

## Chaire Economie du Climat

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**Partenaires** : Université Paris-Dauphine - - EDF – CDC – TotalEnergies – ADEME – Agrosolutions – Aramco – CSTB – Effy – GRDF – RGreen – Hexagone – Sarpi -Saint-Gobain

**Responsable Scientifique** : Anna Creti (Université Paris-Dauphine)

**Site internet** : <https://www.chaireeconomieduclimat.org/>

### DESCRIPTION DU PROGRAMME DE RECHERCHE

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Le programme de recherche de la CEC porte sur l'économie du changement climatique. Cette discipline s'intéresse aux enjeux et conséquences de la transition d'un système économique carboné (nocif pour l'environnement et le climat) vers un système économique performant et environnemental. Le but étant de trouver des leviers d'actions permettant de faciliter cette transition dans un contexte d'urgence climatique.

Pour cela la Chaire s'appuie sur le triptyque : Recherche – Formation - Valorisation = Identifier les questions qui nécessitent de la recherche en économie du climat, Analyser ces questions, Assurer sa visibilité scientifique, Lieu de "savoir, débat, échange", Intervenir dans le débat social avec un éclairage vers un public de spécialistes et plus large.

Les travaux de recherche sont multiples et se décomposent suivant les pôles comme suit :

#### **Pôle 1 : Prix du CO2 et Innovation Bas-Carbone**

Modélisation du prix du carbone, Intégration des marchés de quotas et intégration avec le marché de l'électricité, Prix du carbone et mobilité, Impact de la taxe carbone sur les émissions de CO2, Stratégies coopératives en innovation bas carbone, Prix du carbone interne dans le secteur de l'énergie, Finance verte : empreinte carbone et alignement des portefeuilles, Analyse de l'innovation bas carbone à partir des brevets, Analyse des données de conformité et de transactions du marché.

#### **Pôle 2 : Agriculture et Forêts**

Coût de réduction des émissions dans l'agriculture, Pratiques agro-environnementales et risques, Analyse de la transition forestière, Évènements climatiques extrêmes et modèles d'usage du sol en Afrique, Économie circulaire et gestion des déchets.

#### **Pôle 3 : Transitions Énergétiques**

Énergies renouvelables (éolien, photovoltaïques, biogaz), Autoconsommation, Productions décentralisées et fonctionnement des réseaux, Rénovation thermique et valeur des actifs immobiliers, Financement de la transition énergétique et bas carbone, Technologies pour la neutralité carbone (hydrogène, CCS), Accès à l'énergie en Afrique.

La CEC offre les compétences nécessaires pour analyser les différents volets de la transition énergétique (électricité, gaz, transports), ainsi que de celle liée au carbone vivant (agriculture et forêts). Ce large spectre d'actions est unique et distingue la Chaire par rapport à d'autres initiatives de recherche ou chaires qui touchent à des sujets similaires. De plus, une grande diversité d'approches (modélisation théorique\* et empirique\*) caractérise la production de la Chaire sur le thème complexe de la transition bas carbone.

## EQUIPE DE RECHERCHE

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- Anna Creti: Professor at Paris-Dauphine University, Director of the Climate Economics Chair
- Christian de Perthuis: Founder of the Chair
- Patrice Geoffron: Scientific Advisor, Professor at Paris-Dauphine University
- Claire Bérenger: Secretary-general
- Sonia Hosseny: Community Manager
- Marc Baudry: Professor at University Paris Nanterre
- Philippe Delacote: Research Director at INRAE
- Olivier Massol: Professor IFPEN,

### Doctorants

- Mohamed Bahlali «Continuous-time optimal contracts, mean field games and environmental regulation»
- Aliénor Cameron «Can industrial competitiveness and decarbonization go hand in hand?»,
- Milien Dhorne «Ex-ante evaluation of a reform of public policies to support the energy transition»
- Marie Raude «Filling the gap between the financial and economic approaches to the EU ETS: analysing hedging behaviour of market players»
- Jerome Deyris: «Financial markets in the era of stranded assets»
- Raphaël Olivier Governing by the price signal? On the performativity of corporate carbon pricing
- Tom Bry-Chevalier «Economic challenges of cultivated meat as a disruptive technology in the face of climate change»
- Léa Crépin «Soybean trade and imported deforestation»
- Edith Kouakou «Risk, insurance and carbon offset in agriculture»
- Jessica Meyer «Forests, weather shocks and nutrition in developing countries»
- Lise Peragin «Recycled raw materials: which treatments, which uses? Impacts on resources and carbon balance»
- Edouard Pignède «Adaption to climate change: Inequalities and spatial vulnerability in rural areas of Sub-Saharan Africa»
- Giulia Vaglietti «Extreme weather events and land use changes: assessment of deforestation drivers»
- Richard Koenig «Crop insurance as a mitigation and adaptation tool in a climate change context»
- Etienne Lorang Circular Economy, recycling and CO2 emissions
- Maxime Ollier On the economics of climate change: the distribution and redistribution of farmer's income
- Ange Blanchard «Low-carbon power system flexibility: modelling and economic analysis»
- Pauline Cizmic «Regulation, oil and gas industry and banking institutions: a love triangle at the age of climate change»
- Zélie Gankon «Social norms and environmental reforms in emerging countries »
- Valentin Laprie «Demand pull VS technology push innovation in building energy efficiency»
- Alpha Ly «Low-carbon energy transition in Sub-Saharan Africa and the MENA region»,
- Adrien Nicolle «Economic deployment of carbon capture and storage infrastructures»,
- Coline Metta Versmessen «Characterization of interactions between the Effort Sharing Regulation and the EU-ETS market»

- Francesco Savazzi «Climate justice in time of crisis»
- Valentin Lignau «Patents as a measure and a driver of a low-carbon innovation policy»,
- Théotime Coudray «Intermittent renewable energies and power system flexibility: case study on French region Occitanie»
- Esther Raineau-Rispal «Market structure, strategic behaviors and economic incentives of firms in the construction industry»

#### Chercheurs associés

- Stéphane GOUTTE, Professeur, Université Paris-Saclay, UMI SOURCE, IRD, UVSQ
- Etienne LORANG, Postdoctorant, Université de Tilburg (Pays-Bas), Département d'Economie, Tilburg School of Economics and Management.
- Maria Eugenia SANIN, Maître de Conférences, Evry – Université Paris Saclay.

#### PUBLICATIONS DE L'ANNEE

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- **An assessment of the European regulation on battery recycling for electric vehicles** by Quentin Hoarau and Etienne Lorang in **Energy Policy**  
<https://doi.org/10.1016/j.enpol.2021.112770> Volume 162, March 2022, 112770
- **Renewable energy drivers in France: A Spatial Econometric Perspective** Olivier Damette and Gaye Del Lo in **Regional Studies**  
<https://doi.org/10.1080/00343404.2021.1998415>
- **Raising climate ambition in emissions trading systems: The case of the EU ETS and the 2021 review** by Simon Quemin in **Resource and Energy Economics** Volume 68, May 2022, 101300  
<https://doi.org/10.1016/j.reseneeco.2022.101300>
- **The determinants of adapting forest management practices to climate change: Lessons from a survey of French private forest owners** by Jack Ward Thomas, Marielle Brunette and Antoine Leblois in **Forest Policy and Economics** Volume 135, February 2022  
<https://doi.org/10.1016/j.forpol.2021.10266>
- **A Bioeconomic Projection of Climate-Induced Wildfire Risk in the Forest Sector** by M. Riviere, F. Pimont, P. Delacote, S. Caurila, J. Ruffault, A. Lobianco, T. Opitz and J. L. Dupuy in **Earth's Future**. Volume 10, Issue4, April 2022  
<https://doi.org/10.1029/2021EF002433>
- **How efficient are natural gas markets in practice? A wavelet-based approach** by Amina Baba, Sana Ben Kebaier and Anna Creti in **Annals of Operations Research**  
<https://doi.org/10.1016/j.forpol.2021.102662>
- **Assurance récolte en France : spécificité du régime et déterminants potentiels** par Richard Koenig, Marielle Brunette, Philippe Delacote et Camille Tevenart dans la **revue Economie Rurale**. 2022/2 (n° 380)  
<https://doi.org/10.4000/economierurale.9875>
- **The European Union Emissions Trading System Market Stability Reserve: Does It Stabilize or Destabilize the Market?** by Grischa Perino, Maximilian Willner, Simon Quemin and Michael Pahle in the **Environmental Economics and Policy** review Volume 16, Number 2

- **Increasing Paper and Cardboard Recycling: Impacts on the Forest Sector and Carbon Emissions** by Etienne Lorang, Antonello Lobianco and Philippe Delacote in the **Environmental Modeling & Assessment** review. **Volume 27, Issue 4, August 2022.**  
<https://doi.org/10.1007/s10666-022-09850-5>
- **Assessing the regional redistributive effect of renewable power production through a spot market algorithm simulator: The case of Italy** by Silvia Concettini, Anna Creti and Stanislao Gualdi in **Energy Economics** review. Volume 112, August 2022.
- **Profitability and Revenue Uncertainty of Wind Farms in Western Europe in Present and Future Climate** by Bastien Alonzo, Silvia Concettini, Anna Creti, Philippe Drobinski and Peter Tankov in **Energies** review. *Energies* 2022, Volume 15 (issue 17)  
<https://doi.org/10.3390/en15176446>
- **Prospect theory in multiple price list experiments: further insights on behaviour in the loss domain** by Géraldine Bocquého, Julien Jacob & Marielle Brunette in **Theory and Decision** review. *Theory and Decision* 2022, Volume 93  
<https://doi.org/10.1007/s11238-022-09902-y>
- **Prevent or Cure? Trading in the Face of Skewed Binary Lotteries** by Julien Jacob, Marielle Brunette and Louis Eeckhoudt in **Journal of Institutional and Theoretical Economics (JITE)** review. Volume 178 (2022) / Issue 2, pp. 130-169 (40)  
DOI: 10.1628/jite-2022-0009
- **Forest-based climate change mitigation and adaptation in Europe** by Pieter Johannes Verkerk, Philippe Delacote, Elias Hurmekoski, Janni Kunttu, Robert Matthews, Raisa Mäkipää, Fredric Mosley, Lucia Perugini, Christopher P.O. Reyer, Stephanie Roe and Erik Trømborg in the **EFI review**  
DOI: <https://doi.org/10.36333/fs14>
- **Unlocking CO2 infrastructure deployment: The impact of carbon removal accounting** by Emma Jagu Schippers and Olivier Massol in **Energy Policy** review. **Volume 171, December 2022, 113265**  
<https://doi.org/10.1016/j.enpol.2022.113265>
- **Coordinating the Deployment of Bioenergy with Carbon Capture and Storage** by Emma Jagu Schippers, Pascal Da Costa and Olivier Massol in **Science and Technology for Energy Transition** review. Issue : Sci. Tech. Energ. Transition, Volume 77, 2022, The Role of Negative Emissions Technologies in 2050 Decarbonation Pathways
- **La dépendance de l'Europe au gaz russe : état des lieux et perspectives** by Carl GREKOU, Emmanuel HACHE, Frédéric LANTZ, Olivier MASSOL, Valérie MIGNON and Lionel RAGOT in **Revue d'Economie Financière** Ref 147, Guerre en Ukraine: déflagrations et recompositions économiques et financières

## RESTITUTIONS DES TRAVAUX LORS DE MANIFESTATIONS SCIENTIFIQUES

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Pour valoriser l'information, la Chaire dispose de plusieurs outils : un site web (sous WordPress), la diffusion d'une lettre d'information mensuelle (environ 4 000 abonnés), ainsi que des réseaux sociaux CEC en fonction des sujets : LinkedIn, Facebook et Twitter.

Petits déjeuners professionnels : Interns Friday Lunch Meeting (FLM) (FLM) et 10 FLM externes :

- Philippe Quirion (Research director at CNRS/CIREN), "Lutter contre les émissions des voitures dans les zones urbaines : décaler, éviter, améliorer », December 2022

- Charles F. Mason (HA True Chair in Petroleum and Natural Gas Economics), “Complications in cooperating when players are asymmetric : theory and experimental evidence”, November 2022
- Adrien Fabre (CNRS researcher at CIREN), “Fighting Climate Change: International Attitudes Toward Climate Policies”, September 2022 (Online)
- Raja Chakir (Research Director, Paris-Saclay Applied Economics, INRAE-AgroParisTech), “The impact of Climate Change on Farmland Prices: a Repeat-Ricardian analysis”, June 2022 (Palais Brongniart)
- Akshaya Jha (Assistant Professor of Economics and Public Policy, Heinz College of Information Systems and Public Policy, Carnegie Mellon University), “Start-up costs and market power: lessons from the renewable energy transition”, May 2022 (Online)
- Emmanuel Combet (Researcher, Senior Economist at ADEME’s Foresight and Research Executive Directorate, coordinator of the foresight programme), “Ademe "Transition(s) 2050" scenarios: Four scenarios for the transition to carbon neutrality in France”, April 2022 (Palais Brongniart)
- Jean-Philippe Nicolaï (Professor of Economics at Grenoble INP-Génie Industriel, member of the Gael laboratory), “Digital sobriety certificates as an instrument to regulate digital pollution”, March 2022 (Online)
- Imelda (Assistant Professor of Economics, Institut universitaire, Geneva), “Market power and price exposure: lessons from changes in renewable energy regulation”, February 2022 (Online)
- Emmanuel Hache (Economist in the Economics and Environmental Assessment Department of IFP Énergies nouvelles), “Prospective methodology for assessing the material needs of the energy transition”, January 2022 (Palais Brongniart)
- Anna Alberini (Professor in the Department of Agricultural and Resource Economics at UMD), “Competing Forces in the German New Car Market: How do they Affect Diesel, PHEV, and BEV Sales?”, Exceptional FLM, January 2022 (Online)

- **International Conference on Mobility Challenges** - 8/9 décembre 2022
- **Green Deal** – 17 novembre
- **Climate Economics Chair Annual Conference**  
jeudi 13 octobre / Vendredi 14 octobre
- **IAEE WEBINAR**- 14 septembre, 2022

## AUTRES FAITS MARQUANTS

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- The AEE jury awarded a 1000 euros prize to Milien DHORNE for his paper Towards Carbon Neutrality and Energy Independence in Europe: Can New Storage and Renewables Push Fossil Fuels Out? for the best student research paper.
- Best Paper Award Modelling Nuclear flexibility using Stochastic Dual Dynamic Programming: Application to the French Case to Ange BLANCHARD at the Conference on Sustainability, Environment, and Social Transition in Economics and Finance, December 13-15, 2022 in Paris-Saclay.
- Léa CREPIN, Young Economist best paper FAERE Award (Conference Rouen 09/22) Do forest conservation policies undermine the soybean sector in the Brazilian Amazon? Evidence from the blacklisting of municipalities.
- Jérôme DEYRIS, The Herbert Simon Award for the best paper by a young economist at the #EAEPE2022 conference in Naples (09/22) Too green to be true?: Forging a climate consensus at the European Central Bank