OAT verte

Environmental Evaluation of the Public Subsidy to **Voies Navigables de France**

28 novembre 2019

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE L'ÉCONOMIE
ET DES FINANCES

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE
ET SOLIDAIRE

The Evaluation Council of the Green OAT

- **In January 2017, France issued its first green sovereign bond (OAT) and committed to publishing several reports for investors:**
  - → A yearly report on funds allocation and general performance indicators,
  - → Regular reports on the environmental impacts of the expenditures eligible to the Green OAT. The Evaluation Council of the Green OAT is in charge of publishing the latter reports.
- **The Council is chaired by Mr. Manuel Pulgar-Vidal, former Environment Minister of Peru, president of the COP20 and head of the WWF Climate and Energy Work, and comprises eight other independent members, experts in green finance or in the evaluation of public policies.**
- **The French Ministry of Ecological and Solidarity Transition and the Ministry of Economy and Finance are jointly in charge of the Council's Secretariat.**
- **The first report (2018) evaluated the Tax Relief for Energy Transition (CITE). The report on VNF is the second report submitted to the Council.**

Members of the Evaluation Council of the Green OAT at their first meeting on 11 December 2017, in the presence of Mrs. Brune Poirson, Minister of State for Ecological and Solidarity Transition.

Evaluation Process

- **The evaluation of VNF had to comply with the specifications set out by the Council with the Secretariat's support (and available for consultation on the AFT website). An interim report was reviewed and commented by the Council in June 2019.**

- **The *Commissariat général au développement durable* (CGDD) was commissioned to carry out the evaluation study.**

- **The Council appointed two scientific personalities as independent referees. The final version of the evaluation report takes their comments into account.**

  - ***Mr. François Combes,*** *transport and logistics economist, lecturer at l'Ecole des Ponts ParisTech and head of the laboratory SPLOTT at the French Institute for Transport Sciences and Technologies, Planning and Networks (IFSTTAR). His research focuses on socioeconomic modelling and evaluation of goods transport and logistics. Mr. Combes is the scientific referee for the first part of the study (climate change mitigation).*

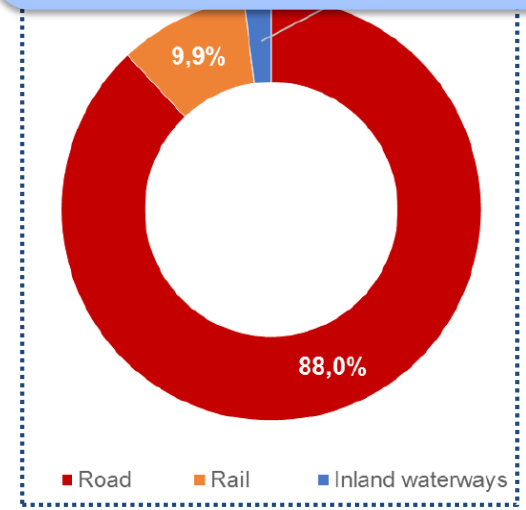
  - ***Mr. André Evette,*** *researcher at the National Research Institute of Environmental and Agricultural Sciences and Technologies (IRSTEA). He is an expert in the ecological restoration of river banks and riparian habitats, in ecological engineering, in revegetation and in the management of invasive species. Mr. Evette is the scientific referee for the second part of the study (biodiversity and adaptation to climate change).*

Voies navigables de France (VNF)

6,700 km of inland waterways under VNF management (84% of the French network)

The 3rd largest waterway network in Europe

2% of the total French freight transport in 2016



53 Mt of goods carried in 2017

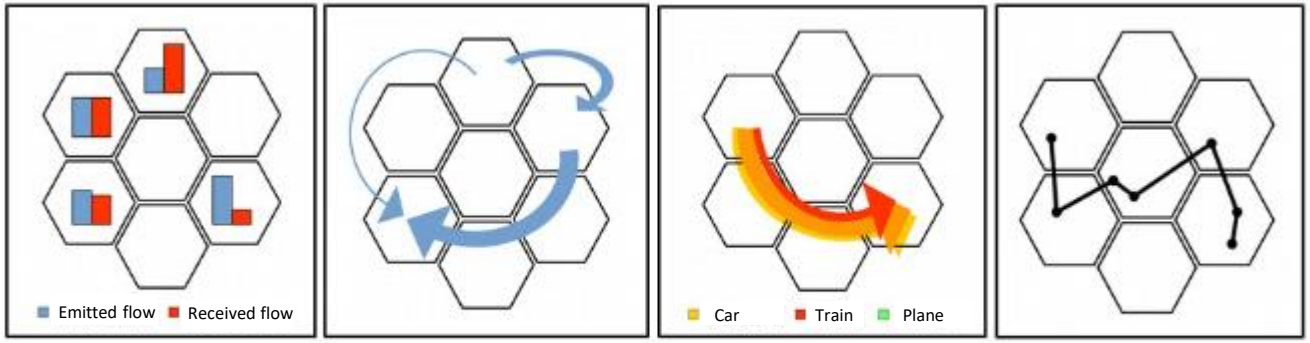
Annual Government subsidy of 245 M€ funding 57% of VNF's budget

Evaluation Methodology (1/2)

1. Greenhouse Gas (GHG) Emissions

- *Using different scenarios of toll rate hike, the report evaluates VNF's capacity to increase its commercial income and substitute it for the State subsidy.*

- *With the help of an in-house forecasting model for transport demand in France (Modev), the report evaluates an extreme case scenario which implies that abolishing public subsidy to VNF would lead to a total demise of waterway transport. The authors modelized the ensuing modal shift and the net impact on GHG emissions.*



The 4 steps of modelisation of Modev (Source: CGDD)

Evaluation Methodology (2/2)

2. Biodiversity and Climate Change Adaptation

- *Analysis of VNF's techniques for waterways works and maintenance.*
- *Analysis of VNF's efforts to facilitate fish migrations and to monitor and regulate the water debit in dams and water intakes.*
- *Analysis of VNF's techniques to maintain and preserve natural areas impacted by its infrastructures.*

*Left : Gray Heron (*Ardea cinerea*) on the lookout in the aquatic vegetation, on a pond of the Dombes (Auvergne-Rhône-Alpes) © Thierry Degen – Terra ; Right : Frog (Occitanie) © Arnaud Bouissou – Terra*

290 kt_{CO2} of emissions avoided thanks to waterway transport

The report shows a limited potential to substitute VNF State subsidy by an increase of the commercial income (toll). Therefore, the authors may estimate the volume of avoided CO_2 emissions by simulating the impact of a complete demise of inland waterway transport:

→ The demise would cause a modal shift towards road (71%) and train transport (29%)

→ The modal shift would induce **an additional 290kt of net CO_2 emissions per year,** equivalent to 1% of the total annual emissions of the transport of goods in France.

	Shares of land transport modes in 2015	Estimated shares after modal shift from waterway transport	Resulting variation of CO_2 emissions (kilo tons)
	11%	12%	+30
	3%	-	-257
	86%	88%	+515
		Total	**+288**

Other Findings in the Evaluation Report

- ✓ The optimization of VNF's techniques for infrastructure maintenance (dredging, sediment storage) **reduces its negative impact on environment**.
- ✓ VNF better takes into account the impact of its operations **on biodiversity** (ecological connectivity, regulation, instrumentation), although it is slightly off track with some of its commitments.
- ✓ On several actions (sediment collection, banks revegetation, banishment of phytosanitary products), **VNF practices go beyond the existing regulatory requirements**. This confirms the additionality of its operations.
- ✓ The scientific referees endorsed the conclusions of the report.

Opinion of the Evaluation Council

- **The Green OAT Evaluation Council welcomes the evaluation report,** notably the quantitative estimation of the contribution of inland waterway transport to climate change mitigation and the qualitative assessment conducted regarding climate change adaptation and biodiversity protection.

- **This evaluation provides a major contribution to the development of impact reporting in the green bond market**, as it provides an evaluation methodology for climate change adaptation and biodiversity protection.

- **The quality of the evaluation meets high academic standards.** Quantitative assessments are in line with recent literature and based on a state-of-the-art model, and qualitative elements are robust.

- **The evaluation process provided transparency and independence,** as the evaluation was reviewed by independent experts.

- **The Green OAT Evaluation Council endorses the main results of the evaluation of the grant to *Voies Navigables de France*,** and notes that the expenditures associated with this agency significantly contribute to meet France's objectives in terms of climate change mitigation, climate change adaptation and biodiversity protection.