

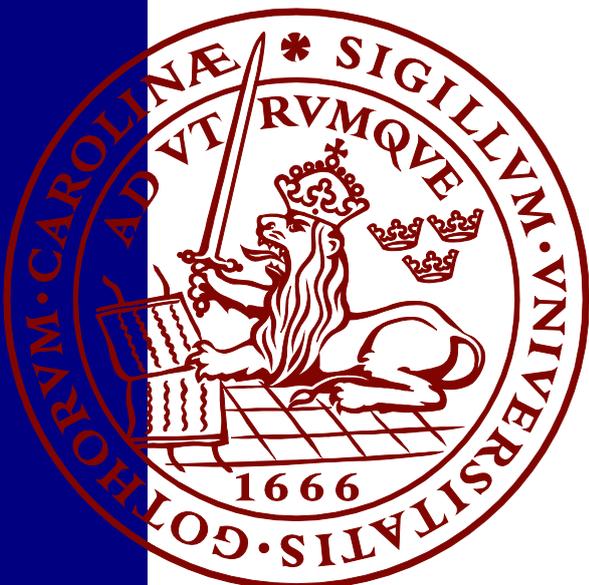
Envisioning post-industrial futures

A 3 Horizons approach for navigating Taranto's social imaginaries' potential for change

Mariarcangela Augello

Master Thesis Series in Environmental Studies and Sustainability Science,
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A thesis submitted in partial fulfillment of the requirements of Lund University
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(30hp/credits)



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Lund University Centre for
Sustainability Studies



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Abstract

Socio-environmental crisis are also crisis of imagination. In the city of Taranto, the heavy industry has had devastating socio-environmental effects, and the dominant narrative still considers environmental and social sustainability as a double bind. Consequently, to this date there is no sign that anticipate a solution to the socio-environmental crisis.

By means of 3 horizons framework, this work identifies the social imaginaries of Taranto's social movements, namely how they frame the present and imagine the future. This research finds that Taranto's social movements envision different ways to re-make a sustainable and lively city in which environmental sustainability does not necessarily exclude social sustainability. Furthermore, it finds that imagining alternative futures is a way to re-politicise the conflict and raise questions of socio-environmental transformative justice.

By joining social movements' theories to that of social imaginaries, this research reflects on social movements' role in shaping society's imaginaries and potential to change.

Keywords: Social movements, alternatives, transformations to sustainability, visioning, socio-environmental justice, participatory research

Wordcount: 11928

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This thesis was written during an ongoing genocide.

As of 8:59:59 am (CEST) on the morning of May 13th, 2024, 35,469 Palestinians have been murdered by the state of Israel in Gaza, including over 14,500 children. 78,614 have been injured, and at least 10,000 are currently missing.¹

Every university in Gaza has been destroyed.

Lund University remains silent and therefore complicit.

We join students across the world who are collectively amplifying the Palestinian struggle. We condemn the ongoing violence perpetrated by the state of Israel against Palestinian health, freedom, safety, culture, and academia.

We demand that Lund University openly recognizes these atrocities and cuts all ties with the state of Israel. Additionally, it must terminate all cooperation with the weapons industry so as to ensure that Lund University will never again contribute to such violence and war crimes.²

We urge every reader to speak up for human rights and international law and against this genocide.

FROM THE RIVER TO THE SEA

PALESTINE WILL BE FREE

¹ See Al Jazeera Israel-Gaza war in maps and charts: Live tracker:

<https://www.aljazeera.com/news/longform/2023/10/9/israel-hamas-war-in-maps-and-charts-live-tracker/>

² Demands in alignment with Lund Students for Palestine. See: <https://linktr.ee/lundstudentsforpalestine>

List of acronyms and abbreviations

3H	3 Horizons
GxT	Giustizia per Taranto
JDC	Jonian Dolphin Conservation
JTF	Just Transition Fund
Mele	Mele d'Artemisia
Raggia Tarantina / Raggia	Laboratorio Raggia Tarantina
RQ	Research Question(s)
SM	Social Movement(s)
SMO	Social Movement Organization(s)

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1. Introduction

The city of Taranto has been called a “sacrifice zone” (Barca & Leonardi, 2016, p. 60) in which the interests of capital come above everything else, where people and environment’s health have been sacrificed in the name of progress. Emblem of the crisis, the steel plant, has been presented as a solution to develop a territory otherwise considered backward. However, the population of the territory soon realised that the promised development did not arrive, or arrived with side effects: environmental devastation, pollution, and the associated health problems. Nowadays this case is presented as a dilemma, or, as the inhabitants of Taranto call it, a blackmail: safeguarding several thousands of job places or safeguarding citizens’ right to health and a healthy environment. However, framing the socio-environmental crisis in terms of a dilemma has hindered any alternative way out.

In this political and economic immobilisation, imagining the alternatives allows to find just solutions for the people and the environment’s health. Therefore, in this thesis I want to explore the future collective visions imagined by the social movement organisations (SMO) in Taranto answering to the following research questions (RQ):

1. How do social movements in Taranto frame the problem?
2. How do they envision the future of their territory?
3. How do they understand their role as actors of change?

My claim is that SMO’s visions for the future are powerful tools to resist and change the dominant narrative of blackmail and re-politicise the conflict. Ultimately, rendering these alternative visible is fundamental to change social imaginaries and foster transformations to sustainability. My research inserts itself in the literature regarding alternatives and solutions to the socio-environmental crisis in Taranto. In fact, increasingly new research has focused on solutions to Taranto’s problems. However, until this point, the role of social movements in driving transformative social imaginaries has been overlooked. My thesis aims to fill this gap.

The thesis is organised as follows: section 2 will introduce the background and the existing literature on Taranto’s socio-environmental problem. The third section displays the theoretical framework, which will be followed by the methodology section in which I will justify the methods used to conduct this research. I will present the results of the fieldwork in section 5 and then discuss them in section 6, in which I will also explain their relevance to sustainability science.

2. Setting the scene

This section will present a literature review about the socio-environmental situation in the city of Taranto and some background on the social movements in the city. It will provide an insight of the context, review existent research, and finally identify research gaps. I used the platforms LUBSearch and Scopus to search for and retrieve existent literature on the topic.

2.1 Taranto

The first industrialization of Taranto started from the Nineteen century with the construction of the military arsenal. After the second world war, the Italian state massively invested in the industrial development of Southern Italy with the aim of relieving it from the proverbial backwardness, savagery, and underdevelopment (Festa, 2014). Nowadays, Taranto is an industrial hub hosting a cement factory, a petrochemical refinery, an industrial landfill, and an industrial port. However, the city has become nationally and internationally (in)famous for the case of ex-Ilva steel plant, now a public-private partnership called Acciaierie d'Italia, which has become the emblem of the socio-environmental effects of industrialization and industrial monoculture. In fact, national epidemiological studies reveal a higher mortality for all types of cancer, cardiovascular, and respiratory diseases in the area of Taranto, well beyond the regional and national average (Sentieri, 2019). Also, studies demonstrated how living in an environmentally contaminated and economically unstable situation has psychological effects on the citizens of Taranto (Tartaglia et al., 2018). Additionally, from 2012 the city has been declared an area of complex industrial crisis (Ministero delle Imprese e del Made in Italy (MIMIT), 2024). Areas of complex industrial crisis are those territories that are experiencing economic recession and job losses due to the crisis of important factories or an entire sector with a high degree of specialisation in the territory (MIMIT, 2024). In the same year an historical judicial decision ruled the stop and the confiscation to all the activities of the plant (Lai et al., 2019), however, despite a great downsize of the production and of the number of employees (Dunford & Greco, 2007), different governmental decrees were issued to continue with the production (Lai et al., 2019). In fact, the state aims to adopt carbon capture and storage technologies to dampen the emissions, a solution that L. Greco et al. (2023) deemed partial, overdue, and irrelevant considered the scale of the problem. Meanwhile, Taranto tries to emerge from the inactivity of the last decades. Indeed, the city will be beneficiary of the Just Transitions Funds (JTF) from the European Union. The JTF are funds allocated by the EU to support the transition to carbon neutrality in those territories who will be most affected by it. The fund includes provisions for the diversification and the reconversion of the territories (European Commission, n.d.). Also, in 2019 the administrations presented a plan called "Taranto

Futuro Prossimo” (2019), which aims to invest in tourism and port logistics activities to diversify the city’s economy. Still, as discussed by L. Greco et al. (2023), the funds open up new questions regarding the city’s ability to tackle the root causes of the socio-environmental and economic crisis.

Different research has dealt with Taranto’s socio-ecological issues. Lai et al. (2019) analysed how the Italian state problematised the issue as a double bind between social and environmental sustainability, a dilemma in which one of the two sides will be necessarily dissatisfied. Also the media have contributed to shape this image of the city. Benetti et al. (2023) describe how the narratives (or landscapes as they call them) around the city of Taranto have been intertwined with the steel plant, which passed from a symbol of progress for the city to the symbol of pollution and death. Additionally, C. Greco (2016) has unpacked how media (but also authorities) showed little to no acknowledgement to the environmental movements and to the structural conditions at the origin of the problem, also in some cases individual habits have been blamed for the disastrous health consequences of pollution. Thus, the dominant narrative for which Taranto will be condemned to massive unemployment and socioeconomic marginalisation without the steel factory has been internalised by the citizens. For Barca (2014), the case of Taranto prefigure itself as the manual case of environmental injustice in which the contradictions created by the treadmill of production become evident: occupational illnesses, job accidents, environmental contamination, ecocide, public health disasters, annihilation of possibilities for alternatives/autonomous forms of economy and so on. Barca (2012) asserts that these costs are disproportionately felt by the workers and the most vulnerable social groups and Ippolito (2022b) sheds light on how toxicity has shaped the lived experiences of residents, especially those living in the Tamburi neighbourhood, which is the closest to the steel plant. Furthermore, he explains how the bureaucratic and institutional setup has prevented the community from mobilizing epidemiological evidence and advocating for environmental justice, leading to a pervasive sense of resignation and the conviction that illnesses are inevitable. Lastly, Jokela-Pansini (2022) examines the embodied experiences of pregnant women, demonstrating how their health concerns are multiplied in polluted environments.

2.2 Civil society and Social Movements in Taranto

The years between 2008 and 2012 witnessed a great fervour in Taranto. In those years environmental movements managed to mobilise great parts of the city to demand justice and the stop to the polluting activities (Ippolito, 2022a). The Altamarea (Hightide) movement was result of the union of different SMO and civil society that managed to bring several thousands of people in the streets of Taranto. L. Greco and Di Fabbio (2014) analysed how the events of those years have led to the withdrawal of the

unconditional support to the steel plant and how this is fundamental to reverse the path-dependence of the city from the factory. As noted by Alliegro (2020) civil society associations have had a crucial role in spreading awareness about the level of contaminants coming from the steel plant and the health-related issues caused by them. In fact, the judicial processes that led to the condemnation of the steel plant by Italian and European's courts were triggered by independent inquiries by social movements, which found toxic contaminants in a sample of local cheese, in the local mussels and finally on breast milk that they had analysed (Alliegro, 2020). Through different initiatives, they have managed to change citizens and policy makers' consciousness and to create new values (L. Greco & Di Fabbio, 2014). They managed to spread the idea that the steel factory should close and with it, all the other polluting industries of the city. Barca and Leonardi (2016) have studied how the confiscation of 2012 has shaken the perception of part of the workers too, despite the interest of the dominant narrative in keeping workers and environmentalist in two separate factions (Barca, 2012). Also, L. Greco (2023) noted that trade unions have started including sustainability concerns in their claims, even though they have historically always prioritised the safeguard of job places. However, this process has not been straightforward, first of all, because there are resistances to change and interests to keep things as they are. Secondly, because materials such as steel are deeply embedded in the economy, politics, geopolitics, history, and identities (Bulkeley et al., 2022). In fact, the scandals of pollution spurred social fragmentation, especially among the workers and their families which have been the least involved in environmentalist struggle (Ippolito, 2022a).

To conclude, as L. Greco and Bagnardi (2018) demonstrate, we are experiencing an apolitical, or post-political, way of framing the conflict, in line with Swyngedouw (2014)'s argument for which the neoliberal environmental governance frames environmental conflicts as techno-scientific or bureaucratic (Alliegro, 2020) problems. Apart from hindering change, these narratives are systemically violent, as they close any possibility of imagining alternatives to the plant (Barca & Leonardi, 2016). Therefore, in such a political economic context, imagining alternative worlds is an act of resistance and allows to get out of the loop and pursue socio-environmental justice. Some research has indeed shed light on alternatives and efforts to re-make the future in the city. For instance, Camarda (2018) follows an inclusive, participatory scenario making plan for urban post-industrial regeneration. D'Ovidio (2021) instead analyses five activities in the old town of Taranto that represent a tool for bottom-up resistance, place making and the creation of alternative practices. Finally, Jokela-Pansini and Militz (2022) studied how newer generations in Taranto navigate the experience of pollution in the city and their hopes for the future. My research aims to expand these topics by analysing the visions of SMO for the territory.

3. Theory

This research will combine Social Movement (SM) theories with that of social imaginaries. In fact, studying the interception between SM and imaginations is still an underexplored field that allows to understand SM's emergence, transformation and eventual success or collapse (Hawlina et al., 2020).

3.1 Social Movements

SM are composed of different actors engaging in collective action, they have clear and defined political opponents and engage in conflictual relations with them with the aim of changing power relations (Della Porta & Diani, 2006). Buechler (2016) distinguishes between SM and Social Movement Organizations (SMO); where SM are the broader structure of preferences and beliefs, while SMO are the different organizations that mobilise collective action to implement the SM's goals. According to Melucci (1980), collective action is the ensemble of different conflict-based behaviours that transgress the institutionalised social norms, go beyond the rules of political system or attack the structure of society's relations. However, different forms of resistance exist, and the conflict component is not a necessary condition for defining a SM. For instance, alternative SMO engage in practices, performances, concepts etc. that challenge the status quo in non-confrontational ways by proposing alternative values and behaviour that reject the hegemonic political or economic practices (Gibson-Graham, 2006). This characteristic is for Törnberg (2021) a vital role of SMO, which are able to create alternatives for radical societal transformations, for instance, by creating small-scale niches central to the formation of a protected space where to experiment innovations. Rodriguez et al. (2015; Temper et al., 2018) describe the different strategies implemented by SM to impact change at different levels of power, from institutional and economic to discourse, values, worldviews, and narratives, summarised in figure 1.

Power Type	Institutions, laws, economic and political framework	People, Networks	Discourse, narratives, worldviews and values
Aim	Impact on public policies, legal institutional and political framework to open a space for public participation, cultural difference and human rights	Strengthening local abilities of adaptations of the most marginalised so that to obtain equal conditions	Unmask the apparent neutrality of institutions at the historical roots of exclusions. Creating new social consensus on new meanings, rules and values
Strategies	<ul style="list-style-type: none"> • Resistance, social mobilization, networking • Advocacy: lobbying, media campaigns • Participation in democratic structures: local governments, assemblies, committees, 	<ul style="list-style-type: none"> • Strengthening of local organizations • Capacity building • Increasing knowledge about the conflict and the context • Negotiations • Generating new environmental knowledge 	<ul style="list-style-type: none"> • Revitalization of local knowledge and identity • Reconstruction of local history • Construction of future visions • Counter-narratives

Figure 1. Strategies to impact on personal, structural, and cultural dominations. Adapted from Temper et al. (2018), as cited in Rodríguez et al. (2015)

The last set of strategies, dealing with discursive forms of power, coincides with McAdam (1996)'s framing processes, which is one of the three main factors for analysing the work of SM. Framing processes are the way in which SM generate, interpret, and diffuse their grievances. As framing processes deal with meanings and interpretations, a central task for SM is that of aligning people's values and beliefs to that of the movements (Snow et al., 1986). Della Porta and Diani (2006) talk about "discursive opportunities" to refer to the capacity of SM's narratives to resonate with cultural values of the places in which they operate. These tasks are essential for SM to be able to involve and recruit new members, which affects future mobilizations' prospects of success (Buechler, 2016). Framing processes are the tools with which SM challenge dominant narratives and try to influence society by creating new meanings and values. In fact, the framings of SM can get translated in public policies but also in symbols and general culture (Zald, 1996). This is achieved by raising collective awareness of the problem, strengthening local identity, the revitalization of local environmental and historical knowledge, and the creation of visions of the future (Rodríguez et al., 2015; Temper et al., 2018). The creation of narratives by SM can disrupt the status quo and yield profound social, political, and environmental change.

New SM theory has focused on the ways in which capital accumulation feeds on control of information, on the process of symbols formation, and intervention in interpersonal relations (Melucci, 1980) thereby fostering the emergence of new SM. Indeed, in a post-modern society, new SM are struggling to reappropriate not only, like historical SM, of the means of production, but "also for collective control over socio-economic development, i.e., for the reappropriation of time, of space, and of relationships in the individual's daily existence" (Melucci, 1980, p. 21). In fact, like the feminist slogan "the personal

is political” exemplifies, the new SM have brought in the realm of collective action matters that have been usually relegated to the private sphere such as health, body, sexuality, death. Nevertheless, new SM theory’s focus on identity has neglected the importance of class, social inequality, and economic and environmental struggles that still represent fundamental organizing principles of SM (Edelman, 1996).

3.2 Social imaginaries

Drawing from Gramsci’s theories and post-structuralism, the field of social imaginaries has spurred great attention in the academia and beyond (Adams et al., 2015). Social imaginaries are cultural articulations of the world and reveal the importance of meanings for social change or continuity, taking into account power, institutions, and actions (Adams et al., 2015). Social imaginaries are not a set of ideas, but they are what make sense of the practices of society (Taylor et al., 2003) and they are collectively built through narratives and storytelling. In fact, according to Escobar (1996), narrative (or discourse) is not merely a discursive fact, but instead it is produced by and (re)produces reality. Therefore, narratives can be seen as the articulation between knowledge and power, and “the process through which social reality inevitably comes into being” (Escobar, 1996, p. 326). Since it draws on the concept of imagination, social imaginaries are both reproductive, and thus reproducing the images that society has of itself, and creative, producing alternative images of society (Adams et al., 2015). Meaning, imagination can perpetuate domination or support marginalised groups aiming for radical transformations (Wagle, 2022). Moore and Milkoreit (2020) identify two basic functions of imagination: understanding the present and envisioning the future. Consequently, imagination constitute a transformative agent, an essential capacity for achieving ecological, social, economic, and cultural well-being in times of uncertainty (Moore & Milkoreit, 2020). As a result, imagination, and ideas about the future, are both shaped by present reality and power, through structures, norms, and institutions, and at the same time have the capacity to break with the hegemonic view. In addition, analysing imaginaries and social imagination has the role of politicising socio-environmental struggles. For Laclau and Mouffe (2001) political struggles relies, among others, on the ability to imagine alternative worlds. Similarly, Swyngedouw refer to the ‘political’ as “the contested public terrain where different imaginings of possible socio-ecological orders compete over the symbolic and material institutionalization of these visions” (Swyngedouw, 2014, p. 90).

3.3 The role of visioning for transformations to sustainability

Transformations to sustainability require what Göpel (2016) calls “the great Mindshift”, meaning that without imaginaries of alternative futures transformations cannot happen. Transformations to

sustainability¹ are long-term processes of multiple, large-scale, and disruptive changes of socio-technical systems (Avelino et al., 2016; Loorbach et al., 2017) that address the deeper causes of unsustainability (Temper et al., 2018). Transformation to sustainability underpins that current sustainability challenges are systemic, thus require profound systemic changes to be solved (Ceddia & Bergamo, 2024; Loorbach et al., 2017). Hence, while large-scale scientific and technological innovations are needed, these transformations must involve social changes and raise political questions (Avelino et al., 2016). In fact, a political approach is fundamental to address power relations (Pelenc et al., 2019) and transform the ways in which humans relate to the environment and to each other (Pereira et al., 2020). Lastly, transformations to sustainability are influenced by socio-environmental conflicts, which carry destruction but also bring forth resistance to them. Indeed, the environmental justice movements that are born from such conflicts are fundamental actors for sustainability and socio-environmental justice (Scheidel et al., 2018). The fundamental values that actors strive to realize in the future and the belief in alternative futures is an important driver for transformations. For instance, Bulkeley et al. (2022), identify in the lack of visions the obstacle to transformation to a low-carbon economy and Buechler (2016) associate a higher mobilization when people are convinced that change is possible and that their participation will make a difference. Thus, visions have a central role in motivating, coordinating, empowering, and giving a direction to actors (Loorbach et al., 2017). As a result, imagining futures supports the creation of more sustainable and just futures (Biggs et al., 2021). If it is true, as the famous sentence goes, that it is easier to imagine the end of the world than the end of capitalism then imagining alternatives is an act of resistance that carries non-indifferent transformative potential.

3.4 SM and social imaginaries for transformations

SM are a privileged subject to study social imaginaries as they try to influence society to achieve major social changes and provide a niche for alternative practices and thoughts to emerge and grow. According to Temper et al. (2018), sustainability science has not given much attention to the role of social movements in transformations to sustainability, even if SM are by definition challenging power structures and seeking social transformation of the current system (Della Porta & Diani, 2006). As studied by De Rosa (2017) on Campania's waste crisis, SMO's imaginations should be recognised as progressive politics for their potential to re-make their own places instead of passively accepting the top-down imposition of modernity. In socio-environmental struggles, posing the accent on imaginaries

¹ Avelino (2016) and Loorbach et al. (2017) use the word transition, whereas Temper et al (2018) differentiate transformation from transitions. However, the definitions given by the first two authors overlap with the latter, thus I will adopt the term "transformation to sustainability".

and future allows to align present actions towards the envisioned sustainable futures. Consequently, studying the processes through which SM create alternative futures is fundamental to understand present conflicts, strategies to overcome them and the desired outcomes. In conclusion, the imaginations of place-based SM have an essential role in transformations, because the knowledges produced during struggles provide essential elements to think about the transitions necessary for dealing with socio-ecological crisis (Escobar & Frye, 2020).

4. Methodology

This section will explain the methods used to answer to my RQ. Qualitative methods such as literature review of the SM's materials (like website or material productions) and individual and group interviews were applied to the case study. Also, I tried to keep my research as much as possible participatory in its methods and features.

4.1 Three Horizons Framework

Future analysis methods foster imagination and the creation of alternative images that assist in making choices and taking actions in the present (Biggs et al., 2021). Tools such as visioning, future-scenarios and back-casting are important to explore radical innovations and formulate alternative agendas (Loorbach et al., 2017).

The 3 Horizons (3H) framework is a visioning method designed to explore future trajectories. It was created to deal with complexity and at the same time it stimulates agency and imagination (Sharpe et al., 2016). The framework consists of three different lines, representing a system or a pattern, on a x, y graph in which the horizontal axis represents time and the vertical one prevalence, as showed in Figure 2.

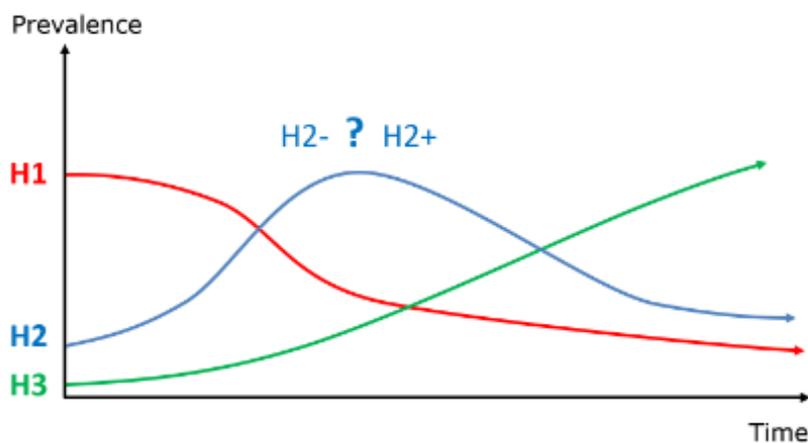


Figure 2. 3 Horizons Framework (Sharpe et al., 2016).

In the graph, the line H1 represents the so-called “business as usual”, the current system, H3 represents an emerging future pattern, the desirable future, while H2 is the changes and transitional innovations put in place to deal with complexity and foster the emergence of H3. Notably, H2 has two possible outcomes: H2+ if the changes can boost the creation of the desired futures, or H2- if the changes risk to be re-absorbed by the current system instead.

The exercise guides the participants through five steps, in order:

1. Explore present concerns and how the current system works
2. Explore future aspirations, visions, and alternatives
3. Explore inspirational practice in the present
4. Explore innovations in play
5. Identify essential features to maintain and desirable elements that need to be kept

Asking questions related to each of the steps, it is possible to obtain a full picture of the situation, namely, how the movements understand and frame present problems, how they understand their role in the transformation and connect the desired future with present practices and emerging characteristics. Also, it helped the identification of actors of change and power issues (Sharpe et al., 2016). For an overview of the questions asked during the visioning exercise, go to Appendix 1.

4.2 Fieldwork

The study site is the city of Taranto, in Apulia, the second largest city of the region. Figures 3 and 4 show the map of the city and its geographical location.

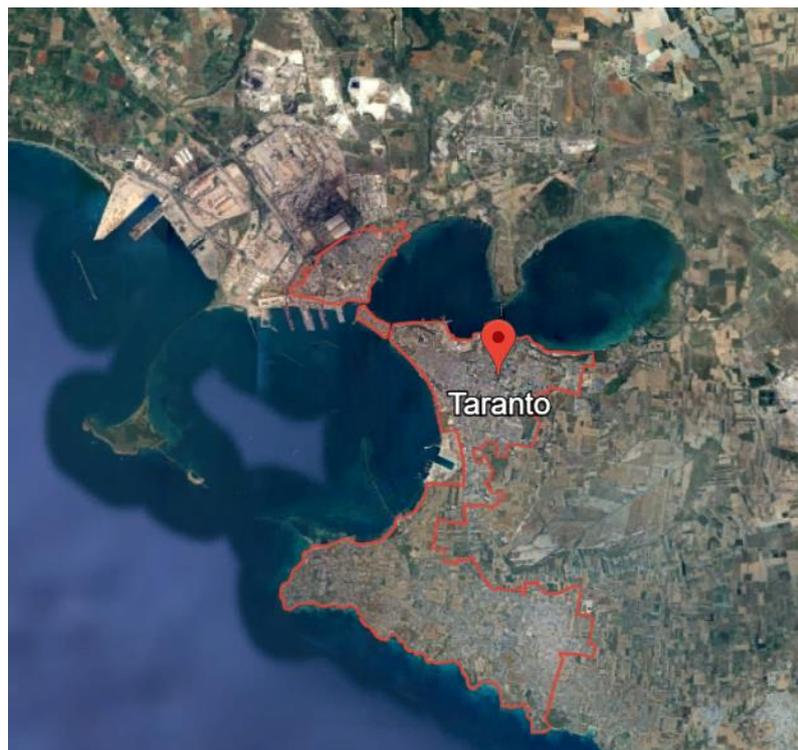


Figure 3. Map of the city of Taranto. Note the extension of the industrial area, on the top left of the picture, with respect to the city. Retrieved from (*Google Earth*, n.d.)



Figure 4. Location of Taranto in the Mediterranean. Retrieved from (*Google Earth*, n.d.)

The fieldwork was conducted from February the 14th until the 28th. During this period, I have collected the views from eight different groups in the city of Taranto. In the selection of participants, I sought to include different perspectives. In particular, the groups of interest were associations, collectives and movements operating in the city and whose main concern is the environment or industrial pollution. In addition, a research centre on cetaceans was included because its mission goes beyond scientific research and includes socio-environmental impacts in the territory. The contacts were retrieved through the snowballing method, meaning that after contacting two of the associations, they referred me to the other active groups in the city. The interviews were recorded in six cases, two interviews were not recorded instead because they took place in loud public places, like cafes or in the streets. The languages used were Italian and, occasionally, dialect, which I manually translated into English. Figure 5 shows the name and type of the association interviewed, the number of participants to the interviews as well as the main values.

N. of interview	Name	Type of SMO / association	Type of interview and n. of participants	Values
1	PeaceLink	Pacifist association, news, and information platform	Individual	<ul style="list-style-type: none"> - Solidarity - Human rights - Peace - International cooperation - Environmental protection - Legality
2	Laboratorio Raggia Tarantina (Taranto's Anger Laboratory)	Ecologist collective	Focus Group, 6 participants	<ul style="list-style-type: none"> - Anticapitalism - Anti sexism - Socio-environmental justice - Antifascism - Anti racism
3	Giustizia per Taranto (Justice for Taranto) (GxT)	Political and cultural association	Focus Group, 9 participants	<ul style="list-style-type: none"> - Antifascism - Anti sexism - Anti racism - Pluralism - Democracy
4	Cobas (also member of Raggia Tarantina)	Trade Union	Individual	<ul style="list-style-type: none"> - Anticapitalism - Antifascism - Anti sexism - Anti racism
5	Jonian Dolphin Conservation (JDC)	Environmental protection association and research centre	Focus Group, 11 participants	<ul style="list-style-type: none"> - Scientific research - Conservation - Citizen science
6	Genitori Tarantini (Taranto's Parents)	Volunteering association	Dyadic, 2 participants	<ul style="list-style-type: none"> - Human rights - Right to health - Legality
7	Member of GxT, previously in Tamburi Combattenti (Fighting Tamburi)	Citizens association (not active anymore)	Individual	<ul style="list-style-type: none"> - Health protection - Stop to pollution - Environmental bonification - Re-employment of workers from polluting factories
8	Mele di Artemisia (Artemisia's Apples)	Trans feminist collective	Focus Group, online, 3 participants	<ul style="list-style-type: none"> - Trans feminism - Antifascism - Anti capitalism - Socio-environmental justice - Intersectionality

Figure 5. List of the SMO interviewed, in chronological order, the type of interview and their main values.

4.2.1 Focus Groups

Focus groups are interviews between the researcher and the members of a group (Fusch et al., 2022). They are among the methods of participatory research (Biggs et al., 2021), in which local perspectives form the base for research and make participants subject, and thus actively involved, instead of being the object of the study (Cornwall & Jewkes, 1995). Three focus groups were conducted during the fieldwork and one online, one with each association. This method was considered fit for the purpose of my thesis because I wanted to analyse the collective formation of alternatives for the future of the

city rather than personal aspirations. Inside the focus groups, of course, space for individuality was left but the main aim was to create a space for the groups to collectively discuss and further their visions. This was particularly important, since meanings are collectively produced in society (Montell, 1999) and focus groups are encouraging the exploration of collective action strategies and potential solutions (Shackleton et al., 2021). Another reason for the choice of focus groups was dictated by research ethics considerations, which I will explain further in the chapter about research ethics and reflexivity.

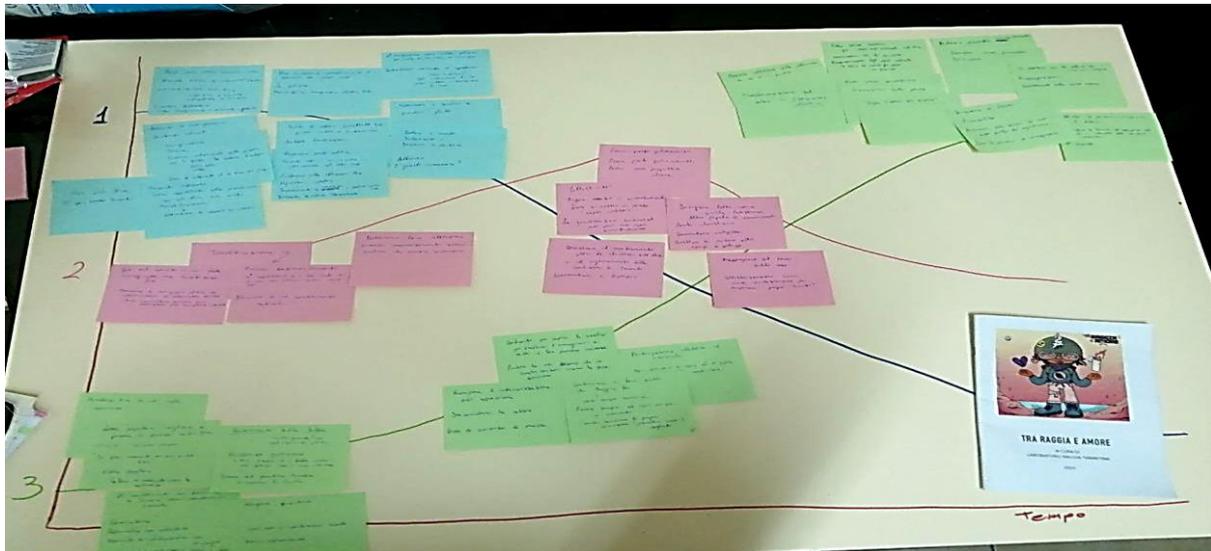


Figure 6. Picture of the 3H framework's poster with Raggia Tarantina.

The focus groups lasted around 90 minutes. Three were carried out in person, in the groups' associative spaces, while the last focus group was conducted on Google Meets. I did not personally choose the participants but let members of each group to choose to participate or not in the activity. However, the groups were well variegated with an overall equal gender ratio and an age ranging between 25 and 70. The visioning exercise I used was the 3 Horizons framework, as created by Sharpe et al. (2016). The materials used were a poster and post-its where answers were summarised – view Figure 6 for an example of the 3H framework. For the online version I instead used the platform [Mural](#) (Figure 7), which is a collaborative workspace that allowed participants to autonomously edit the framework and add their contributions. This was useful for participants because the visual representation stimulated discussion and participants often made connections between the different points. For more examples of 3H frameworks, see Appendix 2.

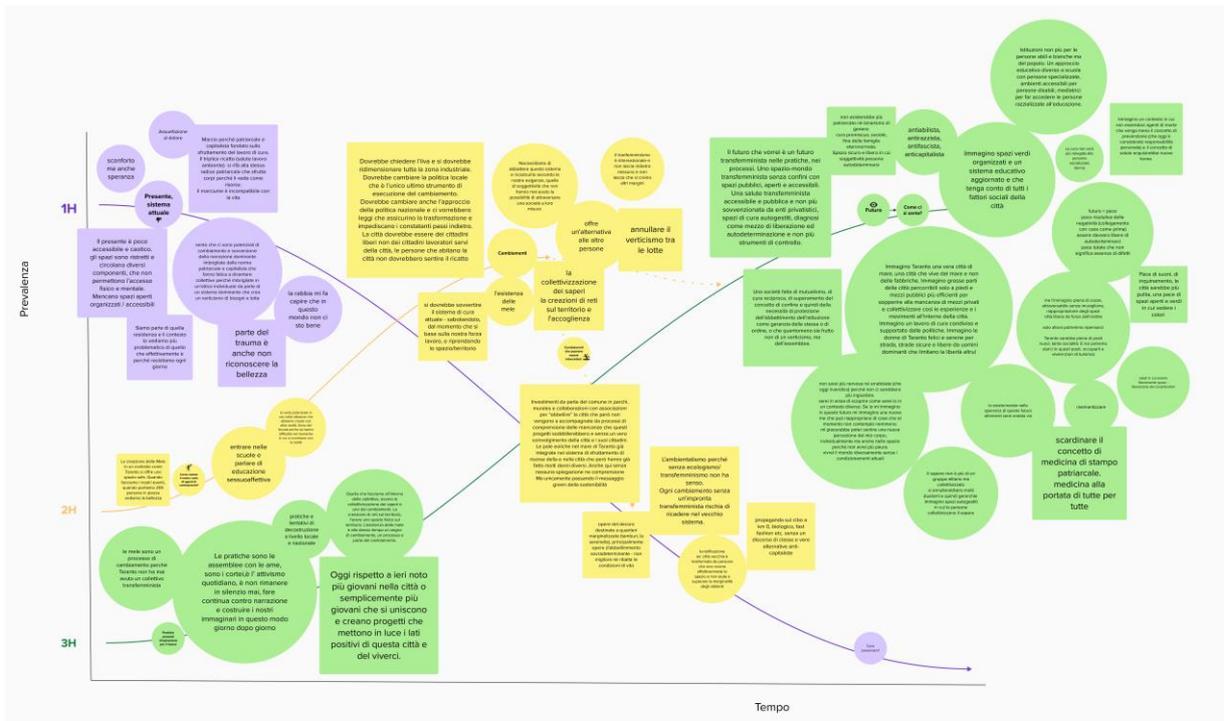


Figure 7. Snapshot of the 3H framework with Mele di Artemisia created on the platform Mural.

4.2.2 Individual interviews

The individual interviews were carried out in person with exponents or representatives of local SMO. I made four different interviews, of which two were not recorded. The nature of the interviews was predominantly descriptive, meaning that I tried to understand the interviewees' lived world and meanings, and exploratory, with little pre-planned structure. In fact, I made use of semi-structured interviews with some guiding questions but free enough to catch different hints and follow the interviewees' answers to discover new angles of the topic (Kvale, 2007). The recorded interviews were transcribed using Microsoft Office, while I took notes of the other two non-recorded interviews on a notebook.

4.3 Analysis of the results

The analysis of the results was carried out through the software NVivo and Microsoft Excel.

The coding part followed a mix of deductive and inductive methods. Starting from the 3H framework, the answers were collected under the 3 different horizons and then each part of the answers was divided into subcodes based on the main arguments given by the participants (see Appendix 3 for the details).

4.4 Research ethics and reflexivity

I am aware of the biases that could potentially influence this research, which are reflected in the research design, the questions asked, the analysis of the results and the several choices I made while conducting my research and writing this thesis. Following Haraway (1988)'s and feminist practices for research, this work does not claim objectivity, instead recognises the situatedness of knowledge and knowledge production, thus does not deny responsibility. The choice of the topic itself, the methods and the theory chosen to discuss the topic reveal my environmentalist, feminist, and anti-capitalist positions. During the fieldwork, I did not impose my point of view - but neither hid it with the participants - instead, I kept an open mind to the ideas and values of the people I interacted with. This enriched my experience in the field, as a researcher but also personally. In fact, I did not want my research to be exploitative but rather egalitarian and that could empower the groups I worked with, in line with what Montell (1999) calls feminist research. Especially in a city like Taranto, which has been the subject of several research and is still at the centre of debates in national and international media, letting the people there narrate themselves and their visions seemed to me paramount. For this reason, the choice fell on participatory research and focus groups. Aim of the framework activity, as one of the participants noted during one of the focus groups, was to be *“useful for the group’s reflexivity and growth among the members”* (Raggia). In addition, the framework used in the focus groups allowed me to get a dynamic picture of the positionality of the groups in time and space. This was necessary to avoid essentializing and fixing into a static identity the SMO involved in the research, even if it is impossible to completely avoid it to some degrees. Also, the choice of semi-structured interviews allowed the interviewees to define the problem instead of imposing my own categories and meanings. Lastly, as this research deals with imagination and shared meanings, my Apulian origins constituted an advantage for understanding the cultural settings and the values expressed by the participants.

To conclude, this research was carried out according to the Swedish Research Council's ethical guidelines. All the interviews, individual and in group, were conducted in respect of confidentiality and anonymity and only after verbally informed consent from the participants on the conditions, i.e. topic of the research, role of participant, purpose of the data etc. Participants consented to the use of the data and organizations' names. Data was handled and stored with precaution.

5. Results

This section will report the participants' answers to the RQ:

1. How do social movements in Taranto problematize the situation?
2. How do they envision the future of their territory?
3. How do they understand their role as actors of change?

5.1 RQ1: How do social movements in Taranto frame the problem?

The description of current situation is the first step in the 3H framework and it is important to analyse the ways in which the members of SMO in Taranto frame the problems they deal with.

The groups describe the city of Taranto as a place profoundly changed by industrialization and by the military arsenal, not only materially but also symbolically. According to the participants, narratives and their effects are visible on people's lives and constitute a symbolic barrier for a different future. Industrialization is felt as an oppressive force that flattened the imaginary of the city. In fact, they talk about "*absence of imagination*" or "*crisis of imagination*". They told me that from a young age, the idea that working in a factory is the natural career path for a resident of Taranto is ingrained: for instance, by explaining the functioning of blast furnaces in school, which is not usually part of school programs elsewhere. This focus on the steel plant and industrial development is seen as blocking all the alternative ways in which the city could prosper. The absence of alternatives is also shown by the fact that a considerable number of young adults decides to "*escape*" and emigrate elsewhere to study or work. They explain that while a common characteristic of Southern European cities, emigration in Taranto is also due to the environmental situation and constitutes a drain of energy for the city, but also demonstrates that the inhabitants do not passively live the blackmail of employment/pollution (Raggia Tarantina).

Yet, despite the governments' efforts, the plant is a phantom of what it used to be and even the narrative revolving around progress and job places does not hold grip on the inhabitants anymore. With the words of GxT, "*Ilva is as a horizon that is completely dissolving*". In fact, since the great mass mobilisation, the awareness of the citizens drastically changed, nowadays people see the city in a different way and talking about ex-Ilva's closure is more mainstream. Also, JDC noted that "*slowly, after years, [...] things are changing but there is still lots of work to do. It is slow, it is a slow change*". However, the groups perceive current politics as an obstacle to change. For instance, PeaceLink refers how authorities have been trying to save the plant without considering a "*plan B*". For Genitori Tarantini this is a sign of blindness from the government, which demonstrates scarce attention to

young people and their future, which would be inevitably affected by pollution, even if the steel plant were to close immediately. The government's immobility on its positions to keep ex-Ilva operating causes discouragement among the interviewees and disheartenment because even after years of struggle their voices haven't been heard.

The participants feel like they are physically "*stuck*" or "*pressed*". These feelings are correlated to Taranto's space. From the walls of the military arsenal to the fences of the hazardous areas or the military bases, from the hills dividing the industrial areas from the Tamburi neighbourhood to the skyline in which the horizon has been interrupted by port facilities, domination in the city occupies material and symbolic space that the inhabitants have "*interiorised as a violence, a detachment*" (Raggia) as they limit their possibilities of moving around the city, occupy it and use it for their livelihood. "*This is the city of walls*" mentions a former member of Tamburi Combattenti. He explains also how spatial limitations are mostly felt in the neighbourhoods in proximity to the steel plant, where he adds to "*feel prisoners inside our own houses*" during the so-called 'Wind Days'².



Figure 8. "Dangerous area". This is one of the many interdicted areas in the neighbourhood Tamburi. Once occupied by a market, the immense area was closed after a hole opened on the asphalt above the pipelines bringing sea water to the industrial area.

The material effects are not only felt on reduced space and mobility, but also on health, physical and mental. "*A Taranto's citizen lives with the constant fear of getting ill*" (GxT), from the air they breathe, the food they eat, this fear is reported by all interviewees for themselves and their dear ones. The experience of the city in their bodies is one of sorrow and death to which people have been

² Wind Days are days in which the authorities recommend staying at home with doors and windows closed to avoid the contaminants carried by the wind blowing from the factory towards the neighbourhoods' direction.

acclimatized as if it was something normal: *“The first years I arrived here, fourteen or fifteen years ago, people told me “Well, everyone dies of cancer everywhere in Italy””* (GxT). PeaceLink’s member adds that the consumption of antidepressants in Taranto is alarming. *“Putrid”, “chaotic”, “poison”* were some of the words used to describe the present situation. However, as Raggia noted, the experience of living in Taranto is not different, but emblematic of all those territories living in the margins and it is not only determined by industrialization but in the different ways in which capital organize, for instance with the new projects of turistification, that will create other geographies of dispossession, barriers, and bodily limitations (Mele). Thus, Taranto is not considered an exception, but its liberation is interconnected with the liberation of all the ‘Souths’. Refusing the role of victims, participants expressed the will to transform their anger, caused by the existence of so many injustices, to collectively change this situation. *“Part of the trauma is also not being able to recognise the positive aspects”*, added Mele. In fact, the participants also stressed on the importance of rediscovering the natural and cultural beauty of the territory - in contrast with the desolation of the industrial landscape - which are covered by the discourses about death and pollution.



Figure 9. Skyline from the Promenade Vittorio Emanuele II. The horizon is blocked by port facilities or, as Cobas’ member called them, “the monsters”.

5.2 RQ2: How do they envision the future of their territory?

This section will talk about the groups’ normative ideas and describe the images of desired futures, which in the 3H framework constitute the third horizon.

From the interviews it was possible to acknowledge that despite the difficulties of the present, people see the future with a mix of hope and bitterness. Many express the impossibility of contemplating a different future, *“Personally, I can’t hope”* (GxT), because the present pain covers the prospects of an alternative and prosperous future. Or because the change they envision is impossible to think with nowadays conditioning. However, it is the hope that keeps people in the SMO fighting and the condition of present despair and anger makes them willing to not leave things as they are nowadays. *“What type of world are we leaving to future generations?”* is a recurrent question among all the groups. And younger generations or citizens’ interest towards sustainability and the activities they propose is seen as a reason that their hopefulness will not be let down. The moments of mobilisation, especially those with high participation, are moments felt with great emotion because it seems that their efforts are worth and the world they envision is possible.

The future envisioned by the different SMO in Taranto is varied and each group imagined it with the characteristics that best suit their values. For sure, all the groups envisioned the end of industrialization as we know it today and the end of polluting activities. Also, they expressed that leaving something better for the future generations, or their children, is a moral imperative for them. They imagined a lively and vibrant city where young people would not want to escape but are able to choose to stay or not, depending on their aspirations. Moreover, they expressed concern not only for environmental but also social sustainability, namely considering the steel workers and their families. Most of the groups referred that ex-Ilva workers should be involved in the reconversion of the plant and that its closure should not leave anyone behind. However, their normative ideas greatly differ, thereby I will report each group’s ideas of future.

For PeaceLink and Genitori Tarantini the safeguard of citizens’ health is a moral imperative and comes before any other interest or other right. GxT referred that it is not profit that must drive imagination but *“who we are, our link to the territory, and our culture”* should. Mele, Raggia and Cobas’ visions are informed by anti-capitalist, anti-fascist, anti-racist, trans feminist, and anti-ableist ideals. Lastly, JDC is driven by the idea that research should not be exclusive but made by everyone for everyone’s well-being to build a different and non-exploitative relationship with the sea.

In GxT desired future, Taranto would follow the example of the Ruhr region in Germany. They envision a gradual but collective change, coming from political and citizens’ will and efforts. The diversification of the territory’s economy, through a no-tax area and European JTF, is a step towards greater transformations in the future. The closure of ex-Ilva is considered a milestone, after which the city will be able to reimagine itself and an alternative future. They wish that Taranto will be an example of successful economic and socio-environmental reconversion, and that the steel plant and all its facilities

would be transformed into theatres, concert halls, cultural centres, museums, and malls and the area around it into a park. In this way they feel like the citizens and the visitors (these facilities will be attractive to tourists too) can reappropriate parts of the city that nowadays are out of limits. In addition, they envision Taranto as an important university pole, which could host programs centred on ecology and sustainability. In this way, they say, the history of the city will not be forgotten but it will serve as a reminder of the impacts of steel production so that *“it will not be done anymore anywhere else”*. On a similar note, Peacelink propose a program for Taranto’s transition (Marescotti, 2014) in which reconversion is financed by the JTF and inspired also by other realities like Pittsburgh or the Stockholm neighbourhood Hammarby Sjöstad: *“if we show that alternatives exist, there are no more alibis [to keep ex-Ilva operating]”*. Also, this would make young people return to Taranto and help the city’s reconversion and well-being with their competences.

The JDC instead would love people to think about Taranto as the city of the dolphins, not the city of Ilva and pollution, a place where cetaceans can live in a healthy environment alongside humans. The aim of the centre is to raise awareness and collaborate with other realities in the city. For instance, by making fishermen and fisherwomen more aware of best practices and collaborate with the research centre for animals’ conservation. This will create a network, for example with the historical museum or other similar realities in Italy and abroad, and attract experts, research, and tourists. In fact, they wish that the blue economy will be at the centre of the economy of the city, not only through research but also fisheries, mussels farming, and sea sports.

Genitori Tarantini imagined that with the end of industrial monoculture the city’s economy will be diversified and carried by “traditional” economic activities, like agriculture, farming, and fishing, which were abandoned because of industrialization. All activities that they believe can be done in respect of the territory. Alongside these activities, they envision new ones able to foster the territory’s economy like tourism and a renewed focus on blue economy, for instance the port facilities could be readapted to host touristic cruises. Steel production, in particular, should disappear but they are not completely against industrialization. Instead, they feel like the future technology will allow for better and greener industries to replace the present ones.

On the contrary, Mele, Raggia, and Cobas recognise that the steel plant is emblematic of the problem but not the sole issue, instead it is important to rethink the entirety of socio-environmental relations. For this reason, they consider the debate around ex-Ilva inconclusive and obsolete because it stopped the movements from envisioning a real alternative to the ways in which capital relations exploit and reproduce themselves in different ways, not only through industrialization but, for instance, through the new urban plans for touristification. As a trade union, the Cobas’ requests do not stop at workers’

revindications, instead they adopt an intersectional point of view and see workers' liberation only in total liberation. The future must be collectively built, and it is a continuous process that starts from the grassroots and in which everybody should be included.

Mele d'Artemisia envision a space in which subjectivities can reach their self-determination, collectively managed and public care spaces in which care is reciprocal and not relegated to those socialised as women. Care does not only come from medical knowledge and diagnosis should be a means of self-determination and not one of control. They added that without polluting activities and agents of death, the concept of prevention will drastically change - it is in charge of the individual nowadays and this is really problematic in a city like Taranto. What they imagine is a physical space, which is open (free of the barriers we see nowadays), safe, collective and with lots of green spaces that people can use and live in, where people can walk everywhere. This space is described as peaceful, from an acoustic point of view, but also visual and symbolic, as they refer to peaceful also as an absence of pollution. They say that it will be only in this future that it will be possible to rethink themselves in a new way. They referred being excited about living in this place and discovering themselves in this future, because they think that would bring new perspectives and sensations that they cannot access now. They are curious to perceive their bodies in relation to this space in which they will feel safe. Also, they will feel peaceful and calm because there will not be any injustices.

Raggia Tarantina stressed on the need to break the colonial way to think about time in a linear fashion and instead expressed their willingness to start giving other meanings to the present. In this way they feel collectively involved in the process of re-signification of the present pain and oppression that the citizens of Taranto live every day on their skins, like in other margins of the world. This re-signification is an ontological need of the community and should be collective, contrary to the present individualization of pain, and will be able to transform the relationships between people and the way people live in the territory: the *"decolonization of our territories is possible only with the decolonization of minds"*. According to them, this will be the real change, because *"the closure of the steel plant is not enough, the least bad is not enough and Taranto's liberation is not enough"*. The symbol of the wall was often used in their words, both as a physical and symbolical element. Walls keep people out of certain places and block them from seeing on the other side, limiting their imagination. They represent the present condition, and the future possibility of collectively deciding whether to tear them down or not renews a sense of freedom and opens to new possibilities of action (*"if I can tear down this wall, then I can, I can, I can, f*ck, I can, we can"*). Finally, they long for a future in which they will not feel hypochondriac and could, for a moment, rest from all the struggles. However, they recognise that even in this utopic future there will be other reasons to fight for an even better world, because the

construction of a better future is a constant process in which people should not stop asking themselves “*how do we cohabit the socio-environmental crisis?*” and “*how do we build a transformative socio-environmental justice?*”.

5.3 RQ3: How do they understand their role as actors of change?

The last RQ addresses the second horizon and particularly the ways in which SMO in Taranto see themselves as actors in the change process.

All the movements feel they are taking their part in the change, each one in its way, and that they have a role in shaping the future of the city. But they all recognised that this change is only possible with the support of the citizens. Hence, it was only after the efforts of local SMO and the massive support of the citizens that nowadays in the city the closure of ex-Ilva is not a taboo anymore. Nevertheless, keeping the attention high and expanding the association’s ideas were mentioned as two of the main challenges. For instance, Mele feel that what they are doing in their collective is beautiful, important and has lots of potential but that this sensation is limited to the members, as it is hard to expand their message and keep people committed for long time. Therefore, the Cobas’ member stressed on the fact that SMO “*must have the ability to translate*” their imaginaries to the rest of the population, since the society of today is fragmented, and the individualization constitutes one of the greatest challenges towards a radical social change. Nonetheless, they recognised that nowadays the movements’ lack of unity is impairing the change. The creation of a network, not only in the city but also internationally, is considered essential for change. Despite the differing focus and ideologies that social movements in the city have, the groups recognised that joining forces can constitute an opportunity to connect the different oppressions and find ways in which they are interrelated and can be collectively fought.

The groups referred that their role was not only limited to advocacy, appeals to the national, European, and international courts or pressure on the authorities. Among the main roles that many of the interviewees mentioned is that of raising awareness about the current situation. PeaceLink, for instance, stressed on the importance of media-activism for keeping the attention of citizens and authorities high on matters concerning pollution and spreading news that would have been hidden otherwise. Showing the presence and feasibility of alternatives is considered another significant role of SMO. For instance, by presenting similar cases in the world that were reliant on steel or carbon and had an industrial reconversion. Also, JDC’s cultural and scientific activities were considered a way to diversify the city’s economy and showing that even in the present it is possible to detach from the industrial monoculture. By studying and sensibilizing about marine species in the gulf of Taranto and making the city a hub for cetaceans’ conservation, the research centre aims to engage young people

to work in those fields, attract tourism and raising citizens' awareness on the anthropic effects on the sea. Cobas' member instead, coming from a Marxist tradition, referred how change cannot be detached from class struggle. Hence, the importance of raising class awareness among workers and connecting class struggle with other struggles against any oppression, starting from the most marginalised neighbourhoods and creating actual links between people with different background of oppression, from the neighbourhoods of Taranto to transnational alliances. Moreover, the very existence of SMO is believed to be a sign of change, as they create a space where it is possible to grow individually and collectively, trying new practices, questioning the current system, and stimulating new questions. The existence of SMO shows that people are desiring for change and asking for change, that they need a space where to collectively build counter-narratives and *"reappropriate of our corporeal and narrative imaginations"* (Raggia). With the words of one of the members of Raggia Tarantina, quoting from Audre Lorde *"we were never meant to survive"* (Lorde, 2024), therefore *"acting with the consciousness that we do not feel dead, is one of the ways to resist a necropolitical act"*.

6. Discussion

The aim of this research has been to analyse and bring forth the imaginaries and visions for sustainable future of Taranto's SMO. The 3H framework and the interviews allowed to draw a picture of the SMO's framing of the present, their ideal futures and their role in driving the transformation.

6.1 Problem description and framing processes of Taranto's social movement organizations

This section will present some of the framings used by the SMO in Taranto to describe the situation and mobilize people. The themes of space, body and environmental justice constitute examples of the SMO's framings and, although not shared by all the SMO in the same way, they incorporate themes that all the movements in the city problematise, as dimensions which every citizen in Taranto can relate to. It is important to note that these dimensions constitute both a way to describe the past and the present but at the same time they represent the starting point for the creation of desirable futures.

Space

Said (2003) refers to the interactions between physical spaces and imagination as "imaginative geographies", that sustain domination and hegemony. In the same way, SMO in Taranto frame the space as something that has been shaped by capitalism (see Gregory, 2006), that translates into industrialization but also in the emerging touristification. In this space the inhabitants feel as prisoners and that something was subtracted from them in ways that remember Camp (2004)'s geographies of containment. Although the author of *Closer to Freedom* refers to women's experiences of slavery in the USA, the spatial logics of domination resonate with the movements' framing of spatiality and how it reflects the subtraction of space to prevent resistance and ensure compliance. Consequently, spaces and places constitute a crucial element in SMO's visions. For some of the SMO, like GxT and PeaceLink, the liberation of these spaces will come after cleanup and ecological improvements, while Raggia stresses on their re-signification as a necessary component for transformation. Mele and Raggia's space is reflected on feelings, they erase any distinction between the outer spaces and their bodies in ways that remember Alaimo (2008)'s notion on trans-corporeal space. According to the feminist scholar, toxic bodies are the perfect example of trans-corporeal spaces, as they remind us of the continuities between environment, human health, and social justice (Alaimo, 2008).

Embodiment

The results of the interviews show how pollution and toxicity are part of the participants' embodied experiences of daily lives. The SMO recount how the embodied dimension played a fundamental role

in raising awareness among citizens on the effects of pollution, as a dimension citizens could relate to. As discussed in the background section (see chapter 1), the wave of protests and citizens' mobilization followed the discovery of toxins and other pollutants in food and breast milk. These discoveries contributed to break the silence around the city's abnormal levels of tumours, which dominant discourse normalised and silenced. The high awareness that citizens live nowadays translates into the daily experience of hypochondria. For instance, as Jokela-Pansini (2022) finds out, pregnant women's political rationalities and their concerns over pollution multiply in highly polluted environments. In the same way, Gay-Antaki (2023) uncovers how incorporating the concept of *cuerpo-territorio* (body-territory) (Segato, 2016), it is possible to understand how women's bodies constitute the battlefield of environmental and reproductive justice. However, far from living the condition as victims, the bodily experiences of toxicity become a way to gain consciousness of the violence against the alienation of the previous decade and the bodies become the first level of resistance. Several research has revealed the importance of recentring research on the sensorial dimension of injustices as a way to re-politicise environmental conflicts (Armiero & De Rosa, 2016) and move away from the victimization of toxic bodies and lives (Jokela-Pansini & Miltz, 2022). In this light, the anger felt by members of the SM is a way to not passively feel the injustice but a reaction to it and a propeller for action.

Environmental justice

The interviewees consider Taranto as a case of environmental injustice. Environmental justice scholarship has uncovered the interconnections between pollution and race, class, and gender (Bullard, 2019; Gay-Antaki, 2023) and how their interception gives rise to situations of ecological distribution conflicts, in which the negative externalities of capital – pollution in this case – fall on the poor (Martinez-Alier, 1995). In the case of Taranto this condition is enlarged not only to the most marginalised neighbourhoods but to the whole territory. In fact, by applying a post-colonial lens, it is possible to understand how Southern Italy has been constructed as an internal other in the nation (Conelli, 2022). A post-colonial approach on the construction of Southern Italy's imaginaries allows to see how framing Southern Italy as inferior and underdeveloped has fostered the emergence of exceptional industrialization plans that promised well-being and development in the neoliberal sense (Festa, 2014), also, it is instrumental to explain the delegitimization of knowledge and the devaluation of certain lives (C. Greco, 2016). Finally, it is a means to reappropriate of narratives and imaginations (Modeo, 2019).

The accounts of the interviewees evidence how the environmental justice struggle in Taranto is also a struggle for recognition. Adopting Fraser (2008)'s definition, misrecognition is the denial of equal participation as a consequence of institutionalised patterns of cultural devaluation. The participants

tell of how their decade long struggle seems unheard by governments, which put geopolitical interests above their lived experiences. According to Davies (2022), dismissing people's experiences of toxicity is a form of epistemic injustice, in the way that Spivak (2010) intends it. However, it is important that struggles for recognition foster interactions across differences (Fraser, 2008) and connect it to transnational struggles. This is vital because defending "nondominant modernities" (Escobar, 2020, p. 115) inside the dominant West is another way to problematize and complexify western modernity (Giaccaria & Minca, 2010) and to create alternatives to liberal capitalism. Recognising the interconnectedness with other transnational struggles is important to avoid the creation of essentialized identities, and to build alliances between transnational political subjectivities. In this way, as De Rosa (2017) claims, grassroot environmental movements in the Global North have the potential to support epistemological shifts.

6.2 Social movement organizations' role and challenges

As analysed by New SM theory, SMO in Taranto are also acting on the discursive power. As explained by recent social imaginaries scholarship, imaginaries shape reality and can contribute to hindering or fostering changes. Participants observed that the abandonment of the logic of blackmail by most of the inhabitants of the city suggests a potential shift in the status quo. For the past successes of mass mobilization prove the effectiveness of SMO to influence the social sphere. This view is supported by Greco and Di Fabbio (2014), for whom the withdrawal of the unconditional social support to the factory is one of the changes that could potentially reverse the path dependency of the city. In the last years, as Ippolito (2022a) reminds, the whole city has been going through a process of identity re-making. In this process, also the research centre is involved and can be considered a cause and an effect of it, as it is trying to change the citizens' relationships with the sea and its inhabitants. Although JDC is not a SMO, for the purpose of this thesis we can still use Della Porta and Diani (2006)'s theory and classify JDC as a consensual movement, meaning that the collective action is non-conflictual and aims at service delivery, self-help, and community empowerment. Also, its objectives are similar to that of an alternative SMO, as it fosters new value and provides a space for innovations to emerge. Similarly, trade unions do not belong to SMO. Nonetheless, they have always been an important ally of SM, thanks to their well-established network, trade unions can "increase the mobilization capacity and chances of success for SM" (Della Porta & Diani, 2006, p. 212).

Also, the SMO in Taranto cannot be only analysed using only New SM theory, as they are not only based on identity, but as Peacelink noted, "*here [movements] are born from an emergency*". As we previously stated, changing narratives is one of the objectives of SMO in Taranto. However, as Fraser

(2008) reminds us, we must be careful about reducing inequalities to the cultural dimension. In fact, she warns us of the dangers of 'culturalism', which is the idea that tackling inequalities on the ideological and identity level will also undermine economic inequalities. This thesis does not claim so. Instead, it recognises the links between narratives and material reality and considers the importance of changing imaginaries as a necessary step towards transformation but not the unique one. Indeed, as Taranto is experiencing in the last years, the narrative shift around the inevitability of industrialisation did not automatically lead to its end since other non-cultural dimensions are determining the conflict. In fact, SMO in Taranto are mainly born from the need to tackle environmental injustice and use narratives and recognition struggles to further their claims. Consequently, not all the SMO centre their framings on recognition. On the other hand, even if resisting the imposition of heavy industry is a necessity in Taranto, however SMO need to avoid limiting their reflections entirely on ex-Ilva. As stated by some of the SMO in the city, this risks rendering them blind towards the other ways in which capital creates new injustices. In fact, based on the ideas of the future that the groups have expressed, it is possible to identify different visions for the future, from reformist to more radical ones, where with reformist it is meant only touching one aspect of the problem while radical as dealing with the root causes of the unsustainability, i.e. capitalism, patriarchy, racism etc (Pelenc et al., 2019; Temper et al., 2018). For instance, advocating for the closure of ex-Ilva only, despite necessary, should not be considered a panacea as it is dealing with one of the consequences of the socio-ecological problems, not their root causes. Similarly, proposing tourism as an alternative does not take into account the social sustainability problems deriving from it, like gentrification, beautification etc (Carvalho et al., 2019). These impacts will be mostly experienced in the Old Town, the historical centre of the city, which is already facing significant socio-urban emergencies (d'Ovidio, 2021). Even if it led and could lead to some improvements in the future, by not questioning the system's underlying causes of unsustainability, it is unlikely that SMO sustaining these stances will contribute to radical transformations (see Scheidel et al., 2018). However, reformist movements are fundamental too, as they open a space for more radical alternatives to emerge (Temper et al., 2018). Also, the neat distinctions between radical and reformist does not consider the myriads of positions that SMO can take and risk fixating them into categories. As Temper et al. (2018) recognise, "many reform measures may well be contained within transformative processes, and some reforms if stretched far enough can also be transformative" (p. 752).

Finally, as recognised by the groups, one of the main challenges to achieve transformation is the fragmentation between the different SMO. The 2012 Hightide movement demonstrated that all together the SMO can mobilise a great mass of people. However, internal fights disaggregated the mobilization and now myriad of SMO operate in Taranto with a common enemy but no strong links

among each other. As pointed out by Ippolito (2022a) the fragmentation among environmental activists displays the embodied violence that the factory exercises and ends up isolating the most vulnerable members of the community. Also, I reckon that the fragmentation among SMO impairs their ability to influence the narrative on the city and therefore their transformative potential. To succeed in the creation of alternatives, SMO in Taranto should not refrain from confronting with each other's' different normative visions.

6.3 From *doler* to *poder*

The shift in common mentality was the result of years of struggle by SMO in Taranto. For Monedero (2009), the process of transformation articulates itself in five steps: from hurting (*doler*) to knowing (*saber*) to desiring (*querer*) to acting (*poder*) to doing (*hacer*). McAdam (1996) calls “cognitive liberation” the process through which people come to define their situation as unjust and are ready to oppose such condition. Similarly, Bulkeley et al (2022) argue that socio-cultural innovations are essential to break path dependence and lead the transition to low-carbon economies. We can therefore collocate the past season of mobilization in the “knowing” phase of transformation, while present struggle is shifting towards the “desiring” and “acting” stages. In fact, the visioning demonstrated that almost all the SMO interviewed have a vision about how the future of the city should evolve and a clear picture of their roles in the transformation.

The results of the 3H frameworks display different visions for the future. The plurality of views does not represent a negative aspect, as the domain of the political is exactly the space in which different imaginaries and visions come together or collide. Adopting Mouffe (2013)'s conception of agonism, the constructive conflict between an ‘us’ and a ‘them’ is exactly what constitutes the bases for democracy. In contexts like Taranto in particular, in which the socio-environmental conflict has developed into a post-political discourse (L. Greco & Bagnardi, 2018), putting forth the visions is a way of re-politicising the matter. The identification of the ideas of the future is indeed a way of uncovering the normative ideas underlying the visions of each movement. Yet, the multiplicity of visions is both a positive indicator and a potential source of concern. As Wagle (2022) warns us, imaginaries, even when they are transformative, can advance new and old injustices. As this research shows, even when SMO share a common goal for the future of Taranto – the end of heavy industry - imaginaries and the strategies to get there are multiple. I would argue that SMO in the city must agonistically engage among each other, as agonism allows pluralism and therefore to consider who is included and who is excluded from their future visions, in accordance with Eadson and Van Veelen (2023)'s notion of green and just path development. Building a real transformative socio-environmental justice can come only

by considering the root causes of the unsustainability and the effects that the reconversion of Taranto's economy will entail in space and in time. While advocating for the end of heavy industry in Taranto will move the burden of environmental destruction in space, also the economic restructuring must be carefully evaluated. Accordingly, MacFarlane (2019) warns us on the ability of capitalism to create a market out of the ruins of industrialization. Taking the cities of the American Rust Belt (the same that inspire the plans for Taranto's conversion) as an example of industrial reconversion, he explains how the reaction to environmental degradation is yet another way to continue the process of capital accumulation that results in benefiting the elites while displacing the poor (MacFarlane, 2019). For instance, the city's plan to diversify the economy of the city through investments in the creation of a new and creative business class, urban requalification through greening of the peripheral areas, and the provisions of 1€ houses in the historical centre risks enhancing the city's economy without removing the structural causes of the socio-environmental crisis (L. Greco et al., 2023). The visions proposed by some of the SMO are, like the strategic plan, inspired by the reconversion of the Rust Belt cities, therefore, even if SMO advocate for the complete closure and decontamination of the industrial areas, they are equally susceptible to being reabsorbed by the current system (to use the language of the 3H framework). Even if we must recognise that the plans proposed by the SMO will constitute an improvement as they try to give solutions to the present condition, nonetheless, they will open new interrogatives for the future. For instance, Anguelovski et al. (2016) examine how movements that once mobilized to fight contamination and advocated for the clean-up of highly polluted sites, then find themselves in a paradox, as neighbourhoods' greening resort in heightened social inequalities. Indeed, this may constitute a fruitful area of collaboration between researchers and activism for advancing social justice (Anguelovski, 2016).

To conclude, the very existence of SMO in Taranto signals a rejection of the top-down imposition of industrial development. The way they frame the current conflict, their desires and plans for change are all tools to resist the dominant narrative and render alternatives visible. Nonetheless, it is important that SMO consider transnational justice implication of their fights to fully release their transformative potential.

6.4 Limitations

I have only presented the visions that some of the SMO operating in Taranto. The choice was justified by the fact that I did not want to give more space to the dominant narrative, which already occupies relevant space in the media and at decisional levels. For sure, a larger sample of participants would have revealed a more variegated picture and uncovered even more visions. Mainly, in the

interviewees' list one important voice was missing, which is that of the workers. As Ippolito (2022a) analyses, the steel workers find themselves in a moral dilemma, divided between resignation and the consciousness of the environmental and health disaster caused by the factory. The absence of workers and their families, or more inhabitants of the neighbourhoods adjacent to the industrial area, or immigrants risks excluding the voices of the most marginalised in the city. In fact, they constitute the groups that would benefit more from sustainable policies (Barca, 2012). Yet, it is important to avoid fetishizing the views of the most oppressed (Haraway, 1988) but remember that the experience of subordination does not necessarily imply that subalterns will radically think about their position unless they find a compelling political discourse that provides them with the tools to acknowledge and then change the situation (Laclau & Mouffe, 2001).

Moreover, time constraints and the political topic of the research constituted an obstacle to reaching more groups in the city. In fact, some of the people I reached preferred avoiding this type of topic while others had no availability during the research period and had thus to be excluded.

Finally, the mix of interviews and focus groups was both a strength and a challenge. As the interviews were left semi-structured, much more space was given to the personal ideas of the interviewee and less space for collective discussion or opposing views inside of a group. Nevertheless, this also allowed the participants to define the problems and a deeper insight into some of the topics. On the contrary, even if focus groups encourage discussion, group dynamics sometimes can hinder the emergence of individual ideas (Barbour, 2007). However, as previously stated, this research is interested in the collective views rather than the individual ones.

6.5 Relevance to sustainability science

Sustainability science tries to understand and address the interactions between humans and nature, understand the interconnectedness between local and global processes, and address issues arising from nature-society interactions. In addition, since the beginning of the century increasingly new efforts have been made to promote sustainability transformations (Kates et al., 2001). Still, as Bulkeley et al. (2022) note, the justice implication of transformations are often overlooked and there is a strong need to engage in normative questions regarding “what it is we need to sustain, for whom, and on what basis” (p. 72). This research is relevant to sustainability science as it tries to fill this gap by means of solution-oriented research and by exploring the visions about the futures, and the normative views that they imply, in one of the territories that will be the most affected by the transition. Indeed, research has proven the role of visions (Biggs et al., 2021; Loorbach et al., 2017) and of environmental justice movements (Martinez-Alier et al., 2016; Scheidel et al., 2018; Temper et al., 2018) in the transitions to sustainability. Finally, by combining SM theory with that of social imaginaries, this thesis advances the vital role of SMO in the creation of narratives and their importance for transformations.

7. Conclusions

My research aims to uncover the potential of SMO in fostering transformations to sustainability by intervening in social imaginaries. By adopting the 3 Horizons framework and participatory research methods, such as focus groups, it was possible to identify the social imaginaries of SMO in the city of Taranto, thereby understanding the framings they use to analyse the situation and mobilise citizens, their visions for the future and the role that SMO occupy in the transformation. The different imaginations for the future of the city of Taranto reveal that contrary to the government's immobility, the citizens of Taranto organised to challenge the socio-environmental injustice and envision alternative futures to that of the top-down imposition of industrialization.

Findings show a variety of ways to frame the situation and different visions for the future of the city, from reformist to more radical ones, i.e. addressing the root causes of the crisis and connecting the local situation to transnational and global struggles. Consequently, SMO in Taranto employ disparate approaches, even if they all agree that changing narratives represents the first step in affecting changes.

Socio-ecological crisis demonstrate the contradictions of current system and the necessity for transformations. As revealed by prior research, sometimes the obstacles towards transformations to sustainable futures may be found in the absence of alternative visions. Therefore, this research stresses on the vital importance of imagination in the process of transformations to sustainability and especially the central role of SMO in the creation of shared meanings and desirable alternatives to the present condition. Additionally, highlighting the desires and the contrasting normative visions, this research calls for agonistical relations among the SMO in Taranto so that to formulate alternative visions for the future which take into account the justice aspects of transformations.

Further research is needed to clarify the role of SM in influencing social imaginaries. Despite the local character of the resistance, situations of ecological distributions conflicts like the one in Taranto result from global processes of capital accumulation and involve interests at upper scales, like national and international geopolitical considerations. Further research could highlight how transformations in local social imaginaries contribute to global environmental justice struggles.

8. References

- Adams, S., Blokker, P., Doyle, N. J., Krummel, J. W. M., Smith, J. C. A., & Zeta Books. (2015). Social Imaginaries in Debate: *Social Imaginaries*, 1(1), 15–52. <https://doi.org/10.5840/si2015112>
- Alaimo, S. (2008). Trans-corporeal feminisms and the ethical space of nature. In S. Alaimo & Hekman, *Material Feminisms* (Indiana University Press, pp. 237–264).
- Alliegro, E. V. (2020). Il monitoraggio ambientale come “dispositivo” politico e “costrutto” socioculturale. Una proposta interpretativa e operativa a partire dalla città di Taranto. *Archivio antropologico mediterraneo*, 22(1), Article 1. <https://doi.org/10.4000/aam.2529>
- Anguelovski, I. (2016). From Toxic Sites to Parks as (Green) LULUs? New Challenges of Inequity, Privilege, Gentrification, and Exclusion for Urban Environmental Justice. *Journal of Planning Literature*, 31(1), 23–36. <https://doi.org/10.1177/0885412215610491>
- Armiero, M., & De Rosa, S. P. (2016). Political effluvia: Smells, revelations, and the politicization of daily experience in Naples, Italy. In *Methodological Challenges in Nature-Culture and Environmental History Research* (pp. 173–186). Routledge.
- ASSET Agenzia regionale Strategica per lo Sviluppo Ecosostenibile del Territorio (Ed.). (2019). *Piano Strategico di sviluppo e valorizzazione del territorio tarantino*. https://partecipazione.regione.puglia.it/uploads/decidim/attachment/file/2206/PS_Taranto_2019.pdf
- Avelino, F., Grin, J., Pel, B., & Jhagroe, S. (2016). The politics of sustainability transitions. *Journal of Environmental Policy and Planning*, 18(5), 557–567. Scopus. <https://doi.org/10.1080/1523908X.2016.1216782>
- Barbour, R. (2007). *Doing Focus Groups*. SAGE Publications Ltd. <https://doi.org/10.4135/9781849208956>
- Barca, S. (2012). On working-class environmentalism: A historical and transnational overview. *Interface: A Journal for and about Social Movements*, 4(2), 61–80.
- Barca, S. (2014, June 3). *Environmentalists and workers of the world, unite!* ROAR Magazine. <https://roarmag.org/essays/labor-environmental-movements-coalition/>

- Barca, S., & Leonardi, E. (2016). Working-class communities and ecology: Reframing environmental justice around the Ilva steel plant in Taranto (Apulia, Italy). In M. Shaw & M. Mayo (Eds.), *Class, Inequality and Community Development* (1st ed., pp. 59–76). Bristol University Press. <https://doi.org/10.46692/9781447322481.005>
- Benetti, S., Gamba, S., & Grasso, M. (2023). Taranto: A flickering landscape of illusory progress, vanished hope, and invisible beauty. *Landscape Research*, 48(8), 1054–1072. <https://doi.org/10.1080/01426397.2023.2211022>
- Biggs, R., Preiser, R., De Vos, A., Schlüter, M., Maciejewski, K., & Clements, H. (2021). *The Routledge Handbook of Research Methods for Social-Ecological Systems* (1st ed.). Routledge. <https://doi.org/10.4324/9781003021339>
- Buechler, S. M. (2016). *Understanding Social Movements: Theories from the Classical Era to the Present*. Routledge. <https://doi.org/10.4324/9781315631387>
- Bulkeley, H., Stripple, J., Nilsson, L. J., Van Veelen, B., Kalfagianni, A., Bauer, F., & Sluisveld, M. V. (2022). *Decarbonising Economies* (1st ed.). Cambridge University Press. <https://doi.org/10.1017/9781108934039>
- Bullard, R. D. (2019). *Dumping In Dixie: Race, Class, And Environmental Quality, Third Edition* (3rd ed.). Routledge. <https://doi.org/10.4324/9780429495274>
- Camarda, D. (2018). Building sustainable futures for post-industrial regeneration: The case of Taranto, Italy. *Urban Research & Practice*, 11(3), 275–283. <https://doi.org/10.1080/17535069.2018.1498196>
- Camp, S. M. H. (2004). *Closer to Freedom. Enslaved Women and Everyday Resistance in the Plantation South*. University of North Carolina Press. <https://uncpress.org/book/9780807855348/closer-to-freedom/>
- Carvalho, L., Chamusca, P., Fernandes, J., & Pinto, J. (2019). Gentrification in Porto: Floating city users and internationally-driven urban change. *Urban Geography*, 40(4), 565–572. <https://doi.org/10.1080/02723638.2019.1585139>
- Ceddia, M. G., & Bergamo, J. N. (2024). The Necessity of System Change: An Ecological and Marxian Synthesis. *Monthly Review*, 33–47. https://doi.org/10.14452/MR-075-11-2024-04_4

- Conelli, C. (2022). *Il rovescio della nazione* (Tamu). <https://tamuedizioni.com/tproduct/467310025-298177147021-il-rovescio-della-nazione>
- Cornwall, A., & Jewkes, R. (1995). What is participatory research? *Social Science & Medicine*, *41*(12), 1667–1676. [https://doi.org/10.1016/0277-9536\(95\)00127-S](https://doi.org/10.1016/0277-9536(95)00127-S)
- d’Ovidio, M. (2021). Ethics at work: Diverse economies and place-making in the historical centre of Taranto, Italy. *Urban Studies*, *58*(11), 2276–2292. <https://doi.org/10.1177/0042098021992221>
- Davies, T. (2022). Slow violence and toxic geographies: ‘Out of sight’ to whom? *Environment and Planning C: Politics and Space*, *40*(2), 409–427. <https://doi.org/10.1177/2399654419841063>
- De Rosa, S. P. D. (2017). *Reclaiming Territory from Below: Grassroots Environmentalism and Waste Conflicts in Campania, Italy* [Doctoral Thesis (compilation), Lund University]. <https://portal.research.lu.se/en/publications/reclaiming-territory-from-below-grassroots-environmentalism-and-w>
- Della Porta, D., & Diani, M. (2006). *Social movements. [Elektronisk resurs] an introduction* (Electronic resources; 2. ed.). Blackwell.
- Doughnut Economics Action Lab (Director). (2018, August 8). *Three Horizons Framework—A quick introduction*. https://www.youtube.com/watch?v=_5KfRQJqpPU
- Dunford, M., & Greco, L. (2007). Geographies of Growth, Decline and Restructuring The Rise and Fall (Privatization) of the State-Owned Steel Sector and the Trajectories of Steel Localities in the Italian Mezzogiorno. *European Urban and Regional Studies*, *14*, 27–53. <https://doi.org/10.1177/0969776406072663>
- Eadson, W., & van Veelen, B. (2023). Green and just regional path development. *Regional Studies, Regional Science*, *10*(1), 218–233. <https://doi.org/10.1080/21681376.2023.2174043>
- Edelman, M. (1996). Reconceptualizing and Reconstituting Peasant Struggles: A New Social Movement in Central America. *Radical History Review*, *1996*, 26–47. <https://doi.org/10.1215/01636545-1996-65-26>
- Escobar, A. (1996). Construction nature. *Futures*, *28*(4), 325–343. [https://doi.org/10.1016/0016-3287\(96\)00011-0](https://doi.org/10.1016/0016-3287(96)00011-0)

- Escobar, A. (2020). Postdevelopment @ 25: On “Being Stuck” and Moving Forward, Sideways, Backward, and Otherwise. In *Pluriversal Politics* (pp. 97–119). Duke University Press. <https://www.jstor.org/stable/j.ctv11315v0.12>
- Escobar, A., & Frye, D. (2020). Sentipensar with the Earth: Territorial Struggles and the Ontological Dimension of the Epistemologies of the South. In *Pluriversal Politics* (pp. 67–83). Duke University Press. <https://doi.org/10.2307/j.ctv11315v0.10>
- European Commission. (n.d.). *Just Transition funding sources—European Commission*. Retrieved 2 May 2024, from https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism/just-transition-funding-sources_en
- Festa, F. A. (2014). Oltre l'emergenza. Pratiche ed esperienze di 'comune' nel Sud Italia. In *Briganti o emigranti. Sud e movimenti fra conricerca e studi subalterni*. Ombre Corte. https://www.academia.edu/10412631/Oltre_lemergenza_Pratiche_ed_esperienze_di_comune_nel_Sud_Italia_in_Briganti_o_emigranti_Sud_e_movimenti_fra_conricerca_e_studi_subalterni_a_cura_di_Orizzonti_Meridiani_Verona_Ombre_corte_2014
- Fraser, N. (2008). Rethinking recognition: Overcoming displacement and reification in cultural politics. In B. Hobson (Ed.), *Recognition Struggles and Social Movements. Contested Identities, Agency and Power* (Cambridge University Press, pp. 21–32). <https://assets.cambridge.org/97805218/29229/sample/9780521829229ws.pdf>
- Fusch, P., Fusch, G. E., Hall, J. A., Walker, N. A., & Booker, J. M. (2022). How to conduct a focus group interview: Tips, strategies, and examples for novice researchers. *Education for Information*, 38(2), 171–187. <https://doi.org/10.3233/EFI-211520>
- Gay-Antaki, M. (2023). Embodied geographies of environmental justice: Toward the sovereign right to wholly inhabit oneself. *Environment and Planning E: Nature and Space*, 6(4), 2379–2399. <https://doi.org/10.1177/25148486231151802>
- Giaccaria, P., & Minca, C. (2010). The Mediterranean alternative. *Progress in Human Geography*. <https://doi.org/10.1177/0309132510376850>
- Gibson-Graham, J. K. (2006). *A Postcapitalist Politics* (NED-New edition). University of Minnesota Press. <https://www.jstor.org/stable/10.5749/j.ctttt07>

- Google Earth. (n.d.). Retrieved 12 May 2024, from <https://earth.google.com/web/@40.48706371,17.30052424,2.4010362a,43657.11551604d,35y,-0h,0t,0r/data=CIYaVBJOCiUweDEzNDcxZDE4MTlhNzdiMTM6MHg2NGY4ZjlhNThkNTdkZmNmGUQFPYopO0RAIdPaNLbXRDFAKhNUYXJhbnRvLCBUQSwgSXRhbGlhGAIgAQ>
- Göpel, M. (2016). *The Great Mindshift* (Vol. 2). Springer International Publishing. <https://doi.org/10.1007/978-3-319-43766-8>
- Greco, C. (2016). Blaming the southern victim: Cancer and the Italian ‘Southern Question’ in Terra dei fuochi and Taranto. *Anthropology Today*, 32(3), 16–19.
- Greco, L. (2023). A just transition: Insights from the labour unions of a steel locality (Taranto, Italy). *Economic and Industrial Democracy*, 44(4), 1127–1148. <https://doi.org/10.1177/0143831X221111417>
- Greco, L., & 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. <https://doi.org/10.3197/096327118X15321668325939>
- Greco, L., & Di Fabbio, M. (2014). Path-dependence and change in an old industrial area: The case of Taranto, Italy. *Cambridge Journal of Regions, Economy & Society*, 7(3), 413–431. <https://doi.org/10.1093/cjres/rsu012>
- Greco, L., Perra, S., & Pruna, M. L. (2023). La sfida della «transizione giusta» in due aree di antica industrializzazione: Taranto e Sulcis. *Meridiana*, 106, 39–68.
- Gregory, D. (2006). Introduction: Troubling Geographies. In N. Castree (Ed.), *David Harvey* (pp. 1–25). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9780470773581.ch1>
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575–599. <https://doi.org/10.2307/3178066>
- Hawlina, H., Pedersen, O. C., & Zittoun, T. (2020). Imagination and social movements. *Current Opinion in Psychology*, 35, 31–35. <https://doi.org/10.1016/j.copsyc.2020.02.009>
- Ippolito, A. R. (2022a). *Beyond Protest – The Moral Struggle of Industrial Pollution in Taranto, Italy*.

- Ippolito, A. R. (2022b). Toxicities that matter: Slow bureaucracy and polluting temporalities in a southern Italian city. *Environment and Planning C: Politics and Space*, 23996544221107517. <https://doi.org/10.1177/23996544221107517>
- Jokela-Pansini, M. (2022). Beyond “toxic bodies”: Multiplied rationalities of women’s reproductive health in a high-risk environmental area (Taranto, Italy). *Health and Place*, 77. <https://doi.org/10.1016/j.healthplace.2022.102900>
- Jokela-Pansini, M., & Militz, E. (2022). Breathing new futures in polluted environments (Taranto, Italy). *Transactions of the Institute of British Geographers*, 47(3), 741–755. <https://doi.org/10.1111/tran.12532>
- Kates, R. W., Clark, W. C., Corell, R., Hall, J. M., Jaeger, C. C., Lowe, I., McCarthy, J. J., Schellnhuber, H. J., Bolin, B., Dickson, N. M., Faucheux, S., Gallopin, G. C., Grübler, A., Huntley, B., Jäger, J., Jodha, N. S., Kasperson, R. E., Mabogunje, A., Matson, P., ... Svedin, U. (2001). Sustainability Science. *Science*, 292(5517), 641–642. <https://doi.org/10.1126/science.1059386>
- Kvale, S. (2007). *Doing Interviews*. SAGE Publications, Ltd. <https://doi.org/10.4135/9781849208963>
- Laclau, E., & Mouffe, C. (2001). *Hegemony and socialist strategy: Towards a radical democratic politics* (Geobiblioteket O Samhällsvetenskap; 2. ed.). Verso.
- Lai, A., Panfilo, S., & Stacchezzini, R. (2019). The governmentality of corporate (un)sustainability: The case of the ILVA steel plant in Taranto (Italy). *Journal of Management and Governance*, 23(1), 67–109. <https://doi.org/10.1007/s10997-019-09457-1>
- Loorbach, D., Frantzeskaki, N., & Avelino, F. (2017). Sustainability Transitions Research: Transforming Science and Practice for Societal Change. *Annual Review of Environment and Resources*, 42(1), 599–626. <https://doi.org/10.1146/annurev-environ-102014-021340>
- Lorde, A. (2024, May 5). *A Litany for Survival* (<https://www.poetryfoundation.org/>) [Text/html]. Poetry Foundation; Poetry Foundation. <https://www.poetryfoundation.org/poems/147275/a-litany-for-survival>
- MacFarlane, K. (2019). Time, Waste, and the City: The Rise of the Environmental Industry. *Antipode*, 51(1), 225–247. <https://doi.org/10.1111/anti.12427>

- Marescotti, A. (2014, August 30). *Programma di transizione per Taranto—PIANO B*. Google Docs. https://docs.google.com/document/u/1/d/1-zjpEHqhMx9d2OfpKlSt6MmAUT8NcR33MRfigC4GuhE/edit?usp=embed_facebook
- Martinez-Alier, J. (1995). Distributional Issues in Ecological Economics: Review of Social Economy. *Review of Social Economy*, 53(4), 511–528. <https://doi.org/10.1080/00346769500000016>
- Martinez-Alier, J., Temper, L., Bene, D. D., & Scheidel, A. (2016). Is there a global environmental justice movement? *The Journal of Peasant Studies*. <https://www.tandfonline.com/doi/abs/10.1080/03066150.2016.1141198>
- McAdam, D., McCarthy, J. D., & Zald, M. N. (Eds.). (1996). *Comparative Perspectives on Social Movements: Political Opportunities, Mobilizing Structures, and Cultural Framings*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511803987>
- Melucci, A. (1980). The new social movements: A theoretical approach. *Social Science Information*, 19(2), 199–468. <https://doi.org/10.1177/053901848001900201>
- Ministero delle Imprese e del Made in Italy (MIMIT). (2024, April 19). *Crisi industriale complessa*. [mimit.gov.it](https://www.mimit.gov.it). <https://www.mimit.gov.it/index.php/it/impresa/competitivita-e-nuove-imprese/aree-di-crisi-industriale/crisi-industriale-complessa>
- Modeo, S. (2019). Pensare il Sud. *MENELIQUE*, 8, 90–95.
- Monedero, J. C. (2009). *El gobierno de las palabras* (Fondo Cultural Económico).
- Montell, F. (1999). Focus Group Interviews: A New Feminist Method. *NWSA Journal*, 11(1), 44–71.
- Moore, M.-L., & Milkoreit, M. (2020). Imagination and transformations to sustainable and just futures. *Elementa*, 8(1). Scopus. <https://doi.org/10.1525/elementa.2020.081>
- Mouffe, C. (2013). *Chantal Mouffe: Hegemony, radical democracy, and the political* (SOL Biblioteket). Routledge.
- Pelenc, J., Wallenborn, G., Milanese, J., Sébastien, L., Vastenaekels, J., Lajarthe, F., Ballet, J., Cervera-Marzal, M., Carimentrand, A., Merveille, N., & Frère, B. (2019). Alternative and Resistance Movements: The Two Faces of Sustainability Transformations? *Ecological Economics*, 159, 373–378. <https://doi.org/10.1016/j.ecolecon.2019.01.013>

- Pereira, L., Frantzeskaki, N., Hebinck, A., Charli-Joseph, L., Drimie, S., Dyer, M., Eakin, H., Galafassi, D., Karpouzoglou, T., Marshall, F., Moore, M.-L., Olsson, P., Siqueiros-García, J. M., van Zwanenberg, P., & Vervoort, J. M. (2020). Transformative spaces in the making: Key lessons from nine cases in the Global South. *Sustainability Science*, *15*(1), 161–178. <https://doi.org/10.1007/s11625-019-00749-x>
- Rodríguez, I., Inturias, M. L., Robledo, J., Sarti, C., Borel, R., & Melace, A. C. (2015). Abordando la Justicia Ambiental desde la transformación de conflictos: Experiencias con Pueblos Indígenas en América Latina. *Revista de Paz y Conflictos*, *8*(2), 97–128.
- Said, E. (2003). *Orientalism* (Penguin Classics). <https://eds.p.ebscohost.com/eds/detail/detail?vid=4&sid=47705691-ed52-491e-9cfb-c3f377289b8b%40redis&bdata=JkF1dGhUeXBIPWlwLHVpZCZzaXRIPWVkcys1saXZlJnNjb3BIPXNpdGU%3d#AN=lub.1630595&db=cat07147a>
- Scheidel, A., Temper, L., Demaria, F., & Martínez-Alier, J. (2018). Ecological distribution conflicts as forces for sustainability: An overview and conceptual framework. *Sustainability Science*, *13*(3), 585–598. <https://doi.org/10.1007/s11625-017-0519-0>
- Segato, R. L. (2016). La escritura en el cuerpo de las mujeres asesinadas en Ciudad Juárez. Territorio, soberanía y crímenes de segundo estado. *Amerika*, *15*. <https://doi.org/10.4000/amerika.7531>
- Sentieri. (2019). SENTIERI - Studio epidemiologico nazionale dei territori e degli insediamenti esposti a rischio da inquinamento: *Epidemiologia e Prevenzione*.
- Shackleton, S., Bezerra Carlos, J., Cockburn, J., Reed, M. G., & Aby, R. (2021). Interviews and Surveys. In *The Routledge Handbook of Research Methods for Social-Ecological Systems* (1st ed.). Routledge. <https://www.taylorfrancis.com/books/9781003021339>
- Sharpe, B., Hodgson, A., Leicester, G., Lyon, A., & Fazey, I. (2016). Three horizons: A pathways practice for transformation. *Ecology and Society*, *21*(2). <https://www.jstor.org/stable/26270405>
- Snow, D. A., Rochford, E. B., Worden, S. K., & Benford, R. D. (1986). Frame Alignment Processes, Micromobilization, and Movement Participation. *American Sociological Review*, *51*(4), 464. <https://doi.org/10.2307/2095581>
- Spivak, G. C. (2010). Can the Subaltern Speak? In R. C. Morris (Ed.), *Can the Subaltern Speak?: Reflections on the History of an Idea* (pp. 21–78). Columbia University Press. <https://www.jstor.org/stable/10.7312/morr14384>

- Swyngedouw, E. (2014). Depoliticization ('the political'). In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A Vocabulary for a New Era* (pp. 90–93). Routledge. <https://doi.org/10.4324/9780203796146>
- Tartaglia, S., Conte, E., Rollero, C., & De Piccoli, N. (2018). The influence of coping strategies on quality of life in a community facing environmental and economic threats. *Journal of Community Psychology, 46*(2), 251–260. <https://doi.org/10.1002/jcop.21938>
- Taylor, C., Gaonkar, D. P., Kramer, J., Lee, B., & Warner, M. (2003). *Modern Social Imaginaries*. Duke University Press. <http://ebookcentral.proquest.com/lib/lund/detail.action?docID=1168038>
- Temper, L., Walter, M., Rodriguez, I., Kothari, A., & Turhan, E. (2018). A perspective on radical transformations to sustainability: Resistances, movements and alternatives. *Sustainability Science, 13*(3), 747–764. <https://doi.org/10.1007/s11625-018-0543-8>
- Törnberg, A. (2021). Prefigurative politics and social change: A typology drawing on transition studies. *Distinktion: Journal of Social Theory, 22*(1), 83–107. <https://doi.org/10.1080/1600910X.2020.1856161>
- Wagle, G. (2022). Counterimagination and the Plurality of Radical Politics: Polity. *Polity, 54*(2), 334–358. <https://doi.org/10.1086/718807>
- Zald, M. N. (1996). Culture, ideology, and strategic framing. In D. McAdam, J. D. McCarthy, & M. N. Zald (Eds.), *Comparative Perspectives on Social Movements* (1st ed., pp. 261–274). Cambridge University Press. <https://doi.org/10.1017/CBO9780511803987.013>

9. Appendices

Appendix 1: Table 1. Questions for 3 Horizons framework

Own elaboration from questions inspired by Doughnut Economics Action Lab (2018)

Questions for 3 Horizons Framework	
Horizon	Question
1st Horizon:	What are the characteristics of the current system? What don't you like about it?
3rd Horizon:	How SHOULD Taranto be in the future?
	How does it feel like to live in such a place?
	Is there any inspirational practice in the present?
2nd Horizon:	Are there changes that can contribute to the idea of future you just described?
	Can these changes instead be intercepted and re-integrated into the current system?
	Do you see yourself as change agents? If yes, what is your role in this transformation?
1st Horizon	Is there anything that you would like to preserve in the future?

Appendix 2: Figure 10, 11 and 12. Pictures of 3H frameworks

Figure 10 and 11. Details, 3H framework with JDC

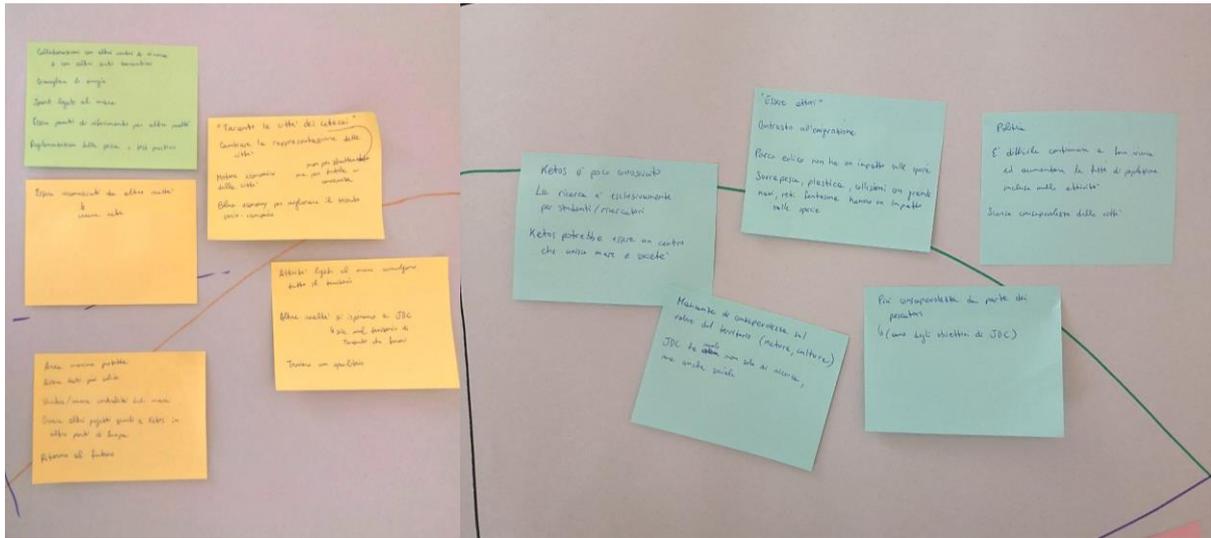


Figure 12. 3H framework with Giustizia per Taranto

