, presenter name in bold

- Research trends in our networks

Aspholm P.E.: *Phenology of the North Calotte: a long-term phenology monitoring project carried out by pupils in Norwegian and Russian schools - an example of cultural ecosystem services*

Aspholm P.E.: *Long term monitoring of Brown Bear population by none invasive DNA methods; results from Pasvik-Enare Trilateral Park area ? Background for valuating ecosystem services*

Aulus Giacosa L., Vignon M., Buoro M., Gaudin P., Gueraud F., Aymes J.C.: *Growth models and estimation of migratory reaction norm for invasive brown trout (Salmo Trutta L.) in Kerguelen Islands*

Baatz R., Van Looy K., Vereecken H.: *Integration of observational networks to improve Earth system dynamics modeling*

Badenhausser I., Gross N., Mornet V., **Le Provost G.,** Roncoroni M., Saintilan A., Rusch A.: *Green infrastructures in the landscape drive weed and aphid predation in sunflower fields*

Beranger S., Le Cointe P., Cucherousset J., Delire C., Dejoux J.-F., Probst J.-L.: *Linking the changes in groundwater recharge to community structure and the functioning of freshwater ecosystems*

Bernard-Jannin L., Binet S., Gogo S., Leroy F., Perdereau L., Laggoun F.: *Modelling hydrological processes and dissolved organic carbon dynamics in a rehabilitated Sphagnum-dominated peatland*

Braun J.J., Paiz M.C., Mcgrath M., Rabenkogo N., Mbonda A., White L., Gaillardet J., Bouchez J., Moquet J.-S., Regard V., Carretier S., Bricquet J.-P., Mahé G., Richter D. Jr.: *CZO perspective in Central Africa: The Lopé watershed, Lopé National Park, Ogooué River basin, Gabon*

Bunel R., Massei N., Van De Wiel M., Lecoq N., Dieppois B., Copard Y.: *Relations between time variability of hydro-sedimentary responses, climatic signals and catchment characteristics using a landscape evolution model (CAESAR-Lisflood)*

Carriere A., Le Bouteiller C., Tucker G.: *How does vegetation impact the erosion of marly catchments in the Southern Alps of France?*

Gamble A., Boulinier T., Garnier R.: *Optimization of sampling designs in eco-epidemiologic studies based on the detection of antibodies*

Gibert M., Beranger S., Brun C., Darrozes J., Galop D., Hautefeuille F., Blanchet S., Brun C., Darrozes J., Jamoneau A., Stevens V., Tabacchi E., Valdeyron N., Valette P. : *Relationships between human societies and their environments from centennial-to-millennial timescales in the Pyrenean piedmont*

Hell K., Niedrist G., Tappeiner U., Bottarin R.: *An alpine open air laboratory amidst apple orchards and glaciers hosting a long overdue nitrogen budget study*

Le Bouteiller C. : *Draix Bléone critical zone observatory*

Legout C., **Nord G.,** Uber M., Esteves M., Hachgenei N.: *Towards routine estimation of suspended sediment source areas during rainfall-runoff events using spectroradiometry: application to the Claduègne (OHMCV) and Galabre (Obs Draix - Bléone) meso-scale catchments*

Marandel L., **Labonne J.,** Gaudin P., Panserat S.: *A reassessment of the carnivorous status of salmonids: Hepatic glucokinase is expressed in wild fish in Kerguelen Islands*

Melecis V., Karpa A., Vilks K., Rusina S.: *Species richness of flies (Diptera, Brachycera) increases on the background of climate warming in Latvia*

Opeicle A., Bretagnolle V.: *The French Long Term Socio-Ecological Network of "Zones Ateliers"*

Probst J.-L., Ouin A., Beranger S., Blanchet S., Cucherousset J., Darrozes J., Deconchat M., Dejoux J.-F., Del Corso J.-P., Delire C., Delmas F., Duru M., Galop D., Gibert M., Hautefeuille F., Heintz W., Hewinson M., Jamoneau A., Lerigoleur E., Macary F., Polidori L., Schrive C., Sheeren D., Stevens V., Tabacchi E., Valdeyron N., Valette P. : *The project of Zone Atelier Pyrenees-Garonne (ZA PYGAR)*

Pujol S., Barba-Vasseur M., Bernard N., Parmentier A.-L., Eckman A., Mariet A.-S., Houot H., Tenailleau Q., Thiriez G., Riethmuller D., Maury F.: *Vulnerability during pregnancy in an urban environment: how do the risk factors cumulate?*

Sharkey S., White T.: *Key findings from the U.S. Critical Zone Observatories National Program*

Talleg G., Carré C., Hague J.-P., De Coninck A., Becu N., Deroubaix J.-F., Pivano C., Flipo N., Le Pichon C., Mouchel J.-M.: *An experiment of physical and agent-based integrated models for multifunctional management of the river, ORACLE Observatory*

Valero-Garces B., Galop D., **Le Roux G.**, Camarero L., De Diego A., Felip M., Amouroux D., Santamaria Ulecia J.M., Lauga B., Barreiro-Lostres F., Mata Campo M.P., REPLIM Science Team: *Towards the establishment of a pyrenean network of global change in lakes and peatlands: the REPLIM project*

- **Biodiversity and ecosystems**

Ah-Peng C., Flores O., Billard M., Leclair De Bellevue J., Lees E., Jeambu F., **Join J.-L.**, Moureau E., Piteau A., Staménoff P., Strasberg D., Duflot V.: *Cloud layer characterization and bryophytes' cloud water interception on an oceanic island*

Le Provost G., Henckel L., Violle C., Clough Y., Le Bagousse-Pinquet Y., Bretagnolle V., Roncoroni M., **Badenhausser I.**, Gross N.: *Legacy effect of land use intensification on grassland multitrophic trait diversity*

Ouin A., Del Corso J.-P., Duru M., Andrieu E., Nicola G.: *Pollination: from ecological processes to stakeholders*

Weisser W.W., BE-consortium: *The Biodiversity Exploratories long-term research platform*

- **Biogeochemical cycles**

Audry S., Riotte J., **Braun J.-J.**, Ruiz L., Muddu S., Ndam Ngoupayou J.-R.: *The CZO-BVET: Functioning of experimental tropical watersheds*

Baneschi I., Ferraris S., Giamberini S., Imperio S., Mosca P., **Provenzale A.**, Raco B., Viterbi R.: *The Earth Critical Zone and Ecosystem Observatory at Nivolet, Gran Paradiso National Park, Italy*

Celle-Jeanton H., Gilbert D., Steinmann M., Denimal S., Bertrand C., Cholet C.: *Investigating long term variations in a karstic system - Jurassic Karst an observation system of the LTER site Jurassian Arc ZAAJ*

Chabaux F., the Strengbach and the Ringelbach Teams: *Deep vs. subsurface water circulations within mountainous granitic catchments: The Strengbach (OHGE) and the Ringelbach CZO case*

Flaim G., Nishri A., Camin F., Obertegger U.: *Lake Tovel: Long-term stable isotope ($\delta^{18}\text{O}$) study*

Gandois L., Binet S., Rosset T., Durantez P., Camboulive T., De Vleeschouwer F., Teisserenc R., **Le Roux G.**: *Biogeochemical survey of a mountainous peatland*

Guillon S., Flipo N., Jézéquel D., Marmonier P., Franquet E., Thorel M., Vienney A., Oursel B., Olivier J.-M., Bourrand J.-J., Groleau A.: *Metabolism in hydrological extends of alluvial plains : from Casiers Girardon dike fields of the Rhone river to Bassée gravel pits of the Seine river*

Ponnou-Delaffon V., Probst A., Ferrant S., Payre-Suc V., Granouillac F., Camboulive T., **Probst J.-L.**: *Long-term and high frequency hydrochemical monitoring in a small cultivated experimental catchment (CZO Aurade, SW France): impacts of climate change and agricultural practices on streamwater quality*

Probst A., Binet S., Camboulive T., Payre-Suc V., Bakalowicz M., **Probst J.-L.**: *Forty years' fluctuations of streamwater chemistry in the Baget karstic catchment (Ariège, Pyrénées mountains, SW France): impact of atmospheric deposition on carbonate dissolution*

Probst A., Binet S., Camboulive T., Payre-Suc V., **Probst J.-L.**: *Baget catchment: a Critical Zone Observatory of a karstic area in the Pyrenees mountains, South West of France*

Probst J.-L., Ponnou-Delaffon V., Payre-Suc V., Granouillac F., Camboulive T., Probst A.: *Aurade experimental catchment: a Critical Zone Observatory of a cultivated area in South West of France*

Riotte J., Ruiz L., Muddu S., Marechal J.-C., Audry S., Braun J.-J.: *To which extent vegetation controls water and biogeochemical cycles? The forested watershed of Mule Hole (CZO BVET)*

- **Decision making, management and adaptive governance**

Braud I., Branger F., Labbas M.: *Assessing various options for rain water management in 2030 using prospective land use change scenarii and distributed hydrological modelling in the Yzeron experimental periurban catchment (ZABR/OTHU-OZCAR CZO observatory)*

Houet T., Hubert-Moy L., Houpert L., Nabucet J., Corgne S., Pottier E. , Nicolas H., Bellec N.: *Characterizing ecology and monitoring ecological / human interactions from space: the KALIDEOS Bretagne framework*

- **Environmental risks**

Berthou J., Mougine C., Gouy V., Bretagnolle V.: *RECOTOX: Research sites network in ECOTOxicology-TOXicology to monitor, understand and mitigate the eco-toxicological impacts of pollutants in socio-agro-ecosystems*

Celle-Jeanton H.: *Long term monitoring of pharmaceutical molecules in an alluvial hydrosystem (AUVERWATCH Project)*

Denize J., Hubert-Moy L., Baudry J., Corgne S., Betbeder J., Pottier E.: *Identification and characterization of land cover and land use during intercrop-periods with high resolution time-series of radar and optical images: Application to the « Zone Atelier Armorique de Pleine-Fougères ».*

Molbert M., Goutte A., Alliot F., Mouchel J.-M.: *Impregnation factors of freshwater fishes by organic micro-pollutants in the Seine river catchment.*

Robert E., **Grippa M.**, Gal L., Kergoat L.: *Monitoring turbidity and suspended particulate matter as indicator of "health hazard" in surface waters in West Africa*

Rodriguez F.: *Relevance of a multi-topic observatory of urban environments, ONEVU in Nantes (France) ? a ten-years feedback*

Ropert-Coudert Y., Thierry R., Shiomi K., Kato A.: *Adélie penguins in Terre Adélie need active protection following two complete breeding failures over the past four years*

- **Global initiatives**

Chicharo L., Krauze K.: *UNESCO chair in Ecohydrology: water for ecosystems and societies, a tool for global water education*

Mcdowell W.: *International Critical Zone Science: Opportunities to build a global understanding of land-water linkages*

Melece I.: *The "TeaComposition" initiative results in Latvia after the tea bag incubation over the period of one year*

Pons M.-N., Werthe A., Lahami S., Dagois R.: *Some additional experiments in the French ILTER TeaComposition Network*

Smith M.: *The International Drought Experiment: A global network to assess terrestrial ecosystem sensitivity to drought*

- **Social-ecological system (SES) research, or “Putting the S” in LTSER**

Caquet B., **Benoit M.**, **Pons M.N.** : *To learn or not to learn, that is a question*

Gangneron F., Robert E.: *Water resources in West Africa, a socio-environmental approach of scarcity*

Mouchel J.-M., Lestel L., Carré C., Meybeck M.: *Long term comparison of city-river couples*

Renaud P.C., Pays O., Fritz H., De Souza F., De Oliveira R.F., Fischer E., Fabricius C.: *Anthropogenic constraints in tropical savannah: building a social-ecological conceptual framework of the agricultural/biodiversity conservation interface*