

Scenari

Fondazione Giangiacomo Feltrinelli

Political Participations in Sacrifice Areas

Workers and community-based
mobilization for a Just Transition

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Preface
Towards an ecological transition *from below*
Emanuele Leonardi

The essays which compose this thought-provoking book prove beyond any reasonable doubt that *Just Transition* – conceived of as a field of research (academic as well as non-academic) – is going through a fruitful period of original and much-needed political elaboration. The discussion is rich and multifarious, as it should be, with regards to both general frameworks and context-specific outcomes. Yet, my impression is that two elements constitute common ground for such variety of theoretical approaches and practical options.

The first may be labelled as ‘the failure of ecological transition *from above*’. This formula refers to the ‘green economy’ wager, made by ruling elites in the late 1980s/early 1990s, according to which environmental constraints could be turned from economic nuisances to lucrative opportunities for sustainable business. Hence, the twofold promise of such wager: more profits *and* more environmental protection. The main policy instrument to operationalize this strategy was market-creation through ‘giving a price to nature’ narrative was the following: “sure, the ecological crisis is a market failure as standard economics was unable to account for negative externalities; however, a new wave of environment-friendly marketization would turn such externalities into commodities whose subsequent trading would produce a sustainable society”. Good for people, good for nature, good for companies. Who would dare disagreeing with such a radiant vision?

Well, it is all too easy – in July 2024, the time of this writing – to play the joy-killer. Heavily implemented in recent decades

(especially but not exclusively in the realm of climate governance – think of carbon markets, for example), this kind of eco-policies are now unanimously assessed in negative terms: economically, all agree that they didn't live up to expectations (whereas many judge their performance as altogether detrimental); environmentally, they were utter disaster. It's not just that they did not deliver *on time*. They actually drove the world *further away* from effective ecological action. Let's consider the issue from a climate change perspective: the goal of these market-based 'solutions' was to reduce current CO₂-equivalent emissions with regard to 1990 – Kyoto's baseline year. Their result is that more CO₂-equivalent has been emitted between 1990 and 2019 than it was released in the atmosphere from 1750 to 1990. Otherwise put: the UN-led COP system is *not* 'simply' proceeding too slowly on a right path – as commentators have used to describe every disappointing COP since the Paris Agreement in 2015. Climate governance as we know it is actually racing *very fast* in the direction *opposite* to the desirable one.

Economist Martin Wolf, in a recent article for the *Financial Times* – titled 'Market forces are not enough to halt climate change' – brilliantly summed up the state of the art:

At the heart of attempts to halt damaging climate change is a pair of ideas: decarbonise electricity and electrify the economy. So, how is it going? Badly, is the answer.

[...]

Here is a sobering fact: in 2023, the production of electricity generated by fossil fuels reached an all-time peak. The share of electricity produced this way did fall, from 67 per cent in 2015 (the date of the celebrated Paris Agreement) to 61 per cent in 2023. But global output of electricity jumped 23 per cent in those eight years. As a result, even though generation from non-fossil-fuel sources (including nuclear) rose by an impressive 44 per cent, that from fossil fuels rose by 12 per cent. Alas, the atmosphere responds to emissions, not good intentions: we have been running forward, but going backwards.

Against this background, the second element may be labelled as 'the convergence towards an ecological transition *from below*'. Here, what needs to be analytically emphasized – before assessing a healthy plurality of perspectives – is the necessity to address climate/environmental issues by *enlarging democratic*

spaces. Putting the market at the center of the green economy has engendered a process of ‘executivization’ of politics whose main victims have been mass parties and trade unions. Whatever forms social participation will find to infuse new energy in eco-policies, it will be by mobilizing workers and citizens in support of such policies. As the essays in this collection compellingly edited by Luca Novelli show, this requirement is simultaneously *political* and *scientific*.

With particular regard to the latter aspect, I would like to conclude by sharing one of the results of the H2020 project titled *JUST2CE – A Just Transition to Circular Economy*. As the following infographic tellingly elucidates, while most literature on the role of labor in circular economy (but it is reasonable to hypothesize that the same dynamics apply to ecological transition as a whole) focus on *quantity* (how many jobs are going to be created in a given CE scenario?), some do engage with *quality*, but only in the form of ‘decent work’ (are minimal working conditions’ standards respected by CE policies?).



Figure 1. JUST2CE infographic <https://just2ce.eu/infographies/>

Hence, investigating the ecological transition *from below*, namely by conceiving of workers (and citizens, for that matter) as proactive agents of desirable change, with the right to decide

not only the conditions of production but also its qualitative composition – namely what should or should not be produced based on use values – is far from being the norm in most labor-related CE literature. In the vast majority of cases, academia, private foundations and public institutions alike still assume workers (and citizens) as merely passive recipients of top-down decisions regarding environmental design and policies, with their implementation being even more removed from democratic control.

A deeper emphasis on workers' agency in ecological initiatives would enrich the concept of decent work and overcome the limitations of a narrow focus on green jobs and economic growth. From a more political perspective, workers' and citizens' subjectivity should be regarded as key in two main ways: enabling them to take pride in and receive recognition for their work and social activism, and empowering them as fundamental enablers of the eco-transition to a veritable sustainability.

I believe both these ways are given concrete consistency by the analyses readers will find in the next pages. There, political passion and scientific accuracy are abundant: let me thank the authors and editor for their extremely useful work.

Introduction

Connecting the ecological transition with political participation: worker-based and community-based mobilisations in industrial territories

Luca Novelli

The ecological transition is a complex and multidimensional process. The concept consists of two terms: “transition”, which refers to an oriented path, and “ecological,” which denotes the goal of this path. As the European Union Member States commit themselves to the achievement of carbon neutrality by the year 2050, the theme is becoming more salient in the public debate, generating polarizing opinions. The social and political demand for alternative and green development strategies is increasingly supported: hence, it is imperative that European economies are committed to a structural process of recalibration of consumption and production.

However, the term *ecological transition*, despite various conceptualizations, has soon acquired the characteristics of a contested concept: different actors adapt different meanings, according to their strategic and political goals. In fact, the claims of the transnational environmentalist movements have been narratively subsumed by companies – even, and especially, the less “green” ones. This device has produced a containment of the groundbreaking and possibly transformative capacity of this concept, suddenly reverted to a new opportunity for sustain capital accumulation, and to greenwash extractivist and fossil-based economic activities, i.e. based on an intensive exploitation of organic or inorganic natural resources which typically result in environmental damages and climate alteration.

Against this backdrop, the hegemonic framework for politics and business is the Ecological Modernisation Theory (EMT) (Spaargaren and Mol, 1992). In a nutshell this approach claims

that every ecological problem can be addressed through a technological solution. In broader terms, ecological modernization considers technological and economic development as sufficient for improving society's environmental performance; the perspective is, on the one hand, to "ecologize the economy" through the adoption of green production technologies; on the other hand, to "economize ecology," incorporating the environmental cost of goods and services into their prices (Greco and Bagnardi, 2018).

Nonetheless, this sight is contested by some segments of the society, and especially in those territories at the "front line", in which environmental damages produce by climate altering industrial activities typically match with socio-economic and cultural segregation: these pages aim to give visibility to these political experiences and discuss some paradigmatic cases. In fact, this "affirmative" conceptualization of the ecological transition is opposed by more critical positions, which are described as "transformative" and fundamentally question the nexus between the economy (understood as the production and distribution of goods and services), the environmental sphere, and the social sphere (Stavis and Felli, 2020). An example is the post-growth theory which conceptualises the ecological transition as a socio-economic shift towards development models that do not foresee economic growth (post growth), thus questioning the logic of profit as the driving force of modernization and development (Kallis, 2018). The feminist critique, on the other hand, conceptualizes production, especially industrial production – the heart of value generation in modern economies – as detrimental to social reproduction, in terms of both harm to human health and biosphere degradation, i.e., the progressive and encompassing worsening of the bio-chemical equilibrium needed for life to continue (Barca, 2020). Also, in an intersectional perspective, the concept of "sacrifice zones" (Bullard, 1990; Lerner, 2012) sheds light on the cumulative inequalities affecting the territories in which industrial facilities are located: environmental and health damages are often accompanied by social exclusion and possibly ethnic segregation.

Reflecting upon the challenges of the ecological transition in European societies, the achievement of a post-carbon society necessitates extensive mobilisation to gather the consensus needed for decarbonisation. The involvement of citizens and workers is a priority for the success of the European Green Deal and

the related policy packages, such as “Fit for 55”. This, however, should not result in the mere formal consultation of local communities in the implementation of top-down policymaking. The ecological transition should not be a vertical process: it requires – and will require – unprecedented social collaboration and political participation; it should be horizontal and inclusive, collaborative and participative, to produce positive effects on behalf of the most socially vulnerable groups. To make the ecological transition an effective process, it is necessary to design its decision-making mechanisms in an inclusive and participative manner. The objective is twofold: on the one hand, democratic citizenship should be exerted, on the other hand, policymaking should be opened towards more horizontal practices.

In light of these general considerations and acknowledging that the ecological transition will have an uneven impact on workers, communities, and territories, this publication aims at tracing some community and worker-based mobilisations that occur in the industrial territories: in these pages, democratic participation has been primarily interpreted in terms of grassroots activation of organized citizens and workers.

This publication adopts a dual perspective. On the one hand, there are the workers whose livelihood depend on work in these facilities, which are highly polluting but also capable – even if less and less – of distributing income to blue-collar employees (and, arguably, profits to the owners). In this regard, the experiences of the working class in dealing with daily exposure to *noxiousness*, and the strategies adopted to cope with the peculiar arrangement of productive factors and managerial choices that amount to “employment blackmail”, are of particular interest (Feltrin and Sacchetto, 2021). The term employment blackmail refers to the situation in monopsonistic labour markets (Tomassetti, 2020) in which workers are forced to accept jobs that expose them daily to toxic and harmful substances. On this “odious” (Curcio, 2014) dilemma between health and work, significant struggles and political platforms have developed (Barca and Leonardi, 2016, 2018). In this regard, the analysis of the GKN Factory Collective is particularly interesting. Building on this discourse, the GKN Factory Collective (GKN et al., 2022) – as testified in a text published by Fondazione Giangiacomo Feltrinelli – goes further by scaling up to interrogate the climate dimension. They develop strategies to decouple production from

the climate-altering impact that has caused, and is causing, the climate crisis.

A second perspective focuses instead on the activation, within these “industrial” communities, of social actors: from environmental associations, social movements, and civic activism. These individuals and groups actively seek to develop strategies and actions to envision a green future: it is crucial to address these experiences, because it is here that the global dimension of climate change converges with the local impacts of highly polluting industrial production, and here the ecological transition must set off from.

Accordingly, the initiatives and elaborations coming from these “left-behind places” (Bez and Virgillito, 2024) fully align with the objective of mapping and disseminating best practices related to democratic participation, envisioned from a bottom-up, inclusive, and horizontal perspective. In these pages, the aim has been to highlight these voices and contexts, with the belief that the political and cultural urgency of these experiences should be central to the discussion on democratic participation concerning environmental and climate issues.

This publication is built around four essays. Their disposition in the text follows a logical order.

The first text is written by Charlotte Sophia Bez and is aimed at giving a conceptual framework to what will follow, i.e. the study of political activation in industrial territories. This text develops the heuristic concept of “left-behind places”, useful to illuminate the stratification of social and environmental inequalities that typically occur in geographies characterized by the presence of heavy industries. Such stratification is commonly defined as environmental inequality. Following an institutionalist approach and backed up by empirical evidence, the text shows the lock-in mechanisms that prevent economic diversification, looking at spatial power dynamics, path dependency, and job segregation. This chapter shows how pollution and economic backwardness are intertwined, how spatial inequalities are reproduced in time through an industrial-technological dependence without sufficient support for transitioning, how these industrial territories ended up bearing the environmental and social costs of national economic growth, eventually becoming “sacrifice zones”.

After this conceptual chapter, the publication goes through two case studies and a comparative essay.

The chapter by Lorenzo Feltrin and Gabriela Julio Medel illustrates the case of the petrochemical complex of Porto Marghera, near Venice. Here the focus is on trajectories of community- and workplace-centred mobilisation in dealing with noxious petrochemical production. The text illustrates the different positions taken by the two groups of actors and the different understandings on the nexus between the job-environment dilemma. For the community-centred “front”, Porto Marghera’s chemical industrial pole constituted an unacceptable source of risk and health damage for the densely populated area, due to toxic emissions, the contamination of soil and water, and the storage of hazardous substances such as chlorine, vinyl chloride monomer (VCM) and highly lethal phosgene, all known to cause health as well as environmental damage. The workplace-centred front, while agreeing that the plant had been a major source of noxiousness in the past, argued instead that due to technical improvements existing since the 1970s, it was possible to achieve a sustainable cohabitation between the chlorine cycle and communities.

In a similar fashion, the text by Ilaria Boniburini and Alessandro Esposito looks at another local mobilisation, that of Taranto. This town of roughly 200,000 inhabitants, located in the Apulia region in the South of Italy has been experiencing a deep socio-ecological crisis connected to ex-ILVA, one of the oldest and to date the largest operating steel plant in Europe. In this context, they develop an analysis of “Piano Taranto” (Taranto Plan, in English), a planning strategy presented in the form of a document and drafted through a grassroots participatory process between 2017 and 2018. The objective of this article is to present the Taranto Plan as an example of bottom-up planning, resulting from a popular and “green” mobilisation, aimed at envisaging and imaging a “post-ILVA” future for Taranto, i.e. proposing a radical alternative to the current monocultural economy.

Lastly, comparing the Taranto case with a similar one, the contribution by Maristella Cacciapaglia provides an analysis on the governance related to the pathways of urban renewal and economic restructuring in Taranto and Pittsburgh, two steel cities. This study critically investigates participatory urban governance in the two cases, with a specific focus on the processes of

change affecting them. In particular, it examines the participation by socioeconomically vulnerable segments of the population in the processes of urban regeneration and economic reconversion that have taken place and are taking place in both cities, showing the limits of this kind of urban governance, branded as “participatory” while orientated at fostering capital accumulation and profit-making.

References

- Barca, S., (2020). *Forces of reproduction. Notes for a counter-hegemonic Anthropocene*. Cambridge: Cambridge University Press.
- Barca, S., and Leonardi E., (2016). Working-class communities and ecology: reframing environmental justice around the ilva steel plant in taranto (apulia, italy). *Class, inequality and community development*. Bristol: Policy Press, 59–75.
- Barca, S., and Leonardi E., (2018). Working-class ecology and union politics: a conceptual topology. *Globalizations*, 15(4): 487–503
- Bez, C., and Virgillito M. E., (2024). Toxic pollution and employment dynamics: uncovering europe’s left-behind places. *Forthcoming in Review of Regional Research*.
- Bullard, R. D. (1990). *Dumping in Dixie: Race, class, and environmental quality*. Boulder: Westview Press.
- Curcio, R., (2014). *Il pane e la morte*. Roma: Sensibili alle foglie.
- Feltrin, L., and Sacchetto, D., (2021) ‘The work-technology nexus and working-class environmentalism: Workerism versus capitalist noxiousness in Italy’s long 1968’. *Theory and Society*, 50(5), 815-835.
- Collettivo GKN et al., (2022). *Un piano per il futuro della fabbrica di Firenze: Dall'ex GKN alla Fabbrica socialmente integrata*. Milan: Fondazione Giangiacomo Feltrinelli editore.
- Greco, L., and Bagnardi F., (2018). In the name of science and technology: the post-political environmental debate and the taranto steel plant (italy). *Environmental values*, 27(5): 489–512
- Kallis, G., (2018). *Degrowth*. Newcastle upon Tyne: Agenda Publishing.
- Spaargaren, G., and Mol A.P.J., (1992). Sociology, environment, and modernity: Ecological modernization as a theory of social change. *Society and Natural Resources* 5(4): 323–344.
- Stavis, D., and Felli R., (2020). Planetary just transition? How inclusive and how Just? *Earth System Governance*, Volume 6.
- Tomasetti, P., (2020). From Treadmill of Production to Just Transition and Beyond. *European Journal of Industrial Relations*, 26(4): 439–457.

1.

Policy and politics in left-behind places where heavy industries are present

Charlotte Sophia Bez

Introduction

This chapter examines policy and politics in Europe's left-behind regions, characterized by the presence of heavy industry, in order to trace their role in democratic participation. I explore how these regions' environmental challenges hinder the shift toward low-carbon initiatives and propose strategies to overcome these hurdles.

Our research illustrates a significant link between environmental and social inequality, often described as environmental injustice, backed by empirical data. Energy-intensive and polluting industries, like energy, minerals, metals, and chemicals have led to socioeconomic deprivation in certain European areas over time. This perpetuates the creation of marginalised zones within capitalist centers, isolating both places and people. Our findings reveal that pollution and economic disparity are intertwined, perpetuating spatial inequality across time. These factors, when combined, reinforce each other, forming a crucial aspect of ongoing spatial inequality. Focusing on these 'left-behind places' perpetuates inequality, trapping regions in a cycle of industrial-technological dependence without sufficient support for transitioning. These disadvantaged regions commonly bear the burden of polluting industries, sacrificed for national economic growth, despite the health implications for their residents, often in exchange for promised employment opportunities.

The chapter is structured in four parts, each delving into distinct aspects of the link between left-behind places and heavy

industries. Section 1 sets the framework by defining and characterizing the environmental dimension of left-behind places, encompassing the geography of industrial pollution, its health and disproportional impacts. Section 2 navigates through the mechanisms, discussing spatial power dynamics, path dependency and job segregation. Section 3 highlights the political importance of these regions, exploring their connections to right-wing populism, environmental justice communities, and the lessons drawn from NIMBYism. Finally, Section 4 outlines an agenda for left-behind places, addressing labour-driven challenges such as job dynamics and unravelling the political complexities of these regions. Each Section contributes to explaining the importance of democratic participation as a pivotal driver of socially just transitions.

1. The environmental dimension of left-behind places

This Section analyses the to-be-decarbonised sectors in more detail, based on a disaggregated mapping of industrial activity in Europe. Among other things, the following key questions are addressed. What is meant by left-behind places? In which socio-economic contexts do the most energy-intensive and polluting factories operate? How do health and environmental pollution map onto those socio-economic contexts?

1.1 What is meant by left-behind places?

‘Left-behind’ places refers to the concept of a geographic zone characterised by socio-economic deprivation (see, e.g., Pike et al., 2023). They share common challenges like the experience of economic stagnation or even decline, depressed wages, and demographic loss. These left-behind places have faced significant challenges, either due to difficulties in recovering from industrial decline and population loss resulting from structural change, or due to a lack of industrialization in the first place. This is often coupled with the overarching sense of neglect from policy interventions and economic revitalization efforts. This has been expressed as a feeling of political exclusion, a general notion of having been forgotten or being irrelevant (Rodríguez-Pose, 2018; Hendrickson et al., 2018; Antonucci et al., 2017). Such authors argue that this sense of exclusion often translates

into diminished political participation or support for populist movements, as residents feel alienated from traditional political structures and decision-making processes, hence highlighting the subjective process that left-behindness entails.

The ballot box in form of populist surges brought to the forefront socio-economic inequalities that have grown out of long-term tendencies but have often been neglected by the economics literature. Hence, while deindustrialised, marginalised and declining areas have moved out of policy focus, their urgent political relevance, for instance through Brexit (Goodwin and Heath, 2016; Antonucci et al., 2017), has sparked general renewed policy attention. This makes the case for a politization of left-behind places.

1.2 The geography of industrial pollution

Industrial facilities, especially operating in the coal, steel, petrochemical, and cement industries, are embedded in Europe's regions and their emissions are considered hard to abate. This Section provides insights into the geography of industrial facilities by giving examples, and by tracing the connection with health and environmental disparities.

The geography of heavy industry in Europe is characterized by concentrated clusters. These regions are often strategically located near key resources such as energy sources and transportation infrastructure, e.g., river valleys, such as the Rhine and the Danube. The Ruhr Valley in Germany, for instance, stands as a prominent example with a historic legacy as a coal and steel manufacturing hub in Western Germany (Grabher, 1993). These highly specialized regional industries are marked by intense interfirm linkages and as well as strong regional political institutions. Many traditional manufacturing strongholds have experienced a significant decline in employment since the 1960s, even as some facilities continue to operate, either with reduced output or increased automation (Feltrin et al., 2022).

In fact, heavy industry is responsible for a lion's share of Europe's point-source CO₂ emissions that contribute to global warming. At the same time, they emit large quantities of local toxic air pollutants - for instance, heavy metals - that pose an immediate public health threat to local communities and cause

environmental degradation. The map below shows the spatial distribution of facilities in the heavy industries in 15 European countries, by broad activity (see legend). It shows patterns of clusterisation of toxic pollution, indicating that a highly polluted region is likely to be in geographical proximity to another polluted region. Such clusters are visible in particular in Spain, the UK, Germany, Poland, the Czech Republic, and Romania. Moreover, the map shows that polluted places are capturing both the deindustrialized (e.g., West Germany) as well as rural types of geographies (e.g, Finland).

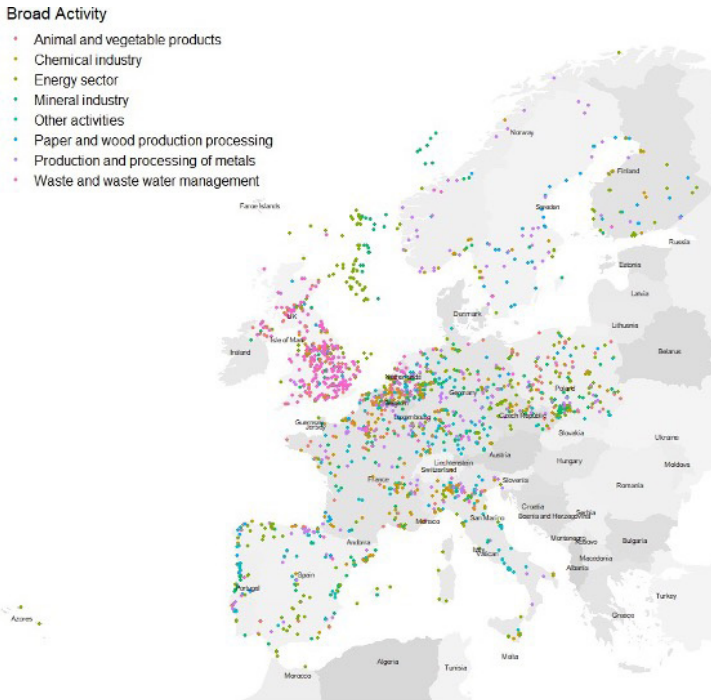


Figure 1.1: Spatial distribution of facilities in the heavy industries in 15 European countries. The color of the dots indicates industry, size of the dot indicates toxic pollution intensity over 2007-2018. Source: own calculation based on E-PRTR (European Commission, 2006).

Who are those polluting facilities and which sectors do

they operate in? The top-ten polluting facilities of the four most toxic sectors (energy, metals, minerals, chemicals), are presented in Table 1. It lists the names of the facilities as well as the countries and cities that host such facilities, sourced from the European Pollutant Release and Transfer Register (E-PRTR) dataset (European Commission, 2006).

<i>Name of Facility</i>	<i>Country</i>	<i>City</i>	<i>Log Poll.</i>
Energy			
PGE Górnictwo i Energetyka Konwencjonalna	PL	Rogowiec	12,61875
PPC S.A. SES AGIOY DHMHTRIOY	GR	Agios Dimitrios	12,58762
Drax Power Station EPR/VP3530LS	GB	Selby	12,24817
ENEA Wytwarzanie Polsce energii	PL	Swierzach Górnych	12,01695
LEAG Lausitz Energie Kraftwerk Lippendorf	DE	Neukieritzsch	11,81845
LEAG, Kraftwerk Jänschwalde	DE	Teichland	11,77331
RWE Power AG Kraftwerk Niederaußem	DE	Bergheim	11,66642
RAFFINERIA DI GELA SPA	IT	Gela	11,48725
Elektrownia ZE PAK S.A. Patnów	PL	Konin	11,45654
Elektrowni Adamów	PL	Turek	11,44843
Metals			
ArcelorMittal Italia (ex-ILVA)	IT	Taranto	14,15508
Outokumpu Chrome&Stainless Oy, Tornion	FI	Tornio	13,63423
ACCIAI SPECIALI TERNI - stabilimento di TERNI	IT	Terni	12,89282
Tata Steel IJmuiden BV	NL	Velsen-Noord	12,60091
ArcelorMittal Fos Sur Mer	FR	Fos Sur Mer	12,14459
ArcelorMittal Dabrowa Górnicza steel plant	PL	Dabrowie Górniczej	12,01051
thyssenkrupp Steel Europe Werk Schwelgern	DE	Duisburg	12,00896
ARCELORMITTAL FRANCE	FR	Dunkerque	11,77123
Port Talbot Steelworks Tata Steel	GB	Port Talbot	11,73189
ARCELORMITTAL LIEGE sa (Coke-Fonte)	BE	Ougree	11,62174

<i>Name of Facility</i>	<i>Country</i>	<i>City</i>	<i>Log Poll.</i>
Minerals			
CBR sa - Site de Lixhe	BE	Lixhe	10,49804
HOLCIM Belgique sa - Usine d'OBourg	BE	Obourg	10,31415
CEMEX Polska Cementownia Chelm	PL	Chelm	9,582096
CCB sa - Site de Gaurain-Ramecroix	BE	Gaurain-Ramecroix	9,302887
TITAN CEMENT S.A. - KAMARI PLANT	GR	Kamari	9,148636
Whitwell Works	GB	Worksop	9,146606
HERACLES G.C.Co, VOLOS PLANT	GR	Portaria	9,055297
Górażdze Cement S.A. - Cementownia	PL	Chorula	9,026553
VERALLIA FRANCE	FR	Chalon sur Saone	9,007586
Grupa Ożarów S.A.	PL	Karsy	8,876104
Chemicals			
Runcorn Halochemicals EPR/BS5428IP	GB	Runcorn	12,17456
INOVYN FRANCE	FR	Tavaux	11,20224
KEM ONE LAVERA	FR	Martigues	10,86025
NAPHTACHIMIE	FR	Martigues	10,74064
SC CHIM COMPLEX S.A. Borzesti	RO	Ramnicu Valcea	10,52307
BASF SE	DE	Ludwigshafen a.R.	10,0455
VYNOVA BELGIUM	BE	Tessengerlo	9,865824
Spolana Neratovice	CZ	Neratovice	9,709022
ORLEN Unipetrol RPA	CZ	Litvínov	9,68126
ThermPhos International BV	NL	Ritthem	9,323645

Table 1.1: Top-10 polluting facilities that operate in the energy, metals, minerals, and chemicals industries. Pollution refers to air pol-

lution, released at the facility level, and weighted by toxicity. Source: own calculation based on E-PRTR (European Commission).

1.3 Example of Europe's biggest steel factory

Table 1 above suggests that the most polluting industrial facility in the metals sector belongs to ArcelorMittal Italia (ex-ILVA), situated in Taranto in the South of Italy, where steel production takes place (also refer to the contributions of Boniburini and Esposito, and Cacciapaglia). The ex-ILVA steel plant is depicted in Figure 2 and has been the subject of many scholarly articles, public debates and environmental lawsuits due to its profound impact on the surrounding environment, public health concerns, and the broader industrial landscape surrounding Taranto.

Europe's largest steelwork ex-ILVA exemplifies a situation where the plant didn't update its production technology or invest in improving production methods, creating a conflict between job availability and health risks. The plant's management historically resisted adopting better practices, leading to a heavy reliance on the area's single industry for jobs. This path dependency (Greco and Di Fabbio, 2014) - has made the region economically vulnerable to structural dynamics such as decarbonization efforts. Lack of industry diversity is coupled with multiple dimensions of environmental inequities, such as ill health and deaths attributed to toxic chemicals coming from the plant, and employment and wage levels below the Italian average (Barca and Leonardi, 2016).

How toxic pollution connects to health and environment

Emissions of CO₂ and local air pollution are closely linked. Site-specific local air pollutants are known in the academic literature as "co-pollutants", and include for instance sulfur oxides (SO_x) and nitrogen oxides (NO_x), particulate matter (PM₁₀) and volatile organic compounds (VOCs). Those air pollutants are known to have far-reaching consequences on the economy, i.e., labor productivity (Neidell et al., 2023) and GDP (Muller and Mendelsohn, 2007).

Moreover, local air pollution ultimately reduces life expectancy, as shown extensively for the US (Bennett et al., 2019) and for Europe (Rodriguez-Alvarez, 2021). Indeed, industrial pollu-

tants pose significant health risks to humans. Long-term exposure to sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulate matter (PM), and volatile organic compounds ($VOCs$) may increase the risk of chronic respiratory diseases Hormati et al. (2022). Fine particulate matter ($PM_{2.5}$) can lead to cardiovascular issues such as heart attacks and strokes (Mills et al., 2009). Heavy metals like arsenic and chromium are associated with increased cancer risk (Ortega-García et al., 2017). Further, lead and mercury are neurotoxic and can lead to cognitive impairments, learning disabilities, and behavioural problems (Genc et al., 2012).

Moreover, industrial pollutants have significant effects on the environment, ranging from air quality degradation to acid rain (Cass, 2013), water pollution, and soil contamination. This is often caused by heavy metals, persistent organic pollutants (POPs), and other chemicals that accumulate in the soil and lead to contamination of entire areas. Soil contamination is further linked with legacy pollution, referring to pollutants left in the environment by sources that no longer emit them, such as plants that have closed down in the name of deindustrialisation or delocalisation (Bez et al., 2024). Legacy pollutants are often persistent in the environment, such as persistent organic pollutants (POPs) - banned since the 2001 Stockholm Convention -, polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs).

Exposure to toxic harm coupled with the slow decay of chemical change maintains and reinforces regional divergences. This has been coined by Rob Nixon as “slow violence” (Nixon, 2011; Davies, 2022), referring to a concept of graduality that results in long-term, persistent, and chronic impacts on the health of communities and ecosystems. According to Nixon, exposure to toxic chemicals, exemplified by the petrochemical industry, creates a toxic geography of daily environmental concerns (Davies, 2018). Hence, through chemical toxicity, industrial pollution connects to both health and environmental issues.

How evidence of disproportionality and inequality are connected

Disproportionality of industrial pollution is crucial to understanding the environmental dimension of left-behind places and addressing environmental justice concerns. As touched upon above, environmental pollution is characterised by dispropor-

tionality from both a production and exposure point of view, a characteristic that is often overlooked but crucial for effective and just policy design.

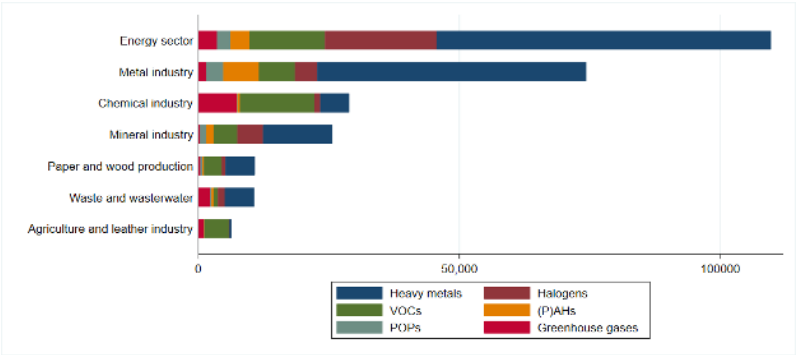


Figure 1.3: Total toxic pollution by industry, disaggregated by pollutant groups, and ranked from industry with highest toxic pollution to lowest, over 2007–2018. The pollutant groups are: greenhouse gases, halogens, heavy metals, polycyclic aromatic hydrocarbons (PAHs), persistent organic pollutants (POPs), volatile organic compounds (VOCs). Source: own calculation based on E-PRTR, see Bez and Virgillito (2022).

From the *production* point of view, and as shown in Table 1, there is evidence for a small number of sectors being responsible for a large portion of industrial pollution. Furthermore, within those sectors, some plants are polluting a lot more than others, also after normalising for size (Ash and Boyce, 2011; Freudenburg, 2005). They have been coined ‘toxic outliers’ in the literature, and framed within the environmental inequality discourse (Collins et al., 2016). Figure 1.3 illustrates disproportionality of pollution production by different heavy industries in Europe. The sector that emits the largest amount of toxic pollution is the energy sector, mostly due to coal-fired power plants, at the same time also the main point-source contributor of CO₂ emissions (Zwickl et al., 2024). The metal industry is ranked second, followed by chemicals and minerals.

From the *exposure* point of view, there is disproportionality in the distribution of environmental pollution and risk across

regions, see Ash and Boyce (2011, 2018); Ard (2015); Ringquist (1997). One of the core concepts to study the inequities in distributions is that of “environmental inequality”, a lens to analyze the uneven distribution of burdens caused by polluting and hazardous industries. However, it goes well beyond the simple analysis of geographic and distributional aspects but extends to sustainable materialism¹ that acknowledge power and consider the environment to pave conditions for social justice, as argued in Schlosberg (2013). European scholarship on distributional inequities has been accelerating over the last ten years, and the relevance of disproportionality of environmental burdens on vulnerable populations has long been proven (Laurian and Funderburg, 2014; Rüttenauer and Best, 2021; Walker et al., 2005). For instance, Ganzleben and Kazmierczak (2020) explores evidence provided by the European Environment Agency (EEA), finding environmental inequality in terms of disproportional exposure to air pollution, noise and high temperatures both across European regions and across socio-economic groups. Further, Rüttenauer (2019) and Glatter-Götz et al. (2019), focusing on Germany and Austria, respectively, have used georeferenced facility-level pollution data from the European Pollutant Release and Transfer Register (E-PRTR). They both find empirical evidence for immigrant minorities being more likely to live in direct proximity to industrial sites.

A vast collection of interdisciplinary research seeks to identify common socio-economic characteristics in exposed populations to environmental harm to uncover the presence of environmental inequalities across space (see, for instance Newell, 2005). They show that communities that host polluting sites differ from those that do not, in terms of race, class, and poverty. Environmental inequality researchers have looked at different proxies for environmental hazards to study the socioeconomic distribution around them. Such proxies include the study of hazardous waste sites, and manufacturing facilities that release toxic local

¹ Sustainable materialism is the idea that the material everyday life experience is a function of the status of the natural world, a conception that has increased in urgency with climate change and other ecological crises. Hence, labour and industry demands reaching from green jobs to green technologies are core elements of current environmental justice demands (Schlosberg, 2013).

pollutants² (Ash and Fetter, 2004; Bowen et al., 1995; Glatte-Götz et al., 2019; Rüttenauer and Best, 2021; Zwickl et al., 2014), particulate air pollution (Bell and Ebisu, 2012; Jerrett et al., 2001), waste incinerators and landfills (Funderburg and Laurian, 2015; Martuzzi et al., 2010; Pellow, 2004), nuclear waste (Kyne and Bolin, 2016), illegal dumping of toxins (Banzhaf et al., 2019), and more specific for the US context on superfund sites³ (Denq et al., 2000; Hird, 1993; Stretesky and Hogan, 1998) and on fracking (Clough, 2018; Zwickl, 2019). Commonly cited problems include exposure to toxins, dust, odour, noise, illegal dumping, and chemical runoff into neighbourhoods and nearby water bodies. This illustrates how environmental justice departs from the conception that the environment is to what people are exposed to on an everyday basis and where people live and work (Novotny, 2000), as opposed to a more abstract, natural world. Hence, issues of public and occupational health are closely connected issues.

1.4 Connecting the dots

Finally, which implications can be drawn from the insights of the geography of industrial pollution and the socio-economic fabric of what has been coined “the left behind”? Combined, they conceptualize the environmental dimension of left-behind places, a concept that uncovers the stratification of socio-economic and environmental risks. The focus on heavy industries allows us to underline the link with the environment, which has received less attention in regional inequalities studies. In that sense, Leyshon (2021) offers a way to look at uneven regional development through the lens of crises, which include the environmental and climate crises.

Taken together, tracing the environmental dimension of left-

² Here, the United States Environmental Protection Agency's Toxic Release Inventory provides a widely used database to study toxic industrial pollution at the point-source level, see for instance in Ash and Boyce (2018); Ash and Fetter (2004).

³ The Superfund is an environmental remediation program within the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) established in 1980 which gives the Environmental Protection Agency (EPA) the economic agency to clean up the nation's most polluted sites (Superfund, 2022)

behind places is one of the core questions that this Section seeks to explore. It is a development that has so far taken place insidiously. However, spatial inequality urgently needs to be addressed - not only because of the growing right-wing populism in structurally weak regions that threaten environmental policy-making but also as an important factor in social participation toward envisaging a socio-ecological transformation. Indeed, many places with low economic diversification and stagnating wages depend on heavy industries, as I have illustrated for the industrial city of Taranto. Hence, left-behind places where heavy industries operate face a combination of social, economic, and environmental problems that lead to a cumulative disadvantage. As I show, many such places depend on fossil and other toxic industries, mainly producing raw materials, such as metals, minerals, and coal. This makes the case for understanding the material histories and theoretical workings of left-behind places, which will be explored in Section 2.

2. Exploring the channels

The present Section proposes three channels, spatial power dynamics, path dependency and job segregation.

2.1 Spatial power dynamics

The spatiality of power, evident in the creation and perpetuation of left-behind places, illustrates how certain regions suffer from environmental degradation and economic deprivation due to imposed power structures. Here, power is defined in relational sense, encompassing institutional, corporate, and systemic power. The concept of left-behind regions affected by toxic pollution marks regions where socio-economic erosion is crucial for perpetuating spatial power differences between cores and peripheries (Massey, 2009). Industries posing more significant threats to human health, being dirtier and more hazardous, contribute notably to the spatiality of power. The gradual decay associated with exposure to toxic harm reinforces regional disparities, marking regions as sacrifice zones where power is imposed, allowing the 'right to pollute' through naturalised economic power (see the pioneering work of Freudenburg, 2005).

Core-periphery research takes up the concept of disadvanta-

ged and left-behind regions, even though it has received little attention within the environmental justice literature. The former interprets peripheralised regions within overarching processes associated with the globalising economy that leads to regional polarisation that informs regional development research and lastly urban policy. This meta-geographical taxonomy sheds light on who bears the consequences of our economic system (Newell and Mulvaney, 2013). It reflects power dynamics, showcasing how environmental degradation aligns with other social inequalities and global financial instability. According to Chomsky and Pollin (2020), capitalist institutions and ideologies are deeply entrenched in the destruction of nature and resource exploitation. Mohai et al. (2009) argue that these ‘side effects’ represent industries externalizing social and environmental costs, often with complicity from regulatory bodies.

The process of uneven impact, at the local level, has also been studied by economic geographers and in the framework of land policy. This pattern of spatial inequality has been coined the process of ‘peripheralisation’ (Blowers and Leroy, 1994). This landscape of centre-periphery arguably created and reinforced conflicts between interest and the imposition of power. For instance, a manufacturing or fossil fuel company could base its location decision on a polluting site based on lower anticipated organised resistance or even tap into the narrative of ‘jobs versus pollution’ (see Ash and Boyce, 2018, for a facility-level analysis that proves this narrative wrong).

2.2 Path of least resistance and siting versus sorting

Another important channel looks at “which came first, people or pollution” (Mohai and Saha, 2015). The literature attempting to identify potential causal mechanisms behind the observed correlations has used longitudinal analyses that focus on the unequal siting and sorting decisions (post-siting) of facilities and social groups. Most results suggest that disproportionate siting near concentrations of poor people and people of colour is a driver of environmental inequities, e.g., in Laurian and Funderburg (2014) and Rüttenauer and Best (2022) for Europe and, most saliently, Mohai and Saha (2015) for the United States. A mechanism often put forward to explaining sorting, i.e., when disadvantaged communities move to or disproportiona-

tely stay in polluted areas, is housing market dynamics, framed as an economically rational tradeoff of pollution for lower property values and rents, assuming that the environment is a normal good (Kahn and Matsusaka, 1997). Siting versus sorting is also a matter of static versus dynamic behaviour as potential drivers of uneven development and peripheralisation: a condition of ex-ante community disadvantage that favours the choice to locate polluting plants in these areas because they are less economically valuable than white or rich communities (siting), versus a condition of dynamic disadvantage, i.e., through the attraction of non-white or poor people in the polluted areas because the cost of living is lower or mobility of the rich out of these places (sorting).

Hence, the mechanisms behind environmental inequalities crucially include the siting versus sorting debate. The political economy of disparate siting includes anticipated weaker organised resistance or even increased public acceptance due to promises of economic development or even welcome for the desirable prospect of economic development (Phillimore and Moffatt, 2004), a narrative that has been coined ‘job blackmail’ by some scholars, see for instance Bullard (2019). Other aspects of siting decisions include low land prices, especially greenfields, the presence of beneficial industrial infrastructure such as proximity to roads, and a relatively cheap workforce (for instance Mohai and Saha, 2015). Sorting decisions or residential mobility, for instance, studied by Rüttenauer (2018), depart from the notion that the well-off move away while the worse-off are forced to stay, and cheaper housing spurs clustering dynamics of disadvantaged social groups (see, again, Mohai and Saha, 2015).

2.3 Rigid specialization trap and job segregation

Having a very polluting factory in an area can harm the local economy in several ways. It can lead to rigid specialization traps and job segregation, implying fewer job opportunities in the long run (Iammarino et al. 2019). To understand how regions develop into existing technologies and growth paths, we must pay attention to the drivers of regional diversification. In fact, lock-ins entail place and history-dependent paths that occur by means of the continuous reproduction of localised knowledge and socio-technological regimes (Cimoli and Dosi, 1995).

Heavy industry in particular faces peculiar technological regimes of innovation and competition. For instance, it is not susceptible to either high levels of innovation or intense competition. As a consequence, it seems that major polluters are often within-sector outliers characterised by a low rate of efficiency, indicating that environmental damage is often neither economically nor technologically required by the variety of production techniques available (often referred to as ‘toxic outliers’). In this respect, high-scale toxic pollution is a proxy for low-technological dynamism and absence of investment in efficient techniques of production, rather than a necessary externality.

Consider for instance the well-known case of the ex-ILVA steel plant in Taranto, Italy, which has been introduced in Section 1. The latter represents a clear combination of lack of technological upgrading, absence of investment in enhancing techniques of production and purported employment-health trade-off. The latter has been revealed by an ownership- managerial orientation historically resistant to promoting technical progress in the plant (Greco and Bagnardi, 2018). As a result, the mono-industrialisation pattern of the area has created a strong economic dependence in terms of job opportunities.

3. The risk of becoming politically consequential

How can spatial inequality be prevented from turning into exclusion and political back-lash? Economic deprivation and cultural shifts intertwine,⁴ fueling the surge of political backlash against elites and the political establishment, especially expressed by right-wing populism. This tension is heightened in left-behind places. Widespread economic deprivation due to events like the 2008-2009 global financial crisis and austerity measures, but also structural phenomena linked to globalization and automation amplifies risks of political backlash (Noury and Roland, 2020). This phenomenon has been coined ‘the revenge of the places that don’t matter’ as a result of local economic and industrial decline combined with social disadvantages, for instance,

⁴ I.e., economic deprivation can amplify cultural divides between cosmopolitanism and communitarianism.

Brexit (Goodwin and Heath, 2016), but also regional import shocks (Bez et al., 2023).

Addressing spatial inequality is crucial for at least two political reasons. Firstly, the rise of right-wing populism in left-behind regions threatens environmental policymaking. Secondly, it plays a vital role in enhancing democratic participation in envisioning a socio-ecological transformation. This Section highlights the political importance of these regions through the regional salience of right-wing populism. The framing of environmental justice communities and lessons drawn from NIMBYism provide tools for bottom-up policymaking, departing from the material realities on the ground. It aims to be a guide for where political participation could strategically depart from.

3.1 The left-behind and right-wing populism

The comeback of economic nationalism, with figures like Trump, Bolsonaro, and Brexit at its forefront, stands as the prevailing strain of populism today. This brand of politics strongly champions protectionism and isolationism as its core principles, aiming to safeguard domestic industries and workers. A central theme revolves around highlighting the interests and worries of ordinary people in contrast to the elites. This trend finds its roots in both economic and cultural factors, as I will explain.

Economic distress and regional disparities play a significant role in fostering populist sentiments (Rodríguez-Pose, 2018). Regions experiencing economic decline, loss of industries, and as an extension, jobs, or stagnant wages have been proven to be fertile ground for populist movements. Economic distress and regional disparities play a significant role in fostering populist sentiments. Regions experiencing economic decline, loss of industries, and as an extension, jobs, or stagnant wages have been proven to be fertile ground for populist movements. Indeed, globalisation and automation are two often cited examples with large distributional effects (Dorn et al., 2016; Acemoglu and Restrepo, 2018). For instance, there is substantial literature on the effects of globalisation on attitudes and voting, finding that trade exposure tilts voters in the nativist and authoritarian direction, a trend that arguably drives the support of radical-right policy platforms (Ballard-Rosa et al., 2021; Dippel et al., 2022;

Colantone and Stanig, 2018; Autor et al., 2020). The polarisation of political ideology in general (Dorn et al., 2016), and the increased support for nationalist and right-wing parties in particular (Colantone and Stanig, 2018) has been termed the 'globalisation backlash', referring to the political shift of voters and parties in a protectionist and isolationist direction, largely consistent with policy platforms of right-wing populist parties. Transitioning to a low-carbon economy and climate impacts imply reinforced or additional distributional consequences, and without appropriate perceived and actual compensation further political backlashes are to be expected (Vona, 2019). Generally, the rise of populism in Western democracies can be attributed to a general failure of compensation and representation (see Frieden, 2018).

Right-wing populism further tends to emphasize issues related to nationalism, immigration, and cultural identity. Industrial decline and structural change can threaten local cultural values and identities, and hence citizens could resonate with the cultural agenda of right-wing populist parties. Further, right-wing political agendas often go hand in hand with climate denial or delay (see, e.g., Jylhä et al., 2020; Dunlap and Brulle, 2020). The alignment between right-wing populism and climate denial stems from the scepticism and hostility toward climate action prevalent among political leaders and supporters. This association often roots itself in an ideological standpoint, emphasizing the conflict between 'the people' and a perceived elite. Such an ideologically driven explanation suggests that the antagonism within right-wing populism plays a pivotal role in obstructing support for effective climate policies (Lockwood, 2018). This explanation complements the material drivers in left-behind places, mainly centered around heightened vulnerability to industrial restructuring and conversion, induced by climate policies.

A plausible theoretical nexus emerges between the disenfranchised demographic associated with the 'left-behind' and environmental justice communities. The latter will be defined in the next Section. This linkage is predicated on shared sentiments of political neglect and socio-economic disadvantages. Notably, right-wing populist movements occasionally leverage these sentiments to resonate with marginalized communities, albeit without necessarily championing environmental justice or advocating for climate policies.

3.2 *Environmental justice communities*

As I have shown, environmental and social inequality tend towards stratification, which is often summarised under the term environmental injustice. As touched upon in the Sections above, an adjacent concept to that of environmental inequality and the interrelations between industrial pollution and socioeconomic disadvantages is that of Environmental Justice (EJ). The concept of justice has been studied by many economists (see, for instance, Sen, 2008) as a foundation of economic reasoning and measurement of human well-being. EJ advocates for the right to live in an environment free of pollution and other environmental hazards, and immediate threat to health, and the fair treatment and meaningful involvement of all people regardless of race, colour, national origin, or income with respect to the development, implementation and enforcement of environmental regulations.⁵

Different contexts look at different socio-economic vulnerabilities, expressed as racial minorities, for instance, Black and Brown communities, or immigrant communities more generally, the working class, the unemployed, and the poor. Across these areas of analysis, race and income emerge as consistent determinants of environmental inequality (Walker, 2012; Boyce, 2020). For instance, higher levels or closer proximity to environmental hazards are associated with decreased income levels and increased poverty rates.

Mounting evidence for the clustering of environmental harm in space and reproducing over time gave rise to the concept of disenfranchised, overburdened or disadvantaged communities. Their definition and identification vary across contexts and often include an analysis of economic disinvestment, environmental vulnerability and risk, disempowerment from decision-making, and peripheralisation. Those communities of interest are margin-

⁵ It has several dimensions, which include distributive, procedural and restorative justice (Kuehn, 2000). Generally, justice claims are made by linking evidence of a condition of inequality with a normative position on what is just or unjust. Concepts of political theory are borrowed to address normative questions, given that social scientists mostly prioritize positive research questions (Sayer, 2011). Hence, EJ distinguishes itself from environmental inequality which gives a descriptive account of a specific social group being disproportionately affected by environmental hazards.

alised both in terms of decision-making authority and in terms of economic and social prospects of growth. Policymakers sometimes use the term ‘environmental justice communities’ (Collins et al., 2016). All these definitions have in common the sensibility of socio-demographic characteristics and measures of the overburden of environmental harm. For advocates for environmental justice, it is a priority that those to whom injustice has been done start being included in decision-making processes of redressing past harms but also in the design and implementation of new environmental policies. The marginalisation of the many and environmental privileges for the few has mostly failed to be structurally addressed as corporate-led policies continue to exclude disadvantaged and unorganised populations (Faber et al., 2021). Further, as Schlosberg (2013) notes, participatory justice puts the focus on ‘speaking for oneself’, ensuring that marginalized voices are not only heard but also central in shaping equitable policies. This must be coupled with compensatory justice, demanding material and structural changes that rectify historical and systemic environmental inequities. The following Section further illustrates how a lack of participation and representation harms environmental justice.

Finally, I suggest that reclassifying communities traditionally referred to as “left behind” in regions dependent on heavy industries as EJ communities could enhance the emphasis on materialistic interests concerning environmental action and decarbonization efforts. This reclassification aims to underscore the perspective of positionality of environmental issues, i.e., enabling the elaboration of a working-class ecology by these communities affected by industrial activities (see Barca and Leonardi, 2018, on the concept of positionality).

3.3 *Lessons from NIMBYism*

Next, I trace the link between environmental justice communities and NIMBYism (“Not In My Back Yard”) (see, for instance, Esaiasson, 2014). This concept highlights the tension between advocating for environmental justice and the resistance to building harmful or burdensome infrastructure. NIMBYism can refer to various kinds of locally unwanted sites, such as airports, nuclear reactors, landfills, and wind farms. Here, I will focus on industrial facilities that operate in heavy industries, such as

coal-fired power plants, steel mills, cement factories, and oil refineries.

The common narrative assumes that such industrial facilities “have to go somewhere”, in the name of national economic growth through sustained industrial production. As a consequence, the issue is framed as a dilemma between satisfying a national need whilst seeking to accommodate the demands of those communities that must pay the cost of living in the direct proximity of environmental hazards. This conflict, starting with singular protests, has been widely coined as NIMBYism and gained prevalence in the 1980s.⁶ From the point of view of developers and facility siting authorities, gaining acceptance from local residents who resist anticipated personal and ecological harm is key to carrying out construction projects. The impact of NIMBYism protests often has been substantial and succeeded in avoiding harm in already disadvantaged communities and hence further aggravating environmental inequalities.

However, power differences that make some protest voices heard more than others can also entrench further injustices through NIMBYism. For instance, consider the infamous case of Warren county in North Carolina, USA, often cited as the originator of environmental justice struggles in the US, where the prevalently Black population has protested against a planned landfill of polychlorinated biphenyls (PCBs)⁷ (McGurty, 2009). The siting decision followed the path of least resistance (Schelly and Stretesky, 2009) with unwanted sites located near the voiceless, racialised and poor: it was indeed the NIMBY attitude by the white part of the city that resulted in the dump being located in a majority black neighbourhood, overhearing their protests. Not only is this considered to be the beginning of the environmental justice movement (Bullard et al., 2008), NIMBY was hence also acknowledged to give potentially rise to a ‘squeaky wheel gets the grease’ phenomenon, and the need for a universal ‘Not In Anyone’s Backyard’ (NIABY) was formulated in order to

⁶ The concept has been also used to look at public opposition to renewable energy technology infrastructures such as wind or solar farms (see, for instance, Smith and Klick, 2007; O’Neil, 2021, and in the Section below).

⁷ These highly carcinogenic chemical compounds are banned from production by United States federal law since 1978, and by the Stockholm Convention on Persistent Organic Pollutants since 2001.

prevent asymmetric power relations from harming disadvantaged communities and protect communities unequally (Bullard, 2018; Schaffer Boudet, 2011). Understanding the political economy of left-behind places is urgently needed to address the politics of the green transition and guarantee citizens' participatory processes. Activating citizens is crucial to overcome a potential lack of imagination for an alternative future after decades of industrial activity and normalisation of the status quo between socio-economic deprivation, ill health and the general feeling of political under-representation.

4. Towards an agenda of a just transition in left-behind regions

Transitioning towards a greener economy has direct effects on heavy industries and on workers affected by restructured or closing plants. Understanding what the affected communities want is imperative here, which highlights the importance of citizens' participation in left-behind places. However, first and foremost, it is imperative to move beyond the narrative that communities have to choose between jobs and good health, or between jobs and an intact environment. Put differently, there is a need to move from the geography of pollution to the geography of transitions. This is key to making sure that citizens in left-behind places do not find themselves on the losing end of the green transition. Left-behind places in general and workers in affected industries would have reason to become subjects in environmental struggles, due to their materialist dependencies on those toxic industries. Hence, policy-makers, in dialogue with communities, must find entry points to formulate a future agenda for a green transformation that has working-class environmentalism at its core. In what follows, I will situate working-class environmentalism in the context of industrial landscapes.

4.1 Overcoming the job blackmail and blue-green conflicts

The debate on the relation between environmental regulation and employment dates back to the early 1970s with the introduction of environmental and workplace protections in the US (Greenstone et al., 2012). Since then, there has been a widespread perception that environmental regulations limit econom-

ic growth and reduce employment. This concept has been theorised by Ehrlich and Holdren (1971) and Commoner (1972), who have popularised the proportionality hypothesis on human-environment relationships, assuming a linear trade-off between environmental deterioration and economic wealth. These theories form the backbone of the 'jobs versus environment' dilemma, an argument since then nurtured and fueled by industry interest groups and played back by political representatives. They make the case that economic growth and environmental protection are intrinsically opposing forces, often to justify the deregulation of the economy (see Coglianese and Carrigan, 2013).⁸ Conceiving this relationship as a zero-sum game has the consequence of producing a rift between labour and environmental organisations. Labour organisations and unions tend to ally with the industry as famously theorised in Schnaiberg's theory of the treadmill of production (Schnaiberg 1980, see also 2020).

In industrialised countries, one of the main debates fuelling such 'blue-green' conflicts revolves around the job-killing argument on environmental policy. At the core of the conceived 'jobs versus environment' dilemma - from the workers' point of view - is the decades-old concept of job blackmails, firstly theorised by Kazis and Grossman (1982). The term refers to the common corporate practice of threatening employees with a choice between secured employment and human-environmental health, a mechanism that seeks to normalize ecological contradictions in the publics' and workers' minds, hence conjuring that there is no alternative. Job blackmail is widely used against workers in large industrial complexes, whose operations pose major environmental and health hazards and hence face major regulation (Bullard, 2018).

However, it is also used in a broader context, whereby large-scale industrial job loss or even closing of factories is falsely attributed to environmental regulation, but in reality stems from other economic forces such as globalisation, automation or growth stagnation, and would hence have occurred regardless

⁸ In public speeches, for example, Republicans have called the Environmental Protection Agency a "cemetery for jobs" or "the job-killing organisation of America" (both recited in Coglianese and Carrigan, 2013).

(Kazis and Grossman, 1982). Not only has this tactic the effect of justifying corporate business as usual, but also buys workers and their communities into anti-environmentalist discourses, even though they are disproportionately affected by environmental pollution. This leads to the production of an artificial separation between labour and environmental justice struggles (Barca and Leonardi, 2018).

4.2 Framing working-class environmentalism

This Section sheds light on conversion strategies in which industrial workers act as subjects. The concept of environmental justice has been widely studied, analysing anti-toxic struggles within a working-class and anti-discrimination framework (see, for instance Bullard, 2018; Harvey et al., 1996; Mah, 2020). Examples for Europe come from highly polluting industrial complexes such as in Taranto (Barca and Leonardi, 2016) and in Venice around Porto Marghera (Feltrin and Sacchetto, 2021), where workers have succeeded in re-framing labour-environmentalism relations away from the job blackmail, but instead reconciling them around the struggle of reproduction, therefore making them natural allies.

If toxic pollution contributes to a place being left behind, then the environmental dimension might matter for politics, i.e., populist stances, which however are mostly anti-environmentalist. Instead, left-behind places would have reason to become subjects in environmental struggles in general and the Green New Deal in particular, due to their materialist dependencies on toxic economic growth. In this regard, economists are advised to apply environmental justice approaches to contemporary environmental challenges. This points to the general need to bring deindustrialised and marginalised places back into policy focus, apart from their political relevance.

The labour and environmental justice struggles can be connected by a common element, which is the health of workers and fence-line communities, as argued in Sheehan et al. (1993). Adopting this perspective facilitates grasping the connection between work and the environment, workplaces that produce or co-produce hazardous substances that later become environmental problems, such as in large industrial complexes. However, occupational health hazards are largely unpoliticised and

dealt with independently from environmental standards (Mayer, 2009).

Theories of working-class ecology are seeking to overcome this dichotomy by incorporating the perspective of environmental justice. They depart from the observation that working-class communities are often situated in places that are affected by environmental injustice, i.e., being disproportionately exposed to pollution (see Barca and Leonardi (2016) for a case study on working-class ecology in Taranto, Italy, and Mohai et al. (2009) for a full review). Through the concept of sacrifice zones associated with socio-economic decline, it becomes apparent that union-environment relations are no class conflict between working-class trade unions and middle-class environmental movements, but a struggle that starts at the workplace.

4.3 Policies and politics for a just transition

Policies for a just transition should be guided by democratic ownership and community control, enabling economic democracy over what and how much shall be produced, hence moving away from the focus on consumption. Many highly polluting industrial plants can go through a process of conversion towards renewable energy and sustainable manufacturing hubs. Other plants will close down, e.g. coal-fired power plants. Such phase-outs inevitably lead to localised losses in jobs and community identity (Galgóczy, 2019), which stresses the importance of just phase-outs that do not overburden already left-behind people and places.. Hence, industrial policy must heavily feature investment in green jobs and training programs and redevelopment of former industrial sites (Keeley and Benton-Short, 2019).

Moreover, conversion and decline will leave behind lasting imprints on the territory, i.e., legacy pollution and industrial brownfields. Restoration has already gained momentum in most industrialised countries, reducing health hazards due to contamination and pollution, inner-city decay, and tackling left-behind communities. Such approaches can be summarised under the umbrella term of ‘restorative environmental justice’, a recently developed concept that focuses on repairing, healing and correcting environmental harms already made in order to achieve justice (Braithwaite 2019).

Worker-based and community-based mobilisations play a vital role in pursuing a just transition in regions facing the conversions and closure of heavy industries. They can be breeding grounds for reconversion demands, centred around the working class and around the reappropriation and collective use of industrial means of production (also refer to the contribution of Feltrin and Julio Medel).

References

- Acemoglu, D., and Restrepo P., (2018). The race between man and machine: Implications of technology for growth, factor shares, and employment. *American Economic Review* 108(6), 1488–1542.
- Agency, U.S. Environmental Protection (2022). Superfund.
- Antonucci, L., Horvath L., Kutiyski Y., and Krouwel A., (2017). The malaise of the squeezed middle: Challenging the narrative of the 'left behind' brexiter. *Competition & Change* 21(3), 211–229.
- Ard, K., (2015). Trends in exposure to industrial air toxins for different racial and socioeconomic groups: A spatial and temporal examination of environmental inequality in the us from 1995 to 2004. *Social Science Research* 53, 375–390.
- Ash, M., and Boyce J.K., (2011). Measuring corporate environmental justice performance. *Corporate Social Responsibility and Environmental Management* 18(2), 61–79.
- Ash, M., and Boyce J.K., (2018). Racial disparities in pollution exposure and employment at us industrial facilities. *Proceedings of the National Academy of Sciences* 115(42), 10636–10641.
- Ash, M., and Fetter, T.R., (2004). Who lives on the wrong side of the environmental tracks? evidence from the epa's risk-screening environmental indicators model. *Social Science Quarterly* 85(2), 441–462.
- Autor, D., Dorn, D., Hanson, G., Majlesi, K., et al. (2020). Importing political polarization? the electoral consequences of rising trade exposure. *American Economic Review* 110(10), 3139–83.
- Ballard-Rosa, C., Malik, M.A., Rickard, S.J. and Scheve, K., (2021). The economic origins of authoritarian values: evidence from local trade shocks in the United Kingdom. *Comparative Political Studies* 54(13), 2321–2353.

- Banzhaf, S., Ma, L. and Timmins C., (2019). Environmental justice: The economics of race, place, and pollution. *Journal of Economic Perspectives* 33(1), 185–208.
- Barca, S., and Leonardi E., (2016). Working-class communities and ecology: reframing environmental justice around the ilva steel plant in taranto (apulia, italy). *Class, inequality and community development*. Bristol: Policy Press, 59–75.
- Barca, S., and Leonardi E., (2018). Working-class ecology and union politics: a conceptual topology. *Globalizations*, 15(4): 487–503
- Bell, M.L., and Ebisu, K., (2012). Environmental inequality in exposures to airborne particulate matter components in the United States. *Environmental health perspectives* 120(12), 1699–1704.
- Bennett, J.E., Tamura-Wicks, H., Parks, R.M., Burnett, R.T., Arden Pope III C., Bechle M.J., Marshall, J.D., Danaei, G., and Ezzati, M., (2019). Particulate matter air pollution and national and county life expectancy loss in the usa: A spatiotemporal analysis. *PLoS medicine* 16(7), e1002856.
- Bez, C., Bosetti, V., Colantone, I., and Zanardi, M., (2023). Exposure to international trade lowers green voting and worsens environmental attitudes. *Nature Climate Change*, 1–5.
- Bez, C., and Virgillito M. E., (2022). Toxic pollution and employment dynamics: uncovering Europe's left-behind places. LEM WP.
- Bez, C., Ash, M., and Boyce J.K., (2024). Environmental inequality in industrial brownfields: Evidence from French municipalities. *Ecological Economics* 217, 108018.
- Blowers, A., and Leroy P., (1994). Power, politics and environmental inequality: a theoretical and empirical analysis of the process of 'peripheralisation'. *Environmental politics* 3(2), 197–228.
- Bowen, W.M., Salling, M.J., Haynes, K.E., and Cyran, E.J., (1995). Toward environmental justice: Spatial equity in Ohio and Cleveland. *Annals of the Association of American Geographers* 85(4), 641–663.
- Boyce, J. K., (2020). Distributional issues in climate policy: air quality co-benefits and carbon rent. In *Handbook on the Economics of Climate Change*. Edward Elgar Publishing.
- Bullard, R., (2019). Environmental blackmail in minority communities. In *Race and the incidence of environmental hazards*, pp. 82–95. Routledge.
- Bullard, R. D. (2018). *Dumping in Dixie: Race, class, and environmental quality*. Routledge.

- Bullard, R. D., Mohai, P., Saha, R., and Wright, B., (2008). *Toxic wastes and race at twenty: Why race still matters after all of these years*. *Envtl. L.* 38, 371.
- Cass, L. R., (2013). *Air pollution and acid rain*. *Routledge Handbook of Global Environmental Politics*, 388–399.
- Chomsky, N., and Pollin, R., (2020). *Climate crisis and the global green new deal: The political economy of saving the planet*. Verso Books.
- Cimoli, M., & Dosi, G. (1995). Technological paradigms, patterns of learning and development: an introductory roadmap. *Journal of Evolutionary economics*, 5, 243–268.
- Clough, E., (2018). Environmental justice and fracking: A review. *Current Opinion in Environmental Science & Health* 3, 14–18.
- Coglianesi, C., and Carrigan C., (2013). The jobs and regulation debate. Does Regulation Kill Jobs.
- Colantone, I., and Stanig, P., (2018). The trade origins of economic nationalism: Import competition and voting behavior in western Europe. *American Journal of Political Science* 62(4), 936–953.
- Collins, M. B., Munoz, I., and JaJa, J., (2016). Linking ‘toxic outliers’ to environmental justice communities. *Environmental Research Letters* 11(1), 015004.
- Commoner, B., (1972). The environmental cost of economic growth. *Population, resources and the environment* 3, 343–63.
- Davies, T., (2018). Toxic space and time: Slow violence, necropolitics, and petrochemical pollution. *Annals of the American Association of Geographers* 108(6), 1537–1553.
- Davies, T., (2022). Slow violence and toxic geographies: ‘out of sight’ to whom? *Environment and Planning C: Politics and Space* 40(2), 409–427.
- Denq, F., Constance, D. H., and Joung S.S., (2000). The role of class, status, and power in the distribution of toxic superfund sites in texas and louisiana. *Journal of poverty* 4(4), 81–91.
- Dippel, C., Gold, R., Heblich, S., and Pinto, R., (2022). The effect of trade on workers and voters. *The Economic Journal* 132(641), 199–217.
- Dorn, D., Hanson, G., Majlesi, K., et al. (2016). *Importing political polarization? the electoral consequences of rising trade exposure*. Technical report, National Bureau of Economic Research.

- Dunlap, R. E., and Brulle R.J., (2020). Sources and amplifiers of climate change denial. *Research handbook on communicating climate change*, 49–61.
- Ehrlich, P. R., and Holdren, J.P., (1971). Impact of population growth. *Science* 171(3977), 1212–1217.
- Esaiasson, P. (2014). Nimbyism a re-examination of the phenomenon. *Social science research* 48, 185–195.
- European Commission (2006). Guidance document for the implementation of the european prtr.
- Faber, D., Levy, B., and Schlegel C., (2021). Not all people are polluted equally in capitalist society: An eco-socialist commentary on liberal environmental justice theory.
- Feltrin, L., Mah, A., and Brown, D., (2022). ‘Noxious deindustrialization: Experiences of precarity and pollution in Scotland’s petrochemical capital’. *Environment and Planning C*, 40(4), 950–969.
- Feltrin, L., and Sacchetto, D., (2021) ‘The work-technology nexus and working-class environmentalism: Workerism versus capitalist noxiousness in Italy’s long 1968’. *Theory and Society*, 50(5), 815–835.
- Freudenburg, W. R., (2005). Privileged access, privileged accounts: toward a socially structured theory of resources and discourses. *Social Forces* 84(1), 89–114.
- Frieden, J., (2018). *The politics of the globalization backlash: Sources and implications*. Unpublished manuscript, Department of Government, Harvard University.
- Funderburg, R., and Laurian, L., (2015). Bolstering environmental (in) justice claims with a quasi-experimental research design. *Land Use Policy* 49, 511–526.
- Galgóczi, B., (2019). Phasing out coal—a just transition approach. ETUI Research Paper-Working paper.
- Ganzleben, C., and Kazmierczak, A., (2020). Leaving no one behind—understanding environmental inequality in europe. *Environmental Health* 19, 1–7.
- Genc, S., Zadeoglulari, Z., Fuss, S. H., Genc, K., et al. (2012). The adverse effects of air pollution on the nervous system. *Journal of toxicology* 2012.
- Glatzer-Götz, H., Mohai, P., Haas, W., and Plutzer, C., (2019). Environmental inequality in Austria: do inhabitants’ socioeconomic characteristics differ depending on their proximity to industrial polluters? *Environmental Research Letters* 14(7), 074007.

- Goodwin, M. J., and Heath, O., (2016). The 2016 referendum, Brexit and the left behind: An aggregate-level analysis of the result. *The Political Quarterly* 87(3), 323–332.
- Grabher, G., (1993). The weakness of strong ties; the lock-in of regional development in Ruhr area. *The embedded firm; on the socioeconomics of industrial networks*, 255–277.
- Greco, L., and Bagnardi F., (2018). In the name of science and technology: the post-political environmental debate and the Taranto steel plant (Italy). *Environmental values*, 27(5): 489–512
- Greco, L., and Di Fabbio, M., (2014). Path-dependence and change in an old industrial area: The case of Taranto, Italy. *Cambridge Journal of Regions, Economy and Society* 7(3), 413–431.
- Greenstone, M., List, J. A., and Syverson, C., (2012). *The effects of environmental regulation on the competitiveness of us manufacturing*. Technical report, National Bureau of Economic Research.
- Harvey, D., Merry, A. H., Royle, L., Campbell, M. P., and Rudd P. M., (1996). Justice, nature & the geography of difference.
- Hendrickson, C., Muro, M., and Galston, W. A., (2018). Countering the geography of discontent: Strategies for left-behind places. Brookings, November.
- Hird, J. A., (1993). Environmental policy and equity: The case of superfund. *Journal of Policy Analysis and Management* 12(2), 323–343.
- Hormati, M., Mohammadi, M. J., Iswanto, A. H., Mansourimoghadam, S., Taifi, A., Maleki, H., Mustafa, Y. F., Dehaghi, B. F., Afra, A., and Taherian, M.m et al. (2022). Consequences and health effects of toxic air pollutants emission by industries. *Journal of Air Pollution and Health* 7(1), 95–108.
- Iammarino, S., Rodríguez-Pose, A., & Storper, M. (2019). *Regional inequality in Europe: evidence, theory and policy implications*. *Journal of economic geography*, 19(2), 273–298.
- Jakob, M., Steckel, J. C., Jotzo, F., Sovacool, B. K., Cornelsen, L., Chandra, R., Edenhofer, O., Holden, C., Löschel, A., and Nace, T., et al. (2020). The future of coal in a carbon-constrained climate. *Nature Climate Change* 10(8), 704–707.
- Jerrett, M., Burnett, R. T., Kanaroglou, P., Eyles, J., Finkelstein, N., Giovis, C., and Brook, J. R., (2001). A gis–environmental justice analysis of particulate air pollution in Hamilton, Canada. *Environment and Planning A* 33(6), 955–973.

- Jylhä, K. M., Strimling, P., and Rydgren, J., (2020). Climate change denial among radical right-wing supporters. *Sustainability* 12(23), 10226.
- Kahn, M. E., and Matsusaka J. G., (1997). Demand for environmental goods: Evidence from voting patterns on California initiatives. *The Journal of Law and Economics* 40(1), 137–174.
- Kazis, R. and Grossman, R., (1982). Fear at work: Job blackmail. *Labor, and the Environment* 37.
- Keeley, M., and Benton-Short, L., (2019). Economic sustainability. In *Urban Sustainability in the US*, pp. 61–96. Springer.
- Kuehn, R. R., (2000). A taxonomy of environmental justice. *Envtl. L. Rep. News & Analysis* 30, 10681.
- Kyne, D., and Bolin, B., (2016). Emerging environmental justice issues in nuclear power and radioactive contamination. *International journal of environmental research and public health* 13(7), 700.
- Laurian, L., and Funderburg, R., (2014). Environmental justice in france? a spatio-temporal analysis of incinerator location. *Journal of Environmental Planning and Management* 57(3), 424–446.
- Leyshon, A., (2021). Economic geography i: uneven development, ‘left behind places’ and ‘levelling up’ in a time of crisis. *Progress in Human Geography* 45(6), 1678–1691.
- Lockwood, M., (2018). Right-wing populism and the climate change agenda: exploring the linkages. *Environmental Politics* 27(4), 712–732.
- Loorbach, D., Frantzeskaki, N., and Avelino, F., (2017). Sustainability transitions research: transforming science and practice for societal change. *Annual Review of Environment and Resources* 42(1), 599–626.
- MacKinnon, D., Kempton, L., O’Brien, P., Ormerod, E., Pike, A., and Tomaney, J., (2022). Reframing urban and regional ‘development’ for ‘left behind’ places. *Cambridge Journal of Regions, Economy and Society* 15(1), 39–56.
- Mah, A., (2020). Toxic legacies and environmental justice. In *Environmental Justice*, pp. 121–131. Routledge.
- Martuzzi, M., Mitis, F., and Forastiere, F., (2010). Inequalities, inequities, environmental justice in waste management and health. *European Journal of Public Health* 20(1), 21–26.
- Massey, D., (2009). Concepts of space and power in theory and in political practice. *Documents d'anàlisi geogràfica* (55), 15–26.

- Mayer, B., (2009). Cross-movement coalition formation: Bridging the labor-environment divide. *Sociological Inquiry* 79(2), 219–239.
- McGurty, E., (2009). *Transforming environmentalism: Warren County, PCBs, and the origins of environmental justice*. Rutgers University Press.
- Mills, N. L., Donaldson, K., Hadoke, P. W., Boon, N. A., MacNee, W., Cassee, F. R., Sandström, T., Blomberg, A., and Newby, D. E., (2009). Adverse cardiovascular effects of air pollution. *Nature clinical practice Cardiovascular medicine* 6(1), 36–44.
- Mohai, P., Pellow, D., and Roberts, J. T., (2009). *Environmental justice*. *Annual review of environment and resources* 34, 405–430.
- Mohai, P. and Saha, R., (2015). Which came first, people or pollution? a review of theory and evidence from longitudinal environmental justice studies. *Environmental Research Letters* 10(12), 125011.
- Muller, N. Z., and Mendelsohn, R., (2007). Measuring the damages of air pollution in the United States. *Journal of Environmental Economics and Management* 54(1), 1–14.
- Neidell, M. P., et al. (2023). *Air pollution and worker productivity*. IZA World of Labor.
- Newell, P., (2005). Race, class and the global politics of environmental inequality. *Global environmental politics* 5(3), 70–94.
- Newell, P., and Mulvaney, D., (2013). The political economy of the ‘just transition’. *The Geographical Journal* 179(2), 132–140.
- Nixon, R., (2011). *Slow Violence and the Environmentalism of the Poor*. Harvard University Press.
- Noury, A., and Roland, G., (2020). Identity politics and populism in Europe. *Annual Review of Political Science* 23, 421–439.
- Novalia, W., McGrail, S., Rogers, B. C., Raven, R., Brown, R. R., and Loorbach, D., (2022). Exploring the interplay between technological decline and deinstitutionalization in sustainability transitions. *Technological Forecasting and Social Change* 180, 121703.
- Novotny, P., (2000). *Where we live, work, and play: the environmental justice movement and the struggle for a new environmentalism*. Greenwood Publishing Group.
- Ortega-García, J. A., López-Hernández, F. A., Cárceles-Álvarez, A., Fuster-Soler, J. L., Sotomayor, D. I., and Ramis, R., (2017). Childhood cancer in small geographical areas and proximity to air-polluting industries. *Environmental research* 156, 63–73.

- O'Neil, S. G., (2021). Community obstacles to large scale solar: Nimby and renewables. *Journal of Environmental Studies and Sciences* 11(1), 85–92.
- Pellow, D. N., (2004). *Garbage wars: The struggle for environmental justice in Chicago*. Mit Press.
- Phillimore, P., and Moffatt, S., (2004). 'If we have wrong perceptions of our area, we cannot be surprised if others do as well.' Representing risk in Teesside's environmental politics. *Journal of Risk research* 7(2), 171–184.
- Pike, A., Béal, V., Cauchi-Duval, N., Franklin, R., Kinossian, N., Lang, T., Leibert, T., MacKinnon, D., Rousseau, M., Royer, J., et al., (2023). 'Left behind places': a geographical etymology. *Regional Studies*, 1–13.
- Pörtner, H.-O., Roberts, D. C., Adams, H., Adler, C., Aldunce, P., Ali, E., Ara Begum, R., Betts, R., Bezner Kerr, R., Biesbroek, R., et al. (2022). Climate change 2022: Impacts, adaptation and vulnerability. *IPCC Sixth Assessment Report*.
- Rauner, S., Bauer, N., Dirnaichner, A., Van Dingenen, R., Mutel, C., and Luderer, G., (2020). Coal-exit health and environmental damage reductions outweigh economic impacts. *Nature Climate Change* 10(4), 308–312.
- Ringquist, E. J., (1997). Equity and the distribution of environmental risk: The case of tri facilities. *Social science quarterly*, 811–829.
- Rinscheid, A., Rosenbloom, D., Markard, J., and Turnheim, B., (2021). From terminating to transforming: The role of phase-out in sustainability transitions. *Environmental Innovation and Societal Transitions* 41, 27–31.
- Rodriguez-Alvarez, A., (2021). Air pollution and life expectancy in Europe: Does investment in renewable energy matter? *Science of the Total Environment* 792, 148480.
- Rodríguez-Pose, A., (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge journal of regions, economy and society* 11(1), 189–209.
- Rüttenauer, T., (2018). Neighbours matter: A nation-wide small-area assessment of environmental inequality in germany. *Social Science Research* 70, 198–211.
- Rüttenauer, T., (2019). Bringing urban space back in: a multilevel analysis of environmental inequality in germany. *Urban Studies* 56(12), 2549–2567.
- Rüttenauer, T., and Best, H., (2021). Consistent inequality across Germany? exploring spatial heterogeneity in the unequal distri-

- bution of air pollution. In *Research Handbook on Environmental Sociology*. Edward Elgar Publishing.
- Rüttenauer, T., and Best, H., (2022). Perceived pollution and selective out-migration: revisiting the role of income for environmental inequality. *Journal of Ethnic and Migration Studies*, 1–21.
- Satheesh, S., (2020). Moving beyond class: A critical review of labor-environmental conflicts from the global south. *Sociology Compass* 14(7), e12797.
- Sayer, A., (2011). Misrecognition: the unequal division of labour and contributive justice. *The politics of misrecognition*, 87–103.
- Schaffer Boudet, H., (2011). From nimby to niaby: regional mobilization against liquefied natural gas in the United States. *Environmental Politics* 20(6), 786–806.
- Schelly, D., and Stretesky, P. B., (2009). An analysis of the “path of least resistance” argument in three environmental justice success cases. *Society and Natural Resources* 22(4), 369–380.
- Schlosberg, D., (2013). Theorizing environmental justice: the expanding sphere of a discourse. *Environmental politics* 22(1), 37–55.
- Schnaiberg, A., (1980). *The environment: From surplus to scarcity*.
- Sen, A., (2008). *The idea of justice*. *Journal of human development* 9(3), 331–342.
- Sheehan, H. E, Wedeen, R. P., et al. (1993). *Toxic circles*. Rutgers University Press.
- Smith, E., and Klick, H., (2007). Explaining nimby opposition to wind power. In *Annual Meeting of the American Political Science Association*, pp. 1–19.
- Stretesky, P., and Hogan, M. J., (1998). Environmental justice: An analysis of superfund sites in Florida. *Social Problems* 45(2), 268–287.
- Vona, F., (2019). Job losses and political acceptability of climate policies: why the ‘job-killing’ argument is so persistent and how to overturn it. *Climate Policy* 19(4), 524–532.
- Walker, G., (2009). Beyond distribution and proximity: exploring the multiple spatialities of environmental justice. *Antipode* 41(4), 614–636.
- Walker, G., (2012). *Environmental justice: concepts, evidence and politics*. Routledge.
- Walker, G., Mitchell, G., Fairburn, J., and Smith, G., (2005). Industrial pollution and social deprivation: Evidence and complexity in evaluating and responding to environmental inequality. *Local environment* 10(4), 361–377.

- Zwickl, K., (2019). The demographics of fracking: A spatial analysis for four us states. *Ecological Economics* 161, 202–215.
- Zwickl, K., Ash, M., and Boyce, J.K., (2014). Regional variation in environmental inequality: Industrial air toxics exposure in us cities. *Ecological Economics* 107, 494–509.
- Zwickl, K., Sturn, S., Neier, T., and Miklin, X., (2024). *The top 100 industrial co2 emitters in the EU*. Working Paper.

2.

A planet on fire fell into the sea: Communities and workplaces in Porto Marghera's deindustrialisation

Lorenzo Feltrin and Gabriela Julio Medel⁹

Do you know what is Marghera?
Is the place where the sea used to be.
A long time ago, you know,
A planet fell into the sea,
All on fire...
Alberto D'Amico, 'Ti Sa Miga'¹⁰

Introduction

Marghera, the neighbourhood, is the Other of Porto Marghera, the industrial area. The two Margheras form part of the Venice council area and are divided by a mere road, Via Fratelli Bandiera, severing the dark smokestacks from the red-tiled condos. Established from 1917 onwards, Porto Marghera used to be the largest industrial hub of north-eastern Italy and a major labour stronghold (Chinello, 1996; Zazzara, 2017). The 2000-hectare area comprised a multitude of factories, power stations, the industrial port and an important transport hub. The most important factory in Porto Marghera's history was called Petrolchimico (Zazzara, 2009). This integrated petrochemical complex was established in 1951 by electric company Edison and passed through Montedison in 1966, to be then gradually bought up by Ente Nazionale Idrocarburi (ENI). Since the late 1970s, Petrolchimico's slow-motion downswing came to symbolise the crisis of the whole industrial area.

The residential counterpart to Porto Marghera's industries is

⁹ Parts of this article are re-elaborations from Feltrin 2022.

¹⁰ All sources in Italian and Venetian dialect were translated by the authors.

the mostly working-class neighbourhood of Marghera (Nappi, 1994). Most people in the Veneto region know Marghera indirectly, through a mythology of immense and deadly factories, endemic heroin addiction, sex trafficking and crime, left-wing 'extremism' yesterday and 'excessive' immigration today. This picture clashes to some extent with the one offered by the neighbourhood when actually visited: large and well-kept green areas, strong public services, lively and crowded open spaces. In 2000, the Venice council area had a population of 275,000 inhabitants, 28,000 of them living in Marghera (Città di Venezia, 2020). In line with the findings of the environmental justice literature (see Taylor, 2014), Marghera's poorest area, the slum of Ca' Emiliani, was the nearest to Petrolchimico, before being flooded and mostly demolished in 1974.

In the 1990s and 2000s, community-centred and workplace-centred mobilisations diverged over Petrolchimico's chlorine-based production, with the former demanding a just transition away from chlorine and the latter a just transition within it (Feltrin, 2022). While the rival mobilisations limited damage to health and the environment on the one hand, and to chlorine workers' livelihoods on the other hand, chlorine-based production was closed without full environmental remediation and without the relocation of all its workers to comparable jobs. Based on qualitative and quantitative data, this article sketches a narrative of this transformation and of the resulting new makeup of Porto Marghera's workplaces and communities. Many of these changes reflect broader trends in Italian society, yet some – such as the marked shift from manufacturing to services employment and high immigration rates – are more pronounced and tied to Porto Marghera's specific history as a working-class heartland in transition.

1. Marghera vs Marghera

Since the late 1960s, Porto Marghera became the site of fierce workplace struggles against noxiousness, i.e. production-induced health damage and environmental degradation (Feltrin and Sacchetto, 2021). Over the decades, two competing working-class environmentalist perspectives emerged from such struggles, one mostly organised in the factories through unions and party factory branches and the other mainly organised in

the neighbourhood through social movement organisations and party neighbourhood branches. The workplace-centred camp was composed of the ‘confederal’ unions, CGIL, CISL and UIL, and the majorities of the Centre-Left parties DS – originated from PCI – and Margherita – derived from DC’s Left (see Table 2.1). The community-centred camp had also originated in the workplace with the New Left factory groups. However, after being marginalised in the factories, the New Left put down stronger roots in the neighbourhoods. The community-centred camp thus became composed of environmentalist and workers’ health associations rooted in the history of struggles against factory noxiousness (most prominently AmbienteVenezia, Associazione Bortolozzo, Ecoistituto Langer and Medicina Democratica), the leftist PRC, the Green Party (Verdi), the post-autonomist Rivolta Social Centre and the radical union CUB.

AN	Alleanza Nazionale (National Alliance)
APCRC	Assemblea Permanente Contro il Rischio Chimico (Permanent Assembly against Chemical Risk)
CGIL	Confederazione Generale Italiana del Lavoro (Italian General Confederation of Labour)
CISL	Confederazione Italiana Sindacati Lavoratori (Italian Confederation of Workers’ Trade Unions)
COORLACH	Coordinamento Lavoratori Chimici (Chemical Workers’ Coordination)
CUB	Confederazione Unitaria di Base (Unitary Rank-and-File Confederation)
DC	Democrazia Cristiana (Christian Democracy)
DS	Democratici di Sinistra (Left Democrats)
FdI	Fratelli d’Italia (Brothers of Italy)
FI	Forza Italia
LeU	Liberi e Uguali (Free and Equal)
M5S	Movimento 5 Stelle (5 Star Movement)
MSI-DN	Movimento Sociale Italiano-Destra Nazionale (Italian Social Movement-National Right)
PCI	Partito Comunista Italiano (Italian Communist Party)
PRC	Partito della Rifondazione Comunista (Communist Refoundation Party)

PRI	Partito Repubblicano Italiano (Italian Republican Party)
PSDI	Partito Socialista Democratico Italiano (Italian Democratic Socialist Party)
PSI	Partito Socialista Italiano (Italian Socialist Party)
UdC	Unione di Centro (Centre Union)
UIL	Unione Italiana del Lavoro (Italian Labour Union)

Table 2.1 - List of organisational acronyms

In traditionally left-wing Marghera, the New Left gained popularity also by opposing industrial pollution, as shown by the fact that all Borough Presidents between 2005 and 2020 belonged to PRC or the Green Party. Many Green local leaders, such as Gianfranco Bettin and Michele Boato, had formerly belonged to the extra-parliamentary group Lotta Continua (Boato, 2019). The local CUB branches and the Rivolta Social Centre, instead, emerged mainly from Potere Operaio and Autonomia Operaia. In the early 2000s, CUB still represented a vocal minority of Porto Marghera workers. In Petrolchimico, CUB was led by environmentalist employees such as Luciano Mazzolin, who had established the COORLACH news agency to denounce the industry's noxiousness. Rivolta, instead, was based in a large, disused factory in Porto Marghera, self-managed by the local group of the post-autonomist Tute Bianche movement. It was also an important social milieu for working-class youths, for example the Venice football team supporters.

The workplace-centred and community-centred camps were both represented in the Venice administrations of the 1990s and 2000s, mostly led by 'mayor-philosopher' Massimo Cacciari. Even Tute Bianche had elected activist Beppe Caccia as a city councillor with the Green Party. The point of contention regarding Petrolchimico was, however, the complex of factories known in the public debate as the 'chlorine cycle': three integrated plants located downstream from 'Petrolchimico's heart', its ethylene cracker, and producing respectively chlorine and sodium hydroxide, polyvinyl chloride (PVC) and toluene diisocyanate (TDI).

The community-centred camp held that Porto Marghera's chlorine cycle constituted an unacceptable source of risk and health damage for the densely populated area, due to toxic emissions, the contamination of soil and water, and the storage of

hazardous substances such as chlorine, vinyl chloride monomer (VCM) and highly lethal phosgene. Moreover, the ageing plants were subject to frequent leaks and accidents. In 1999, *Associazione Bortolozzo* published a report linking carcinogenic industrial emissions to higher-than-average cancer incidence amongst fenceline communities, demanding epidemiological research. In their view, the three plants should be closed and environmental remediation was needed to make space for cleaner production. Their position on employment was that workers' income had to be protected through a combination of subsidies, employment in remediation works, and redeployment in other local factories (already existing or to be created post-remediation). Additionally, they supported Greenpeace's calls for a global decrease in plastic production (particularly PVC).

The workplace-centred camp agreed that *Petrolchimico* had been a major source of noxiousness in the past but held that the trajectory of substantial technical improvements existing since the 1970s could be further progressed to achieve a sustainable cohabitation between the chlorine cycle and communities. It was with the double objective of relaunching industrial employment in Porto Marghera while improving the industries' environmental performance that the Agreement for Chemistry between trade unions, employers (mainly ENI) and public authorities was signed on 21 October 1998.

An analysis of employment trends is necessary to understand the relationship between the two camps. Throughout Porto Marghera's history, only a minority of the industrial area's workers lived in Marghera (Nappi, 1994), which is hardly surprising as for many decades the number of jobs in Porto Marghera exceeded that of Marghera residents. However, in the 1960s, when Porto Marghera employed between 33,000 and 40,000 workers,¹¹ a high share of Marghera residents were employed in the factories (Bonello, 2017, 179). This gradually changed when employment in the industrial area started to decline in the 1970s.

Unfortunately, the population census report from 1981 did not include disaggregated data for Marghera, but we can see an

¹¹ The difference in the figures depends on whether one includes an estimate of the workers under the most transient employment arrangements.

evident fall of industrial employment even between 1991 and 2001, after the mass layoffs of the 1980s had already happened (see Figure 2.1). Employment deindustrialisation is a national trend. Nonetheless, as the Marghera neighbourhood was located next to a major but retreating industrial hub, the decline in its local share of manufacturing jobs between 1991 and 2001 (-7%) was much more pronounced than the national figure (-3%).

The employment structure of Porto Marghera also changed. On the one hand, there was a drastic decline in the number of workers employed in the industrial area. On the other hand, there was an increase in the number of enterprises operating there (see Figure 2.2). This means that the remaining workforce is fragmented in a relatively large number of smaller workplaces, which constitutes an obstacle to effective union organising.

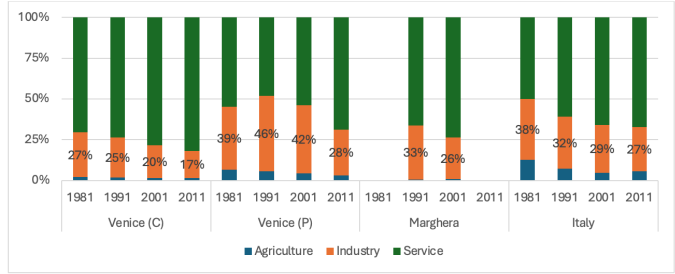


Figure 2.1 - Employment share by economic sector among residents of Venice (council and province), the Marghera neighbourhood and Italy, 1981-2011 Sources: Authors’ elaboration using data from ISTAT (census).

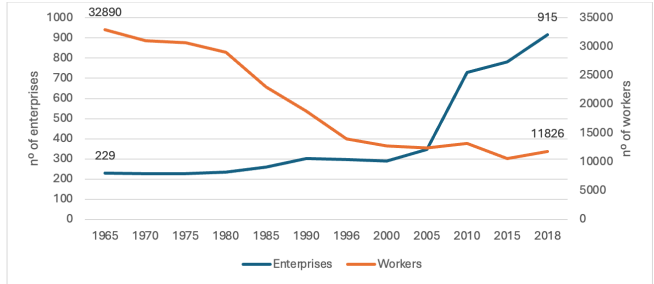


Figure 2.2 - Number of workers vs number of enterprises pre-

sent in Porto Marghera, 1965-2018.¹² Sources: Authors' elaboration using reports from Ente Zona Industriale di Porto Marghera (EZIPM) and Osservatorio di Porto Marghera.

By the 1980s, the relationship between neighbourhood and factories had already become uneasy as the locals found fewer and fewer jobs on the other side of Via Fratelli Bandiera. This malaise surfaced provocatively when the local reggae band Pitura Freska rose to fame singing: 'Marghera without factories would be healthier: a jungle of corn, tomatoes, and marijuana' (*Marghera*, 1991). Marghera was thus undergoing a deep 'noxious employment deindustrialisation' process, i.e. a situation in which the share of manufacturing employment in an area declines but significantly noxious industry remains (Feltrin et al., 2022).

The chlorine cycle directly employed about 600 workers, a large majority of whom commuted from the further urban centres of Mestre and Chioggia as well as rural localities scattered within and beyond the province. In turn, many Marghera residents commuted to insular Venice to work in its cultural sector, public services, hotels, shops and restaurants. The majority of Marghera residents are working class, yet they became less industrially employed than before. The growing chasm between employment in the industrial area and residence in the local neighbourhood increased tensions between the two working-class environmentalist camps presented above, as the next Section shows.

2. *The fight over the chlorine cycle*

In the summer of 1994, retired petrochemical worker Gabriele Bortolozzo entered the office of Public Prosecutor Felice Casson to submit a complaint against his previous employers Montedison and ENI, based on his own lay research on the health of his colleagues at Petrolchimico. The blue-collar turned green activist believed the high number of deaths from cancer was due to exposure to vinyl chloride, an intermediate material in PVC production (Bortolozzo, 1994). Casson did open an in-

¹² This chart refers to employment in the Porto Marghera industrial area, not the whole municipality.

quiry, but Bortolozzo never saw the beginning of the trial. He was killed in a road accident while riding his bicycle on 12 September 1995.

Large numbers turned up for the first hearing of the Petrolchimico case, on 13 March 1998 in Mestre's bunker-courtroom (Allen, 2011). Thirty Montedison and ENI managers and doctors stood accused of charges including manslaughter, injury and environmental disaster, while hundreds of former Petrolchimico workers, relatives of the victims, unions, NGOs and public authorities participated as civil parties. The charge of manslaughter concerned the death by cancer of 149 Petrolchimico workers who had been exposed to vinyl chloride, although subsequent research updated the number to 248 (Pirastu et al., 2003). The charge of environmental disaster referred to the contamination of the soil and water surrounding the factories, the severe pollution of the Venice Lagoon, and the proliferation of noxious landfills in different areas. In fact, in December 1998, the government declared Porto Marghera a highly polluted site in need for remediation.

The workplace-centred and community-centred camps both endorsed the trial, but they diverged on how to interpret it (Cerasi, 2007). According to the community-centred camp, the lawsuit contributed to show that the chlorine cycle had to be closed down. To this end, it held a 'self-managed referendum' on 6-7 June 1998, collecting 23,000 signatures. The workplace-centred camp, led by CGIL's chemical federation local leader, Bruno Filippini, countered that union action had substantially reformed Petrolchimico, and thus – while the trial was needed to address past wrongdoings – it had no implications for the future.

The first instance ruling came on 2 November 2001, after 150 testimonies and 1.5 million pages of documentation. The bunker-courtroom was packed and the atmosphere tense. Judge Ivano Nelson Salvarani slowly read out his verdict, reiterating 'acquitted' for each and every charge. The public – mostly retired workers, family members and activists – reacted with disbelief. Rivolta members led by Tute Bianche spokesman Luca Casarini broke into the courtroom and hung a banner reading 'Guilty, yesterday like today' under the inscription 'The law is equal for all'. A heated debate erupted across the news media. What had happened?

The prosecution had shown that the carcinogenicity of vinyl chloride was first revealed in 1969-70 by Dr Pier Luigi Viola and

confirmed to Montedison by Professor Cesare Maltoni in 1972 (Casson, 2007). Yet Montedison did not publicise the information due to a 'secrecy agreement' subscribed to by the largest petrochemical multinationals (Markovitz and Rosner, 2002). Vinyl chloride's carcinogenicity became publicly known only in 1974, after the correlation between exposure and death from the rare angiosarcoma cancer emerged in BF Goodrich's Kentucky plants. The court, however, rejected the secrecy agreement thesis, interpreting it as a confidentiality clause to be respected until research on vinyl chloride could be completed. Moreover, the judges accepted the defence's argument that, since 1974, Montedison had taken satisfactory safety measures.

Concerning the charge of environmental disaster, the court (like the defence) acknowledged the severe contamination of the soil, canals and lagoon by a great variety of pollutants (metals, polycyclic aromatic hydrocarbons, dioxins, etc.). However, it held that it could not be proven that Montedison and ENI were the main culprits or had violated any existing laws. Ironically, two days before the verdict, Montedison had agreed with the Ministry of Environment – until then a civil party in the trial – a compensation of €271 million for environmental remediation.

The community-centred and workplace-centred camps both appealed against Salvarani's ruling. The appeal court verdict was reached on 15 December 2004. Five defendants were convicted for the angiosarcoma death of Petrolchimico worker Tullio Faggian, because – as the high toxicity of vinyl chloride had been known since the 1950s – Montedison had the legal responsibility of reducing workers' exposure even before carcinogenicity was fully proven. Judge Francesco Aliprandi thus recognised Montedison's responsibility for all other angiosarcoma deaths and Raynaud syndrome cases, but the statute of limitations for them had expired. The verdict also acknowledged Montedison's responsibility for illegal discharges into the lagoon until the 1990s, but the statute of limitations for these irregularities had also elapsed. On 19 May 2006, the Cassation Court upheld the appeal court ruling.

However, Petrolchimico's trouble were not over. On 28 November 2002, a tank exploded in Petrolchimico's TDI units. The sirens screeched through Marghera, the population was told to go home and shut their windows. For long minutes, the apocalyptic prophesy of Marghera ablaze seemed to have at last co-

me to pass. Luckily, however, the shock wave from the explosion of a second tank extinguished the main fire, allowing the fire-fighters to gain the upper hand. The fire department's official report later famously thanked all those 'who, at their own risk, prevented the accident from having worse consequences, certainly benefitting from the assistance of divine Providence'.

In what many saw as ENI's betrayal of the 1998 Agreement for Chemistry, Petrolchimico's TDI plant had been sold to Dow Chemical in 2001. In 2005, three Dow managers would be convicted for the 2002 explosion. However, after the first instance court ruling in the Petrolchimico case, legal proceedings could scarcely appease the infuriated fenceline communities. This time, the focus of accusations was the highly lethal phosgene gas stored in a 15-tonne tank close to the TDI unit where the explosions happened.

On 4 December 2002, a large gathering of locals and activists led to the foundation of the APCRC (see Table 2.1). Even if some retired factory workers were still involved, the APCRC's most prominent leaders were a mixture of middle-class professionals – such as IT consultant Anthony Candiello and health and environmental inspector Franco Rigosi – and service sector workers – such as janitor Roberto Trevisan and social worker Michele Valentini. Noting that 'jobs keep going down while cancers go up', APCRC began a long anti-chlorine campaign featuring several mass demonstrations (Benatelli et al., 2006; Chesta et al., 2014).

Meanwhile, remediation works were relaunched in 2002, using a combination of public funds and mandatory contributions by the industry, engendering hopes for a regeneration of the declining industrial area. However, between 2001 and 2005, maverick petrochemical multinational Ineos acquired full ownership of Porto Marghera's PVC plants. In 2005, chemical workers staged a campaign of strikes and roadblocks demanding that the public authorities grant the permits to expand production required by Ineos to keep the factories open.

On its part, APCRC collected 12,600 signatures in support of a consultative referendum on the chlorine cycle in the council area. Between 19 June and 8 July 2006, all Venice citizens received a postal ballot with the question: 'Do you want the production and processing of chlorine, vinyl chloride, and phosgene to continue?' A week later, the survey results were out: 34.3% eligible participants expressed their view and 80% of these chose the

‘No’ option. Marghera was the borough with the highest participation rate (41%), with 80% against the chlorine cycle.

In August 2006, Dow announced it would decommission its Porto Marghera plant. The corporation never explained if the survey had influenced its decision or not, although Dow Italia manager Roberto Lombardi only mentioned ‘market issues’. In any case, Dow’s 180 workers were furious. Remediation works were progressing at a snail’s pace and no ‘green chemistry’ investments were in sight for the workers to be redeployed. In December 2006, ENI agreed to re-hire the Dow workers who were not near retirement and would not find alternative employment, but this happened slowly and, for some, after years on income support schemes.

In March 2008, the government overrode the national environmental commission to grant Ineos the final permits. But the financial crisis was erupting and, in July 2008, Ineos announced it would abandon its Italian PVC plants, to the dismay of its 270 Porto Marghera employees. The factory was put under special administration in an attempt to find a buyer, while the workers – led by technician Nicoletta Zago – began a tenacious campaign in defence of their jobs, including spectacular actions such as the symbolic occupation of the plant’s flare stack and San Marco Square’s bell tower. ENI was this time unwilling to re-hire the Ineos workforce, although extra-ordinary income protection schemes were kept in place until late 2014. The PVC plants never resumed production.

An invisible part of this story was uncovered in 2013, when it turned out that Consorzio Venezia Nuova (CVN) – the consortium of companies tasked with carrying out Porto Marghera’s remediation works – was behind a network of bribes and illicit financing (for an alleged €1 billion) of politicians in exchange for public tenders. It emerged that Altero Matteoli – environment minister between 2001 and 2006 for the post-fascist party AN – had secretly obtained through CVN the award of an inflated public tender for Porto Marghera’s remediation works to crony entrepreneur Erasmo Cinque, after having brokered Montedison’s compensation in 2001. The tender for Porto Marghera’s remediation – worth an ever-inflating sum of hundreds of millions – was then awarded to CVN without competition. During the CVN trial, businessman Piergiorgio Baita allegedly declared:

‘Without CVN, Porto Marghera’s clean-up would have been easily completed by now’ (*Il Gazzettino*, 8 July 2016, 3).

3. *The new Marghera*

In May 2022, ENI permanently turned off its ethylene cracker, ‘Petrochimico’s heart’. While smaller plants that were once part of Petrochimico remain in operation, this closure symbolised an already accomplished fact, the twilight of the centrality of petrochemical production for Marghera. According to EZIPM data, employment in Porto Marghera’s chemical industries decreased from over 14,000 in 1965 to 2200 in 2005, to reach about 700 in 2018. By now, the largest industrial employer in Porto Marghera is by far Fincantieri. Established in 1920 as Breda, this massive shipyard occupies about 1600 direct employees and an oscillating number of outsourced workers – allegedly close to 10,000 during peak times –, which made it infamous for its highly intricate, precarious, and racialised subcontracting system (Quondamatteo, 2022). However, the vast majority of Marghera residents are today employed in the service sector, where tourism in insular Venice plays a big role. The latter generates its own problems – and related social movements – particularly more precarious employment patterns, the further expulsion of Venetian residents to the mainland, the damage to the lagoon’s ecosystem engendered by large cruise ships, and a considerable contribution to excessive air traffic.

Even in the industrial area, concerns about pollution are not over. On 15 May 2020, the acetone plant 3V Sigma suffered a dramatic explosion. ENEL’s coal-fired power station remains active, as well as a waste incinerator. After closing its ethylene cracker, ENI announced plans to open a new incinerator, which engendered a strong opposition campaign by Marghera residents, with particular concerns over the fact that it could be used to burn the PFAS-contaminated muds generated by the Miteni environmental disaster in nearby Trissino (Tamas 2020). Highly worrying is also the fact that the remediation of vast contaminated areas in Porto Marghera is far from completion, leaving them unusable for other purposes.

The province of Venice has consistently reported deaths and cancers beyond the regional average (see Table 2.2). Recent research has also demonstrated that, within Venice, Marghera is

in turn the neighbourhood with the highest excess deaths and cancer incidence, although the difference between Marghera and other areas has been narrowing in recent years (Gessoni et al. 2020).

	Males	Females		
	OBS	SMR (CI90%)	OBS	SMR (CI90%)
General mortality	8,044	108 (106-110)	9,384	105 (103-107)
All malignant Tumours	2,676	114 (111-118)	2,345	116 (112-120)
Circulatory diseases	2,564	105 (101-108)	3,654	105 (102-108)
Respiratory diseases	531	87 (81-94)	638	102 (95-108)
Digestive diseases	321	116 (106-128)	348	104 (95-113)
Urinary diseases	121	96 (83-112)	122	73 (63-85)

Table 2.2 - Mortality in Venice for the main causes of death. Number of observed cases (OBS), standardised mortality ratio (SMR), 90% confidence interval (CI90%); reference = Veneto, 2013-2017. Males and females. Published in Zona et al., 2023, 113.

In the 1980s, a new form of noxiousness, heroin addiction, invested Marghera. At the time, drug trafficking was managed by the local criminal organisation known as Mala del Brenta, which was disbanded in the 1990s (Dianese, 2018). According to our interviewees’ perceptions, heroin trafficking and addition had improved in the late 1990s and the 2000s, but it made a relative comeback in the years following the 2008 financial crisis. Today, Mestre and Marghera (the mainland side of Venice’s council area) have the sad record of being the first area in Italy in terms of per capita drug-induced deaths, mostly caused by heroin.¹³

Marghera’s reputation as an unhealthy place to live has probably contributed to a remarkable increase in the number of emp-

¹³ The data is available at www.geoverdose.it.

ty properties and a decline in house prices. While real estate depreciation is a national trend, even more so when inflation is taken into account, in Marghera it reached more than 50% in real average prices between 2006 and 2022, a difference much more pronounced than in the neighbouring areas (see Figure 2.3).

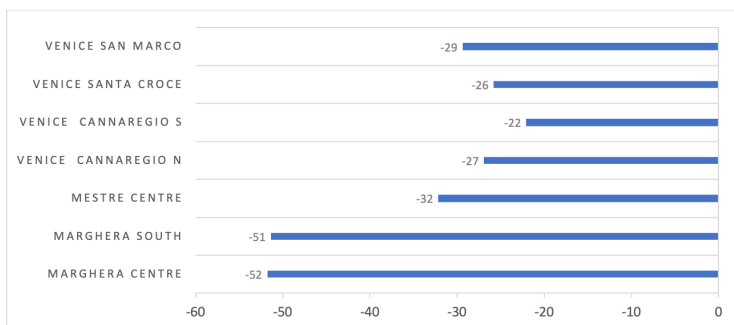


Figure 2.3 - Rate of depreciation of the average sale prices (per sq. mt.) of residential units in 'optimal' conditions between 2006 and 2022 (prices adjusted to 2022) in selected homogenous areas. Source: Authors' elaboration using data from the Ministry of Economy and Finances (Agenzia delle Entrate).

Relatively cheap housing, combined with the availability of nearby employment opportunities in both industry and services, has in turn contributed to high foreign immigration rates. Italy has shifted from having a 2% rate of foreign population in 2001 to 9% in 2021. Marghera, however, moved from 2% in 2001 to 27% in 2021 (see Figure 2.4).

The largest immigrant community in the Venice council area is made up of Bangladeshi nationals, followed by Romanian and Chinese citizens, according to Venice Registry data. Marghera's immigrant population has a much higher male to female ratio (116 men per 100 women) than both the national average and the neighbouring municipalities (see Table 2.3). This might be related to the presence of Fincantieri, which makes extensive use of an outsourced workforce, often male and immigrant (Rabby, 2023). Another important source of employment for the immigrant population is Venice's hospitality sector, which noto-

riously provides, for a large share of jobs, very poor pay and conditions (Magatte, 2019).

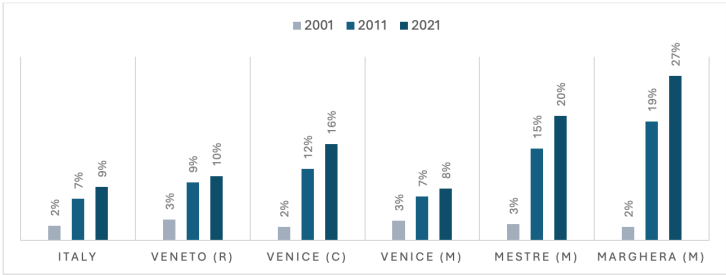


Figure 2.4 - Foreign residents in selected areas (% of the total resident population), 2001-2021. Source: Authors’ elaboration using (1) data for the municipalities of Marghera, Venice and Mestre from the Venice Registry, (2) all other data from ISTAT.

	Ratio of males to 100 females, foreign residents	Percentage of males, foreign residents		
	2011	2021	2011	2021
Marghera (M)	116.0	116.9	54%	54%
Venice (M)	57.7	62.8	37%	39%
Mestre (M)	91.6	98.1	48%	50%
Venice (C)	87.4	92.8	47%	48%

Table 2.3 - Male to female ratio in the immigrant population of selected areas, 2011 and 2021. Sources: Authors’ elaboration using (1) data for the municipalities of Marghera, Venice and Mestre from the Venice Registry, (2) all other data from ISTAT.

The influx of immigrants has mitigated the decline and ageing of Marghera’s population. In fact, the number of Italian citizens residing in Marghera has declined from about 27,600 in

2001 to 20,700 in 2021, according to Venice Registry data. The ageing index (i.e. the ratio of the population aged 65 or more to that aged between 0 and 14) was particularly high in Marghera in 2001, but it then converged with the Italian average in recent years (see Figure 2.5), which is most probably due to immigration.

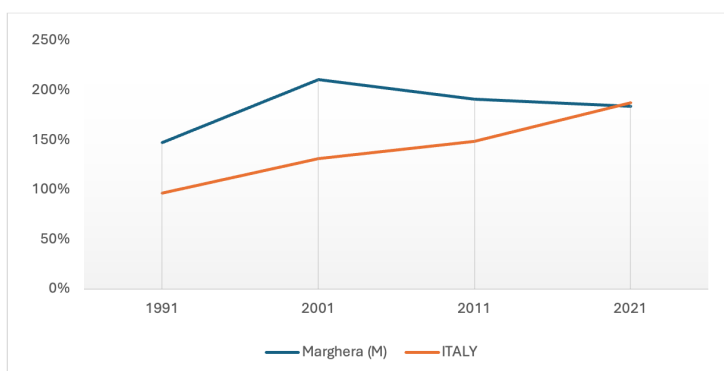


Figure 2.5 - Ageing index in Marghera and Italy, 1981-2021. Sources: Authors' elaboration using (1) data for the municipality of Marghera from the Venice Registry, (2) data for Italy from ISTAT.

These transformations of Marghera's employment and residential make up have also changed its political outlook. Three periods can be distinguished in this respect. The first phase, from the post-WWII decades to 2005, saw a hegemony of PCI (and its heir DS) and PSI. These were the traditional parties of the labour movement, with a strong presence in the trade unions and in the industrial area. Since the Marghera municipality was established in 1975, these parties or their successors always won the presidency, except for a four-year Green Party tenure (see Figure 2.6). However, employment deindustrialisation and rising awareness over the impacts of industrial pollution undermined this state of affairs. Between 2005 and 2020, PRC and the Green Party – originated from Marghera's New Left groups – kept the presidency of the municipality on a platform based on combating pollution and strengthening public services. This is a quite exceptional development in an otherwise mostly conserva-

tive region such as Veneto. However, for the first time in Marghera’s history, the Right won the 2020 municipal elections, inaugurating the third and current phase. This shift to the Right is consistent with the national trend and – according to some of our interviewees – it also stems from a rise in implicit and explicit racism in relation to immigration.

1975	1980	1986	1990	1992	1996	2000	2005	2010	2015	2020
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DE FACCI PCI	LUCATELLO PCI	MATTARAGGIA PCI	BROCCA PSI	DA VILLA VERDI	LUGATO DS	TURETTA DS	PANCIERA PRC	DAL CORSO VERDI	BETTIN VERDI	MAROLO CIVICA-DESTRA
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Figure 2.6 - Timeline of Marghera municipality presidents

In parliamentary elections, Marghera, once a safe Left constituency, became a contested seat, with right-wing parties gaining ground in recent years (Figure 2.7). Comparing the evolution of electoral outcomes since 1983, we can see a first decline of the Left in 1992, which was the first election after both the fall of the Soviet Union and the corruption scandal *Tangentopoli*. There has also been an increase in vote dispersion to smaller parties (represented in grey). However, Marghera kept voting for

the Left in greater proportions than the country’s average until the very last election, while at the same time ‘testing the newcomers’: FI in 1996 (not charted here), M5S in 2018 and, finally, FdI in 2022.

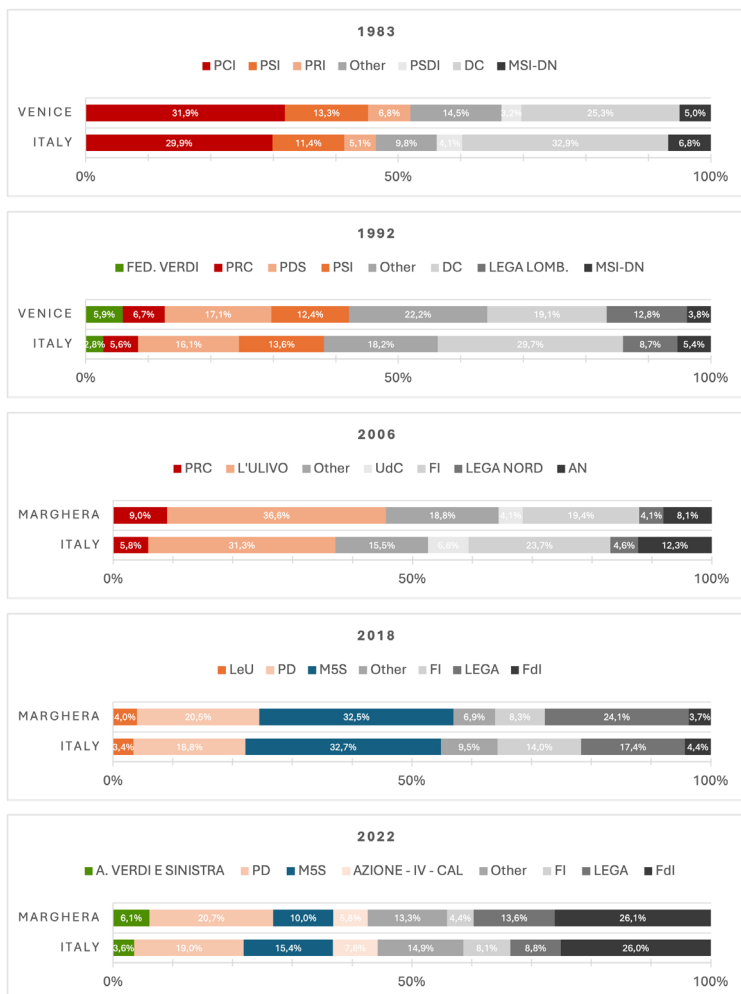


Figure 2.7 - Vote share by party at Chamber of Deputies elections, selected years. Source: Authors' elaboration using data from the Ministry of Interior and Venice Council (data prior to 2006 is disaggregated at the council level only). See Table 2.1 for acronyms.

From this account, it emerges that Marghera's deindustrial transition has been accompanied by multiple forms of malaise.

Nevertheless, it is important to remember that we are still dealing with a neighbourhood situated in one of Italy's richest areas. Income tax (IRPEF) data show that Venice is part of the top 1% councils in Italy, both in absolute and per capita terms. While Marghera's income per capita is no doubt lower than that of insular Venice, the latter is among the three metropolitan areas with the lowest income inequality (Biagetti, 2020).

Furthermore, while problems such as pollution and drug abuse are real, there is a good dose of classism and racism in the sensationalistic and stigmatising depictions of Marghera that can sometimes be heard in Veneto. These representations overlook the social wealth of a territory with strong citizens' associations, cultural and political activities, and public services that resist in spite of defunding. Marghera has also long been a reference point for youth countercultures, with its music scene – for instance the Venezia Hardcore collective – and its football fan clubs. Such community bonds explain to a large extent the deep sense of attachment that the people who live Marghera or know it well feel towards this neighbourhood. An open question is how this social texture is modifying in relation to Marghera's changing population, which increasingly resembles that of the whole planet.

Conclusion

With the chlorine cycle gone and remediation far from completion, neither the workplace-centred camp nor the community-centred one realised their goals. The environmentally sustainable chlorine cycle envisioned by the unions did not materialise, and neither did the regeneration based on post-remediation green jobs advocated by the environmentalists. Yet, on the one hand, the workplace-centred mobilisations protected workers' income to some extent through re-hiring by ENI and extra-ordinary income support schemes. On the other hand, the community-centred camp achieved significant environmental improvements in terms of partial remediation and reduced industrial pollution and hazards.

As a reflection on this experience, Gianfranco Bettin published a novel titled *Cracking* (Bettin, 2019), a reference to Petrochimico's last major plant. The protagonist is a retired petrochemical worker enraged about the fact that his former colleagues

are being left without viable employment alternatives. The narrative, written by one of the most visible leaders of the anti-chlorine campaign, is meant as a contribution to heal the fracture between the workplace-centred and community-centred camps through the perspective of its protagonist, both Marghera resident and former union activist.

A convergence between the workplace-centred camp and the community-centred one would possibly have generated more effective pressure on employers and the state authorities to deliver an environmental remediation that, to the present day, is far from realisation. Such remediation would have been in the interest of both camps, as it would have removed much pollution from the vicinities of residential Marghera while making space for new sources of employment. Perhaps, the times were not ready for such a coalition across workplaces and communities. We have seen a major example only recently, with the convergence between factory workers and the climate justice movement successfully led by the Ex-GKN Florence Factory Collective (Collettivo GKN et al., 2022). While the GKN dispute has many characteristics making it very special, it is to be hoped that it will serve as an inspiration for future struggles over productive conversion and its relationship to the surrounding territories.

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References

- Allen, B. L., (2011). A tale of two lawsuits: Making policy-relevant environmental health knowledge in Italian and US chemical regions. in Christopher Sellers and Joseph Melling (Eds), *Dangerous trade: Histories of industrial hazard across a globalizing world*. Philadelphia (PA): Temple University Press, 154-167.
- Benatelli, N., Candiello, A., and Favarato, G., (2006). *Laboratorio Marghera: Tra Venezia e il Nord Est*. Portogruaro: Nuovadimensione.
- Bettin, G., (2019). *Cracking*. Milan: Mondadori.

- Biagetti, M., (Eds) (2020). I redditi imponibili e le disuguaglianze IRPEF nei comuni capoluogo delle 14 città metropolitane: Evidenze empiriche dalla serie storica 2000-2017. https://www.agenzia-coesione.gov.it/wp-content/uploads/2020/07/CPT_Informa_1_2020_def.pdf.
- Boato, M., (2019). *La lotta continua*. Venice: Libri di Gaia.
- Bonello, V., (2017). *Porto delle nebbie e luoghi chimici: Marghera, etnografia della città post-industriale*. PhD thesis, University of Verona.
- Bortolozzo, G., (1994). Storia di un killer chimico: Il cloruro di vinile. *Medicina Democratica*, 92/93, 32-92.
- Casson, F., (2007). *La fabbrica dei veleni: Storie e segreti di Porto Marghera*. Milan: Sperling & Kupfer.
- Cerasi, L., (2007) *Perdonare Marghera: La città del lavoro nella memoria post-industriale*. Milan: FrancoAngeli.
- Chesta, R. E., Crivellari, P., and Santana-Bucio, C., (2014). Histoire des mobilisations civiques sur les risques majeurs au Havre (France) et à Marghera (Italie). *FonCSI Livrable 2*.
- Chinello, C., (1996). *Sindacato, Pci, movimenti negli anni Sessanta: Porto Marghera-Venezia, 1955-1970*. Milan: FrancoAngeli.
- Città di Venezia, (2019). *Indagine conoscitiva sulle attività economiche presenti nell'area di Porto Marghera al 31 dicembre 2018*. www.comune.venezia.it/sites/comune.venezia.it/files/documenti/progetti_strategici/report_2019_31072019_DW.pdf.
- Collettivo GKN et al., (2022). *Un piano per il futuro della fabbrica di Firenze: Dall'ex GKN alla Fabbrica socialmente integrata*. Milan: Fondazione Giangiacomo Feltrinelli editore.
- Dianese, M., (2018). *Doppio gioco criminale: Vera storia di Felice Maniero*. Milan: Milieu.
- Feltrin, L., (2022). Situating class in workplace and community environmentalism: Working-class environmentalism and deindustrialisation in Porto Marghera, Venice. *The Sociological Review*, 70(6), 1141-1162.
- Feltrin, L., Mah, A., and Brown, D., (2022). Noxious deindustrialization: Experiences of precarity and pollution in Scotland's petrochemical capital. *Environment and Planning C*, 40(4), 950-969.
- Feltrin, L., and Sacchetto, D., (2021). The work-technology nexus and working-class environmentalism: Workerism versus capitalist noxiousness in Italy's long 1968. *Theory and Society*, 50(5), 815-835.
- Gessoni, F., Macciò, S., Barbiellini Amidei, C., and Simonato, L., (2020). Study on the health status of the population living in Marghera

- (Venice, Italy) through the use of a longitudinal surveillance system. *Annali dell'Istituto Superiore di Sanità*, 56(2), 157-167.
- Magatte, S., (2019) *Marghera: Da città industriale a città degli immigrati*. Venice: Mazzanti.
- Markovitz, G., and Rosner, D., (2002). *Deceit and denial: The deadly politics of industrial pollution*. Berkeley (CA): University of California Press.
- Nappi, A. F., (1994). *Storia di Marghera: Da periferia a città*. Venice: CSC.
- Pirastu, R., Baccini, M., Biggeri, A., and Comba, P., (2003). Epidemiologic study of workers exposed to vinyl chloride in Porto Marghera: Mortality update. *Epidemiologia & prevenzione*, 27(3), 161-172.
- Quondamatteo, N., (2022). Dentro le navi, il mondo intero: Un'analisi del sistema degli appalti nel caso Fincantieri. *Quaderni rassegna sindacale*, 2, 51-62.
- Rabby, A. A., (2023) Fincantieri: Lavoro migrante precario e appalti nella grande industria di Stato. Gli asini, <https://gliasinirivista.org/fincantieri-lavoro-migrante-precario-e-appalti-nella-grande-industria-di-stato/>.
- Tamas, L. R., (2020) Sostanze perfluoroalchiliche (PFAS) e salute: *Il caso del Veneto, Master's Dissertation*. University of Padua.
- Taylor, D. E., (2014) *Toxic communities: Environmental racism, industrial pollution, and residential mobility*. New York (NY): New York University Press.
- Zazzara, G., (2009). *Il Petrolchimico*. Padua: Il Poligrafo.
- Zazzara, G., (2017). *I cento anni di Porto Marghera. Italia contemporanea*, 284, 209-236.

Piano Taranto: between participation and planning

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Introduction

Taranto is a city of roughly 200,000 inhabitants, located in the Apulia region (South of Italy), which has been experiencing a deep socio-ecological crisis, due to different and interconnected economic, social and environmental contradictions, largely connected to the ex-Ilva, one of the oldest and largest operating steel plants in Europe. Taranto's community has been particularly vulnerable to the so-called job blackmail, whereby the right to a healthy environment comes into conflict with the right to work, largely provided by the steel factory. The ex-Ilva case is also characterised by a series of complex events, involving judiciary, administrative and legislative powers at different levels, which are still under judgement. These include legal proceedings against the ex-Ilva and the Italian State by European institutions (Graziuso, 2022). In this context, *Piano Taranto* [Taranto Plan], a planning strategy presented in the form of a document, was drafted through a grassroots participatory process between 2017 and 2018. Assuming the steel-plant closure as necessary, the Plan aims at providing a radical alternative to the current monocultural economy by a massive brownfield remediation and diversification of the economic bases.

The objective of this article is to present the Taranto Plan as an example of bottom-up planning. However, this analysis aims to go beyond the scrutiny of the genesis and content of the Plan. By listening to the words of those who participated, in one way or another, in conceiving the Plan, we would like to unveil the

assumptions, conceptions and categories on which the Plan and the imaginary of Taranto rest. The intention is to offer a non-neutral reading of the Plan, but to question the more general relationship between bottom-up participation and planning. Can the Taranto Plan be considered a virtuous example of bottom-up planning? What elements determine this bottom-up process? Is it able to escape the developmentalist and colonial conception of 'planning' or does it rather risk unwittingly to reproduce its theoretical assumptions?

Before reasoning on the participatory process, a few events about the last sixty years of industrial, urban and social history of Taranto need to be recalled. The ex-Ilva is the last Italian plant mobilizing an integral cycle of steel production, which means the transformation of raw materials to final steel products through a blast furnace/basic oxygen furnace process (Acciaierie Italia, 2022). The environmental impact of such a plant is devastating and includes the emission of pollutants of various origins in the air, discharge of toxic and hazardous liquid and solid waste, contamination of surrounding agricultural land and biodiversity reduction. In terms of public health threats, the assessments of the impacts of the exposure to contaminants of industrial origin commissioned by the Italian National Health Institute reveal excess mortality in the Taranto area from cancer, cardiovascular and kidney illnesses, as well as increased neurological, heart, kidney, and digestive illnesses and respiratory infections (SENTIERI, 2019).¹⁴

The steel plant, at its full capacity, can produce up to 10 mt (million tons) of steel per year (Romeo, 2019), but since the 1980s both the production and employment have decreased progressively. In 2021, there were 8,165 employees including those in layoff (Acciaierie d'Italia, 2022) and production in 2023 was less than 3 mt (Federmanager, 2024). Starting its operation in

¹⁴ Further studies have revealed serious neurobehavioral effects on child development (Renzetti et al., 2021), while a cohort study on mortality and morbidity in the area of Taranto shows that people living in the districts closest to the industrial zone (featuring lower socioeconomic indicators) have higher mortality/morbidity levels compared to the rest of the city area (Mataloni et al., 2021). Most recently it has been estimated the significant mortality impact associated with the greenhouses gases emission of the ex-Ilva to be expected by the end of the century based on the 2020 declared emission (Gianninico et al., 2023).

1964 as a State-controlled company, ex-Ilva represents a clear example of how the Italian State organized the industrial development of Southern Italy after World War II. The establishment of the steel factory was seen as the basis for the modernization of a “backward” economy, previously founded on primary sector, military arsenal and shipyards. Although the ex-Ilva prompted the construction of some activities, including a cement plant and a Shell refinery, it did not boost the expected development. During the 1970s the plant doubled, and its footprint reached about 15 million sqm. Both phases of construction occurred in complete disregard of statutory urban zoning plans, as the chosen site was right on the edge of the city centre and adjacent to an existing residential area.

From the beginning, industrial development marked the territory, redefining the socio-spatial organization of the city and the everyday life of citizens. This powerful transformation, oriented to the stabilization of a monoculture and to build a popular industrial consciousness was sustained by a pervasive discourse, cultural and pedagogical programs and propaganda (Nistri, 2009; Leogrande, 2013; Romeo, 2019). This expansion, which involved the concessions of coastal and rural space to the industry, was not accompanied by interventions to balance the social and environmental costs. As the Old city depopulated - due to the collapses of buildings and subsequent evictions - the real estate speculation encouraged over construction outside the historical perimeter (Romeo, 2019) believing the unreal demographic forecasts of 300,000 inhabitants. *“Citizens could finally enjoy its belated “economic miracle”, witnessing growth in per capita income and understandably taking pride in the new city identity of “Steel Capital” [...] the Megamachine celebrated its triumphs, fueling the illusion of unlimited growth in both output and employment, a fantasy destined to dissipate in the following decade”* (Nistri, 2011, 1).

In the early 1980s, the factory reached the maximum expansion of its employment base, with 21.791 units (Riva Fire, 2011), but a global economic recession came in, together with the contraction of the European steel market. In a decade, from the 1980s to the 1990s, employment halved (Cerrito, 2010). In 1995, after the plant was sold to the Riva family, a restructuring process took place. On the one hand, it transformed the Ilva into the biggest steel making plant in Europe for production capacity,

making outstanding economic profits in the early 2000s. On the other hand, it deeply changed social and labour relations, further degrading both working and living conditions in the city. As environmental and health concerns became stronger, biomonitoring became more systematic and demonstrated that the ex-Ilva was causing a severe increase of pollution in the surrounding area. Already in 1986, the Italian State included Taranto in the list of the national sites at 'higher risk of environmental crisis', and in 1998 was included in the first group of contaminated sites of national interest (SIN).

A sequence of events led in 2012 to what is considered the turning point of Taranto's industrial and social history: the legal confiscation of the "hot area" due to environmental disaster, put forward by the Public Prosecutor Patrizia Todisco. According to the prosecutor, the ex-Ilva managers were accused for the crimes, among others, of unnamed disaster, food poisoning, intentional omission of precautions against accidents at work, extortion and corruption. The judgment demonstrates, for both men and women, an excess of mortality for different pathologies, as well as higher infant mortality, compared to the regional population, for pathologies etiologically correlated with exposure to the contaminants emitted by Ilva. Despite the evidence brought up by the judiciary, the Italian governments kept bypassing the 2012 sentence issuing a subsequent series of decrees *Salva Ilva* [Save Ilva] in order to maintain the hot area in productive continuity.

In June 2017, Italy awarded most of ILVA's assets to Arcelor-Mittal InvestCo, a consortium led by Arcelor Mittal, which is the world's leading manufacturer of steel in terms of capacity. Currently, Arcelor Mittal owns 62% of ex-Ilva, while public investment agency Invitalia has the remaining 38%. For months both parties have been accusing each other of failing to respect their commitments, but recently the Italian Government has placed the plant under special administration and is looking for new investors again, leaving the fate of Taranto at the mercy of events.

1. Semantics and contradictions of planning

In order to understand *Piano Taranto* and decipher its intentional codes in the words of those who participated in the process, it is necessary to question the instrument of "planning". Specifically, it is crucial to recognise the central role assigned to

planning in the development of Italian marginal areas, which is reflected in some in the discourses about the difficult relationship between North and South of Italy and the so-called “southern question”, one of the most accentuated cases of economic dualism in the West. In the backdrop of the hegemonic narrative about the Southern inability to plan and implement infrastructural, economic and social plans there was the lack of industrialisation first, and later the technological and cultural lag. The ex-Ilva is trapped precisely in this narrative. In the imagination of the Taranto community, the ex-Ilva’s inability to break out of the job’s vs environment dilemma is seen as the result of a political inability to plan a different future for the city. In the face of this impasse, *Piano Taranto* is an attempt - by a part of the Taranto community - to take ownership of the planning tool, in response to the immobilizing narrative of national political and institutional powers.

“Planning” is an attractive and powerful tool for envisioning the future, however it can lead to a number of contradictions and socio-political positioning. Underlying the definition of planning is the word “development” and the Western gaze has taken ownership of it, as the necessary process for the construction of a socio-economic system aimed at individual and collective well-being. Both the liberal and capitalist traditions, as well as the more radically anti-capitalist ones, read “development” in positive terms, at most questioning the ways to do it in a given territory.

In 1992 *The Development Dictionary: A Guide to Knowledge of Power* was published, edited by Wolfgang Sachs. The book aims to unveil the fundamental contradictions underlying the processes of exploitation and socio-ecological destruction inherent in the Western world’s developmentalist approach. It also places attention to the narrative established since World War II. Specifically, the category of “development” is exposed to be much more than a simple technical determination of “socio-economic endeavor.”: *“it is a perception which models reality, a myth which comforts societies, and a fantasy which unleashes passions. Perceptions, myths and fantasies, however, rise and fall independent of empirical results and rational conclusions; they appear and vanish, not because they are proven right or wrong, but rather because they are pregnant with promise or become irrelevant”* (Sachs, 2010, xvi).

In a sense, “development” constitutes a category peculiar to

a specific form of socio-cultural and political narrative, which has determined the expansion of a Western-driven global project. Two major procedures have been essential in this regard: professionalization and institutionalization (Escobar, 1995). The first allows certain forms of knowledge, and not others, to achieve and maintain the status of truth, which are generated and validated by a set of techniques, strategies and disciplinary practices. The entire process of construction of a problem and identification of its solution, passes through a system of measuring, theorization and normalization, which is western based (such as statistics) and functional to the development project. The latter is a complex system of reports, programmes, conferences, local practices, and the like through which discourses and techniques are produced, recorded, stabilized, modified, and circulated. For instance, as industries were associated with cities, a physical redistribution of population from countryside to urban centres was wished, linking indissolubly together industrialization, urbanization and development. Universal education and a system of values, supportive of industrial growth, such as punctuality, hard work, capacity to respond to monetary incentives, were also considered necessary for having a skilled, literate and inventive population.

Another article in the Dictionary asserts the centrality of planning techniques and practices in the development project since its inception and explains that social change and development can be “engineered and directed, produced at will” (Escobar, 2010, 145). This position is not neutral; planning becomes - hidden under the guise of good intention - the main vector and the technical-scientific arm for imposing the modern Western model on the world, specifically on the “underdeveloped” areas, a tool of “domination and social control”.¹⁵ However, this is not sufficient to highlight its inherent power as an instrument

¹⁵ In the “Vocabulary of culture and society” (1983), Williams explains that the most significant change to the meaning of the word “development” came after 1945, when underdevelopment came into use, and development was connected with the idea that economies and societies were to pass through predictable ‘stages of development’. Expressions such as ‘backward’, or ‘underdeveloped’ became the way to permanently define the countries of Africa, Latina America and Asia. Later, a similar treatment was applied to marginal areas within national borders, in Italy to the South.

of capitalism. Town planning gained prominence for dealing with the built environment, social planning was instrumental for promoting people's welfare in the hands of professionals and the State, and modern economy institutionalised the market and the formulation of classical political economy (Escobar, 2010). Therefore, the economist and the planner were leading figures. The first was the expert par excellence called upon to produce the most basic truths about development, the latter was who applied theoretical knowledge through planning, linking policy and the state (Escobar, 1995).

Modern city planning was also progressively relevant. Its fortunes in Western countries are linked to problems of hygiene, promiscuity of uses, and the collapse of property values derived from the rapid industrialization of the 19th century. Beginning with sanitary reforms and the introduction of zoning, the city was planned in neighborhoods to accommodate the labor force migrating from the countryside and find a balance among the different uses and functions. *"Reifying space and objectifying people, the practice of town planning, along with the science of urbanism, transformed the spatial and social make-up of the city, giving birth in the twentieth century to what has been called 'the Taylorization of architecture'"* (Escobar, 2010, 146).

Transforming the urban living space, deeply pervaded by social, economic and cultural networks involves the transformation of subjects and their experience of daily life; and this implies - by the State - a standardization of realities through problems and solutions to solve them, with the suppression of difference and diversity (*Ibidem*).

As a modern device for normalising everyday life, urban planning and planning more generally, call for a reflection. On the one hand, communities and cities become the place where everyday life is naturalised and the technical-scientific knowledge (at the basis of the planning process) determines the constitution of a class holding the power of drafting plans, controlling urban transformations and ultimately dominating communities. On the other hand, by excluding community's knowledge and desires, urban and social planning enter into conflict with the territorial practices intrinsic to the history of the communities themselves.

This excursus becomes therefore a warning about the power of planning as a tool, pervasively constitutive of modern reality.

Analysing Taranto Plan, as an attempt by a community to plan from below its own emancipation from the exploitative linear industrial model, also means testing their experience in comparison with the very use of such a tool. In the following paragraphs, we try to understand how this community managed to appropriate the instrument of planning and to what extent it succeeded in overcoming its modern assumptions, and avoiding the reproduction of those imaginaries belonging to the process of Western domination over marginal territories.

2. Piano Taranto: participatory planning as a response to the hegemonic narrative

The first assembly of the participatory process leading to the drafting of the Taranto Plan document was held in November 2017. The aim of the call to the city, launched by *Comitato dei Cittadini /Lavoratori Liberi e Pensanti* [Committee of Free and Reflective Citizens/Workers] (hereafter CCLLP), is to “*bring together all the intelligences that care about the present and the future of the city of Taranto, aware of the fact that only a bottom-up process, broad and participatory, starting from the local but involving the whole country and beyond, can allow us to regain possession of a destiny that others think they have already written for our tormented land, and that we can no longer delegate to anyone*” (Piano Taranto, 2018, 5). Beside CCLLP participated others civil society organizations,¹⁶ workers and citizens. The assembly had a broad and heterogeneous social composition in terms of age, social class, neighbourhood of residence, occupation, education and previous experience in environmental justice movements. On the basis of preparatory texts discussed during public assemblies, held weekly for about five months, a conversion plan for Taranto was drafted. From this proposal it was expected that all the actors involved would undertake scheduled commitments through regulatory instruments and agreements. The experien-

¹⁶ Giustizia per Taranto a political-cultural association based on the values of environmental justice, social advocacy and democratic participation as tools to promote inclusion, funded in 2017 by former members of CCLLP; Tamburi Combattenti, a group of inhabitants of the Tamburi neighbourhood; the Taranto civic movements Taranto Respira and Tutta mia la città; and ISDE Massafra, an association of doctors for the environment.

ce of the decommissioning of another Italsider steel plant in Cornigliano (Northern Italy) - which had seen intense mobilisations and a subsequent Agreement between workers, trade unions and the government - served as an important precedent, at least for the workers of the Assembly, and the CCLLP in general. A report about the opportunities that the reclamation of polluted sites can offer for the economic and environmental regeneration of territories (Confindustria, 2016) and *Piano B for Taranto*, a document produced by the environmentalist organization Peacelink (2014) on a possible future for the city were important references.

Taranto Plan is presented on the morning of 1 May 2018 at a press conference, attended by institutional representatives, trade unionists, and MPs elected in 2018 in the lists of the *Movimento 5 Stelle* in the Puglia-Taranto constituency.¹⁷ The date is no coincidence. Since 2013, Labour Day in Taranto has been celebrated with *Unomaggio Taranto*, a nationwide music festival attended by artists, activists and intellectuals from all over Italy. The launch of this festival and the birth of the CCLLP, who organises it annually is linked to the events of 2012.

In order to understand the genesis of Piano Taranto, it is necessary to contextualise it in relation to the socio-cultural transformations that led to the judicial seizure of the ex-Ilva 'hot zone' and consequently to the establishment of the CCLLP. As mentioned above, with the privatisation of the factory in 1995, a restructuring process had begun, affecting production, management and labour relations, which were becoming progressively more precarious. In addition, the closure of the Ilva hot-air plant in Cornigliano implied the transfer of that production to Taranto. In 2008, following revelations about the presence of dioxin in cows and sheeps' milk, the environmental movement *Altamarea* emerged. A big strike, followed by 20,000 citizens, and supported by local institutions took place. Unfortunately, *Altamarea* broke up, failing to overcome differences and the involvement of the working class in the construction of the social and political path (Corvace, 2011). Despite the mobilisations, and the

¹⁷ It is worth emphasising that the 5 Stelle party explicitly aligned with the movement for the closure of the plant and the struggles for environmental justice at the national level. However, after the election their withdraw their support.

mounting evidence of the ongoing contamination, the national governments continued to ignore the evidence, but the judiciary intervened, ruling the seizure. A few days later, during a strike called by the major trade unions against the verdict and seizure - which established their subordination to the job blackmail - a worker, dissident trade unionist and founder of the CCLLP took the microphone and shouted "*Enough of your speeches! It's our turn to speak*".

The protest that emerged was not only against the ex-Ilva executives, trade unions and governments. As in all struggles for hegemony - the ability of a specific social class to dominate over others, not only in political and economic terms, but also in cultural terms (Gramsci, 1975) - the narrative dimension is fundamental. Social and political initiatives and the participatory planning process itself are configured as initiatives of resistance and contestation against a dominant culture, connected to the idea that every economic and social progress for the city depended on the production of steel (Nistri, 2009). It is a dialectical hegemonic process, neither static nor rigid (Leitner et al, 2007; Rose, 2002) in which hegemonic (government and institutions) and counter-hegemonic (social and environmental movements) imaginaries and visions of Taranto are articulated. Taranto's cultural hegemony is built on two key elements. First, the configuration of the steel production as a strategic sector for the national economy, which replaced the 1960s-80s rhetoric of industrial development as a modernising force. This new narrative is strictly functional to justify the *Salva Ilva* decrees in defence of a highly impactful company, whose environmental and social costs are externalised and made to fall on the Taranto community. Second, the employment guarantee, which frames the socioeconomic dependence of the territory on the factory.

Underpinning Piano Taranto's counter-hegemonic narrative is the determination to demonstrate the economic and environmental unsustainability of the linear steel-based economy and that "another way is possible". Three main elements frame the Plan. The first element is the claim that the removal of the polluting sources, and therefore the closure of the ex-Ilva, is prior and essential to any alternative development. Technical options to mitigate the environmental impact of steel production are not considered viable transitions. If the reduction of pollutants released into the environment is considered an insufficient

measure to guarantee a healthy life for inhabitants, deep transformations through innovative production cycle technologies (fossil-free steel through hydrogen and electrification) are considered utopian in the short and medium term. On the one hand, the environmental and health risks are amply described. On the other hand, the document criticises the alleged strategic role of steel in the Italian economy, as repeatedly claimed by the Italian governments over the last ten years. This criticism is based on a detailed examination of the financial aspects, including investments, debts, loans and costs mobilised and incurred by the government after 2012. This Section of the plan concludes by identifying the winners and losers of this process, in terms of financial benefits (private) and social and environmental costs (public). The second element of the plan is the reallocation of the ex-Ilva workforce. In this regard, a report by the main association representing manufacturing and service companies is used to demonstrate the economic and employment opportunity of the reclamation. The third, and final, element of the Plan is to demonstrate economic feasibility. The plan claims the need for a diversified economy to overcome the negative impacts of monoculture. Innovative sectors such as renewable energy production, circular economy, energy efficiency (building products and services), port and intermodal development, tourism and culture are suggested. The plan also indicates a series of European and national funding schemes to be used to finance the transition and identifies the responsibilities of each institutional actor in finding and managing these funds.

3. Voices from the community

What lies beneath the pages of *Piano Taranto* holds a far more complex and vast horizon. To explore it, we dig into the experience of the community that gave life to the Plan and into the different imaginaries and reflections that the subjectivities of that community bring with them. This paragraph gives space to the socio-ethnographic side of our research and gives voice to the protagonists of the participatory process that led to the Plan and with those who, being part of the political processes since 2012, have in some way crossed this path, otherwise what we would see is only the technical-scientific scope of the Plan.

The imaginaries are fundamental for unravelling the rela-

tionship between bottom-up participation and planning. They also account for a renewed meaning in the light of the depth of a Southern Italian territory's socio-ecological crisis, also a victim of a narrative of the development/underdevelopment dichotomy. This dichotomy seems to permeate the general intention behind the Plan, which stems primarily from the image of steel production as a barrier to Taranto's potential:

"The organization focused on what at the time was considered an obstruction to the economic development of the city of Taranto. [...] The Plan did not mean to indicate the future of Taranto. It meant to be the inception of an agreement for the closure of the Ilva without the loss of jobs". (Interview 1 aprile 2022). The protagonists seem to share the idea that Taranto has an economic potential, which has been trapped by decades of industrial monoculture. The imagery that emerges at the beginning of the process does not correspond, at least at first sight, with a radical rethinking of the relationship between community and territory or questioning the socio-economic system that led to the industrialisation process. Rather, it appears to be linked to that concept of 'development' promised to the Southern territories for decades, and irretrievably betrayed by the environmental and economic devastation of the Big Industry. What has changed is that the new enemy of development now is the twentieth-century industrial model, which prevents the extraction of other values from the territory. In particular, the reference to the Cornigliano Programme Agreement, as an inspiration by some activists, is fully situated within this vision, whereby the old concept of large-scale monocultural industry gradually gives way to the relocation of highly polluting production and consequent new forms of socially exploitative activities, although more environmentally sustainable. The removal of the obstruction finds its premises in the image that economic progress is closely linked to the release of new energies, linked to advances in technology and scientific specialisation. The desire is - we are told by another interviewee - *"to move from a retrograde and highly polluting production to an innovative industrialization based on a renewable economy"* (Interview 15 February 2022). Piano Taranto represents in the eyes of a part of the community an opportunity to show how Taranto is submitted to a production model that has failed. Faced with the Big Industry's huge costs, the answer is to modernise the local economy on the basis of Taran-

to European city, projected towards the green economy. Taranto without ex-Ilva is an imaginary that, starting with its planned decommissioning, envisages an urban renewal under the impetus of contemporary economic and technological development, which requires a cultural renaissance and new cultural institutions:

“its own university, its own university campus, giving young people a perspective so that they can study in Taranto, a research laboratory on the Mar Piccolo, which is a source of economy for mussel farming, marine biology, and thus create jobs. Or new jobs connected with the history of Taranto, archaeology, and the national museum, which is one of the most important in Italy. So, developing around culture by creating jobs for young people, so that they do not leave the city, because it means culturally impoverishing the city” (Interview 4 April 2022).

The suggestion that renovation comes through the valorisation of the local and young intelligentsia has as its premise a specific vision of the Taranto community by some subjectivities that conceived the Plan. The words of the interview just quoted, imply a vision of backwardness compared to the western system's ability of extracting value from the cultural and education industry. This feeling goes so far as to become a detriment to the transformation itself. In fact, it is the opinion of another activist that Taranto requires *“to be literate, to have tools of understanding in order to bring about change on a cultural level. A great effort was needed to explain difficult things in an understandable way, to provide the cultural background for understanding the pollution in Taranto, without mentioning Ilva. If for decades the schools explained how blast furnaces were built, now we have to explain what dioxin is”*: (Interview 2 April 2022). Here literacy means territorial skills from a developmentalist perspective according to the dictates of today's environmental transition, aimed at investing in environmentally sustainable technologies.

Bottom-up planning therefore identifies with “bringing technical-scientific skills into the territory” and operating a cultural and technical reform. A vision which clearly shows how planning passes through the technicalisation of the process of constructing spaces. Not only, but it also implies that technical and cultural skills belong to an elite, a conception which is far from community bottom-up processes. It is rather in continuity with

the cultural conversion, already experienced by the South of Italy in the years of unification and the modernisation process (Conelli, 2022), which took as its model the construction of a bourgeois and elitist intelligentsia within the European industrial revolution (Williams, 1972).

From the words of the people who have believed in the Taranto Plan or who have questioned the possibility of overcoming the monocultural model of big industry, the vision emerging is anchored to a conception of development linked to western forms of green, smart and creative regeneration processes, where the buzzword remains “development”.

On the one hand, *Piano Taranto* is conceived as a participatory product of the community that thinks of itself beyond Big Industry, moved by a feeling of liberation; on the other hand, it has in its nature the assumptions of a developmentalist model. In this sense, *Piano Taranto*, although a bottom-up endeavour, remains entangled in the production and reproduction of classic positions of the western development model, of which the ex-Illa is an exemplary concretisation.

Conclusions

Providing a new imaginary is not an easy thing to do, especially when it emerges from a condition of socio-ecological devastation such as that of Taranto. The present study tries to interrogate *Piano Taranto* as an attempt to open a crack in years of a national dominant narrative of steel monoculture starting from a study and a vision coming from the same subjectivities living on their bodies, the deep impact of a multifacet crisis.

The result of the analysis conducted here, however, digs a gap between the possibility of a new “imaginary” and the planning of a socio-economic alternative for the city. Indeed, the former calls for a relationship between community and territory that is dynamic and based on the collective construction of a new way of inhabiting space, and establishing emancipatory relations between humans (work, care, housing) and between humans and nature, beyond abstract planning and within community practices that place the role of social reproduction as the pivot of daily and collective life at the centre.

The planning instrument is unable to free itself from being irretrievably bound to a western and modern idea of “deve-

lopment". *Piano Taranto* is thus anchored - between its pages and, even more so, in the words of those who contributed to its drafting - to the hope of a redemption of the South and, specifically, of Taranto from the meshes of cultural, technological and economic backwardness on the basis of an imaginary that is anything but new. It has its origins in the induced myth of the superiority of the western and, specifically, northern European system of progress.

In the final instance, *Piano Taranto* captures the hopes of a devastated community, which unconsciously is forced to reproduce even in the image of a new and prosperous future the systemic processes that always determine its socio-ecological catastrophe.

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References

- Acciaierie d'Italia (2022). *Rapporto di sostenibilità. Esercizio 2021. Stabilimento di Taranto*. Retrieved from: <https://www.corriereditaranto.it/2022/10/07/dati-e-numeri-di-acciaierie-ditalia/>.
- Cerrito, E. (2010). La politica dei poli di sviluppo del Mezzogiorno : elementi per una prospettiva storica. *Quaderni di Storia economica*, 3, 2010. Retrieved from: https://www.bancaditalia.it/pubblicazioni/quaderni-storia/2010-0003/Quaderno_storia_economica_3.pdf.
- Conelli, C. (2022). *Il rovescio della nazione*. Napoli: Tamu.
- Confindustria (2016). *Dalla Bonifica alla reindustrializzazione. Analisi, criticità, proposte*. Retrieved from https://www.confindustria.it/wcm/connect/31b3856f-7aac-4022-9382-84b187b1eace/Confindustria+Dalla+Bonifica+alla+Reindustrializzazione+settembre+2016.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE-31b3856f-7aac-4022-9382-84b187b1eace-mnICLWb.
- Corvace, L. (2011). Dalle navi dei veleni all'AIA: la questione ambientale a Taranto. In Battafarano G. (Ed). *Taranto capitale: economia, lavoro, ambiente e società*. Taranto: Scorpione Editrice.

- Escobar, A. (1995). *Encountering Development. The Making and Unmaking of the Third World*. Princeton: Princeton University Press.
- Escobar, A. (2010). Planning. in *The Development Dictionary*. Second Edition. London & New York: Zed Books. pp. 145-160.
- Federmanager (2024). *Commissione Siderurgia 19 gennaio 2024*. Retrieved from:
https://www.senato.it/application/xmanager/projects/leg19/attachments/documento_evento_procedura_commissione/files/000/429/091/2024_01_31_Federmanager.pdf.
- Giannico, O.V. et al. (2023) The mortality cost of carbon dioxide emissions from a steel plant in Southern Italy: a climate change health impact assessment. in *E&P* 2023, 47 (4-5) luglio-ottobre, pp. 273-280.
- Gramsci, A. (1975). *Quaderni del carcere*. (4 voll.) Torino: Einaudi
- Graziuso, E. (Ed.). (2022). *The right to respect of private life and the protection of the environment*. Retrieved from: <https://www.iusinitinere.it/the-right-to-respect-of-private-life-and-the-protection-of-the-environment-42069>.
- Leitner, H., Sheppard, E. S., Sziarto, K., & Maringanti, A. (2007). Contesting Urban Futures. Decentering Neoliberalism in H. Leitner, J. Peck & E. S. Sheppard (eds), *Contesting Neoliberalism: Urban Frontiers*. New York: Guilford Publications.
- Leogrande, A. (2013). *Fumo sulla città*. Roma: Fandango.
- Mataloni, F. et al. (2012). Studio di Coorte sulla mortalità e morbosità nell'area di Taranto. in *E&P*, 36 (5) settembre-ottobre, pp. 237-252.
- Nistri, R. (eds). (2009). *Taranto: dagli ulivi agli altiforni*. Taranto: Mandese.
- Peacelink (2014). *Un Piano B per Taranto*. Retrieved from: <https://www.peacelink.it/tarantosociale/a/40544.html>.
- Piano Taranto (2018). Retrieved from: <https://www.liberiepensanti.it/wp-content/uploads/2022/04/PIANO-TARANTO.pdf>
- Renzetti, S. et al. (2021). The effects of the exposure to neurotoxic elements on Italian schoolchildren behavior. *Sci Rep*, 11. Retrieved from: <https://doi.org/10.1038/s41598-021-88969-z>
- Romeo, S. (2019). *L'acciaio in fumo. L'Ilva di Taranto dal 1945 a oggi*. Roma: Donzelli.
- Rose, M. (2002). The seductions of resistance: power, politics, and a performative style of systems in *Environment and Planning D: Society and Space*, 20(4), pp. 383 - 400.
- Sachs, W. (2010). *Introduction*. in *The Development Dictionary*. Second Edition. London & New York: Zed Books. pp. xv-xx.

- SENTIERI (2019). Studio epidemiologico nazionale dei territori e degli insediamenti esposti a rischio da inquinamento. Quinto Rapporto. *E&P*, 43 (2-3) marzo-giugno Suppl.1. Retrived from <https://epiprev.it/pubblicazioni/sentieri-studio-epidemiologico-nazionale-dei-territori-e-degli-insediamenti-esposti-a-rischio-da-inquinamento.quinto-rapporto>.
- Williams, R. (1960). *Culture and Society 1780-1950*. New York: Anchor Books
- Williams, R. (1983). *Keywords: A Vocabulary of Culture and Society*. Revised Edition. Oxford: Oxford University Press.

4. Pittsburgh for Taranto

Striving for participatory and inclusive governance
in changing steel cities

Maristella Cacciapaglia

This chapter analyses the participatory governance concerning urban renewal and economic restructuring in the steel cities of Taranto (ITA) and Pittsburgh (USA). In neither case does governance prove to be inclusive; however, it is actively contested only in Pittsburgh. In Taranto, the focus of contention lies primarily in the environmental injustices perpetrated by the steel plant: its chimneys still have an overwhelming character in the city's political arena.

*Introduction*¹⁸

The city of Pittsburgh in United States, once famously labeled the American 'hell with the lid off'¹⁹ due to its steel crisis, has undergone a significant transformation. Today, it serves as a model for new sustainable development trajectories, inspir-

¹⁸ The author would like to thank Franco Chiarello and Marianna d'Ovidio for all their suggestions, which proved invaluable in the various stages of drafting this work. I would also like to thank Sabina Deitrick, Chris Briem and all my colleagues at the University of Pittsburgh for guiding me in the study of their city.

¹⁹ This expression was first popularised in the 1866 *Atlantic Monthly* dedicated to the city of Pittsburgh, which described it as follows: *The town lies low, as at the bottom of an excavation, just visible through the mingled smoke and mist, and every object in it is black. Smoke, smoke, smoke—everywhere smoke.* "It was, he wrote, "like looking over into hell with the lid taken off."

ing – among others – steel cities in crisis like Taranto. The latter, in Italy, is best known for the various problems (environmental, economic, social) associated with its steel industry despite a millennial history as the capital of Magna Graecia or as a Mediterranean port, prompting a demand for transformation. However, the ‘modeling’ in question occurs without proper investigation, neglecting crucial issues such as gentrification²⁰ in Pittsburgh and social exclusion among African Americans, other than the prevalence of working poverty in post-industrial contexts.

This study critically investigates participatory urban governance in Taranto and Pittsburgh, with a specific focus on the processes of change affecting both cities’ steel industries. In particular, it aims to analyze the participation of socioeconomically vulnerable segments of the population in the processes of urban regeneration and economic reconversion that have taken place and are taking place in both cities.

Initially, attention is directed towards urban governance, often touted as ‘participatory,’ despite cities increasingly prioritizing the expansion of capital’s reproductive and profit-making capacities (Sassen, 1993; Harvey, 1989). Subsequently, the cases of Pittsburgh and Taranto undergo analysis to ascertain the experiences of participating citizens and the contextual conditions influencing their involvement. Finally, a comparative examination of the two cases ensues, facilitating a broader contemplation of participatory and inclusive urban governance, transcending mere rhetoric.

Semi-structured interviews, participant observation, and analysis of secondary sources were conducted for the study of both cases. Specifically, over a total period of five months in 2016, the fieldwork in Pittsburgh involved 35 participants, including academics, activists, policy-makers, and other citizens. The study in Taranto, on the other hand, can be regarded as a native ethnography, engaging a total of 52 individuals – entrepreneurs, workers, activists, policy-makers, third-sector practitioners, and other citizens – between 2016 and 2023.

²⁰ Statistics on the living conditions of African-Americans and other segments of the population, the economic fabric of the city, the level of education, etc. are available at the Western Pennsylvania Regional Data Centre (<http://www.wprdc.org/>) or at Data USA (<https://datausa.io/>).

*1. Participatory governance in the entrepreneurial city: opportunities for whom?*²¹

As opposed to ‘government’, the concept of ‘governance’ relies on complex networks of heterogeneous and interconnected actors, both institutional and non-institutional, engaging together in decision-making processes that concern public matters (Pierre, 2000). Especially at the city level, numerous instances highlight the benefits of adopting such participatory approaches to collective decision-making, fostering a deeper understanding of community needs and enabling the design of more equitable solutions. This inclusive approach also helps bridge gaps between citizens and institutions, enhancing individuals’ abilities to listen and advocate for their interests within the community. However, urban governance often presents a complex and fragmented socio-political landscape, with limited opportunities for participatory decision-making. Particularly within the framework of the ‘entrepreneurial city’, such processes may prioritize the interests of public and private entities, potentially excluding vulnerable citizens.

As explained by David Harvey (1989), late capitalism has witnessed a ‘shift’ from managerialism to entrepreneurialism in urban governance. Cities have become increasingly preoccupied with the exploration of new ways in which to foster and encourage local development and employment growth. This entrepreneurial stance contrasts with the managerial practices of earlier decades which primarily focused on the local provision of services, facilities and benefits to urban populations. The ‘entrepreneurial city’ can rather be understood as a ‘growth machine’ — a notion reminiscent of Logan and Molotch’s renowned expression (1987) — embedded within a geographical landscape of interests to be safeguarded and expanded through strategic coalitions. Moreover, it operates within a fiercely competitive global market, where the primary focus is on consistently improving the capacity for capital reproduction and profit-making, mirro-

²¹ This paragraph does not aim to provide an exhaustive overview of the scientific literature produced over the years and more recently on the topics in question. Instead, it seeks to offer readers brief theoretical insights (as interpreted by the author), which can be further explored (and interpreted) in specialized academic journals.

ring the strategies adopted by economic actors. Authors such as Saskia Sassen (1993) adeptly articulate this phenomenon.

At the core of the entrepreneurial city, one encounters landowners, representatives from chambers of commerce, financiers, industrialists, developers, and real estate agents. Conversely, at the margins, reside many citizens who lack the capital—whether economic, social, or human—needed to assert their rights and advance their interests within the sphere of urban politics. It follows that, in this type of city, there would primarily be room for those at its core, with limited space at most for the so-called ‘active citizenship’. Indeed, there is an argument in many circles that participatory urban governance should be reserved only for citizens capable of strategically organizing themselves to assert individual and collective interests (Bobbio e Pomatto 2007). This perspective distances itself from those who advocate for the most marginalized subjects to be the primary protagonists of participatory urban politics.

Finally, it is noteworthy that in the entrepreneurial city, participatory governance is often rhetorically used to conceal democratic deficits and growing social risks. Various institutional actors, including some progressive forces, misuse slogans like Henri Lefebvre’s ‘right to the city’ (1968) to initiate participatory processes that exist only on paper or to imply that suburban issues are resolved through superficial means like murals. Furthermore, it is likely that marginalized segments of society remain unrepresented, or that formal responsibilities are not fulfilled in addressing contemporary social issues associated with commodification, extending beyond the city to labor and welfare concerns. In the words of Patrick Le Galès (1998), many contexts witness a double-faced politics that legitimizes weak and exclusive forms of participatory urban politics. On one hand, politics dictates societal distribution among a small group, while on the other hand, there is a commitment to involve all citizens in public choices and address pressing issues, often without proper follow-up.

Neither Pittsburgh nor Taranto are exceptions to participatory governance that, beyond rhetoric, prioritizes individual economic needs or those limited to specific citizens. Nevertheless, these cases show further irregularities and complexities that undermine the model, to the point where urban policy is challenged to bring about a radical and non-rhetorical change, at least in the US city.

2. *The case of Pittsburgh and exclusive livability*

At the dawn of the 20th century, Pittsburgh earned the moniker of the American 'hell with the lid off'. The city's survey of 1907 underscored the compromised health, working conditions, and living standards of its populace, drawing attention to the high infant mortality rate. Yet, it wasn't until economic downturns, linked to the steel industry, catalyzed the initial strides towards urban revitalization and economic diversification. Specifically, from 1920 onward, Pittsburgh's exclusively steel-dependent economy faced decline amid stabilizing demand and heightened competition from emerging industrial hubs across the nation. Despite economic resurgence during the Second World War, Pittsburgh's steel industry failed to reverse its downward trajectory.

Against a backdrop of smokestacks, Pittsburgh's initial endeavors towards economic transition and urban renewal, later termed *Renaissance I*, witnessed substantial investments in electronics and technical-scientific research. Its identity beyond a mere steel hub was then reshaped, in what was never just a steel city: Henry Heinz's food company found its origins in Pittsburgh, just like Frank Lloyd Wright's famous House on the Falls commissioned by the Kaufmann family.²² Concurrently, urban renewal initiatives unfolded, encompassing the development of Point Park as a central urban feature and negotiations for the renovation of adjacent structures, including parking facilities, hotels, luxury residences, the Alcoa and IBM skyscrapers.

All the *Renaissance I* initiatives found support from the Allegheny Conference Community Development, spearheaded by the business and political elite, orchestrating both economic and urban transformations: notably, figures like the entrepreneur Richard King Mellon, whose economic interests extended beyond the steel market, and the city's mayor David Lawrence, a pioneer of public-private partnerships as levers for local development.

According to Roy Lubove (1996), rather than including any vulnerable segments of the population, *Renaissance I* in Pitts-

²² The Kaufmann family was involved in the retail sectors, with the Kaufmann's Department Store, rather than in the steel one.

burgh exemplified the utilization of public resources to advance specific private interests, resembling what could be termed a 'Reverse Welfare State'. Furthermore, amidst the projects of urban renewal, there were recurrent instances of severe social exclusion directed at these vulnerable groups, echoing James Baldwin's notion of 'negro removal'. Adjacent to Point Park was the Hill District ghetto, where, in 1956 alone, 1324 buildings were razed, 1551 families were displaced, and 413 businesses were forced to close.

In Pittsburgh, citizen participation in urban politics, including vulnerable groups, only gained momentum during the 'contestation years', facilitated by the formation of interest coalitions involving social researchers and activists. These conducive conditions, coupled with a diversifying economy ahead of the global steel crisis, fostered ongoing opportunities for participatory urban governance. For example, in 1973, citizens contributed to drafting the city's Bill of Rights and established the Shadyside Action Coalition to strategically advocate for the interests of vulnerable citizens and defend them against those of others, particularly bankers and landlords. Additionally, organizations like the Neighbourhood Housing Service or the History and Landmarks Foundation provided financial support for the most challenging mortgages showcasing how urban regeneration could occur without the need to dismantle existing structures.

Nonetheless, the definitive collapse of the steel industry in the 1980s marked a new turning point, symbolizing not only relief from environmental hazards for many citizens,²³ but also a pathway out the labour market (or the local economy as a whole) and the urban governance as well. Indeed, this caused an irreversible erosion of their intergenerational lifestyle, synonymous with security and social recognition.

²³ Attempts by some workers to reopen certain industrial plants in the city are alternated with protests by numerous citizens living nearby. For example, we refer to the attempts of the 'Network to save the mon-ohio valley' and the 'Steel Valley Authority' (SVA), formed by several workers around the conviction that de-industrialisation cannot be the answer to the steel crisis. In particular, with five thousand workers, the SVA decided to reopen the plants that LTV only built in the 1970s in Southside, a few kilometres from Downtown and the University District (Oakland). Six years later, however, Southside residents successfully mobilised against the same industrial plants.

More precisely, following the clousure of the many steelworks located in Pittsburgh and its surrounding, further processes of economic reconversion and urban renewal were initiated in the city, once again in the direction of research and technological innovation. Emblematically, these initiatives included Strategy²⁴ or the Partnership for Medical Renaissance,²⁵ whose opportunities tuned out to accessible, strong, and ongoing only to those who embraced the concept of post-industrial Pittsburgh and possessed the adaptable skills needed to thrive in it, such as engineers, doctors, and other highly skilled professionals.

For most steelworkers and their families, these initiatives offered neither place nor opportunities. Despite some vocational retraining programs, such as those offered by the Aliquippa Alliance for Unity and Development and the Heinz Endowments for younger people,²⁶ many steelworkers had no choice but to leave. 150,000 Pittsburgh steel mill workers were laid off by the early 1980s. And between 1980 and 1983, another 95,000 manufacturing jobs were lost. By 1990, half of the population of the Pittsburgh region disappeared.

Even more recently, when Pittsburgh has been seeing the fruits of its economic, human and social capital reinvested over time unlike the Rust Belt 'black spots', the opportunities for participatory urban governance are open and strong only for those citizens who play an economic and social role, as well as a political one, in

²⁴ A programme launched in 1985 by Mayor Tom Murphy to raise the necessary financial funds for the construction of the Biotechnology Centre in place of the LTV smokestacks, bringing together municipal interests with regional interests and, at the same time, those of the Pennsylvania Economic League, the University of Pittsburgh and Carnegie Mellon University.

²⁵ Thanks to various economic resources made available for research and the economic revitalisation of Pittsburgh, this collaboration between the various hospital facilities associated with the University of Pittsburgh allows the academic-hospital world to successfully tie in with the new development paradigm designed for the city. For some time now, this has been the new focus of the Allegheny Conference. Today, the University of Pitt and the prestigious UPMC hospital affiliated with it, are major employers in the city of Pittsburgh, as well as international benchmarks for medicine.

²⁶ Their collaboration generates a major social welfare program to provide a range of services to the two thousand residents of Beaver County, northwest of the city of Pittsburgh, including a youth education and employment project and another economic development project, in support of which they also decide to build two business incubators.

the post-industrial city. Engineers, doctors, creatives, and researchers from around the globe continue to flock to Pittsburgh, drawn by its vibrant cultural and sporting events, environmentally conscious architecture, and dynamic creative communities.

With high-profile companies like Sony, Apple, and Uber calling Pittsburgh home, it comes as no surprise that the city has garnered recognition as one of the most livable cities in the United States, as acclaimed by Forbes magazine and other publications. However, for those who live under vulnerable condition on a daily basis like so many African Americans, Pittsburgh is anything but livable.

Acutally, Pittsburgh has also been named one of the worst cities in the US for African Americans, even more for African American women. It has been labeled by other lists for minorities as difficult, racist, inaccessible, exclusive, and 'gentrified.' These affected residents play a less central role in urban policy, the labor market and local development plans, despite policy makers, tech entrepreneurs, and real estate agents claiming otherwise.

Interestingly, in the case of Pittsburgh, the same rethoric is deconstructed and rejected to such an extent that it can no longer be used to legitimize weak forms of participation and social inclusion in urban politics. Activists, academics, and organized citizens continuously and strategically work together to open up more possibilities for participatory and inclusive processes. Especially in the neighborhood of East Liberty, while there is an increasing number of events where the most vulnerable citizens see their rent multiply in a place already designated as a food desert, or compromised in terms of the quality of public transportation and educational institutions, there are many initiatives geared toward social justice and the formal, not fictitious, accountability of the political class on behalf of the most vulnerable citizens.

"Around that corner, there was a soul food restaurant of a black couple. The food was very good and fresh, although the design tastes were not hip ones. I remembered a lot of families watching the Steelers there. When the couple had problems for the first time in paying the rent of the month, they were immediately kicked out. Just a few time later a white person opened a new soul food restaurant exactly there, supported by the city of Pittsburgh. It was the same kitchen but with a white clientele and a more hip aspect. Around this other corner, in-

stead, there is still a native American guy selling cigarettes but several developers are pushing to get rid of him since black people usually hang out there and this does not positively contribute to a new safer image of the neighborhood. Developers also considered dangerous the Shadow Lounge a few blocks away, with the best concerts of the city. A few years ago, they pushed to shut it down.” (From an interview with a movie director and black activist)

An illustrative example of the reactions to this transformation of the neighborhood is still reflected in the events surrounding the redevelopment of Penn Plaza and Enright Park. Surprisingly, the community was only given the opportunity to participate in the approval of the redevelopment project a mere eighteen hours before the final decision. With such a short timeframe, developers were set to meet with the community for the first time, engage in dialogue, and finalize the proposal for a project that, if approved, would displace more than two hundred families for parking lots, offices, and apartments. The real estate value intentionally soared far beyond the affordability of the residents, even doubling the presence of a luxury supermarket, thereby reinforcing the connection between the issue of food shortage and economic inaccessibility to healthier options. Yet in those very eighteen hours, the East Liberty community decided to cohesively assert its right to the city, after organizing itself into neighborhood committees and receiving support from numerous for-profit and nonprofit organizations in the city. Students and professors from the University of Pittsburgh also stand alongside the East Liberty community, as do the city’s artists and activists. All together, they strategically gave voice to those who live in the neighborhood for decades. Leading first to the city authorities postponing its decision until January and then to cancel, at least for that time, the attempt for participatory and inclusiveness in the project.

Following these episodes, the owners of the Penn Plaza property, Lawrence Gumberg Realty evicted hundreds of residents during a snowstorm. Some residents passed away during the process and the property remained untouched for several months. The protests did not stop but rather converged with those following the murder of George Floyd. Black lives matter.

3. The case of Taranto and the difficulty of its inclusive ‘rebirth’

In Taranto, the steel factory is a city within a city, constructed in the 1950s when the national imperative for its own steel industry aligned with the political, economic, and social ambition to modernize Southern Italy. Implicit in its establishment is a clear notion of territorial development with an industrial emphasis and a top-down approach, lacking autonomy. Moreover, it embodies a notion of development elevated to an infallible and omnipotent deity, echoing the sentiments expressed by Alessandro Leogrande (2013). Emilio Marsini also captures this narrative eloquently in his documentary 'Planet Steel' (1962):

"Because the olive trees, the cicadas, the sun meant sleep, abandonment, resignation, misery. (...) This is instead the new citadel of Italsider, which will be larger than Taranto itself, a metal skeleton that has already transformed into a factory, already in production. Thousands of workers will find employment, peace, and confidence there. Hundreds already work there. They came from the fields, from pastures, from resignation. Today, they already feel like different men, finally alive and modern."

With ITALSIDER, nearly thirty thousand people found more than decent work in the factory and its related allied industries. Many of them left the miserable conditions of peasant life in Southern Italy²⁷ only to find themselves in life and consumption trajectories typical of the industrial cities of the north. Soon, workers and their families begin to adapt to the rhythms of the steel giant and identify with it.

Franco Chiarello and Lidia Greco (2014) aptly elucidate this, highlighting how the widespread socio-economic prosperity fostered a strong and pervasive consensus surrounding the steel mill. This consensus endured even during times of crisis and privatization of ITALSIDER's plants.²⁸ Despite efforts by the new

²⁷ Classical references such as Antonio Gramsci's 'La Questione Meridionale' Friedrich G. Friedmann's 'Osservazioni sul mondo contadino dell'Italia meridionale' (1952) as well as Rocco Scotellaro's sociological survey 'Contadini del Sud' begun in 1950 but left unfinished, are recalled.

²⁸ The factors of the crisis are found locally, nationally, and internationally. For example: the global reduction in demand; the financial and political unsustainability of the mixed economy; and the unsuccessful development of a competitive and high value-added Taranto industry. For more on this, along with the case of rule privatization noted in the Taranto context, see Chiarello and Greco (2014).

management to reduce the workforce and exacerbate tensions between capital and labor, the steel mill remained a crucial source of well-paid and secure employment.

In fact, labor at the factory remained highly valued and sought after, even historically, as many members of the Taranto business class preferred to live in the shadow of the factory or rely on public funding for research and innovation. This underscores the challenge of finding satisfactory employment opportunities in other sectors, still faced by many people in Taranto nowadays.

In this context, characterized by what was later accused of being ‘employment blackmail’, the factory easily wielded significant influence over urban politics, which was hardly participatory or inclusive. Alongside the factory, the city’s elite, including ‘extractive institutions’,²⁹ allied entrepreneurs, and even trade unionists-turned-business managers were found. Objectives aimed at fostering broader social and political goals for enhanced collective welfare among Taranto’s citizens were notably absent. Instead, priority was given to individual well-being, primarily within familial or social networks.

However, in the long run, numerous Taranto residents began to fall ill or witnessed loved ones affected by severe cases of cancer and leukemia. The Tamburi district, for example, became compromised to the point where citizens were advised to stay indoors during so-called ‘wind days’ to protect themselves from fine dust that has already painted the streets, the clothes hung out in the sun, as well as the school flower beds pink. Meanwhile, several young people in search of their own professional and social identity, who have stayed, returned or even arrived in Taranto in some cases, gathered informally in occupied or unoccupied spaces in the city to indicate alternative development trajectories, which start uniquely from below and run especially through the cultural and creative sector.

The culmination of citizens’ dissatisfaction with the hazards posed by the steel mills peaked in 2012 with the initiation of the

²⁹ By ‘extractive’ Acemoglu and Robinson (2012) refer to those institutions of a social reality which base their own plans and activities on the exploitation of the population and the creation of monopolies. Unlike ‘inclusive’ institutions, such institutions do not encourage or foster the participation of the majority of the population in economic activities by leveraging talents and skills.

Ambiente svenduto trial by the judiciary, serving the first decree of seizure of the plants and provoking the reaction of workers on the one hand and citizens and environmental organizations on the other. Thus began the ‘tug-of-war’ between labor and health respectively, that has characterized the city for a considerable period.³⁰

In order to safeguard both these essential rights and considering the strategic significance of the steel plant at both national and European levels, the state implemented extraordinary measures in Taranto. With illuminated smokestacks no longer emitting pollution, these interventions were specifically targeted at addressing environmental issues, reclaiming land, fostering urban regeneration, and facilitating economic diversification. The ultimate objective was to reshape the city into a paradigm of sustainable development—a nucleus of technical-scientific and cultural-touristic excellence.

The state did act in collaboration with various institutions including the Municipality, the regional agency ASSET, the city Port Authority, and local universities. Entrepreneurs, Third Sector organizations, formal and informal groups of citizens also participated in the decision-making and executive processes of such interventions, just as many workers then exasperated by the struggle with their fellow citizens.

Unlike the decision regarding the shutdown of the steel mills, the desire to diversify the local economy has emerged as a unifying force among the various stakeholders in Taranto. This shared goal has fostered collaboration, marking a significant departure from the past when many citizens were reluctant to engage with institutions or fellow citizens, and numerous organizations operated in isolation. Particularly under the administrations of Mayor Melucci (2017-2021; 2022-present),³¹ which has been prioritizing innovation and culture despite potential social

³⁰ There is, however, also the case in which citizens and workers find themselves united in the same battle, namely the ‘Committee of Citizens and Free and Thinking Workers,’ united against the representatives of the national trade unions who, being interested in safeguarding ILVA’s continuity of production, are accused of being complicit in the social and environmental disaster in which the city still finds itself.

³¹ After being challenged by 17 city councilors (out of 32 total), Mayor Melucci won back the 2022 local elections with 60.3 percent of the vote.

risks, many activists and creatives assumed roles as experts in the urban laboratory established by the municipality and its political allies.

In the past, interacting with institutions seemed impossible, but today, they provide support, such as in organizing festivals. This shift is significant progress; at least there is now a vision compared to before. However, there is also a tendency to package the city without much substance. Persistence is still necessary. Sometimes, someone needs to push council members to action, saying, 'Come on, Councillor, get out of the building!'. (From an interview with a socio-cultural entrepreneur)

These more collaborative initiatives included projects promoting green steel production using hydrogen, renewable energy such as offshore wind farms, innovation in the blue economy, and the establishment of a 'special economic zone'. Additionally, urban redevelopment efforts targeted the historic center through initiatives like the 'houses for 1 euro' program and branding strategies aimed at reshaping the image of Taranto. Furthermore, a variety of events including music festivals and sporting events such as the 2026 Mediterranean Games were organized to enhance the city's appeal and revitalization.

Nevertheless, despite the broadened and more participatory nature of contemporary urban politics compared to the past,³² the associated processes still face socio-institutional and socio-economic challenges that render them fundamental yet intricate, rigid, and discontinuous. Often, these processes are pursued as ends in themselves and lack inclusivity.

Critical socio-institutional issues encompass the challenges inherent in extended governance models, where certain actors often prioritize their interests over others'. The presence of extractive institutions, primarily concerned with individual benefits rather than collective outcomes, further exacerbates these challenges. Additionally, widespread mistrust persists among citizens towards institutions, reflecting systemic distrust among individuals themselves. Mistrust and even jealousy among wor-

³² Although it falls outside the time frame of this research, it is worth noting that in 2024, the period in which the current chapter is being written, the political-institutional context of Taranto has changed once again, undermining, among other things, the openness to dialogue and citizen participations.

kers in the Third Sector and social innovators compound these issues. In many instances, dialogues between parties are limited to short-term instrumental goals, such as securing national and European funding for the city. In practice, change processes in the Ionian city often seem driven by actors adhering to a 'zero-to-zero logic.'

'It was thought that we had come to the city to offer them already outlined solutions and that other fellow citizens were colluding and ineffective in identifying a common, win-win solution (...). If you don't understand that one plus one makes three and that cooperation brings everyone a utility, you won't get very far.' (from an interview with a Third Sector actor at national level)

With respect to socio-economic criticality, reference can be made to the many 'fairy'³³ speeches about the quantity and not the quality of new jobs that would be created in the tourism-cultural sector or more generally with the economic diversification processes for the city. Alternative development levers to steel are erected to *'Dei infallibili e permalosi'* (infallible and touchy gods),³⁴ just like industrialism in the past. Yet, these processes can fail and even exacerbate the already compromised conditions of the most vulnerable segments of the population, which find an emblematic representation in the alarming data of the territorial statistics on equitable and sustainable well-being (ISTAT 2023) or in the streets of Taranto's historic center. The latter, which is significantly known as the 'old town,' offers a glimpse into the daily lives of those who have no voice in the arena of urban politics. There, it often happens to witness the buying and selling of heroin just as children are playing ball or as a lady, in the company of her young daughter and very young granddaughter, despairs because another of her young daughters has preferred drug dealing to prostitution.

'I always told you to choose prostitution. At least then you are less likely to die.'

³³ We chose to repurpose the expression 'fairy tale' used by Patrick Vitale in his article 'The Pittsburgh Fairy Tale' published in Jacobin USA on June 20, 2017.

³⁴ The bibliographical reference is still that of Leogrande Alessandro, 'Smoke on the City,' published by Fandango Libri, 2013.

For boys in the 'old town,' there seems to be no alternative to drug dealing, to which they alternate between clandestine pit bull fights and game rooms. For the girls, on the other hand, there is still marriage, even reparative marriage, even at a very young age. Only one street separates all of them from the cruisers who follow the cultural paths dedicated to them, from the *policy-makers* at City Hall or the police at the new building. Such a deprived condition does not only affect young people and is even accompanied by issues concerning the informal economy, long-term unemployment, gambling, scarcity of public services, and social exclusion in all its forms.

Institutions, creatives and pure activists do not seem particularly determined to give a clear and decisive solution to it, except for a few rhetorically focused statements about responsible tourism or community participation in the aforementioned processes.

Conclusions

Placing at the center a critical view on participatory urban governance, and hence taking into consideration both its benefits and risks to the detriment of the most vulnerable citizens, this article analyzed two important cases of urban regeneration and economic reconversion among steel cities. The first involved the city of Pittsburgh, which has seen several of the processes in question repeated over time, alternating between elements of social inclusion and exclusion. The second case, on the other hand, was the city of Taranto, which has a more recent history concerning the steel industry and urban transformation processes, highlighting its particularly rigid and environmentally constrained dimension.

Comparing these two cases, first, it is evident that citizen participation, especially among the most vulnerable, is largely symbolic in both instances, but contested only in Pittsburgh. Rather, in Taranto, participatory processes of urban regeneration and economic reconversion risk exacerbating the problems experienced daily by the most vulnerable segments of the population, while activists, creatives, or innovators in Taranto rigidly narrow their focus to environmental issues alone. Consequently, the steel mill still exerts a dominant, if not overwhelming, influence. With a sense of overbearingness, it imposes itself once

again upon the city of Taranto, despite transitioning from a leading subject to a contested object in urban governance.

Secondly, unlike Pittsburgh, Taranto's social capital is characterized by a dispersion between strong and short, weak and casual ties. While family bonds remain valued and irreplaceable, relationships with other citizens are often marked by a pervasive sense of distrust. Prejudices, fears, and a widespread feeling of inadequacy and selfishness further impede the development of mutual trust. This lack of trust hampers the construction of networks among various actors and undermines the ability to foster cooperative and cohesive environments. Specifically, such fragmented social capital makes it challenging to strategically organize diverse interest groups in urban policy, thereby rendering resulting participatory processes at risk of being closed and weak.

Finally, in contrast to Pittsburgh, in Taranto, processes of economic reconversion and urban regeneration have not been carried out gradually and in anticipation of industrial crises and transformations. On the contrary, many of the interventions carried out in Taranto have been abrupt and imposed by regulatory frameworks. Furthermore, even today, these interventions seem to lack elements of spontaneity and bottom-up activation, despite the expansion of the urban political arena over time.

Yet, as a newcomer to participatory urban governance in transitioning steel cities, Taranto has the opportunity to glean valuable insights from the complexities and past mistakes, which were certainly not lacking in Pittsburgh. There is a chance to steer urban governance towards an inclusive and participatory path. Qualified actors committed to pursuing social justice goals could engage the most vulnerable citizens in processes aimed at identifying the daily social needs of their area and collaboratively designing more equitable and effective responses. This approach would empower marginalized voices, leverage the expertise of those on the margins, and foster new forms of collective knowledge and intelligence.

Another significant proposal could involve forging network pacts binding different stakeholders to synergistic and long-term actions. Additionally, there are untapped opportunities for sustainable local development beyond environmental concerns. For instance, efforts could focus on increasing vocational training opportunities for residents and fostering pathways for women's, youth, and civic entrepreneurship.

Furthermore, increased regulatory interventions could curb real estate speculation and prevent displacement phenomena. At the same time, urban policy could embrace a collaborative approach, integrating with other public policies that influence the well-being of people in territories, particularly emphasizing radical stances on labor and welfare policies.

References

- Acemoglu, D., and Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York: Crown Business.
- Chiarello, F., and Greco, L., (2014). La privatizzazione delle regole: l'ILVA di Taranto. *Sociologia del Lavoro*, 135(3): 37-54.
- Gramsci, A., (1952). *La questione meridionale*. Milano: Edizioni di Comunità.
- Harvey, D., (2013). *Seventeen Contradictions and the End of Capitalism*. Oxford: Oxford University Press.
- ISTAT (2023). *Rapporto BES 2023: il benessere equo e sostenibile in Italia*.
- Le Galès P. (1998), La nuova political economy delle città e delle regioni, *Stato e Mercato*, no. 52, Aprile 1998, Bologna, Il Mulino.
- Lefebvre, H., (1968). *Le Droit à la ville*. Paris: Editions Anthropos.
- Leogrande, A., (2013). *Fumo sulla città*. Roma: Fandango.
- Logan, J. R., and Molotch, H. L., (2013). The city as a growth machine. In *The Gentrification Debates* (pp. 87-102). New York: Routledge.
- Lubove R. (1996), *Twentieth-Century Pittsburgh, Pittsburgh and London*, University of Pittsburgh Press.
- Marsili, E., (1962). *Il pianeta acciaio* (script di Dino Buzzati). Ondatele-rama.
- Sassen, S., (1993). *The Global City: New York, London, Tokyo*. Princeton: Princeton University Press.
- Scotellaro, R., (1950). *Contadini del sud*. Roma: Editori Riuniti.
- Vitale, P., (2017). The Pittsburgh Fairy Tale. *Jacobin*. <https://jacobin.com/2017/06/pittsburgh-tech-new-economy-manufacturing-inequality>.

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