

Europe in transition : challenges for research and education

A conference held under the French Presidency of the
Council of the European Union



10 March 2022

at Grand Est Region building *

1 Place Adrien Zeller, in Strasbourg (France)
and by videoconference



* <https://www.grandest.fr/maisons-de-region/>

Beyond disciplinary research and education questions, is it possible to raise more systemic horizontal concerns, regarding the major transitions: climate, ecology, energy, food and health? Over the last decade, crises are increasingly frequent and have a tendency to pile up. They affect the way of life, the way of consumption, the way of production. Such periods of tension provide information on the significant damages caused by the different types of climatic disturbances, such as social or health crises, or the loss of biodiversity and also reveal the high level of the interdependencies underlying the current ways of life. Enough observations, data and tools are now available to understand and model the impact of these global changes on the environment, health, biodiversity and society.

In the European context, the Green Deal aims at making Europe the first carbon-neutral continent; this policy aims to preserve biodiversity, reduce pollution, and promote a clean and circular economy, while making this green transition a factor of economic growth, by ensuring a fair transition. The European legislative package «Fit for 55» will establish the mechanisms for fitting to the new European ambitions in the reduction of greenhouse gas emissions (a 55% at the horizon 2030, cut-off compared to 1990 level, to reach carbon neutrality in 2050),

thus requiring an acceleration of the energy, environmental, sanitary and digital transitions, the implementation of carbon sinks, and probably major systemic disruptions.

Progresses in disciplinary research and innovation are able to provide many solutions. On the other hand, whereas the problems are largely systemic, the approaches of them are often led in sectoral silos. Innovations must be more and more hybrid, bringing together a broad spectrum of technologies and skills from different disciplines. Working at the interfaces of different scientific fields - life sciences, physical science, digital science, engineering science, human and social science - will contribute to boosting systemic innovations that are necessary to reach a carbon-neutral and resilient society by 2050.

Under the aegis of the French Ministry of Higher Education, Research and Innovation, the five national alliances (gathering the French research organizations and universities under 5 embedding topics: energy, environment, numeric, health, human and social sciences) have produced a positioning document which reflects a common and shared vision of new directions in research, to serve the major transitions, in the emerging academic discipline of sustainability science.

Program

11:30 am - 12:00 am

▶ EU Keynote ◀

The role of research and innovation in the European
Green Deal and Fit for 55

Rosalinde Van der Vlies,
Director, European Commission, DG Research and
Innovation, Clean Planet Directorate

▶ Concluding session

Frédérique Vidal,
Minister for Higher Education,
Research and Innovation (France)

Session 1

10:00 am - 11:30 am

WHICH INTERDISCIPLINARY RESEARCH ROUTES AND IMPLEMENTATION TO ACCELERATE TRANSITIONS?

▶ Keynote ◀

Role of participatory roadmapping in accelerating
industry transition

Gökçe Mete, Head of Secretariat, Leadership Group for Industry
Transition, Stockholm Environment Institute

▶ Round table ◀ (panel discussion)

Moderator Fabrice Lemoine, Professor,
Université de Lorraine, ANCRE¹ (France)

Fabrice Lemoine, Professor, Université de Lorraine,
ANCRE (France) – Presentation of the proposals of the French
research alliances

Sébastien Treyer, General Director, IDDRI² (France)

Sabine Gabrysch, Professor, Potsdam Institute for climate
impact research (PIK) (Germany)

Jean-Marc Daniel, Director of Department, IFREMER³ (France)

Chris Foulds, Associate Professor, Global Sustainability
Institute, Anglia Ruskin University (ARU), (UK)

Kurt Wagemann, Professor, Executive Director, Society for
chemical engineering and biotechnology, DECHEMA⁴
(Germany)

1 ANCRE: National alliance for energy research

2 IDDRI: Institute for sustainable development and international relations

3 IFREMER: French Institute of research for sea exploitation

4 Deutsche Gesellschaft für Chemische Technik und Biotechnologie

Session 2

1:30 pm - 3:00 pm

DEVELOPING SKILLS AND KNOWLEDGE WITH REGARD TO MAJOR TRANSITIONS

▶ Keynote ◀

The rapid evolution of the regional climates

Hervé Le Treut, climatologist,
director of research at the CNRS and member of the French
Academy of Science

▶ Round table ◀ (panel discussion)

Moderator Mohammed Benlahsen,
President of the University Picardie Jules Verne (UPJV), (France)

Patrick Levy, Professor,
Member of the board of the European University Association
(EUA), (France)

Douglas Halliday, Professor, University of Durham, Chair of the
EUA energy and environment platform (UK)

Oliver Günther, Professor, HRK⁵ vice-president, President of the
Potsdam University (Germany)

Frédérique Fournier, Director of Georesources and Energy
Center, IFP School - IFP Energies nouvelles (France)

Jacques Comby, Adviser for European Universities,
French Ministry of Higher Education,
Research and Innovation (France)

5 HRK: Hochschulrektorenkonferenz (German University rectors conference)

Session 3

3:45 pm - 5:15 pm

WHAT IMPLEMENTATION IN THE FRAMEWORK OF THE EUROPEAN AGENDA?

▶ Round table ◀ (panel discussion)

Moderator Pierre-Franck Chevet, President ANCRE,
President IFP Energies nouvelles (IFPEN) (France) ; François
Houllier, President ALLENI, President IFREMER (France)

Laurence Tubiana, Professor, Sciences Po (Paris),
CEO of the European Climate Foundation (ECF), (France)
Christophe Grudler, Member of the European Parliament (MEP),
member of the industry, research and energy commission
(France)

Hans Van Steen, Deputy Director-General - Coordination
of the Just and Green Energy Transition, European Commission

Carle Bonafous Murat, Professor,
senior officer France Universités, in Brussels (France)

Lilia Alvarez (Venezuela), student, IFP School -
IFP Energies nouvelles (France)

Adrien Harmot (France), student, IFP School -
IFP Energies nouvelles (France)

Tea Alikaj, Erasmus Mundus master student, DENSYS⁶ (Albania)

Carlos Perez Villanueva, Erasmus Mundus master student,
DENSYS (Mexico)

6 DENSYS: Decentralised Smart Energy Systems