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# NEWSLETTER

CENTRE FOR INTERNATIONAL ENVIRONMENTAL STUDIES  
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Side-event co-organised by the CIES

## CIES researchers present their work at the OECD Green Growth Forum

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Over 100 participants from the Organisation for Economic Co-operation and Development (OECD), academic and private sector, gathered in Paris at a side event within the framework of the Green Growth and Sustainable Development Forum on 15 December 2015.

The side event “Technology Innovation for a Green Economy in Developing Countries” was organized jointly by the United Nations Environment Programme (UNEP) and the Centre for International Environmental Studies (CIES) of the Graduate Institute of International and Development Studies in Geneva, Switzerland.

The event built on the results of a joint research project between CIES and UNEP funded by the Swiss Network of International Studies. The research project investigates the barriers to the diffusion of clean technologies, the governance mechanisms that can help to unlock diffusion and improve clean energy access in developing countries and required policy environment which enables eco-innovation process of SMEs through green technology.



This side-event presented innovation policy for a green economy in several developing countries. In particular, it provided country case studies to examine the issue of accessing clean energy technology and how to contribute to the evolution of eco-innovation for small and medium-sized enterprises (SMEs) in developing countries.

The event was opened by Joy Kim, Senior Economic Affairs Officer at UNEP’s Economics and Trade Branch (ETB) and Liliana Andonova, Professor and Co-Director of the CIES.

## Clean energy subsidies and the global trading system

Public lecture | Policy briefing  
Friday 15 April 2016, 12:30 - 14:00



Auditorium Ivan Pictet, B, Maison de la Paix

By Carolyn Fischer, Senior Fellow at Resources for the Future, in collaboration with the Green Growth Knowledge Platform.



# Partnership with Cambridge University



CIES is announcing a new academic partnership with the Cambridge Centre for Environment, Energy and Natural Resource Governance. Professor Jorge Vinales, who holds appointments both at the Graduate Institute and at the University of Cambridge, will be overseeing the cooperation between the two institutions.

This partnership aims to promote exchanges of PhD students, professors, and researchers and to carry out common research programmes and projects. The partnership will also enable the exchange of publications and information and facilitate the co-organization of events such as conferences, lectures, symposia and short research courses and meetings.

## CIES workshop on access to clean energy technology



### Climate Policy Innovation and the Access to Clean Energy Technology in Developing Countries, 26-27 May 2016, Geneva

Innovation and diffusion of clean energy technology is essential for moving toward a green economy in a carbon-constrained world. This academic workshop will bring together 20 scholars under the flag of the COST Action INOGOV (Innovations in Climate Governance) to discuss climate policy innovation and access to clean energy technology in particular in developing countries.

## CIES news

### Laura Anadon's video interview

Laura Diaz Anadon is an Assistant Professor in Public Policy at the John F. Kennedy School of Government at Harvard University Visiting Senior Lecturer, Department of Science, Technology, Engineering and Public Policy at University College London.

In a video interview, she explained how technological innovation helps to achieve sustainable development. It took place on November 24th 2015. A video interview of Laura Anadon is now available on our website: [graduateinstitute.ch/cies](http://graduateinstitute.ch/cies).



### SNF Doc.Mobility Fellowship awarded to Kathryn Chelminski for 2016



Kathryn Chelminski, Research Assistant at CIES and PhD Candidate in International Relations/Political Science, was awarded a SNF Doc. Mobility Fellowship for 2016.

Over the next year, Kathryn will spend six months at Harvard's Kennedy School of Government in the Energy Technology Innovation Policy Group at the Belfer Center and six months with the Energy Policy Research Group at the University of Cambridge. The SNF fellowship provides support for these visiting fellowships as Kathryn completes her PhD dissertation and develops research on the impacts of international development cooperation on renewable energy technology development in Southeast Asia.

During her visiting fellowship, she will continue working on the CIES project "Access to Clean Energy for the Green Economy in Developing Countries".

### CIES Evaluation report 2011 - 2015

Over the 2011-2015 period, the centre has grown in staff size. From 2012 on, CIES provided financing to about 10 to 12 PhD students per year. The greater part of CIES staff comes from Europe at 54%, but we also work with colleagues from the United States, India, China, Argentina and Brazil. On average, 55% of our staff is female.

During the 5 year period, CIES was awarded research grants for about CHF5.5 million. The average research project amounts to CHF 350,000 and lasts about three years. Over the same period, 26 research proposals were submitted, 17 were awarded.

In terms of publication output, CIES researchers published 37 peer-reviewed articles, 8 books and edited volumes, 22 book chapters and 36 working papers in the CIES Research Papers Series.

Building a strong academic network and organising high-level academic events has been achieved through the organisation of 4 academic conferences, 10 workshops, 42 interdisciplinary seminars and 36 economic seminars over the 2011-2015 period.

On top of this, 25 public events for a broader audience have been organised (public lectures, roundtables, panel discussions).

This report is now available on our website : [graduateinstitute.ch/cies](http://graduateinstitute.ch/cies).



# How to Move from Fossil-Fuel to Renewable Energy Innovation



In the academic paper “Directing Technical Change from Fossil-Fuel to Renewable Energy Innovation: An Application Using Firm-Level Patent Data”, **Joëlle Noailly**, Head of Research at the CIES, and **Roger Smeets** provide some guidelines on how to induce a technological transition from renewable to fossil-fuel energy.

## What are the distinctive features of your research?

We know that today approximately 70% of the world’s electricity is produced from highly carbon-intensive fossil fuels, namely, coal, oil, and gas. This large reliance on fossil fuels explains why the sector of electricity generation is by far the largest producer of carbon emissions.

Renewable (REN) energy, such as solar, wind, and renewable combustibles, can provide a clean alternative to electricity production. Yet, it represents only 18% of the world’s electricity.

Our research asks the question: Who are the actors of such a technological transition? It stresses the central role of small innovating firms specialised in renewable technologies (i.e. cleantech firms) in moving our energy systems away from fossil fuels. We use patent data in fossil-fuel and renewable energy technologies

for 5,471 European firms over the 1978–2006 period, in order to analyse how REN patents can replace FF ones at the sector level both through a shift in innovation activities within existing firms and through firms’ entry and exit.

## And what conclusions do you draw?

Our study shows that the small cleantech firms can have a big impact in changing our energy systems: these small innovating firms are responsible for 70% of all renewable patenting activities. In particular, the acceleration in the number of renewable patents in the last 15 years is mainly the result of the entry of small innovating firms.. The policy challenge is thus twofold: first, to encourage small specialised firms to start and sustain innovation in renewable technologies (for instance, by helping startup firms to find financing). The second challenge is to make large firms more responsive to drivers of renewable innovation.

Noailly, Joëlle, and Roger Smeets. “Directing Technical Change from Fossil-Fuel to Renewable Energy Innovation: An Application Using Firm-Level Patent Data”, in *Journal of Environmental Economics and Management*, vol. 72, July 2015, pp. 15–37.

## Best Paper at EconWorld 2016



The paper “Energy, Trade, and Innovation: The Tragedy of the Locals”, co-authored by **Giulia Valacchi**, PhD candidate in International Economics and Research Assistant at CIES, has been selected as the **Best Paper at EconWorld 2016**, an international conference in economics held in Barcelona on 1–3 February 2016. It is an outcome of the CIES research project “The Adoption of Clean Energy Technologies in South Africa” funded by SNSF.

This paper analyses the use of different energy sources in a dynamic trade model with endogenous innovation. The authors consider two regions, North and South, the first with high environmental concerns and the second endowed with abundant fossil fuel resources.

It is showed that the North can unilaterally stop the use of fossil fuels and avoid a global climate disaster with two different strategies: either redirecting the comparative advantage of the South towards manufacturing, relocating the production of energy to the North, or buying fossil fuel deposits in the South. These two policies have different implications in terms of monetary costs and environmental outcomes for the North.

## The Ecology of the Himalaya



Shaïla Seshia Galvin, recently appointed Assistant Professor of Anthropology and Sociology at the Graduate Institute, tells us about “Ecology of the Himalaya”, a paper published last January in *Oxford Bibliographies in Ecology*.

## How did you come to write this paper?

Actually, I was asked by Oxford Bibliographies to prepare an article on the ecology of the Himalaya, which made me both excited and daunted. This is a vast area of enormous ecological, cultural, social and political diversity, spanning five countries, stretching over 2,500 kilometres, connecting (but also dividing) South, Central, East and Southeast Asia. I have carried out my own re-

search in one small corner of the Himalaya, in western Uttarakhand in India, and so the preparation of this bibliography allowed me to think about the Himalaya on a much larger scale, and in terms of how it may be understood as a transnational region.

## What is its originality?

In curating this bibliography, I approached ecological questions that confront the Himalaya – both con-

temporary and historical – from an anthropological standpoint. That is to say, I look at the ways in which people have lived in, understood, shaped, and been shaped by Himalayan environments. The bibliography aims to reflect some of the diversity of the region; it cites works by colonial plant hunters as well as contemporary ecologists, and includes scholarship produced by researchers based within as well as outside the region.

# Letter from alumni

**Chiara Ravetti**, Research Fellow of OxCarre and the Department of Economics of the University of Oxford.



In the year before completing my PhD (winter 2014-15) I participated in the European and American job market, attending the ASSA meeting in Boston and the Spanish Symposium in Palma. The experience was interesting and intense, as it required me to confront with other young economists from all over the world. Ultimately, after defending my PhD thesis at the Graduate Institute, I joined the Department of Economics at the University of

Oxford as postdoctoral research fellow within the Oxford Centre for Resource Rich Economies (OxCarre). I received an SNSF Mobility Grant to work on innovation, trade and natural resources during my two-year stay in Oxford.

I am currently working on finalizing and publishing some of the articles from my PhD thesis, and starting the new work on green innovation. One of my articles on Chinese air pollution was recently posted on the economic blog VoxEu. The academic environment here is extremely stimulating, in particular because of the large economic department. This is quite a change from IHEID, which is a relatively small and highly specialized institution.

In the first few months in Oxford, I had the occasion to meet with several colleagues from the CIES at the LSE Green Growth and Innovation Conference in London. I definitely miss the CIES research group (and the view from my old office!), but I am learning to enjoy the strange traditions of Oxford colleges and the British weather. However I always look forward to coming back to visit Geneva, maybe for the Annual Congress of the European Economic Association or some other conference.

## CIES events

### Policy Briefing

- Friday, April 15th, from 12.30 to 14.00

**Clean energy subsidies and the global trading system**, by Carolyn Fischer, Senior fellow at Resources for the Future

### Lunch seminars series - a forum for interdisciplinary research on the environment

- Thursday, March 10th, from 12:15 to 13:30

**Persons displaced by natural disasters: Refugee rights? Human rights? Or no rights?**, by Alexandra Goossens, PhD Candidate, International Law, The Graduate Institute

- Thursday, March 24th, from 12:15 to 13:30

**A political ecology of lithium**, by Marc Hufty, Professor, Development Studies, The Graduate Institute

- Thursday, April 7th, from 12:15 to 13:30

**Saving by Default: Evidence from a field experiment in rural India**, by Lore Vandewalle, Assistant Professor, International Economics, The Graduate Institute

To register, [graduateinstitute.ch/cies/events](http://graduateinstitute.ch/cies/events)



## CIES latest publications

### CIES Research papers

- "Energy, trade and innovation: the tragedy of the locals", Ravetti C., Theoduloz T., Valacchi G., 2016, CIES research paper n°41.
- "Climate, shocks, weather and maize intensification decisions in rural Kenya", Bozzola M., Smale M., Di Falco S., 2016, CIES research paper n°40.
- "Why give aid to resource-rich autocrats?", Sarr M., Ravetti C., Swanson T., 2015, CIES research paper n°39.

- Thursday, April 28th, from 12:15 to 13:30

**The resource curse pathology from a legal perspective**, by Lys Kulamadayil, PhD Candidate, International Law, The Graduate Institute

- Thursday, May 12th, from 12:15 to 13:30

**Containing extractivism: the translocal resistance to gold mining. The cases of Yanacocha (Peru) and Rosia Montana (Romania)**, by Ioana Alexandra Tuta, PhD Candidate, Political Science / International Relations, The Graduate Institute

- Thursday, May 19th, from 12:15 to 13:30

**Buy coal or kickstart green? A North-South perspective**, by Giulia Valacchi, PhD Candidate, International Economics, The Graduate Institute

### Resource and environmental economics seminars series

- Monday, March 21st, from 16.15 to 17.30

**Temperature, mortality and income equity: Evidence from Mexico**, by François Cohen, postdoctoral researcher, London School of Economics

- Thursday, April 14th, from 16.15 to 17.30

**Strategic subsidies for green goods**, by Carolyn Fischer, Senior fellow at Resources for the Future

### Books and articles

- "Partnerships", Andonova L., Assayag M., 2015, chapter in: Orsini, A. and Morin J.-F. (Eds): *Essential Concepts of Global Environmental Governance*, Routledge/Earthscan, pp. 146-150.
- "Multinational firms and the internationalization of green R&D: A review of the evidence and policy implications", Noailly J., Ryfisch D., 2015, article in: *Energy Policy*, Fvol 83, pp.218-228.