

Energy and ecological transitions in the Rhône River in the context of climate change: converging or diverging transitions?

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Energy and ecological transitions in the Rhône River in the context of climate change: converging or diverging transitions?

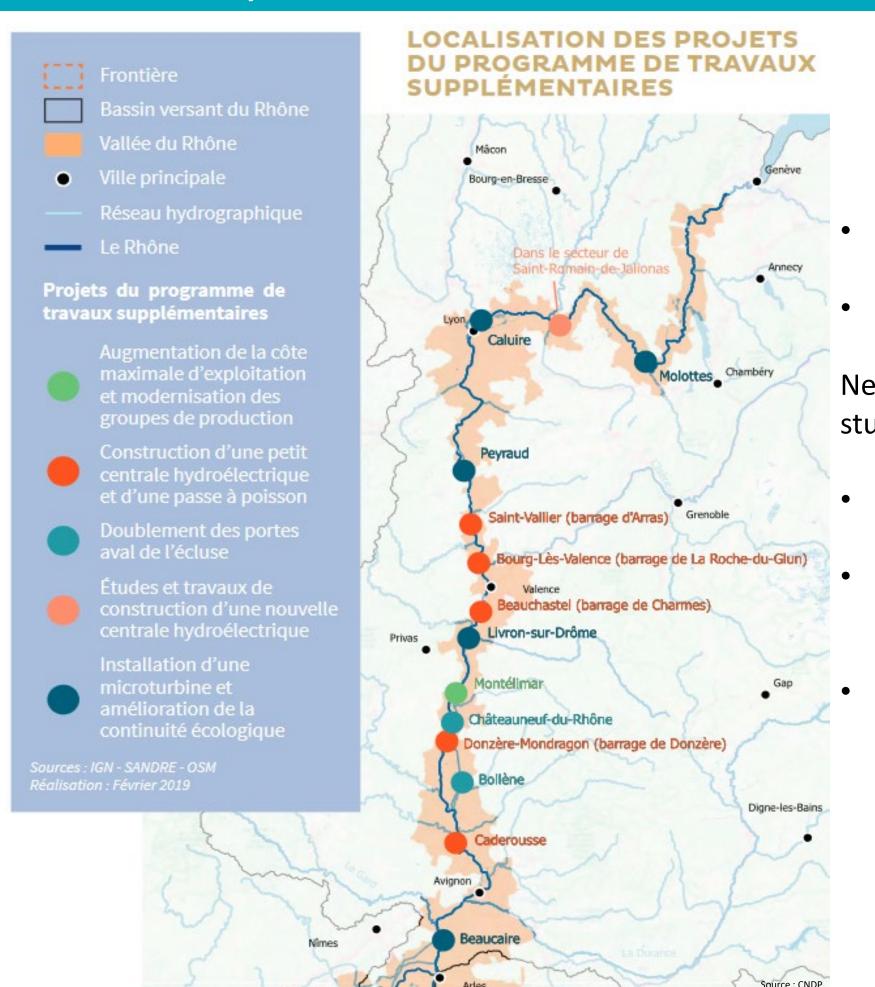
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INTRODUCTION

On the Rhone River, the composition of the installed energy stock is mainly based on hydraulic and nuclear energy. While these numerous developments already have strong impacts on the morphology of the river and its biodiversity, new hydraulic and nuclear energy production projects could take place to meet the objective of energy transition. However, a recent study into the evolution of the river in the face of climate change could overturn the way the river is currently managed.

THE RHÔNE, A LOW-CARBON ENERGY SOURCE



Nuclear energy on the Rhône

4 nuclear power stations managed by

• 22.4% of France's total production

Bugey or Tricastin

2 new EPR2 reactors could be built at

EDF

Hydroelectricity on the Rhône

- 21 dam including 19 power stations and dams managed by the CNR
- 25% of France's hydropower

New projects are currently under study:

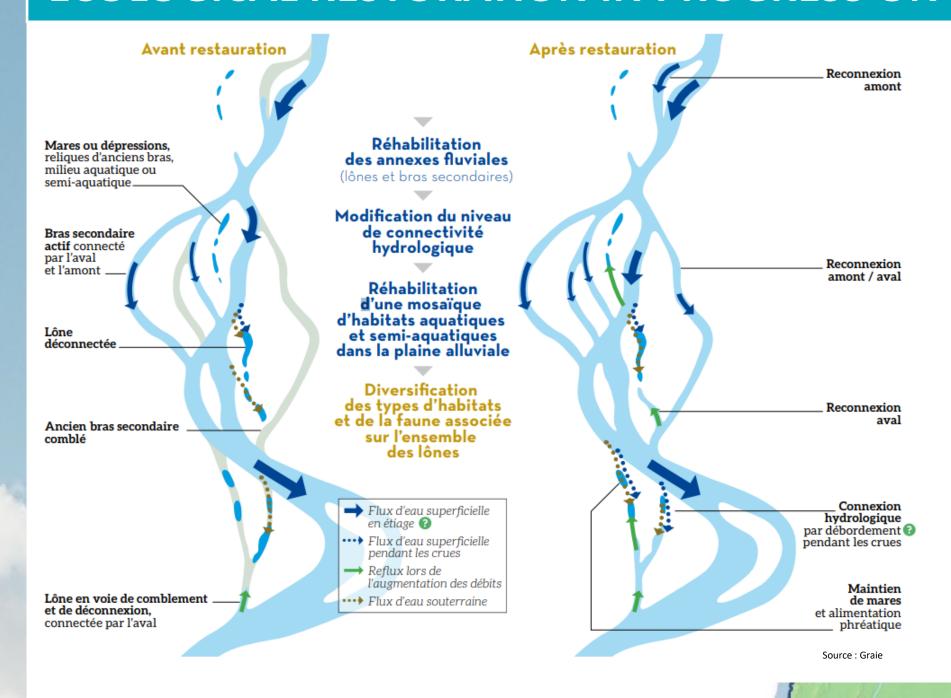
- A new hydroelectric power station and dam
- Equip 5 existing dams on the Rhône with small hydroelectric power stations
- Equipping sills with low-head power stations combining the production of renewable energy and the contribution to piscicultural continuity

Les centrales nucléaires en France FLAMANVILLE 1 & 2 (2) FLAMANVIL

RESEARCH QUESTIONS

In our study, we use the concept of transition as "the passage between two supposedly stable states, by focusing on the one hand on institutional legacies and, on the other, on the actors who drive and support 'transitions'" (Aykut, Evrard, 2017). How the consequences of climate change will impact on the development of the transition project on the Rhône? Will the environmental gains made be affected by the new energy challenges or not? How can the concept of transition be used to discuss and take account of these potentially contradictory issues?

ECOLOGICAL RESTORATION IN PROGRESS ON THE RIVER



Ecological restoration of the river

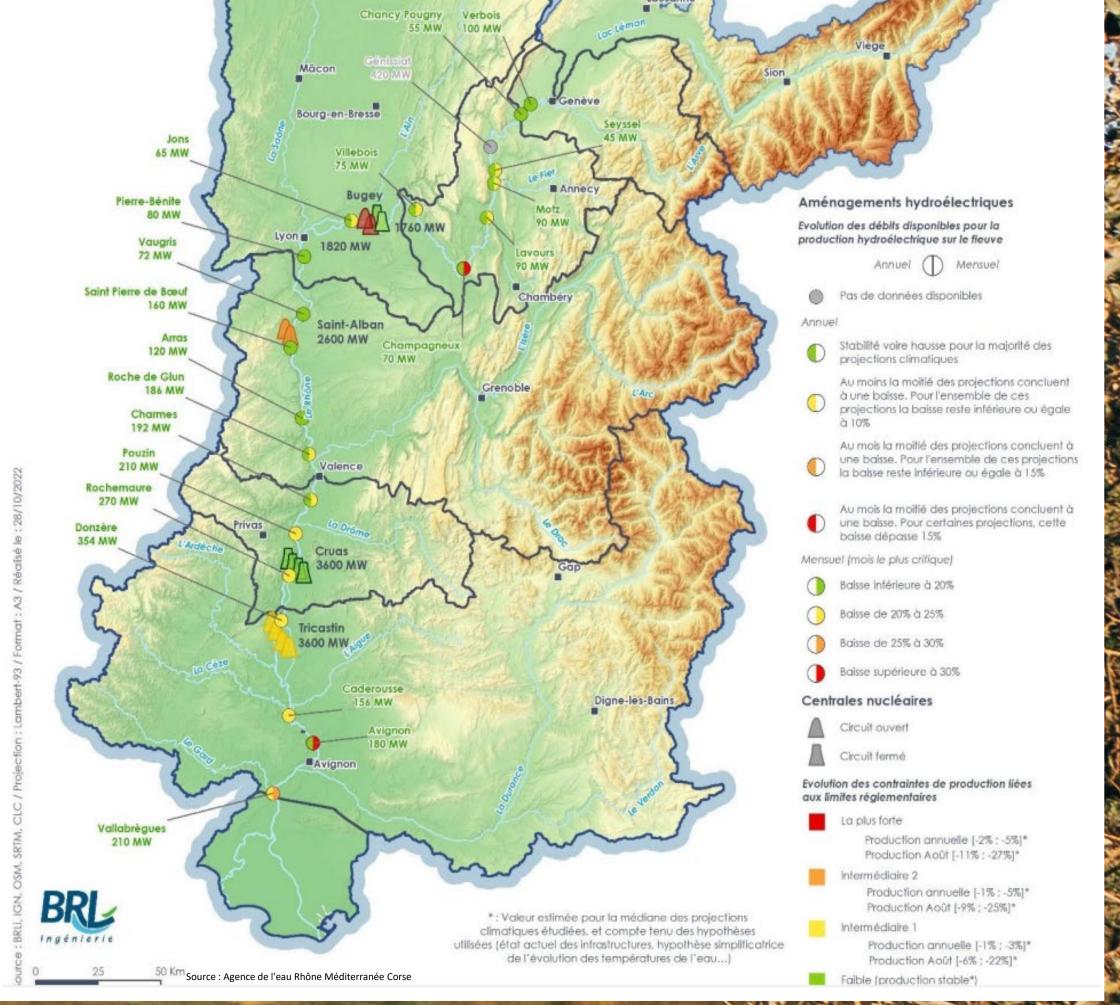
Since the 90s It has undergone ecological restoration in several sectors :

- Increasing instream flows
- Restoration of the lônes
- Partial dismantling of built-up margins
- Restoring fish migration routes

The impact of climate change on the river and its ecosystems

The Agence de l'eau Rhône Méditerranée Corse predicts a drop in flows on the river by 2050 that will have an impact on :

- Increased operating constraints for nuclear power plants
- A reduction in the theoretical summer output of run-of-river hydroelectric installations.
- The aquatic biodiversity of the Rhône will be weakened.
- They recommand to "renaturalise" the river



MATERIALS AND METHODS

- Press analysis with IRaMuTeQ, a lexicometry software
- Study of the documentation from different institutions
- Exploratory and semi-structured interviews with different local stakeholder

STUDY OF THE PRESS COVERAGE OF THE RHÔNE TRANSITIONS: FROM GLOBAL TO LOCAL?

1450 MW (4 réacteurs)

Downward hierarchical classification – Reinert method: 87, 32 % of the text segments classified transition énergétique *presse_loc renouvelable *presse_nat financement Competition in energy Energy transition Local treatment of national and local Competitive tendering for Consequences of Energy transition through the climate change on concessions development of renewable infrastructure requested by the energy production energies and its actors on human and European non-human uses Commission

Study of press articles related to CNR+Hydroelectricity: National coverage of regulatory and economic issues versus regional coverage of the impacts of future projects

Temporal evolution of the articles' quantity on local and national scales Key Words: CNR+Hydroéléctricité National Press Local press The Senate Summer Study on the bill to extend 2022 President of CNR flows of the organised by Rhône to Borie-Bancel drop in hydroelectric anticipate their elected new President of the CNR Management Board Climate change is driving the appearance of articles

CONCLUSION AND OPENING

The initial results of our study show a cross-section of transition issues raised by the press in the Rhône transition. The consequences of infrastructures on ecosystems are covered to a larger extent by the local press, and a survey of local stakeholders is planned.





