GreenPaths: European Knowledge Hub on Just Transition Pathways

https://www.greenpaths.info/

Online database of GREEN-PATHS Case Studies.

Deliverable number: **D3.2**

Funded by the European Union

Project full title

GREEN-PATHS: European Knowledge Hub on Just Transition Pathways

Contract No.

101112305

Call

HORIZON-CL2-2022-TRANSFORMATIONS-02

Topic

HORIZON-CL2-2022-TRANSFORMATIONS-02-01

Type of Action

HORIZON Coordination and Support Actions

Project Document Number

HORIZON-CL2-2022-TRANSFORMATIONS-02-101112305-WP2-D2.4

Project Document Date

May 31, 2025

Deliverable Type and Security

PU-Public

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Table of Contents

Table of Contents 3
Introduction 4
Executive Summary 4
Keywords 4
Intended audience 4
Scope 4
Organisation of the Work Conducted 5
1. Lithium mining in Barroso, Portugal 6
2. Europe's Yellowstone? An analysis of the social impacts of forest conservation in Romania. 8
3. Just Transition Agreements – Coal mine closures in the region of El Bierzo-Laciana, Spain 10
4. Assessing the Impacts of the Common Agricultural Policy (CAP) on Land Use 12
5. 'Green' and 'Fair' Industrial Policy in the Global South 15
6. Evaluating the Impact of EU Green Lending Distribution on the Green and Just Transition. 17
7. Effects of Green Transition Policy Interventions on Environmental Sustainability and Social Well-being in EU Countries and in 24 Selected Countries in the Global South 19
8. The European Hydrogen Economy: A Carrier for the Green and Just Transition? 21
9. Mining Lithium in Serbia 23
10. Green Transformation in the Tourism Industry: The Case of Croatian Urban Destinations 25
11. Energy poverty in residential buildings in Central and South-Eastern Europe (CSEE): The Case of Croatia 27
12. Public food procurement as a lever to foster the just and green transition – The Dordogne Case Study 29

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement No 101112305.

Introduction

The GreenPaths project includes the selection and analysis of case studies. The purpose of these case studies under WP3 is to provide a comprehensive, in-depth and empirically grounded assessment of the linkages between green transition policy interventions, environmental sustainability and social wellbeing. This deliverable follows the completion of D3.1, which focused on conceptual and methodological guidelines.

Executive Summary

This report provides a comprehensive overview of ongoing research being conducted by GreenPaths partners for the production of the series of case studies included in the original work plan of the project. The report is structured as a compilation of 'snapshots' of research in various parts of Europe and three regions of the Global South, encompassing a broad range of thematic issues related to *just transition pathways*.

The presentation of each case includes a summary of the objectives and contents of the study, supporting images and maps (which will be uploaded in high definition to the GreenPaths knowledge hub online), and key data points summarising essential information or preliminary conclusions derived from the ongoing research.

Keywords

Just Transition; Europe; Global South; Social Impacts; Social Impacts; Case Studies.

Intended audience

This report is potentially of interest to stakeholders interested in the green transition, in particular researchers (within and outside the GreenPaths consortium), policymakers and representatives of civil society organisations interested in gaining a succinct overview of the main ways in which just or fair green transition policy interventions are linked to environmental sustainability and social wellbeing.

Scope

GreenPaths WP3 'Policy linkages and social impacts' builds on WP2 'Frameworks, indicators and tools' to investigate some of the social and environmental impacts of green transition policy across Europe and beyond. Ultimately, bringing together the different case-studies will help different stakeholders to identify and, potentially, predict, the social impacts of green transition policies and the real-world significance of such policies in different geographical, welfare models and/or transition contexts. This brief report includes a summary of D3.2 - the online database of case studies. The work presented shows a significant marker in the progress of GreenPaths diverse work, which will culminate in the production of analysis reports under forthcoming deliverables D3.3 and D3.4. It is designed to provide introductory information on each case study in a format designed to be published on the GreenPaths Knowledge Hub.

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Organisation of the Work Conducted

All GreenPaths WP3 partners were involved in the production of this deliverable through their collaborative work and production of the case study 'snapshot' reports. It is a deliverable of T3.2, which led by TNI, represents the overall management of the consortium's case study work. Within this task, TNI created project planning tool for case study partners and collaborated with CES to provide guidance and advice about the ongoing case study work. TNI provided a pool of experts through their network to help advise, collaborate or peer-review each case study. CES hosted quarterly WP3 meetings to offer space for ongoing conversation and troubleshooting about any case study-related questions, attended by all supporting members of WP3. TNI, INTERMON and FOEE will oversee the publication of the online database on the Greenpaths Knowledge Hub.

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1. Lithium mining in Barroso, Portugal

Lead researchers: Mariana Riquito, Marcus Erridge and Irina Velicu (CES)

Supporting researchers: Jose Maria Zavala Perez (Oxfam Intermon), Ajda Pistotnik (Policy Lab), Lindsey Wuisan (Friends of the Earth Europe)

Demonstration organised by civil society organisations from Barroso against lithium mining in the region. Photograph: Mariana Riquito.

Summary

The Barroso region of Northern Portugal is a UN Globally Important Agricultural Heritage System. Deposits of lithium in Northern Portugal were identified in the early 1990s and the country is in the top 10 global producers of lithium. The case study focuses on one proposed lithium mining contract and associated policies, including Portugal's Roadmap for Carbon Neutrality 2050 (RNC2050), the EU's Critical Raw Materials (CRM) Act (2024) and the European Green Deal (2020).

Drawing from the GreenPaths analytical framework, the social impacts the study investigates relate to *injustice and inequality*, and *loss and damage*. The project-level concept is *decarbonisation*, the sectoral concept is *renewables* and the case study concepts are *new extractivism* and *green/land grabbing*.

In addition to environmental and socioeconomic well-being, there are cultural, ontological, and affective factors regarding the potential erasure of traditional ancestral practices and cultural

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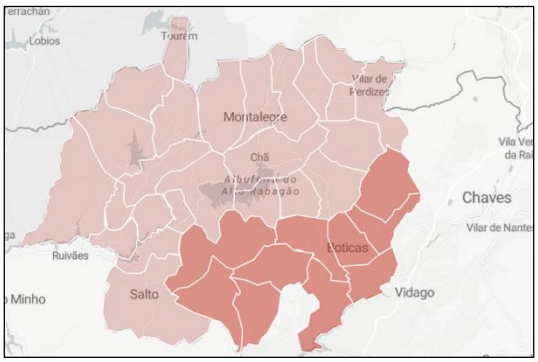
heritage underpinning the local way of life. Governmental officials and company representatives point to the imperative of energy transition and the key role Portugal could play in this scenario. The case is based on ongoing research that follows a collaborative, reciprocal, dialogical methodology to create bottom-up recommendations that generate alternative pathways for a 'just' and 'green' transformation. It includes an overview and discussion of key academic literature, as well as analysis of primary data on different stakeholders' perceptions and experiences of the social, economic and environmental impacts of new extractivist policies.

Key data points

- Portugal's share of renewable energy in total final energy consumption: 34.7% (World Bank, 2022).
- Portugal has the largest reserve of lithium in Europe with an estimate 60,000 metric tons (Direct Industry, 2022).
- 22.0% of people at risk of poverty or social exclusion in Northern Portugal (EAPN, 2024).



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2. Europe's Yellowstone? An analysis of the social impacts of forest conservation in Romania

Lead researchers: Irina Velicu and Marcus Erridge (CES)

Supporting researchers: Clara Bourgin (Friends of the Earth Europe), Ajda Pistotnik (Policy Lab), George Iordachescu (Wageningen University), Romana Puiulet (RISE project), Ioana Savin Bursan (Lucian Blaga University of Sibiu - ULBS)

A cabin in the Făgăraș mountains, part of the Southern Carpathians. Photograph: Jack Wolfskin.

Summary

The case study targets conservation and biodiversity, the role of national parks and ecotourism, alongside the loss of cultural heritage, husbandry and the criminalisation of local logging and other traditional forms of self-sufficient living in the Carpathia Mountains, Romania. It focuses on the balance between meeting renewal energy targets, environmental protection and local communities' interests, needs and heritage.

Key policies include the UNESCO World Network of Biosphere Reserves (WNBR) (1976), NATURA 2000 Special Protection Areas (1992), EU Forest Law Enforcement, Governance and Trade Action Plan (FLEGT) (2003), and at the national level, Romania's Land Restitution Law 18/1991, New Forest Codes (2008, 2015, 2024) and Green Certificate reduction scheme (2014-2024).

Drawing from the GreenPaths analytical framework, the social impacts the case investigates include *injustice and inequality* (redistribution of costs and benefits, recognition and

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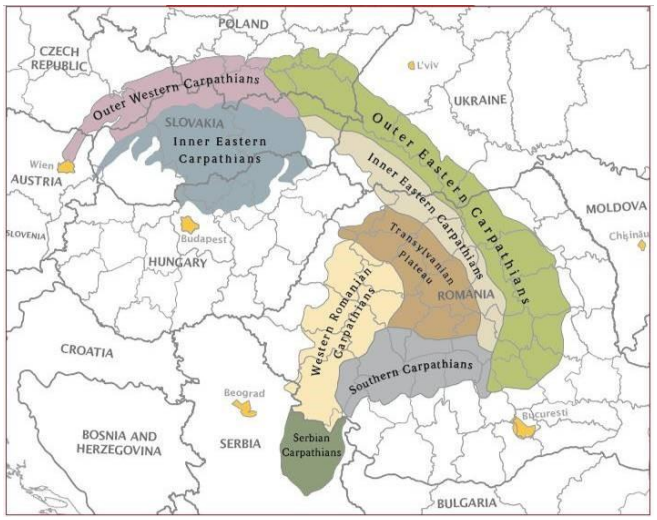
participation), *loss and damage* (from biodiversity and cultural heritage, to health, dignity and wellbeing), recovery/resilience/restoration, governance/policies and labour. GreenPaths project-level concepts include *sustainable growth*, at the sectoral level, *renewables* and at the case-specific level, *green/landgrabbing*.

The virgin forests of the proposed wilderness reserve are an important biodiversity site and home to protected species, such as wolves, bears, lynx and beavers. Recent investment in eco-tourism, with the high-profile publicity about the potential Romania's Yellowstone by Conservation Carpathia Foundation (CFF) the ultimate aim. However, small family farms and forests are being lost and traditional livelihoods and cultural heritage are at threat due to the expansion of ecotourism, the criminalisation of logging, precocity and rural depopulation. In a climate of land-grabbing and dispossession, this case study explores vulnerability and (in)tangible losses.

Key data points

- 12.5% of Romania's population are unable to keep their homes adequately warm (EU-SILC/JRC, 2023)
- Romania's risk of poverty or social exclusion in rural areas is 41.7%, compared with 24.0% towns and suburbs and 14.3% in cities (Eurostat, 2024)
- 18.0% of the population work in agriculture (ILO, 2023).



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3. Just Transition Agreements – Coal mine closures in the region of El Bierzo-Laciana, Spain

Lead researchers: José María Zavala Pérez (Oxfam Intermón)

Supporting researchers: Marcus Erridge and Irina Velicu (CES), Judith Clifton and Daniel Díaz-Fuentes (University of Cantabria)

Summary

This case study tackles the social impact of the Just Transition Agreements, the main tool developed to implement the Spanish Just Transition Strategy in territories affected by the closure of coal mines and thermal and nuclear power plants. The study evaluates how just transition policies impact the social wellbeing of communities affected by the closure of thermal power plants and mining operations in the Spanish regions of El Bierzo and Laciana (León). It identifies key achievements, advantages, challenges, and insights relevant to other JTAs and policymaking processes in Europe. The primary target collective is the population at risk due to decarbonisation policies, addressing aspects such as employment quality, adaptability to new processes, perception compared to other regions, training and skill updates, and the impact on the productive and social fabric of affected areas. The stakeholders interviewed highlight the late and insufficient intervention to address the economic impacts resulting from the closure of mining facilities and power plants.

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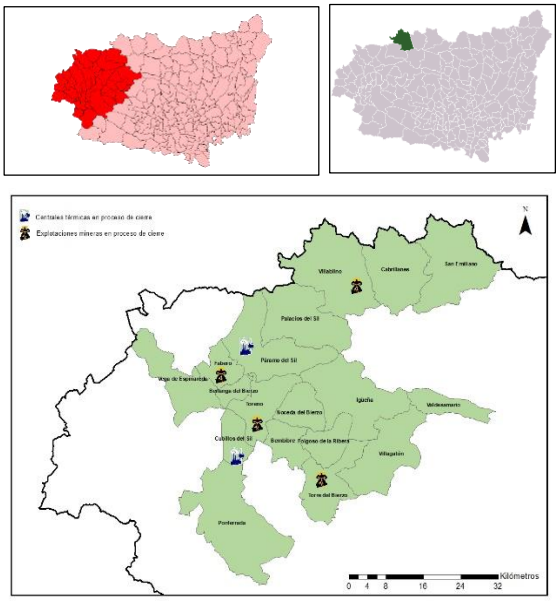
Using the GreenPaths analytical framework, this case study investigates social impacts in the context of *injustice, inequality* and *labour*. At the project level, the central concepts are *decarbonisation* and *state aid;* at the sectoral level, the focus is on *fossil fuel phase-out*; and at the case study level, the key concept is *phasing out*.

Key data points

- 24% of people at risk of poverty or social exclusion in Castilla y León region in 2024 (Eurostat, 2024).
- In the province of León, the percentage of people working in the industrial sector decreased from 15.6% in 2019 to 9% in 2021 (INE, 2024).
- The 18 municipalities included in the agreement lost a total of 6% of their population. Eight of them lost more than 10% of their population (INE, 2024).



A total of 18 locations are included in the Just Transition Agreement focused on the areas of El Bierzo and Laciana (province of León).

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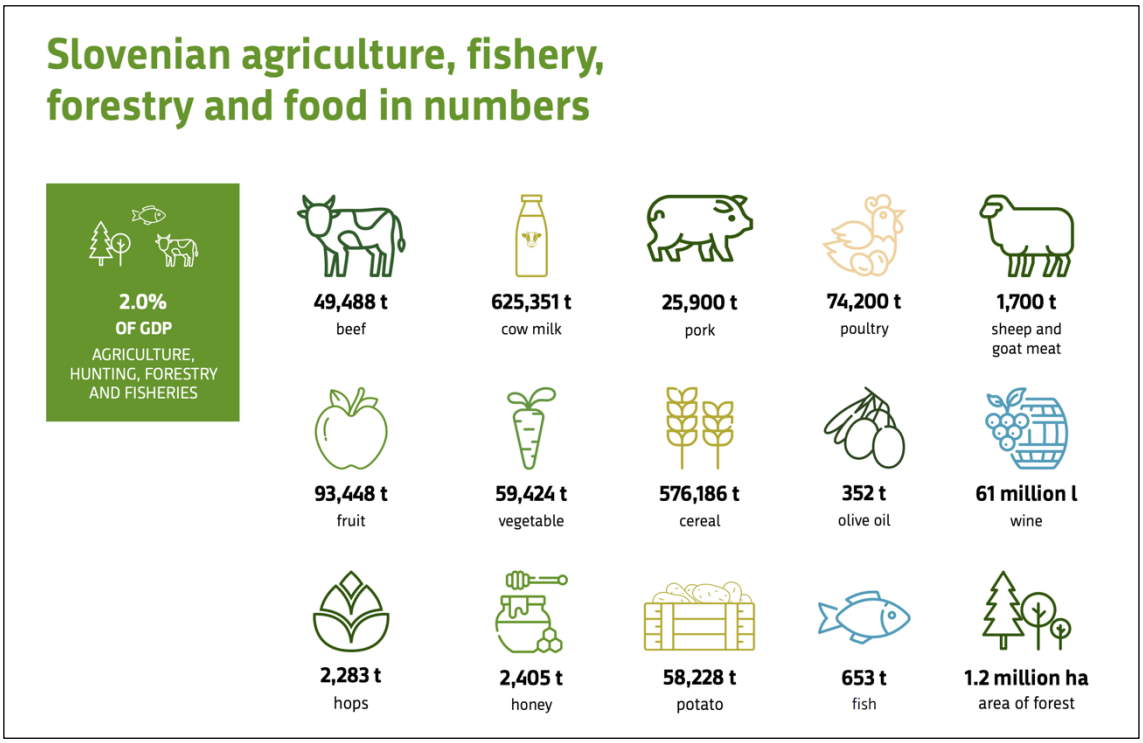
4. Assessing the Impacts of the Common Agricultural Policy (CAP) on Land Use

Lead researchers: Ajda Pistotnik and Arne Kušej (Policy Lab)

Supporting researchers: Katarina Kušić (IPE), Tatjana Avramovic and Predrag Momčilović (Zajedničko), Irina Velicu and Marcus Erridge (CES)



Economic significance of agriculture, fishery, forestry and food production in Slovenia (data published by the Statistical Office of the Republic of Slovenia, Ministry of Agriculture, Forestry and Food in 2024).

Summary

This case study investigates the impact of the EU's Common Agricultural Policy (CAP) on reshaping land use, ownership, and agrarian livelihoods in Slovenia, Croatia, and Serbia – three post-socialist countries at varying stages of EU integration. It focuses on how CAP mechanisms, particularly area-based direct payments, interact with post-socialist land restitution, privatisation, and liberalisation to accelerate land concentration, marginalise smallholders, and entrench rural inequality.

Key policies include the EU Common Agricultural Policy (1962–ongoing), especially the Basic Income Support for Sustainability (BISS), the CAP Strategic Plans (2023–2027), the European Green Deal, Farm to Fork and Biodiversity Strategies, EU enlargement conditionality mechanisms (IPARD), and national laws such as Slovenia's Farmland and Forest Fund Act

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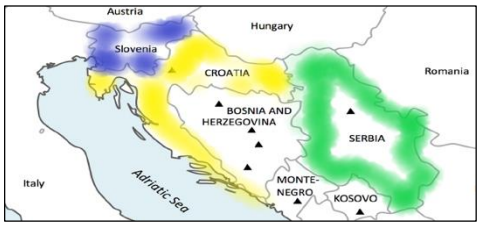
(1993), Croatia's post-accession land regulations, and Serbia's land privatisation and foreign investment laws influenced by World Bank and EU policy alignment.

Using the GreenPaths analytical framework and informed by post-growth and degrowth political ecology, the study interrogates who benefits from green transition investments, and at what social and territorial cost. It explores social impacts including distributive injustice, exclusion of young and new farmers, ecological degradation, and the erosion of rural sovereignty. It concludes that without structural reforms to CAP and land governance—including redistribution, support for commons-based farming, and stronger regulation of speculative land markets—green transition strategies risk reproducing the very inequalities they aim to resolve.

Key data points



Indicator 1: Land Concentration and Farm Size Distribution

- In Slovenia, over 50% of farms cultivate less than 2 hectares, while less than 6% control nearly one-third of agricultural land (Agency for Agricultural Markets and Rural Development, 2016; Udovč, 2003; Bojnec & Latruffe, 2005).
- In Croatia, over 50,000 small farms disappeared between 2008 and 2018, while corporate holdings and land leasing expanded (Burja et al., 2020, p. 2; Josipović, 2021).
- In Serbia, less than 1% of landholders manage over 30% of arable land, with four oligarchs owning more than 100,000 hectares (Gulan, 2010; Srećković, 2013; Kušić, 2025).

Indicator 2: CAP Subsidy Flows and Distributional Outcomes

- In Slovenia (2016), farms over 20 hectares (just 6% of all farms) received 40% of total CAP subsidies, while farms under 5 hectares (over 50% of holdings) received only 13% (Agency for Agricultural Markets and Rural Development, 2016).
- Major agribusinesses such as Perutnina Ptuj and Panvita received over €60 million in CAP funds between 2011–2022 (Pistotnik et al., 2023).
- Similar patterns of subsidy capture by large actors are documented in Croatia and Serbia, where CAP-aligned frameworks favour scale and capital intensity (FIAN, 2013; Kay, 2015; Burja et al., 2020).

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Indicator 3: Rural Employment and Agricultural Transformation

- Agricultural employment fell dramatically between 2000 and 2022: from 9.6% to 4.3% in Slovenia, 16.5% to 5.9% in Croatia, and 26.7% to 19.5% in Serbia (World Bank, 2022).
- These declines correlate with CAP-fuelled mechanisation, depeasantisation, and the shift to export-oriented, low-labour farming models (van der Ploeg et al., 2015; Franco & Borras, 2013).

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5. ‘Green’ and ‘Fair’ Industrial Policy in the Global South

Lead researchers: Daniel Chavez, Hamza Hamouchene and Katie Sandwell (Transnational Institute), Jewellord Nem Singh (University of Sussex), Donna Andrews (University of Cape Town)

Supporting researchers: Daniel Diaz-Fuentes and Judith Clifton (University of Cantabria).

International Workshop on Green Industrial Policy in East and Southeast Asia, co-organised by the GreenPaths Project, the Transnational Institute (TNI), and the Science, Technology and Innovation Policy Institute (STIPI). Bangkok, May 2024.

Summary

The Transnational Institute (TNI) will produce three studies in different regions of the Global South: Southern Africa, Southeast Asia, and Latin America and the Caribbean. The three case studies will be integrated into a report on the prospects and challenges of green industrial policy in the Global South. One key focus of the report will be the European Union's trade, investment, and energy strategies for its engagement with other regions of the world.

These case studies will integrate innovative theoretical insights, empirical evidence, and practical guidance for the implementation of green and fair transformative policies worldwide by partnering with research organisations in Europe, Africa, Asia, Latin America, the Caribbean, and South and Eastern Europe. In the context of its research plan for these studies, TNI has organised

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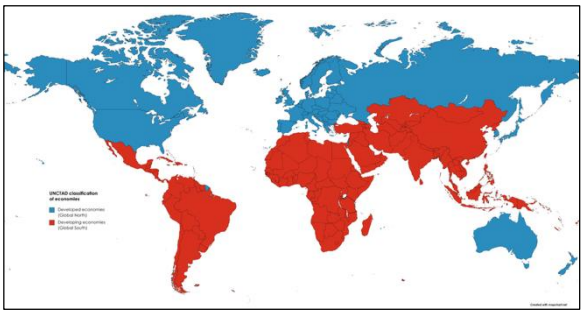
a series of regional workshops and seminars in Rio de Janeiro, Johannesburg, Cape Town and Bangkok between October 2024 and May 2025. The ongoing research takes place in the framework of the recently launched TNI's Global Green Industrial Policy Lab (GGIPL), which has been conceived as an open, collaborative and non-extractive platform for knowledge production that will connect researchers, progressive government officials, trade unionists and civil society activists to work together to improve the design and implementation of democratic, ecological and just industrial policies in Europe and the Global South.

Drawing from the GreenPaths analytical framework, TNI and GreenPaths's supporting partners will investigate the *economic and social impacts* of EU interventions on the prospects for *industrial policy* in the Global South. The case studies will pay particular attention to *governance/policies* and *labour*. The GreenPaths main project-level concept that informs these case studies is *sustainable growth*.

Key data points

- The climate crisis and ecological breakdown require a fundamental transformation of the current economic system, particularly in countries that are still building their industrial base. However, most recent research and policy design on (re)industrialisation primarily focuses on the advanced economies of Europe, North America and Asia-Pacific, leaving a significant gap in understanding how the needed transformations can be achieved in Global South contexts.
- Recent policy initiatives such as the Inflation Reduction Act in the United States and the Green Deal Industrial Plan in the European Union, as well as the rise of China as a global manufacturing powerhouse and the prospects of new and more impactful trade wars, have reignited interest in industrial policy all over the world. These frameworks, however, do not translate well to African, Asian and Latin American national contexts.
- Policymakers and practitioners in the Global South face immediate pressures to design and implement industrial policies that can simultaneously address climate change, create decent jobs, reduce poverty, and build endogenous technological capabilities.



According to UN Trade and Development (UNCTAD), the Global South broadly comprises Africa, Latin America and the Caribbean, Asia (excluding high-income countries such as Israel, Japan, and South Korea, among others), and Oceania (excluding Australia and New Zealand).

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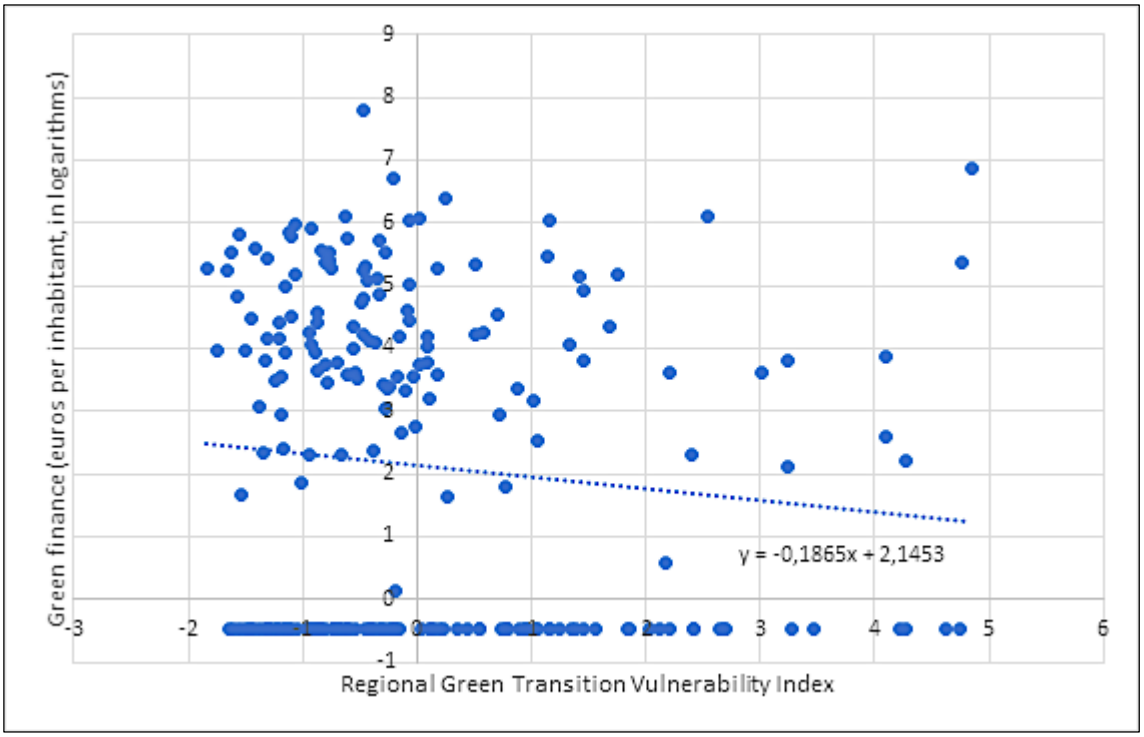
6. Evaluating the Impact of EU Green Lending Distribution on the Green and Just Transition

Lead researchers: Judith Clifton, Daniel Díaz-Fuentes, Marcos Fernández-Gutiérrez, Ana Lara Gómez (University of Cantabria)

Supporting researchers: Jose María Zavala Pérez (Oxfam Intermón) and Daniel Chavez (Transnational Institute)



Correlation between EU regions' vulnerability index to the green transition and EIB lending per inhabitant in 2021-2023 (preliminary results).

Summary

This case study examines lending by the European Investment Bank (EIB) towards the EU green and just transition from a regional perspective. The EIB, originally labelling itself as the "EU Bank", re-launched itself as the world's first "Climate Bank" in 2019, aligning itself with the implementation of the European Green Deal. By analysing EIB lending in climate action and environmental sustainability using available data from 2021-2023, the study aims to determine how effectively EIB finances targets place the most vulnerable to the transition towards decarbonisation. Using mixed methods, including data categorisation at the NUTS2 level and semi-structured interviews with EIB and European Commission officials, the case study will correlate EIB lending in climate action and environmental sustainability with the Regional Green Transition Vulnerability Index developed by Rodríguez-Pose and Bartalucci (2024). The findings will provide insights into the alignment of financial support with existing needs and the broader

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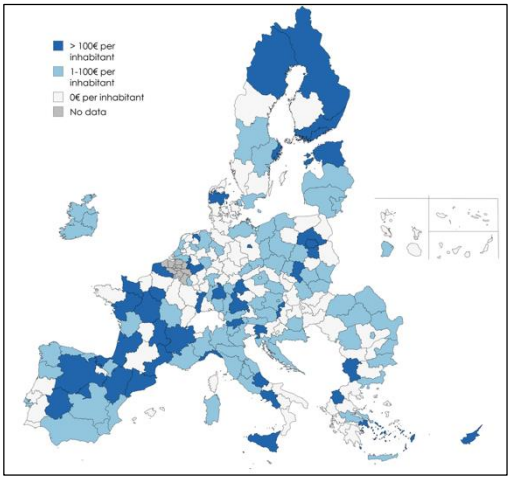
implications for achieving a just transition, considering the potential environmental and social costs and benefits of the green transition.

The study utilises *injustice* for social impact, *decarbonisation* and *renewables* as project concepts, *green finance* as the sector concept, and *phasing out* as the case study concept.

Key data points

During the period 2021-23:

- The European Investment Bank (EIB) funded 1,304 projects on climate action and environmental sustainability in the EU.
- EIB lending on climate action and environmental sustainability in the EU represents 97,000 M,Ç¨ (0,6% of average EU GDP in the period).
- 135 EU regions benefitted from EIB lending on climate action and environmental sustainability.

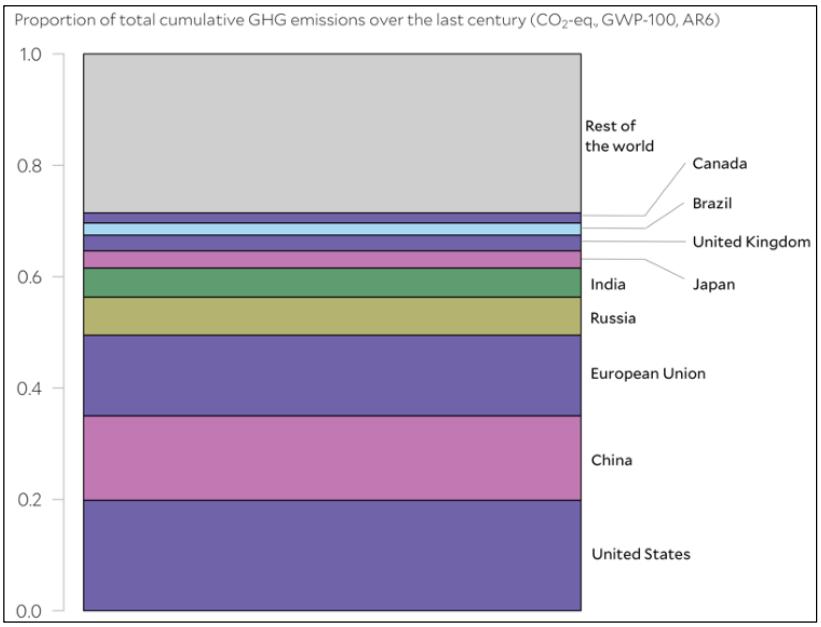


This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement No 101112305.

7. Effects of Green Transition Policy Interventions on Environmental Sustainability and Social Well-being in EU Countries and in 24 Selected Countries in the Global South

Lead researchers: Thomas Kopp and Syeda Aimen Abbas (University of Siegen)

Supporting researchers: Giuseppe Mastruzzo (IUC of Turin) and José María Zavala Pérez (Oxfam Intermón)



Source: Environmental Performance Index (EPI) 2024, Yale Center for Environmental Law & Policy.

Summary

This case study will investigate how increasing environmental policy stringency (EPSI) in Europe may influence social inequality and sustainability outcomes both within the EU and in selected countries of the Global South. While the European Union is accelerating its transition toward a low-carbon economy through measures such as carbon taxes and emissions trading schemes, theoretical and preliminary empirical evidence suggests that such policies may have unintended socio-economic consequences, particularly for lower-income groups.

The research will assess whether stricter environmental policies are associated with changes in income inequality across EU member states, and the extent to which redistributive mechanisms mitigate these effects. It will also explore how these environmental policies affect economic and environmental outcomes in the Global South, including the potential relocation of carbon-intensive industries from the EU to these regions.

This case study will examine *social impacts* related to *injustice* and *inequality* (redistribution of costs and benefits), *governance/policy effectiveness*, and *economic resilience*. By combining

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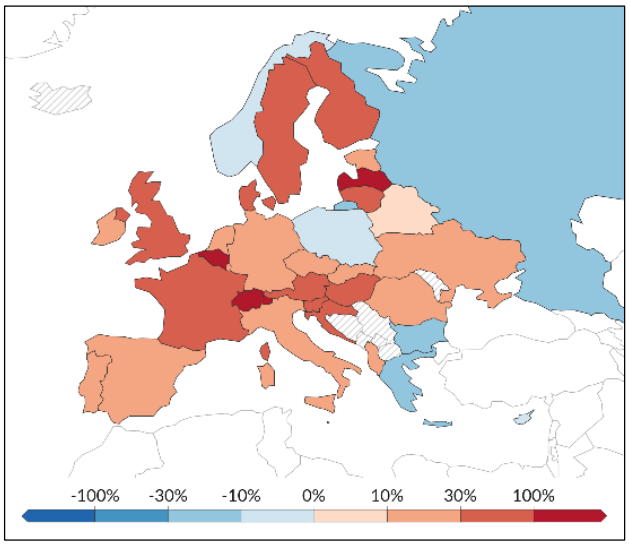
macroeconomic data with indicators of environmental and social well-being, the case aims to generate insights into the trade-offs and synergies between environmental sustainability, social justice, and global equity in the context of the green transition.

This dual-region approach will contribute to a deeper understanding of how green transition policies shape not only local but also global socio-economic structures, informing strategies for a more just and inclusive transition.

Key data points

- Global carbon policies grew from 72 laws in 1997 to over 1500 by 2018 (Nachmany and Setzer, 2018).
- The EU's at-risk-of-poverty rate (anchored to 2019) fell from 16.5% in 2019 to 14.3% in 2023, with major drops in Bulgaria, Romania, and Poland. In contrast, increases were recorded in Germany, Finland, France, and Slovakia (Eurostat, 2024).
- The global top 1% of emitters are responsible for more emissions than the entire bottom half of the world's population (Chancel, Bothe, & Voituriez, 2023).



Share of CO2 emissions embedded in trade, 2022

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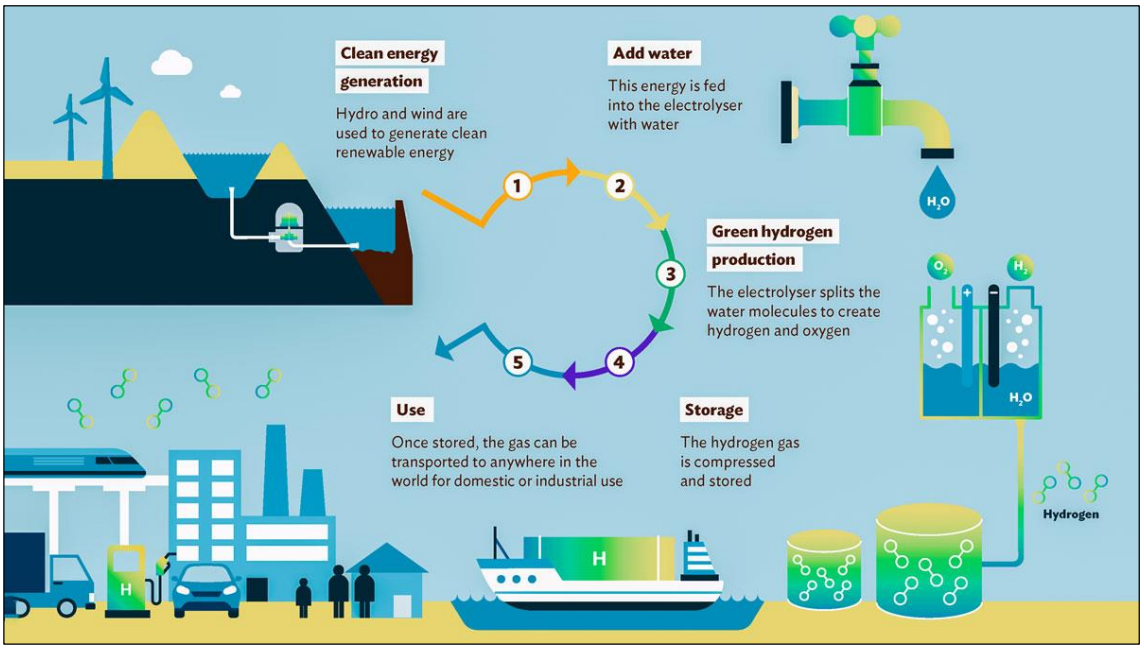
8. The European Hydrogen Economy: A Carrier for the Green and Just Transition?

Lead researchers: Yannick van den Berg and Marija Bartl (University of Amsterdam)

Supporting researchers: Hamza Hamouchene (Transnational Institute) and Thomas Kopp (University of Siegen)



Schematic representation of the cycle of production and utilisation of green hydrogen.

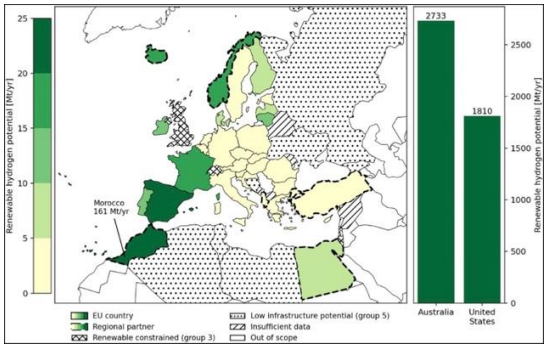
Summary

The case study analyses the social and distributive impacts of the hydrogen economy as a carrier of the green transition with a focus on two "local' contexts: the planned hydrogen valley in the Groningen area and the planned green hydrogen production sites in the Guelmim-Oued Noun region in Morocco. Through the lens of *energy justice*, we focus on the *distribution* of costs and benefits from green hydrogen, as well as the *procedural* dimension of local community involvement, including a *recognition* dimension that acknowledges disparate impacts and contributions, particularly vis-à-vis underserved communities.

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement No 101112305.

Key data points

- Water availability of 620 M3 per person per year in Morocco.
- 44% of people in Groningen perceive their energy spending as high, highest prevalence of municipalities that experience energy poverty in this region.
- Public consultation index.



From Nuñez-Jimenez, A., & De Blasio, N. (2022). Competitive and secure renewable hydrogen markets: three strategic scenarios for the European Union. *International Journal of Hydrogen Energy*, 47(84), 35553-35570.

This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement No 101112305.

9. Mining Lithium in Serbia

Lead researchers: Tatjana Avramovic, Predrag Momcilovic, Janko Stefanović, Andrej Ivančić (Zajedničko)

Supporting researchers: Marcus Erridge and Irina Velicu (CES)

Germany's Chancellor Olaf Scholz and Serbia's President in Belgrade (Image: Sebastian Kahnert / dpa).

Summary

This case study focuses on the issue of lithium mining in Serbia, with particular attention to the narratives and responses surrounding the Jadar project – a planned lithium mine by the company Rio Tinto. Since 2019, the project has been at the centre of public debate. It has sparked significant resistance, initially from the local population and later from the wider public and most opposition parties. In contrast, the Government of the Republic of Serbia and Rio Tinto continue to promote the project, emphasising its proposed benefits, often with support from EU officials.

Using discourse analysis, this case study examines the varying political stances on lithium extraction in Serbia and how these actors influence one another. In parallel, a review of the relevant literature highlights the potential social, environmental, and economic impacts of the Jadar project.

The study also examines the impact of key EU policy documents – primarily the European Green Deal, the Critical Raw Materials Act (CRMA), and documents on EU–Serbia cooperation – on the development of new extractivist projects.

Using the GreenPaths analytical framework, this case study addresses *social impacts* in the context of *loss and damage*. At the project level, the central concept is *decarbonisation*; at the

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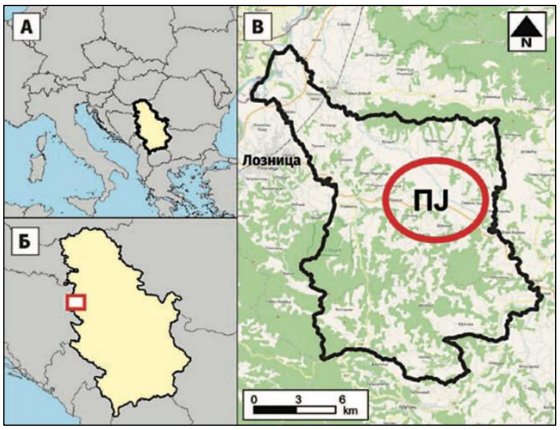
sectoral level, the focus is on *renewables*; and at the case study level, the key concept is *new extractivism*.

Key data points

- 34.75% of agricultural land in the City of Loznica will be potentially affected by lithium mining (Statistical office of the Republic of Serbia, 2013).
- 38.2% of people at risk of poverty or social exclusion in the City of Loznica (Statistical office of the Republic of Serbia, 2013).
- Serbia's share of renewable energy in transportation is currently 0.599% (Eurostat, 2023).



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10. Green Transformation in the Tourism Industry: The Case of Croatian Urban Destinations

Lead researchers: Vedran Horvat (Institute for Political Ecology) and Katarina Kusić (University of Vienna)

Supporting researchers: Yannick van der Berg (University of Amsterdam), Predrag Momčilović (Zajedničko), Maurizio Marianni (RISTECO) and Mauro Sirotnjak (PNG)

While Croatia is recognised as a tourism destination, most tourism activities are concentrated in a few coastal cities (Pula, Zadar, Split, and Dubrovnik) and the capital, Zagreb.

Summary

The case study focuses on the environmental and social footprint of tourism activities in five selected Croatian cities (four coastal cities and the capital, Zagreb), exploring the transformative potential of the tourism industry and the necessary policy shifts to counter overtourism. The study also examines the adverse social and environmental impacts of tourism-induced (over)development. It also examines the climate resilience of tourism activities in relation to the adverse effects of climate change, including heat waves, fires, droughts, and floods. The absence of measures to adapt tourism to climate change and mitigate its carbon footprint, as well as environmental degradation and adverse social impacts (mainly on housing, labour rights, and

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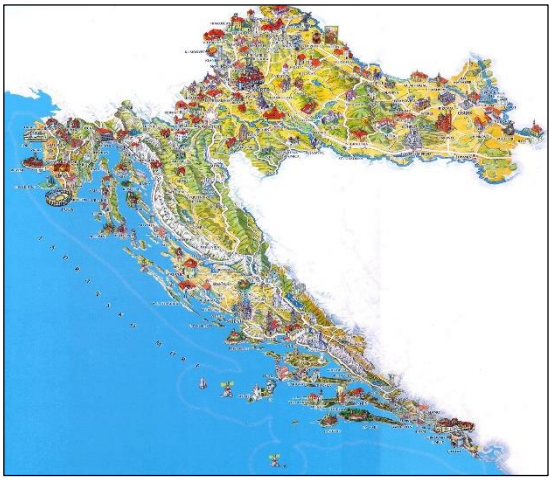
public services), is undermining a more profound and systemic ecological transition in this industry. This is very much reflected in the lack of incentive among tourism stakeholders, including the Croatian and municipal governments and the National Tourism Board, to address overall industry and governance gaps, particularly between the national and municipal levels. Yet, the quality of life and, particularly, housing prices are most affected, creating irreversible adverse impacts on the living conditions of the local population. The study focuses on seven policy/sectoral areas in selected cities to examine stage of ecological transition in the tourism industry – 1) transport, 2) resource efficiency 3) climate change, 4) energy and waste, 5) spatial and urban planning, 6) housing and 7) public infrastructure and services.

Drawing on the GreenPaths analytical framework, the case study explores two overarching concepts: *decarbonisation* and *public services*. Furthermore, analysing the social impact of the tourism industry reveals *injustices and inequalities* (redistribution of costs and benefits, recognition, and participation), *losses and damage* (from biodiversity and cultural heritage to health, dignity, and wellbeing), as well as *recovery*, *resilience*, *restoration*, and *governance/policies.* Sectoral concepts examined in the study include the *phase-out of fossil fuels*, *renewables*, *urbanisation*, and *state aid.* The case study primarily focuses on *sustainable urbanisation***,** as it explores the role that tourism plays in key urban destinations in the country.

Key data points

- With almost 20% of the national GDP originating from tourism (14.6 billion euros and 20 million tourists), Croatia profiles itself as a key European tourist destination.
- The majority of tourists use road traffic or aviation industry, thus increasing the carbon intensity of overall tourism activity
- Accelerated tourism-induced development is not followed with state capacity to monitor violations – ranging from waste collection to housing rentals.



This project has received funding from the European Union's Horizon Europe research and innovation programme under the grant agreement No 101112305.

11. Energy poverty in residential buildings in Central and South-Eastern Europe (CSEE): The Case of Croatia

Lead researchers: Antonija Komazlić, Mauro Sirotnjak and Filip Pračić (PNG)

Supporting researchers: Tatjana Avramovic and Predrag Momcilovic (Zajedničko)

Summary

The case study examines the socio-economic impact of EU and national policies on the energy renewal of residential buildings in Croatia, providing a comparative overview of Slovenia and Serbia. The central research question explores how measures for reducing energy poverty address the social dimension of housing, exploring the reproduction of inequalities. Through an analysis of secondary and primary data, as well as interviews with academic researchers and professionals in the field, the study examines the impact of EU financing mechanisms on regional development, assessing their capacity to sustain the European Green Deal's goal of "leaving no one behind".

Drawing on the GreenPaths analytical framework, it examines the social impacts related to *injustice and inequality*, as well as *governance and policy*. At the project level, the central concepts are *eco-social state* and *public services*. The sectoral concepts are *state-aid, green finance* and *renewables*, and the key case study concept is *housing*.

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Thus, the case study focuses on how the EU regulatory framework – comprising the EU Renovation Wave for Europe strategy, the EU Directive on the Energy Performance of Buildings, and other relevant directives – is reflected in national institutional and regulatory frameworks related to channelling EU funds for energy poverty and energy renovation.

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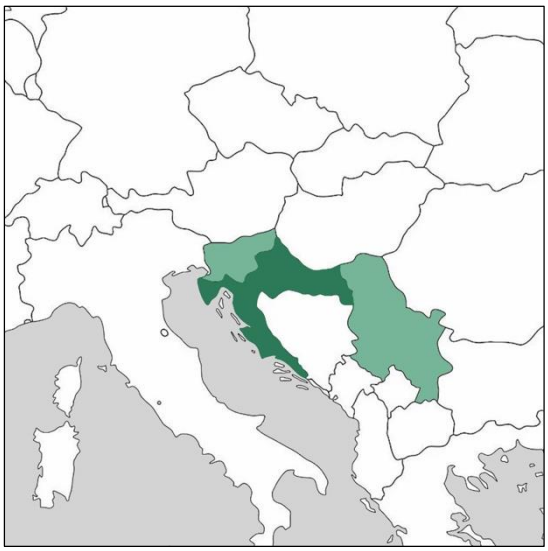
Key data points

- In Croatia people in the income quintile 1 spend 15.5% of their income on energy expenditures - the highest rate among the EU countries (EU-SILC, 2020).
- When measuring arrears in utility bills, there is a trend of drop in percentage in all 3 countries - Croatia (from 28,7% in 2015 to 8,8% in 2024, Slovenia (from 17,5% in 2015 to 6,7% in 2024) and Serbia (from 34,8% in 2015 to 17,1% in 2023) which needs to be analyzed with rising state aid in subsidising utility bills after 2021 (Eurostat, 2024).
- 3.6% of total households in Slovenia, 6.2% of households in Croatia and 9.4% of households in Serbia are not able to keep their homes adequately warm (EU-SILC, 2023).



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12. Public food procurement as a lever to foster the just and green transition – The Dordogne Case Study

Lead researcher: Maurizio Mariani (Risteco)

Supporting researcher: Giuseppe Mastruzo (IUC Turin)

Strawberries from the Dordogne Region. Image: Cochise Ory.

Summary

The Dordogne case study exemplifies a successful public policy-led transition towards sustainable school food systems. Initiated by the Departmental Council of Dordogne and supported also through the European SchoolFood4Change project, this initiative focuses on three core pillars: 100% organic certification, local sourcing, and homemade food preparation. Starting with one pilot school in 2019, the project expanded to certify 15 colleges by 2024, with the goal of converting all 35 departmental schools by 2028. This shift was made possible through integrated public procurement reforms, cross- departmental coordination, the development of digital and logistical tools (such as Agrilocal and the "À Table" planning tool), investment in training and infrastructure, and a multi-stakeholder engagement approach that includes producers, chefs, educators, and families.

The policy framework emphasises environmental sustainability (e.g., low-carbon meals, zero-waste kitchens), social equity (affordable and nutritious meals for all, including grant-aided

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students), and economic revitalisation (millions of euros reinvested annually in the local food economy).

Dordogne's case stands as a leading example of how regional governments can operationalise the EU Green Deal and Farm to Fork Strategy through public food procurement. Its replicability is reinforced by rigorous evaluation data, strong community ownership, and clear alignment with national laws such as EGAlim and the Climate and Resilience Law.

The case study focuses on social impacts related to *mitigation* and *adaptation*, as well as *governance* and *policy*. At the project level, the central concepts are the *eco-social state* and *public services*. The sectoral concepts are *state-aid, organic* and *agriculture*, and the main case study concept is *public food procurement*.

Key data points

- 100% of meals in 15 secondary schools certified as organic local and home-made style by ECOCERT (2024).
- Over 80% of ingredients sourced from within the Dordogne;foodstuff cost per meal: €1.80–€2.10 lower than national average.
- Reduction in average food waste to 40g/meal/student vs. national average of 135g (ADEME, 2023).

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