



## SEMEAU INTERNATIONAL CONFERENCE

### How to combine Forest Management, Local Development and Protection of Surface and Groundwater?

OCTOBER 17-19, 2012

Vulcania, Clermont-Ferrand, France

For registration, accommodation, any information, visit:

<http://www.life-semeau.eu/accueil>

LIFE+ Environment SEMEAU Project

<http://www.life-semeau.eu>

Twentieth Technical days  
of the French Chapter  
of the International Association of Hydrogeologists

<http://www.cfh-aih.fr/>







## SEMEAU INTERNATIONAL CONFERENCE

### How to combine Forest Management, Local Development and Protection of Surface and Groundwater?

OCTOBER 17-19, 2012

Vulcania, Clermont-Ferrand, France

*For registration, accommodation, any information, visit:*

<http://www.life-semeau.eu/accueil>

#### *Secretary of the Conference*

Patrick Lachassagne (EVWS, Danone Waters, Evian, France), C. Fermond (ONF, France), Julien Figuepron (CNPFF-IDF, France), Simon Rouquet (EVWS, Danone Waters France and Mines ParisTech, France)

#### *Organizing Committee*

V. Chassignol  
L. Chery  
N. Dissez  
O. Picard  
J.F. Terrisse  
Ph. Vigouroux

Saint-Etienne city municipality, France  
BRGM – CFH/AIH General Secretary, France  
EVWS, Danone Waters, Volvic, France  
CNPFF-IDF, France  
SITHERE, Vals-les-Bains, France  
Water Division, BRGM, France

#### **Sponsorship: (to be completed)**

BRGM  
European Commission (LIFE+ Environment Programme)  
Evian Volvic Sources World – Danone Research  
Saint-Etienne city  
SITHERE, Vals-les-Bains





## SEMEAU INTERNATIONAL CONFERENCE

### How to combine Forest Management, Local Development and Protection of Surface and Groundwater?

OCTOBER 17-19, 2012

Vulcania, Clermont-Ferrand, France

#### *Scientific Advisory Committee*

Shakeel Ahmed  
Vazken Andréassian  
Marc Benoît  
Richard Benyon  
Bernard Blavoux  
Ariane Blum  
Nathalie Gassama  
Didier Graillot  
André Granier  
Robert Jandl  
Ronald Kozel  
Emmanuel Ledoux  
Steven MacNulty  
Nico Marcar  
Ghislain de Marsily  
Marc Palahi  
Romain Pirard  
Ph. Quevauvillier  
Serge Rambal  
Mohammed Sabir  
François Zwahlen

IFCGR, NGRI, Hyderabad, India  
CEMAGREF, France  
INRA SAD Mirecourt, France  
PRF, Univ. of Melbourne, Australia  
Pr., Avignon University, CFH Pdt, France  
Water Division, BRGM, France  
Tours University, France  
Pr., Saint-Etienne School of Mines, France  
INRA-Univ. H.P. Nancy, France  
BFW, Wien, Österreich  
Federal Office for the Environment, Switzerland  
Paris School of Mines, France  
US Forest Service, Raleigh, USA  
formerly PRS CSIRO, Australia  
Pr., Paris VI University, France  
European Forest Institute, Barcelona, Spain  
IDDRI, Paris, France  
Vrije Universiteit Brussel, Belgium  
Dream CEFE-CNRS, Montpellier, France  
Dir. Ec. Nat. For. d'Ing. Salé, Morocco  
Pr. CHYN, Neuchâtel Univ., Switzerland

*For registration, accommodation, any information, visit:*

<http://www.life-semeau.eu/accueil>





## SEMEAU INTERNATIONAL CONFERENCE

### How to combine Forest Management, Local Development and Protection of Surface and Groundwater?

OCTOBER 17-19, 2012

Vulcania, Clermont-Ferrand, France

**LIFE** is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU.

With the objective of favouring the WFD implementation, the **LIFE+ Environment SEMEAU Project** (2009-2013) aims at developing participative land management strategies at the watershed scale, involving particularly forest management, with the objective of favouring both local economic development and surface and groundwater protection. In that frame, the SEMEAU project is developing specific numerical management tools.

The **SEMEAU conference** is an international meeting devoted to the main following themes, and at presenting the main outputs of the LIFE+ SEMEAU project:

→ **hydrological and hydrogeological relationships between forest and surface and groundwater** (quantity, quality) and biodiversity, interaction-retroactions linked to the global change (climate change, wood demand, abandonment of farmland, cities growth, etc.);

→ **technical tools (numerical models, DST)** for improving the knowledge about and managing the relationships between forest and water resources, from the plot to the watershed and the WFD water body scale;

→ **best practices** aiming at a joint valorisation of forest stands, at the management and protection of surface and groundwater, at the biodiversity preservation, and at reaching the WFD objectives. Evaluation of the global benefit of such joint approaches - Technical and socio-economic approaches;

→ **local to European (WFD), and other countries, scale strategies, policies, amenities and ecological services, contractualization and juridical tools** aiming at favouring local development (forestry, agriculture, tourism, etc.) and the preservation / return to the ecological good status of water resources, particularly in forested and rural European areas submitted to abandonment of farmland – Organizational and socio-economic approaches.

The conference will comprise oral presentations (both open and with conference invitees), poster sessions and round tables.

The conference is aiming at gathering together:

- professionals and stakeholders involved in water, forest and environment management and protection (rivers and aquifers management, forestry, natural parks and reserves, WFD implementation, etc.),
- scientists, engineers, consultants, elected representatives, local, state, national, European and International authorities, etc.,
- from France, Europe and other countries.

For registration, accommodation, any information, visit:

<http://www.life-semeau.eu/accueil>





## SEMEAU INTERNATIONAL CONFERENCE

### How to combine Forest Management, Local Development and Protection of Surface and Groundwater?

OCTOBER 17-19, 2012  
Vulcania, Clermont-Ferrand, France

PROVISIONNAL PROGRAMME (2012, July; note that the timing is only tentative at this stage of the building of the programme)

#### Wednesday October 17<sup>th</sup>, 2012

08h30

Registration – Welcome of the participants - Coffee

09h30

Opening of the Conference - Opening speeches

European, national and regional official representatives

National representatives from the French Ministry of Health (DGS), the Ministry of Agriculture, the Ministry of Environment (**to be confirmed**)

Bernard BLAVOUX, *President, International Association of Hydrogeologists French Chapter (Comité Français d'Hydrogéologie de l'Association Internationale des Hydrogéologues)*

10h00

Introducing Conference

The stakes of water resources protection (**title to be confirmed**)

Ghislain de MARSILY, *Professor, Pierre and Marie Curie, Paris VI University, France*

For registration, accommodation, any information, visit:

<http://www.life-semeau.eu/accueil>





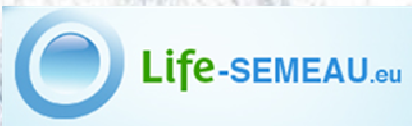
### Wednesday October 17<sup>th</sup>, 2012

10h30	<b>Session 1 - Hydrological (quantity, quality) role, benefits and impacts of the forest cover. Main processes, from the tree and the plot to the watershed scale</b>  <i>Chairperson(s):</i>
10h30 - 10h50	- Influence of forest cover on the water cycle at the tree and plot scales; comparison with other vegetation types (Influence du couvert forestier sur le cycle de l'eau et comparaison avec le bilan hydrique d'autres couverts) <i>André GRANIER. Unité mixte de recherche « Écologie et Ecophysiologie Forestières », INRA-Université Henri Poincaré, Nancy, France.</i>
10h50 - 11h10	- Quantifying forest water use from plot to regional scale. <i>Richard Benyon. Principal Research Fellow in Forest Hydrology - University of Melbourne, Australia</i>
11h10 - 11h30	- Biogeochemistry of forest ecosystems, and consequences on forested areas water properties and quality <i>Arnaud LEGOUT. Unité Biogéochimie des Écosystèmes Forestiers, INRA, Champenoux, France.</i>
11h30 - 11h50	- Forest management and water quality : important assets and some trouble spots <i>Julien FIQUEPRON. CNPF-IDF, Nancy, France.</i>
11h50 - 12h30	<b>2 non invited speakers to be selected amongst the received proposals</b>
12h30 - 14h20	<b>Lunch at Vulcania</b>

**For registration, accommodation, any information, visit:**

**<http://www.life-semeau.eu/accueil>**





### Wednesday October 17<sup>th</sup>, 2012

#### 14h20 **Session 2 - Hydrological modeling of the forest cover (quantity, quality). Technical approaches and tools, from the plot to the watershed scale**

##### *Chairperson(s):*

14h20 - 14h40 - Modeling of the forest cover at the tree and plot scales: the BILJOU methodology.

*André GRANIER. Unité mixte de recherche « Écologie et Ecophysiologie Forestières », INRA-Université Henri Poincaré, Nancy, France.*

14h40 - 15h00 - WaSSI: A Continental Scale Hydrologic Model for Assessing Impacts of Climate, Land Use, and Population Change on Water Supply and Demand and Carbon across the Conterminous United States

*Stephen MAC NULTY, Eastern Forest Environmental Threat Assessment Center, USDA Forest Service, Raleigh, USA.*

15h00 - 15h20 - A methodology for modeling the forest hydrological role in distributed watershed and aquifers models. Application to the Volvic impluvium (SEMEAU project) (Méthodologie d'intégration du rôle de la forêt (LAI, RFU) pour la modélisation hydrologique déterministe à l'échelle du bassin versant. Application à l'impluvium de Volvic (projet SEMEAU)

*Simon ROUQUET<sup>(1, 2)</sup>, Patrick LACHASSAGNE<sup>(1)</sup>, Emmanuel LEDOUX<sup>(2)</sup>, (1) Evian Volvic World Sources, Danone Waters France, Evian France, and (2) Centre de Géosciences, Mines ParisTech, Fontainebleau, France*

15h20 - 15h40 - Deterministic modeling of the Vals-les-Bains carbo-gaseous mineral hydrosystem and sensitivity analysis of land-use and water management practices changes (SEMEAU project). Modélisation déterministe d'un hydrosystème minéral carbo-gazeux et analyse de sensibilité des changements d'occupation du sol et des pratiques de gestion des eaux). Site méditerranéen de Vals-les-Bains (projet SEMEAU)

*Emmanuel LEDOUX, Centre de Géosciences, Mines ParisTech, Fontainebleau, France*

15h40 - 16h00 - Impact of forest cover changes on nitrogen fluxes in aquifers (bibliographical, theoretical and applied - Volvic watershed - modeling) (SEMEAU project). Impact des changements du couvert forestier sur les flux de nitrates au sein des aquifères (approche bibliographie et par modélisation théorique et appliquée à l'impluvium de Volvic; projet SEMEAU)

*Simon ROUQUET<sup>(1, 2)</sup>, Annouck FERROUD<sup>(1)</sup>, Patrick LACHASSAGNE<sup>(1)</sup>, Emmanuel LEDOUX<sup>(2)</sup>, (1) Evian Volvic World Sources, Danone Waters France, Evian France, and (2) Centre de Géosciences, Mines ParisTech, Fontainebleau, France*


16h00 - 16h20 Anthropogenic origin of phosphates in a dam lake of the Furan (Saint-Etienne, France) forested watershed. Diagnostics and eutrophication remediation proposals (SEMEAU project). Origine anthropique des phosphates dans un bassin versant forestier. Diagnostic et propositions de remédiation (projet SEMEAU)

*Florent Pezet, SARCELLE, Charnobry, France*

**For registration, accommodation, any information, visit:**

<http://www.life-semeau.eu/accueil>





16h20 - 16h40	1 non invited speaker to be selected amongst the received proposals (if any), or one presentation to be added or schedule modified
16h40 - 17h40	<b>Session 3 - POSTERS Session and Coffee Break</b>
17h40 - 18h50	<b>Session 4 - FIRST ROUNDTABLE - Debate between invitees to the roundtable (scientists, water and forest managers, consultants) and conference participants.</b>  <b>“State of the art and synthesis of the hydrological relationships between forest cover and water resources (quantity). Practical consequences and applications for water resources management, and perspectives for further research”</b>
18h50 - 20h30	<b>Visit of VULCANIA</b>
20h30 - 22h30	<b>Gala Dinner at VULCANIA</b>
22h30	<b>Bus transfer to the hostels at Clermont-Ferrand</b>

*For registration, accommodation, any information, visit:*

<http://www.life-semeau.eu/accueil>





### Thursday October 18<sup>th</sup>, 2012

8h00	<b>Bus transfert from Clermont-Ferrand to Vulcania</b>
8h50	<b>Session 5 - Best practices and case studies about combined water protection and forest management</b> <i>Chairperson(s):</i>
8h50 - 9h10	Case studies of a city having developed a water and forest policy (to be confirmed : München or Lausanne)
9h10 - 9h30	- Assessment and perspectives of the development actions led by the French National Forest Agency (ONF) for water resources protection Bilan et perspective des actions de développement conduites par l'ONF sur la protection de la ressource en eau <i>Olivier FERRY, ONF, France.</i>
9h30 - 9h50	- Guidelines for the protection of potable water catchworks in forested context. Forestry recommendations in the Midi-Pyrénées region (France): forest and water stakeholders are working together Guide de protection des captages d'eau potable en contexte forestier. Recommandations forestières pour les captages d'eau potable en Midi-Pyrénées : les acteurs forestiers et les acteurs de l'eau s'associent <i>Philippe BERTRAND, CRPF Midi-Pyrénées, Laurent DANNEVILLE, Parc Naturel Régional des Grands Causses, Millau, France</i>
9h50 - 10h10	- Good practices in forested mountains and karstic areas (ALPEAU Project) - Presentation of the water protection guide Synthèse des bonnes pratiques en contexte montagnard et karstique (projet ALPEAU) - Présentation du guide de protection des eaux <i>Jean-Luc MABBOUX, ONF, France</i>
10h10 - 10h40	<b>Coffee Break</b>

**For registration, accommodation, any information, visit:**

<http://www.life-semeau.eu/accueil>





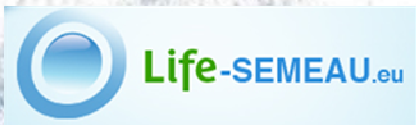
**Thursday October 18<sup>th</sup>, 2012**

10h40	<b>Session 5 (continued)- Best practices and case studies about combined water protection and forest management</b> <i>Chairperson(s):</i>
10h40 - 11h00	- Protection of shallow drainage and catchwork devices for potable water tapping in forested areas (SEMEAU Project) Modalités de protection des drains des captages de faible profondeur (projet SEMEAU) <i>Guillaume SABOT, ONF, France, Valérie CHASSIGNOL, Ville de Saint-Etienne (France)</i>
11h00 - 11h20	- Good forestry practices for the protection of natural mineral water resources. The Volvic Case studies (SEMEAU Project) <i>Christelle VIAL, ONF, Emmanuel FAVRE d'ANNE, CRPF, Julien FIQUEPRON, CNPF, France</i>
11h20 - 12h00	<b>2 possible non invited speakers to be selected amongst the received proposals</b>
12h00 - 13h40	<b>Lunch at Vulcania</b>

**For registration, accommodation, any information, visit:**

**<http://www.life-semeau.eu/accueil>**





**Thursday October 18<sup>th</sup>, 2012**

13h40

**Session 6 - Policies integrating forest management and development, and water resources protection at the various scales (watershed, SAGE, coutry, WFD...), including climate change impacts**

*Chairperson(s):*

13h40 - 14h00

- Links between the Water Framework Directive and forest policies in Europe  
*(title to be confirmed)*

*Invited speaker to be confirmed*

14h00 - 14h20

The principle of the Danone Waters Natural Mineral Waters protection policies. How to integrate forest management policies, and to take into account climate change and landcover change? The Volvic case study (SEMEAU Project)

*Cathy Le Hec, Patrick Lachassagne, Simon Rouquet, Evian Volvic Sources World, France, Christelle Vial, ONF Puy de Dôme, Emmanuel Favre d'Anne, Dominique Jay, CRPF du Puy de Dôme*

14h20 - 14h40

- Proposals for improving the WFD action plan for the « Chaîne des Puys » Water Body on the basis of the SEMEAU project results on the Volvic impluvium  
Proposition d'aménagement au programme de mesures concernant la Masse d'Eau « Chaîne des Puys » sur la base des résultats du projet SEMEAU sur l'impluvium de Volvic

*Monique FREMION, Cabinet Frémion, Clermont Ferrand, France*

14h40 - 15h00

- Restauring forested zones in wetlands and in the riparian zone of the streams and implementation of management tools

Restauration des milieux forestiers en zones humides et en bordure de cours d'eau et mise en place d'outils de gestion

*Julien PRINET, Nicolas GALMICHE, France*

15h00 - 15h30

**Coffee Break**

**For registration, accommodation, any information, visit:**

**<http://www.life-semeau.eu/accueil>**





**Thursday October 18<sup>th</sup>, 2012**

**Session 7 - Socio-economical approaches: evaluation of costs and benefits of forest management policies comprising specific measures for the protection of water resources**

**Chairperson(s):**

- 15h30 - 15h50 - Valuation methods of forest ecological service for drinking water quality  
Méthodes d'estimation de la valeur du service fourni par la forêt pour la qualité de l'eau potable  
*Serge GARCIA, Laboratoire d'Economie Forestière, INRA, Nancy, France*
- 15h50 - 16h10 - Payment for Environmental Services. Example of cities securing their water supply by paying the forest environmental services  
Paiement pour Services Environnementaux. Exemple de villes sécurisant leur approvisionnement en eau en rémunérant les services environnementaux forestiers  
*Jean GAULT, Conseil Général de l'Alimentation de l'Agriculture et des espaces ruraux, Ministère de l'Agriculture et de la Forêt, Metz, France*
- 16h10 - 16h30 - Cost/benefit analysis to support public/private decisions aiming at both favoring forestry development and water quality protection. Case studies from Volvic and Saint-Etienne (SEMEAU Project)  
*Pierre DEFRANCE, ACTEON, Grenoble, Sophie BERTIN, Ekolog, France*

**For registration, accommodation, any information, visit:**

**<http://www.life-semeau.eu/accueil>**





**Thursday October 18<sup>th</sup>, 2012**

16h30 - 18h00

**Session 8 - SECOND ROUNDTABLE - Debate between invitees to the roundtable (hydrogeologists, registered hydrogeologists, forest managers, water authorities) and conference participants.**

**“Operational (groundwater protection zones), practical and financial implementation of forestry and water policies and good practices for the protection of water resources. How to implement an efficient co-operation between forest managers and water managers”**

**« Modalités opérationnelles (périmètres de protection et prescriptions associées) de mise en œuvre des politiques et bonnes pratiques de protection des ressources en eau par la forêt. Comment instituer une collaboration efficace entre forestiers, gestionnaires des ressources en eau et hydrogéologues agréés ? »**

18h30

**Bus travel to the Puy-de-Dôme Conseil Général at Clermont-Ferrand**

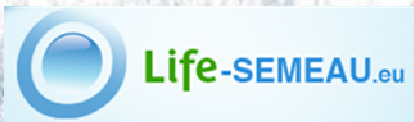
19h15 - 21h00

**Cocktail at the Puy-de-Dôme Conseil Général - Presentation of the project for the labeling of the “Chaîne-des-Puys » as part of the UNESCO World Natural Heritage**

**Présentation du projet de classement de la Chaîne des Puys au Patrimoine Mondial de l'Humanité (UNESCO)**







Friday October 19<sup>th</sup>, 2012

## FIELD TRIP

***Field trip on the SEMEAU project Volvic Impluvium: geology, hydrology, hydrogeology, economical activities, forest management and water protection policies, outputs of the SEMEAU project***

<u>8h45</u>	Departure from Clermont-Ferrand (bus transfer from hostels)
<u>9h15 - 12h30</u>	Field trip
<u>12h30 - 14h00</u> spring hall	Lunch (Auvergne local specialties: delicatessen meat and cheese) at Volvic spring hall
<u>14h00</u>	Bus transfer to hostels, airport, railway station

***For registration, accommodation, any information, visit:***

***<http://www.life-semeau.eu/accueil>***





