Clean energy transitions in Coal and Carbon-intensive Regions (CCIRs) are a priority for the EU’s climate and sustainable development strategies. They help to secure the creation of quality and decent jobs in the long term. The COVID pandemic has accelerated the need for grounded knowledge about how to enact deliberate deep transformations in social-ecological systems. However, little is known about why, how and when abrupt and irreversible changes triggered by apparently small events, or tipping points, occur in social-energy systems.

**Objectives**

TIPPING+ will further the scientific and practical understanding of why and under what conditions regional systems heavily dependent on coal and carbon-intensive activities flip into a low-carbon, clean energy development trajectories; or on the contrary, go in the opposite direction with all their negative social-ecological implications. In particular TIPPING+ will:

- **Examine** the critical concept of *Social-Ecological Tipping Points* (SETPs) to understand and support clean energy transitions in over 20 Coal and Carbon Intensive Regions (CCIRs) of the world.

- **Identify** *tipping interventions* aimed at: 1. supporting positive SETPs through transformative policies and / or 2. preventing catastrophic outcomes provoked by crossing negative social-economic thresholds derived from e.g. inaction, the rise of populism or anti-democratic attitudes.

- **Assess** collective *visions and narratives* and the required *transformative capacities* to generate key *strategies, solutions and socio-technical innovations* which will lead to systemic transformations in CCIRS toward low-carbon clean energy futures.

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Case Studies

The project will carry out a systematic and comparative analysis of at least twenty Coal and Carbon Intensive Regions in the world.

Approach

TIPPING+ brings together an international transdisciplinary team of scientists working closely with practitioners and civic organisations to understand and bring about the emergence of positive SETPs in coal and carbon intensive regions. Among the various dimensions examined, TIPPING+ looks at:

- Human geography and geographic factors
- Cultural, community and psychological factors
- Public policy and governance factors, including those related to the impact of populism in climate and energy policies
- Economic trends, including jobs creation/destruction and distributional changes in welfare