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Deep decarbonization pathways compatible with national priorities and global climate objective

Lessons from a sectoral perspective: Transport

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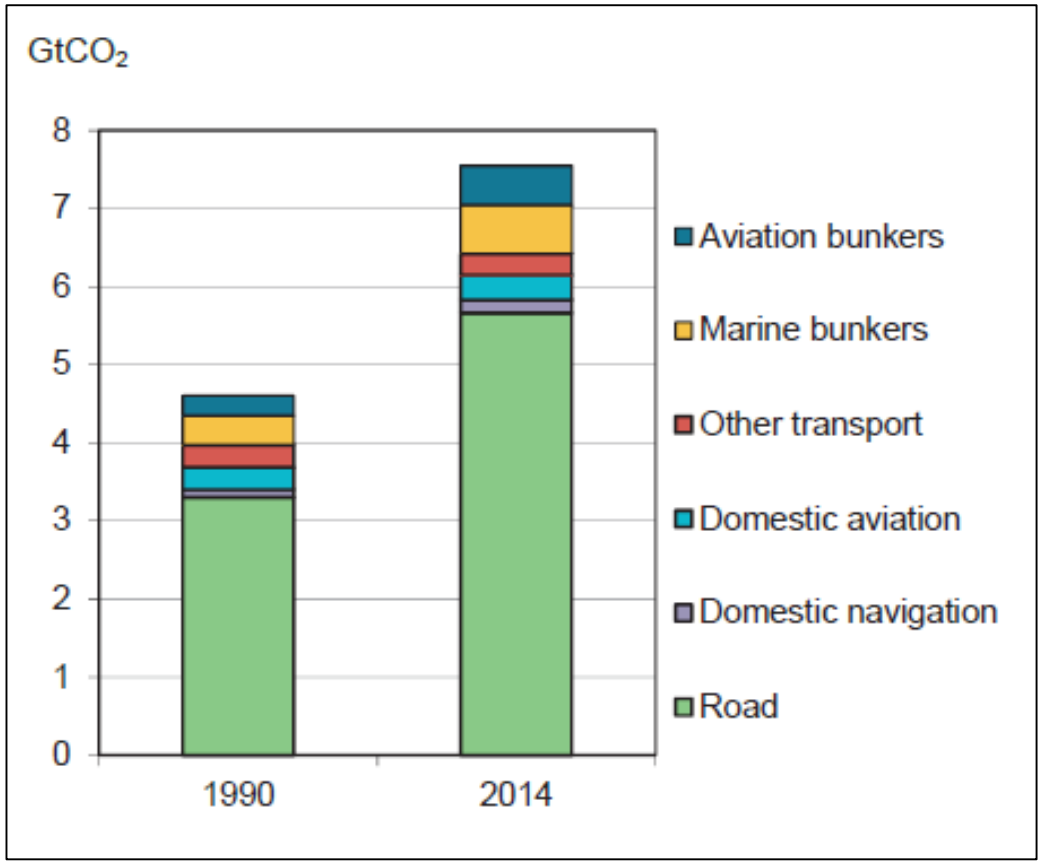
July 17th 2018

If nothing changes, CO2 emissions from the transport sector is expected to explode and reach 12 GtCO2 by 2050

Since 1990, CO2 emissions from transport sector increased by more than 60%:

- Road transport remains the dominant emitter (+~65%)
- International marine due to global trades (+69%)
- International and national aviation grow even faster (+95%).



Sources: IEA, CO2 emissions from fuel combustion, 2016; IPCC, AR6, Chap Transport, 2014

Only 10% of Parties provided a transport mitigation target

"NDCs provide CO2 reduction ambitions, but not yet clear pathways or measures to reach ambitions set by the Paris agreement."

"**Often, measures** in the NDCs are desired outcomes and remain **vague at the best**. In some cases, the mitigation potential of identified "measures" is contestable."

"The transport ambitions for CO2 reductions of such countries especially **need to be intensified** to ensure that the "Well-below 2 degree" ambition, as defined at COP21 in Paris in 2015, can be achieved."

Sources: ITF-OECD, Transport CO2 and the Paris Climate Agreement, April 2018

Key lessons from DDPP - How to raise the ambition and make the link with SDGs!

1. **Pathways developed by independent and in-country research teams**	to ensure consistency with global 2°C climate objective and domestic development priorities
2. **Long term pathways by 2050**	to inform concrete short-term action plans and think the transition towards the 2050-goals
3. **Sectoral pathways**	to reveal other key “non-energy” indicators and “non-technological” drivers to understand the levers of action

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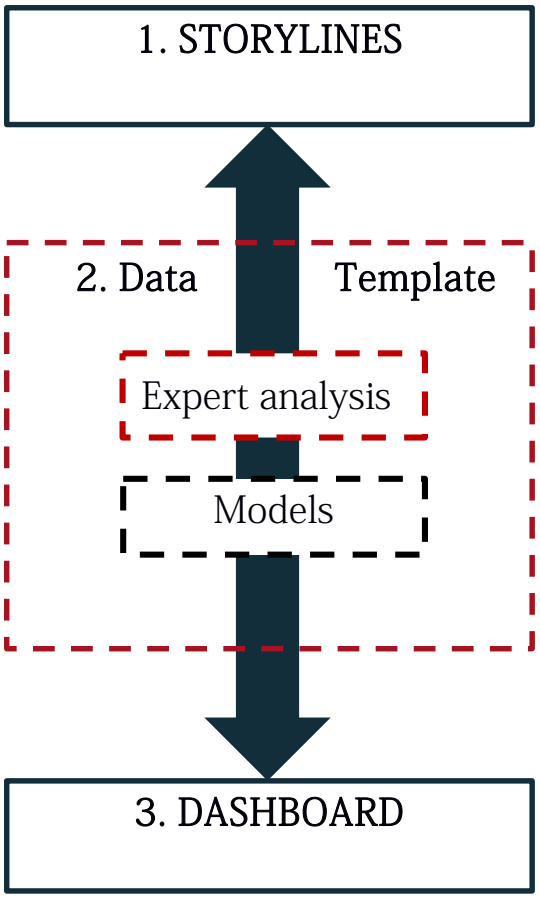
Why developing sectoral pathways is a good approach to raise the ambition of NDCs?

Describing concrete sectoral transformations
-> to inform policy makers and reveal relevant determinants of transformations



- Open a dialogue on sectoral transformations by providing a disagregation of sectoral emissions and other transformation indicators (Dashboard)

- Describe all technological and non-technological determinants of transformations and articulate them consistently (Storylines & Data template)

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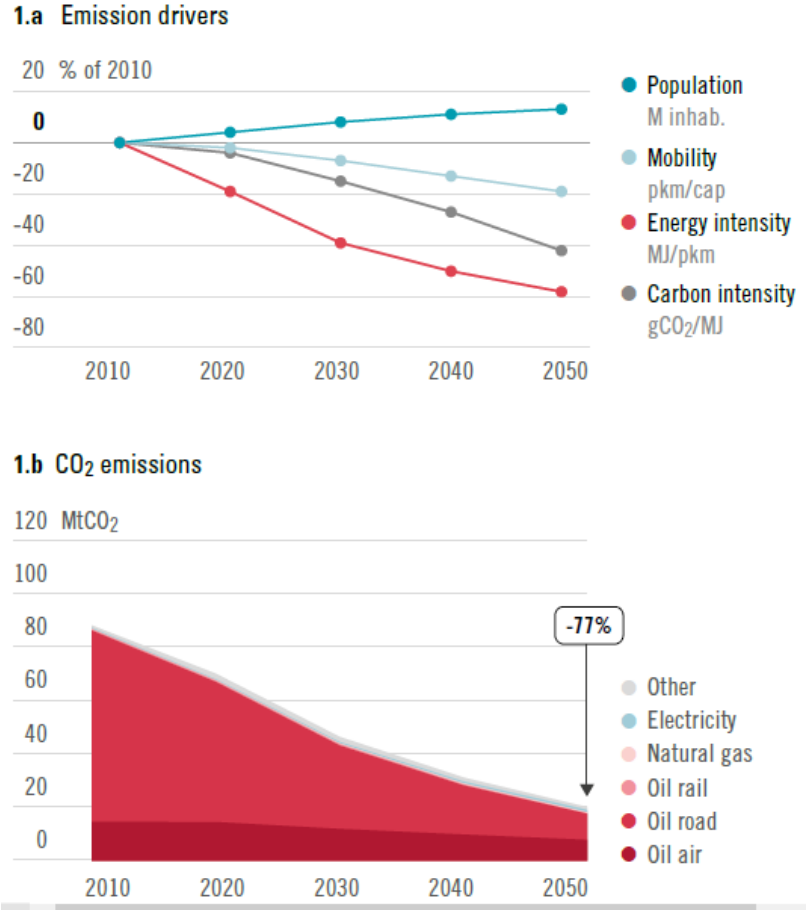
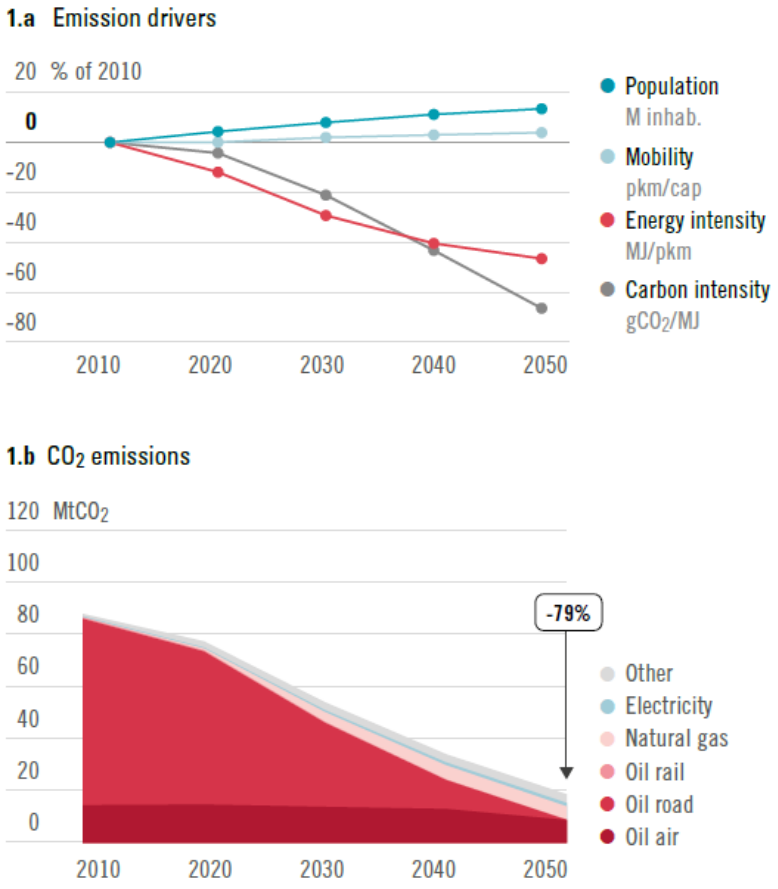
Compare national and international scenarios and structure policy dialogues - DASHBOARD

Sectoral dashboard = more than 60 indicators !
Indicator chosen with parties of transport policy dialogue

Scenario 1: Mobility - First



Scenario 2: Technology - First



Sources: Dashboards, Pathways to deep decarbonization of the passenger transport sector in France, 2017

Develop a consistent scenario of transformations integrating all transport determinants - STORYLINE

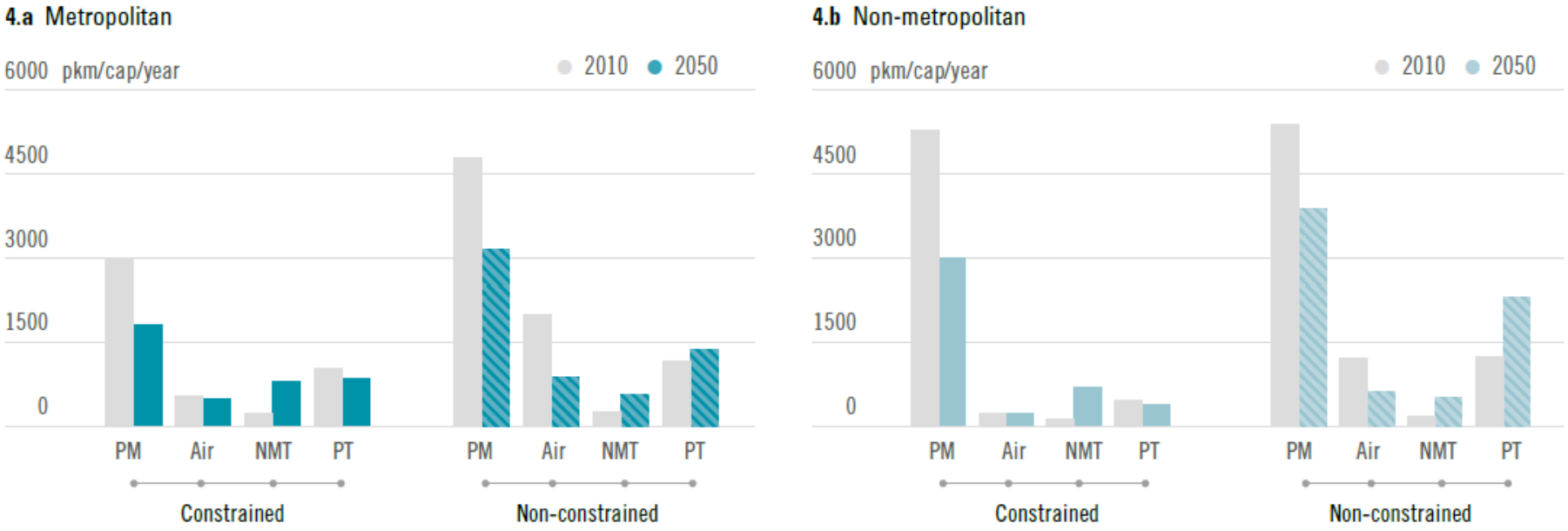
Analysis framework based on litterature review
Integrating national priorities, sustainable and transport-related determinants

1. demographic and economic changes
2. human settlement, land development and spatial organization
3. sociocultural practices and lifestyles
4. vehicles technological assumptions
5. fuel generation and energy carbon content changes
6. car stock and low carbon vehicle penetration
7. modal distribution and modal costs
8. speeds, infrastructure and time

Refined level of disagregation needed !

Indicator examples of the Dashboard:

A4. Modal structure



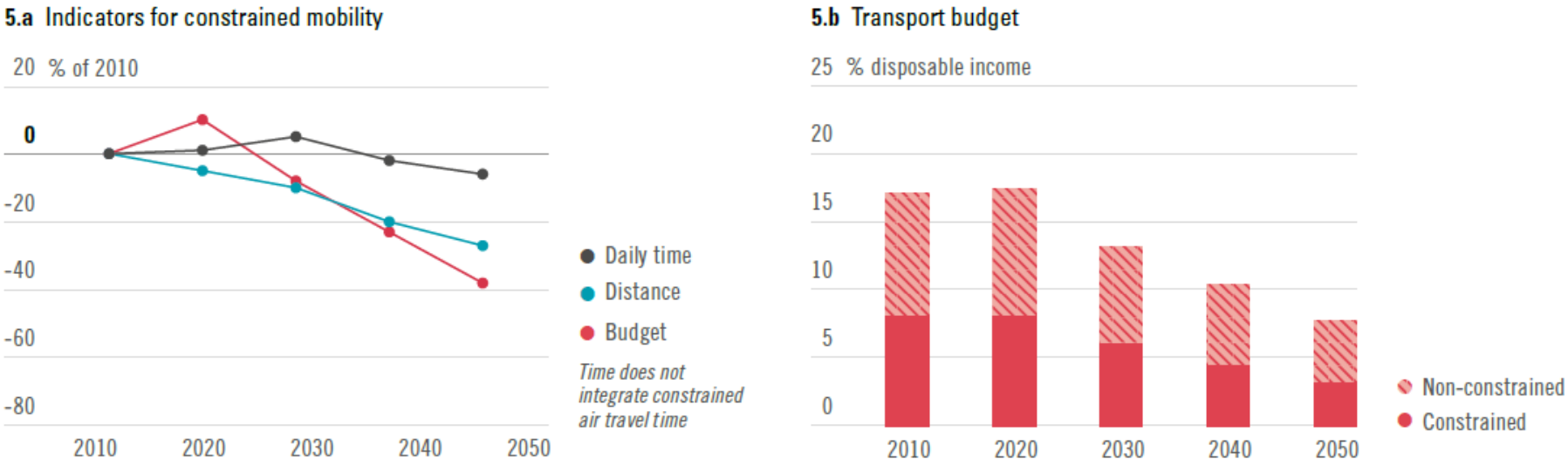
PM = Private Mobility (car and 2W), NMT = Non-motorized transport (walking, biking…), PT = Public transport (bus and rail)

Sources: Dashboard for scenario Mobility-first, Pathways to deep decarbonization of the passenger transport sector in France, 2017

Transport-relevant indicators needed !

Indicator examples of the Dashboard:

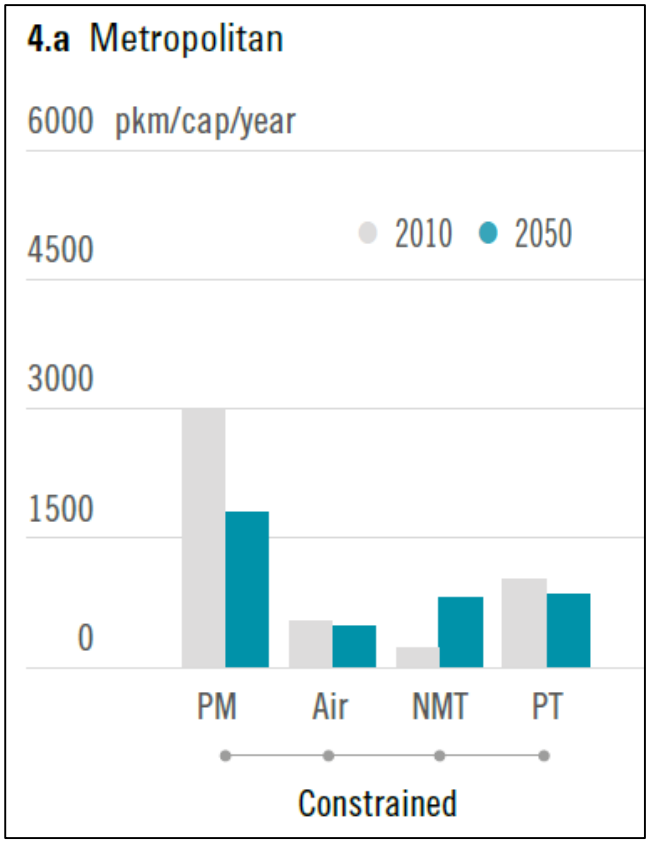
A5. Mobility indicators



Sources: Dashboard for scenario Mobility-first, Pathways to deep decarbonization of the passenger transport sector in France, 2017

Articulate consistenly Storylines and Dashboard indicators and formulate bottum up assumptions

Dashboard



PM = Private Mobility (car and 2W), NMT = Non-motorized transport (walking, biking…), PT = Public transport (bus and rail)

Elements of storyline – modal shift

- Density: population and services
- Space reallocation and city infrastructures for NMT & PT
- Speed changes between the different modes improving NMT & PT
- Cost increase for air tickets

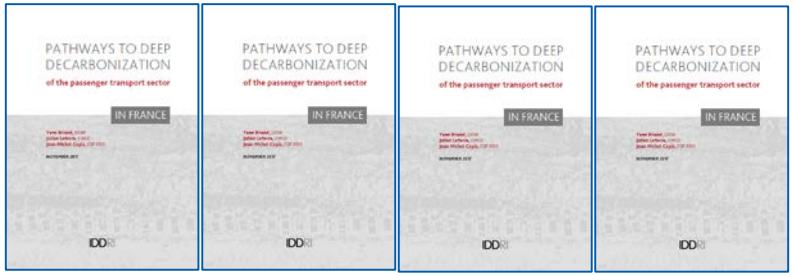
Sources: Scenario Mobility-first, Pathways to deep decarbonization of the passenger transport sector in France, 2017

Sectoral Deep Decarbonization Pathways: what is next ?

In 2017:

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

In 2018/19:

- **Freight transport studies (France, Japan):** "Pathways to deep decarbonization of the freight transport sector"
- **Other sectoral studies (India, China, South Africa, European countries, Brazil, Mexico…):** agriculture, transport, electricity generation, industry…
- **DDP Tool:** Development of simplified online tool to build decarbonization scenarios
- **Monitoring indicator development:** "Monitoring the French Transition"
- **Prospective Dialogues**
- **Adaptation trajectories for small islands**

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Thank you for your attention !

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