

« Changements environnementaux, changements de société : Impacts et adaptations »

Aula du Musée d'ethnographie de Genève (8h30-17h)

- 8h30 *Accueil – Café croissant*
Mise en place des posters
- 9h Invité de la journée: **Prof. Philippe LE PRESTRE** Professeur titulaire de science politique, Université Laval, Francqui Foundation International Professor Chair (USL-ULB-UGhent, Belgique)
- "Pourquoi se préoccuper des problèmes environnementaux ? "**
- 9h45 **Evaluation des services écosystémiques du bassin versant de la mer noire**
Prof. Anthony LEHMANN
- 10h10 *Café*
Découverte des posters de recherche réalisés par les étudiants
- 10h40 **Changements environnementaux, adaptations et monitoring : trois exemples au long du Rhône**
Profs. Emmanuel CASTELLA, Christel HASSLER et Bastian IBELINGS
- Les limites planétaires : un outil pour évaluer les impacts environnementaux de la consommation des pays**
Prof. Hy DAO
- Mécanismes de transfert de risques liés aux extrêmes climatiques**
Christophe ETIENNE, Charles-Antoine KUSZLI
- 11h55 **Discussion : Table ronde avec les intervenants**
- 12h30 *Lunch*
Découverte des posters de recherche réalisés par les étudiants
- 13h30 **Faire la ville entre norme, label et procédure d'évaluation de la qualité - Le cas des écoquartiers**
Prof. Laurent MATTHEY
- Impact et retard de la politique de suppression des ampoules énergivores**
Daniel CABRERA, Dr. Jean-Luc BERTHOLET
- Le rôle du stockage de l'énergie dans le contexte de la sortie du nucléaire en Suisse**
Dr. David PARRA
- Faire le lien entre science, société et changement climatique pour mieux cerner l'évolution des déserts froids de l'Himalaya**
Stéphanie PIFFETEAU
- 15h10 *Café*
Découverte des posters de recherche réalisés par les étudiants
- 15h30 **Adaptations juridiques dans le domaine du changement climatique**
Prof. Makane MBENGUE
- Classe inversée : un stimulus pour l'engagement des étudiants**
Dr. Martin SCHLAEPFER
- 16h20 **Discussion : table ronde avec les intervenants**
Remise des prix pour les meilleurs posters de Master et de Doctorat
deux prix de 1'000.- chacun

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INVITE EXTERNE

Philippe LE PRESTRE est Professeur titulaire de science politique, Université Laval; Francqui Foundation International Professor Chair (USL-ULB-UGhent, Belgique). Voici un extrait de son mot de bienvenue sur sa page web « Si étudier les relations internationales c'est apprendre à survivre, l'émergence des problèmes d'environnement à l'échelle mondiale ajoute une dimension urgente à la quête universelle de sécurité et de justice. L'écopolitique internationale réfléchit sur les facteurs politiques qui influencent la coopération internationale en matière d'environnement et, inversement, sur l'impact des nouvelles problématiques environnementales sur les relations internationales. Par son apport à l'analyse théorique des relations internationales, par l'attention qu'elle porte à l'émergence de problématiques nouvelles, aux rapports qu'elles entretiennent avec des questions traditionnelles, aux rôles divers que jouent les acteurs internationaux, aux fondements de la coopération internationale et aux interactions entre différents régimes de coopération, l'écopolitique internationale ouvre une fenêtre sur la nature et les fondements des nouvelles relations internationales. »

ABSTRACTS

Prof. Anthony LEHMANN

Evaluation des services écosystémiques du bassin versant de la Mer Noire

Assessing ecosystem services in the Black Sea Catchment

Following the enviroGRIDS European project that modeled water resources in the entire Black Sea catchment (2.2 million km²) for the first time using the Soil and Water Assessment Tool, we are exploring in this work how we can transform this initial effort into an ecosystem services assessment. Two international commissions in the region focusing on the Danube River and the Black Sea are directly concerned by the water quantity and quality reaching this almost closed sea. Their concern typically translates into services such as water yield, sediment and nutrient retentions. These services were assessed using the InVEST package developed by the Natural Capital Project. The outputs of these analyses are presented as large-scale maps at 270m resolution and analyzed by countries and by sub-catchments. The created datasets will be shared on the enviroGRIDS geoportal (portal.envirogrids.net) as open data available to download or as web services. This brings a new regional contribution to the Global Earth Observation System of Systems that will remain in the future for other scientists and decision-makers to use and compare with their own results.

Dr Emmanuel CASTELLA, Profs. Christel HASSLER, et Bastiaan IBELINGS

From changes to adaptations and monitoring: three tales along the Rhône.

De changements à adaptations en passant par le monitoring: trois contes au long du Rhône

Case studies from lakes, rivers and marine coastal zones - all interlinked within the Rhône River catchment - exemplify current adaptations to environmental changes, their costs and consequences. Along the river, where several sectors were or are being "restored", questions arise about the sustainability of restoration and the need to tackle other aspects of the river function (i.e. sediment transport). In the coastal zone, the same concerns about sustainability and costs apply to recent structures built as protections against sea level rise. The case of lakes and their changes, questions the way we collect and analyse environmental data to detect, understand and communicate about environmental shifts.

Prof. Quoc-Hy DAO

Les limites planétaires : un outil pour évaluer les impacts environnementaux de la consommation des pays

Les limites planétaires sont un ensemble de neuf limites biophysiques du système Terre qui devraient être respectées afin de maintenir, sur Terre, des conditions favorables à la poursuite du développement humain. Nous proposons une méthodologie pour mesurer ces limites planétaires, les partager entre les pays et pour évaluer les impacts de notre consommation avec une approche de type « empreinte environnementale » (impacts causés sur le territoire national et à l'étranger). Nous discuterons des questions de mesurabilité, de valeurs critiques, d'allocation équitable de droits aux ressources, de performance environnementale et de priorisation des domaines d'action.

Christophe ETIENNE, Charles-Antoine KUSZLI

Mécanismes du transfert de risques liés aux extrêmes climatiques

Risk transfer mechanisms for climate extremes

Resilience to climate extreme events represents a major challenge for the sustainable development of human societies, especially now that the climate system is evolving at an unprecedented rate. Addressing this challenge requires understanding the physics and statistics of climate extremes as well as estimating their impact on human activities. Financial risk transfer to the insurance industry provides a global systemic response for climate risk management, in which reinsurance companies take the ultimate risk. In order to assess the economic impacts of climate extremes, these companies rely on the analysis of past events and the development of catastrophe models (CAT models).

Prof. Laurent MATTHEY

Faire la ville entre norme, label et procédure d'évaluation de la qualité. Le cas des écoquartiers

City-making between standards, labels and quality assessment procedures. The case of eco-neighbourhoods

Based on the case of eco-neighbourhoods, this communication explores the relationship of Swiss architects and urban planners to the standardisation and codification of city-making as a result of the principles of sustainable urban planning. First of all, the analysis considers the production of decision-making tools and labels capable of structuring the production of ecological neighbourhoods. The argument then covers the "consumption" of such tools by the builders of cities and regions. An attempt is made to understand how the users of such tools learn to outmanoeuvre the constraints facing them in order to make room for creativity. More broadly, the communication discusses issues of urban quality assessment, the inventiveness of the various participants in city-making and the relevance of the "model" concept in urban planning. The plan is to show that policy decision-making takes precedence over the principles and tools of governance originating from sustainable urban development. To that purpose, the analysis, which focuses on Switzerland, draws on research materials collected through semi-directive interviews using the "life story" method, adapted here to urban project narratives.

Daniel CABRERA, Dr. Jean-Luc BERTHOLET

Impact et retard de la politique de suppression des ampoules énergivores

Impact and delay of the phase out of inefficient light bulbs policy

In February 2009, the European Commission decided to implement a planned phase out of inefficient (incandescent and conventional halogen) light bulbs (2009/125/CE and 2009/244/CE). Switzerland started its own policy measures a few months before those of the EU27-member body and later followed the EU's line from September 2010. Here we present an analysis of the impact of this policy by analysing an energy efficiency program addressing low to medium income households based on multiple surveys which took place from 2009 to 2014. An important component of this program is the replacement of inefficient incandescent and halogen lamps by efficient ones (CFLs and LEDs). However the phase out of inefficient lamps operating in households has an inherent inertia that appears to be more important than expected. Indeed, there is a significant number of incandescent lamps still operating in households and halogen lamps appear the main chosen substitute. This result in the discrepancy concerning the evolution of the stock of inefficient lamps between the projections made in 2008 for the 2009/244/CEE directive and the real situation in households of the city of Geneva-Switzerland which needs to be accounted for.

Dr. David PARRA

Le rôle du stockage de l'énergie dans le contexte de la sortie de nucléaire en Suisse

Role of energy storage in the context of the Swiss nuclear phase-out

The need for and role of energy storage (ES) in new decarbonisation energy systems are discussed. A uniform techno-economic and environmental assessment for electrical and thermal storage within the Swiss Competence Centre for Energy Research on Energy Storage is presented in addition to some results in battery and power to gas technologies. The key aspects of the methodology are: a) the definition of system boundaries including the ES unit, ES application and the economic/regulatory context; b) a time-dependent model accounting for variable renewable energy generation, demand load and energy prices; and c) the calculation of key performance indicators (KPIs).

Stéphanie PIFFETEAU

Relier la science et la société pour concevoir les impacts du changement climatique dans les déserts froids en Himalaya

Link science and society to map impacts of climate change in cold deserts in Himalaya

Mountain areas are often considered as “hotspots” of climate change. Although the physical presence of mountain barriers has always influenced atmospheric circulations, climate change is today modifying the mountain environments, with consequences for local populations that may be even more severe in developing countries. In this context, we will discuss about the impacts of climatic change, in terms of temperature, rainfall, snowfall, glaciers mass and front, on the livelihoods of local people in cold desert areas, in particular Ladakh (India) and Mustang (Nepal). Our study compares scientific and local knowledge on climate data and climate-related threats that could be helpful in developing strategies for adapting to climate change.

Prof. Makane Moise MBENGUE

Adaptations juridiques dans le domaine du changement climatique

Legal Adaptations to Climate Change

Since the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), various instruments have been adopted to address global warming. Many of those instruments are quite unique and show that adaptation to global environmental issues is also a question of adaptation of legal and normative strategies to allow the international community to better deal with environmental changes. Climate change is a great laboratory to identify the types of instruments that could be designed in the international system to ensure more adaptation to environmental changes.

Dr. Martin SCHLAEPFER

Classe inversée : un stimulus pour l’engagement des étudiants

Flipped classroom: a few easy tips that improve the engagement among your students

The flipped classroom (cours inversé) is a pedagogical approach that asks students to acquire basic knowledge on their own, outside of classroom time. This allows face-time in class to be dedicated to clarifying and re-inforcing learning outcomes. A key element of this approach is setting up incentives to ensure that students are fully engaged in the process. In this talk, I will illustrate some first-hand experiences that resulted in dramatic improvement in student learning outcomes.”

DATES IMPORTANTES

Pour étudiants de Master et Doctorants :

Poster : Soumission des abstracts (300 mots max.) d’ici au 15 novembre par email à Christel Hassler en précisant Master ou Doctorant.

Inscription au cours : date habituelle.

Pour tous les participants/auditeurs :

L’inscription à cette journée sera ouverte du 20 au 27 novembre afin de prévoir au mieux les boissons et sandwiches.