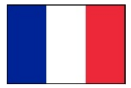
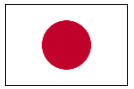
2nd French-Japanese Annual Meeting on Low-Carbon Society

On-going research cooperation between IGES, NIES, IDDRI, CIRED, ADEME (low carbon scenario)





6-7 March 2018, Paris, France

ADEME
Agence de l'Environnement et de la Maîtrise de l'Energie

CIRED

IDDRI
SciencesPo.

IGES

MIZUHO
Mizuho Information & Research Institute

Research collaboration between Japan and France

Objective: Support climate policy making processes

NDCs — long-term low greenhouse gas emission development strategies

Scenario analysis
- **Low carbon/zero carbon pathways**
- Sector-wise analysis: **DDPP-Transport**
- Transition management, resource management, social conditions, preferences, etc.

- Stock taking: Increase ambition of NDCs
- SDGs: Simultaneous solution

Research Network
- LCS-RNet
- IMACLIM network
- AIM network

Policies
Carbon pricing, City planning, Transportation management. etc.

Models
3ME model (ADEME), **IMACLIM** (CIRED) , **AIM** (NIES, etc.) , etc.

Database/Web tool
- **Dashboard/Template**
- **Pathway Builder** (IDDRI)

Indicators: Energy demands, Energy efficiency, electrification, GHG emissions, etc.

Dialogue
Stakeholder meeting between state and non-state actors

Capacity building
Latin America; Mediterranean countries; Asia

Joint Events in FY2017

CIRED organised the **1st International Summer School in Economic modelling of Environment, Energy and Climate** in July 2018. Two PHD students from Japan joined and made active exchange.

At the 9th International Forum for Sustainable Asia and the Pacific (**ISAP 2017**), organised by IGES in Yokohama, French and Japanese experts held a common session to share their experience with decarbonisation strategies.

The experts from both sides are also member of an international research network, the **LCSR-Net**, of which IGES is the Secretariat. Its annual conferences facilitate in-depth discussions on decarbonisation in both countries.

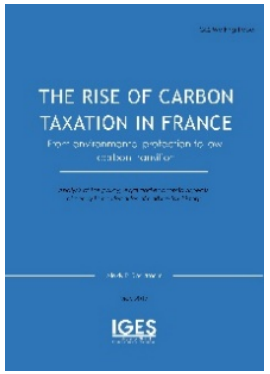
Experts from Japan and France organised a joint side event at the **COP23** in Bonn in November 2017, discussing how low-carbon strategies can facilitate the implementation of Nationally Determined Contributions (NDCs).

NIES organised in Tsukuba (Japan) in November 2017 the **AIM workshop**, regarding the models used to build low-carbon scenarios and the challenges and opportunities encountered by modellers in the world.

Research Outputs

The DDPP-T, coordinated by IDDRI, is a sectoral companion project of the **Deep Decarbonization Pathways Project** (DDPP), which aims to demonstrate how countries can transform their transport system by 2050.

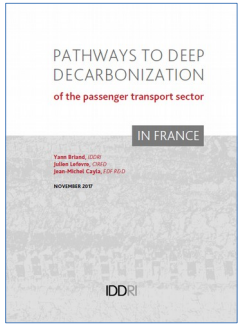
The project gathered in-country research teams, whose experts also conducted **case studies** on France and Japan.

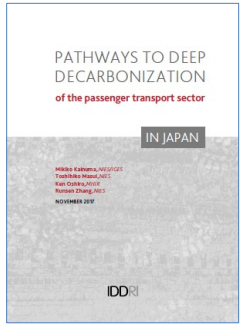


IGES published a paper on "**The Rise of Carbon Taxation in France" (2017)**, using inputs from the French experts of CIRED. The study explains the dynamics that played an important role in the failure and success in adopting such tax.

Research collaboration in the DDPP-Transport

- The Deep Decarbonization Pathways Project for Transport (DDPP-T)
  - The DDPP-T, coordinated by IDDRI, have developed country-driven passenger transport strategies of passenger transport decarbonization to 2050 by four teams in France, Japan, Mexico and the UK.
  - Research partners are: CIRED, EDF R&D and IDDRI (France); IGES, NIESand MHIR (Japan);
  - Tempus Analitica (Mexico); UCL Energy Institute (UK).
- Publications of the DDPP-Transport (www.iddri.org/projets/ddpp-transport)





4 country reports (France, Japan, Mexico, UK):

"Pathways to deep decarbonization of the passenger transport sector"

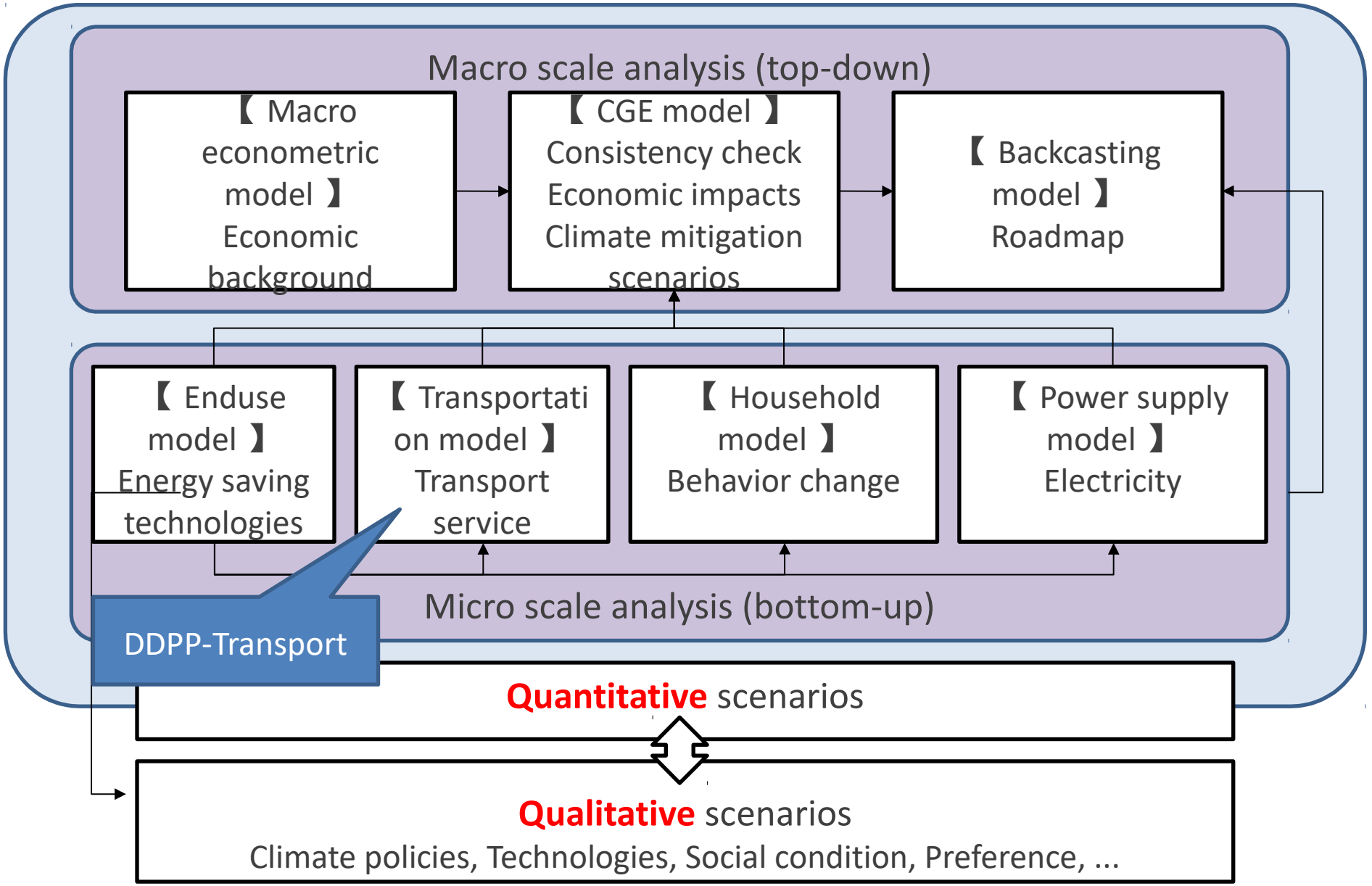
- Authored by in-country research teams, independent of their governments
- Presents and discusses several country-driven sectoral deep decarbonization pathways for each country

Iddri Issue Brief:

"Beyond emission targets: how to decarbonize the passenger transport sector?"

- Authored by the DDPP-T consortium, led by IDDRI
- Discusses cross-cutting messages derived from the country analyses

AIM models and Japan scenarios under ERTDF 2-1702*



* ERTDF 2-1702 is a project funded by Environment Research and Technology development Fund by MOEJ

Major topics in FY2018

1. Research/study/analysis on transition/transition management

- Cases on heavy industry and/or materials industry's drastic transition strategies (ex. Coal-fired power generation, automobile industry, steel, cement, etc.)
- Cases that local governments play a key role in transition, by facilitating collaboration between different industries within the region, revitalizing regional industry, employment, etc
- Cases on how to promote stakeholder engagement

2. Modeling and scenario research

- 3ME model (ADEME), IMACLIM (CIRED) , AIM (NIES, etc.) , etc.

3. Research to support development policy in natural resource-dependent developing countries in their responses to the global transition to carbon neutrality

- Target countries (tentatively): Bhutan, Indonesia, Lao, Myanmar, Nepal, etc…
- Provide above countries with scientific information to support the preparation of NDCs and long-term carbon neutrality strategies
- Examine long-term scenarios and associated policies to achieve balance between emissions from industrial development and absorption from forests and soil, while giving consideration to projection of climate change impacts and adaptation measures

4. Interview to IPCC 1.5 degrees report experts

- Read IPCC 1.5 report intensively
- Conduct interview sessions to approx. 5 experts for good preparation for IPCC Plenary Session to be held in Japan (in May 2019, Kyoto)

Mid-term plan and important milestones

- LCS-RNet Annual Meetings:
  - 10th (July 2018 in conjunction with ISAP2018, Yokohama, Japan); 11th (2019, Italy?), 12th (2020, France?)…
- COP meetings:
  - COP24 (Dec. 2018, Katowice, Poland), COP25 (2019), COP26 (2020)…
- IPCC 1.5 degrees report (Sept. 2018)
- IPCC AR6 report
- IPCC Plenary Session (May 2019, Kyoto)
- G20 meeting (2019 in Japan)

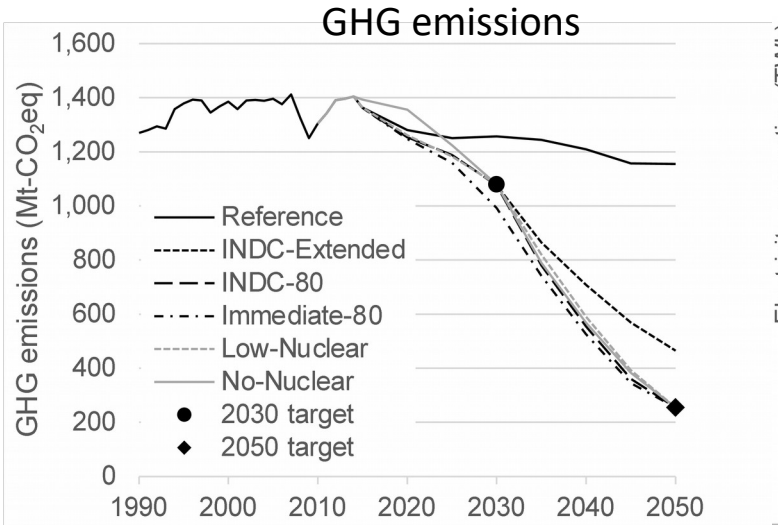
Thank you!

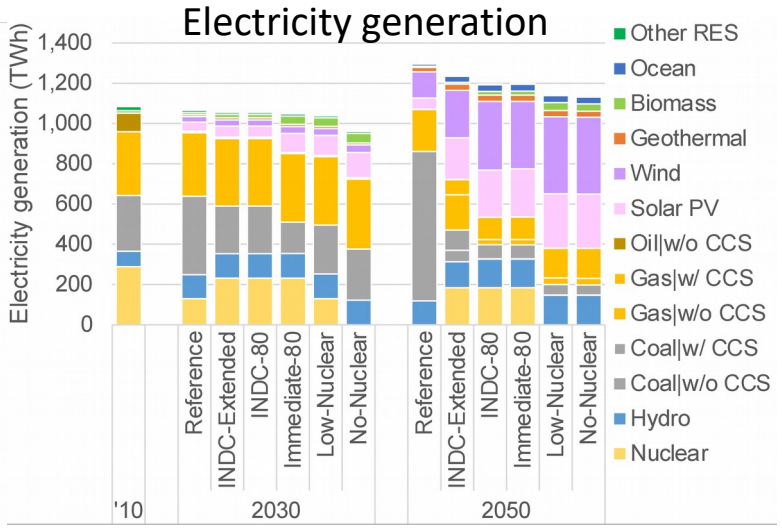
Assessment of Japan's NDC and the 2050 goal using AIM/Enduse

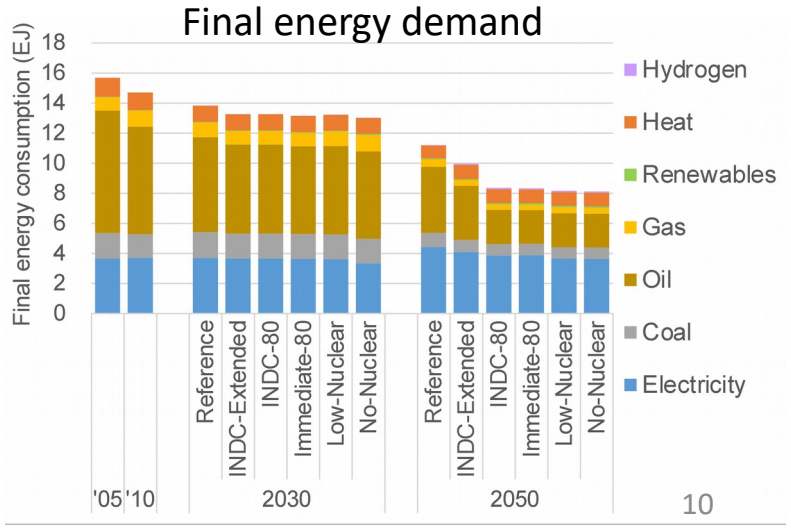
- Three key options
- ✓ Decarbonization of electricity
  - ➢ Large-scale deployment of renewables and CCS
- ✓ Energy efficiency improvement
  - ➢ Final energy demand: -43% in 2050 compared with the 2010 level
- ✓ Low-carbon energy carriers (electrification, hydrogen, and renewables)
  - ➢ Share of electricity: 46% in 2050
  - ➢ In addition to 80% reduction, AIM/Enduse [Japan] estimated pathways to achieve zero emission in 2050.

- (Oshiro, K., Masui, T. and Kainuma, M. *Carbon Management* (in press))

80% reduction scenarios in Japan by 2050 estimated by AIM/Enduse [Japan]







Oshiro, K., Kainuma, M., and Masui, T. (2017) *Energy Policy*