



*Atelier de travail sur les émissions nettes de GES du  
réservoir Eastmain-1  
Eastmain-1 reservoir net GHG emissions workshop  
April 15-16 Avril 2009*

**Holiday Inn Midtown- Montréal, Canada  
Salle Sénateur Room**

**APRIL 15 AVRIL**

8h15-9h00 **Petit déjeuner continental – Continental breakfast**

9h00-9h10 Introduction  
**Alain Tremblay**, Hydro-Québec

9h10-9h20 The Eastmain-1 Net Emissions Project  
**Alain Tremblay**, Hydro-Québec

**VOLET TERRESTRE – TERRESTRIAL ASPECTS**

9h20-9h40 Terrestrial aspect : Eastmain-1 region characterisation  
**Michelle Garneau**, UQAM-GEOTOP

9h40-10h00 Carbon stocks in 5 boreal forest types of the Eastmain-1 region, James Bay,  
Quebec  
**Jessica L. Banville**, UQAM - Département de Géographie

10h00-10h20 **Pause santé – Health break**

10h20-10h55 CO<sub>2</sub> and CH<sub>4</sub> fluxes from peatlands and forest soils of the Eastmain-1  
reservoir region, James Bay, Quebec  
**Luc Pelletier**, UQAM-GEOTOP

10h50-11h10 Long-term carbon accumulation in the peatlands of Eastmain-1 region,  
James Bay, Quebec  
**Simon van Bellen**, UQAM - Département de Géographie

11h10-11h30 The use of ground penetrating radar (GPR) to characterize and improve  
estimations of organic carbon accumulation in peatlands of Eastmain-1

region, James Bay, Quebec  
**Pierre-Luc Dallaire**, UQAM - Département de Géographie

11h30-11h50 Evaluation of the Holocene Peat Model with Data from Boreal and Subarctic Peatlands of the James Bay Lowlands, Quebec, Canada  
**Anne Quillet**, UQAM - Département de Géographie

11h50-13h30 **Diner-Lunch**

### **VOLET TOUR DE COVARIANCE EDDY – EDDY COVARIANCE TOWER ASPECTS**

13h30-13h50 Using the eddy covariance technique for estimating changes in greenhouse gas emissions resulting from the EM-1 reservoir creation  
**Marie-Claude Bonneville**, McGill University

13h50-14h10 From Forest to Lake: Effect of Hydroelectric Reservoir Impoundment on the Net Ecosystem Exchange of CO<sub>2</sub>  
**Marie-Ève Lemieux**, McGill University

14h10-14h50 Discussion sur le volet terrestre – Discussion on terrestrial aspects  
**Michelle Garneau**, UQAM-GEOTOP

14h50-15h10 **Pause santé – Health break**

### **VOLET AQUATIQUE – AQUATIC ASPECTS**

15h10-15h30 The Relative Contribution of Winter in Annual CO<sub>2</sub> Emissions of Boreal lakes  
**Véronique Ducharme Riel**, UQAM, Sciences Biologiques

15h30-15h50 Direct link between surface turbulence and air-water gas exchange velocities: methodological improvements and applications  
**Dominic Vachon**, UQAM, Sciences Biologiques

15h50-16h10 Lake sediment carbon storage in the Eastmain region, James Bay.  
**Marie-Ève Ferland**, UQAM, Sciences Biologiques

16h10-16h30 Metabolic Differences Between Boreal Lakes and a Young Reservoir In Québec  
**Soren Brothers**, UQAM, Sciences Biologiques



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**APRIL 16 AVRIL**

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| 8h15-9h10   | <b>Petit déjeuner continental – Continental breakfast</b>  |
| 9h10-9h40   | Furnas Carbon budget Project<br><b>Andre C. Prates Cimblaris</b> , Furnas  |
| 9h40-10h20  | Greenhouse Gas Emissions from Hydroelectric Reservoirs Before<br>Impoundment in Brazil<br><b>Marco dos Santos</b> , L.COPPE – UFRJ   |
| 10h20-10h40 | <b>Pause santé – Health break</b>  |
| 10h40-11h10 | The monitoring of GHG on Eastmain-1 reservoir and natural lakes<br><b>Julie Bastien</b> , Environnement Illimité Inc.  |
| 11h10-11h30 | Explaining the spatial heterogeneity of surface pCO <sub>2</sub> and CO <sub>2</sub> fluxes in the<br>Eastmain-1 Reservoir.<br><b>Cristian Teodoru</b> , UQAM, Sciences Biologiques-GRIL |
| 11h30-11h50 | Carbon Sources in the Eastmain-1 Reservoir; Insights from Stable Carbon<br>Isotopes<br><b>Jean-Francois Hélie and Annie Lalonde</b> , -UQAMGEOTOP  |
| 11h50-13h30 | <b>Diner-Lunch</b>   |
| 13h30-14h00 | What we have learned from the aquatic systems in and around Eastmain-1<br><b>Yves Prairie</b> , UQAM-Sciences Biologiques-GRIL   |
| 14h00-14h40 | Discussions sur le volet aquatique – Discussion on aquatic aspects<br><b>Yves Prairie</b> , UQAM-GRIL  |

## **VOLET MODELISATION – MODELS ASPECTS**

14h40-15h00      Linking terrestrial ecosystem with aquatic ecosystem – A modelling approach  
**C. Peng** ,UQAM

15h00-15h20      **PAUSE SANTÉ – HEALTH BREAK**

15h20-15h50      Simulating northern James Bay ecosystem carbon fluxes and experimental studies of underway vegetation and soil decomposition

**Young Il Kim, Sami Ullah, and Nigel Roulet**, McGill University

15h50-16h00      Closing comments  
**Alain Tremblay**, Hydro-Québec

16h00-17h30      EM-1 research project cocktail