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THE INTERNATIONAL IMPACT OF ILVA: GRANTING A GREENER FUTURE TO NEXT GENERATIONS

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Introduction

The Ilva case in Taranto stands as a significant event not only when confined within the borders of Italy, but also on an international level, given the numerous environmental issues emanating from the Ionic province. The primary objective of this thesis is to conduct an in-depth analysis of the Apulian city's case, deeply examining its facts, legal judgments, international implications, and proposed intergenerational solutions. Ilva represents an entity inexorably intertwined with the territory of Taranto, capturing global attention due to the considerable environmental impact on the local population, the legal complexities arising from the province, the questions surrounding the region's future and the uncertain well-being of new generations of *Tarantini.*

The first chapter of this analysis will furnish a comprehensive overview of the facts, tracing the historical and corporate evolution of the factory. This will be followed by an examination of environmental consequences arising from the industrial processes, encompassing both objective and subjective dimensions. Subsequently, there will be an examination of the legal *iter* revolving around the steel mill, delving into the internal perspective of the case through the "*Ambiente Svenduto*" process and the decisive judgments produced by the Italian Constitutional Court. Additionally, the European perspective will be explored, addressing conflicts between Italy and the European Commission.

In the second chapter, the discourse will delve into an analysis of the international implications of the Ilva case within the framework of International Environmental Law and its principles, with a specific emphasis on delineating potential extended international obligations for environmental enforcement. Another crucial point will involve an examination of the European Union's implementation system and the challenges associated with European non-compliance. Subsequently, the Ilva case will be scrutinized from a human rights perspective, concentrating on individual rights pertinent to the case, with an in-depth exploration of specific judgements such as *Smaltini* and *Cordella*. These landmark decisions assume significance in the context of environmental protection within the Taranto case.

The third chapter, which will conclude the analysis, revolves around the revaluation of Ilva and the proposition of the Right to a Healthy Environment as a viable solution to intergenerational environmental challenges. The initiatives undertaken by the current management of the steel plant, coupled with European endeavors supporting a green transition for the Union and its Member States, will be subject to examination. Furthermore, the discourse will evaluate potential mechanisms aimed at ensuring a more sustainable future for Taranto's next generations. This may involve, as an objective solution, the detoxification of the area and, as a legal solution, the recognition, both at the national and international levels, of Environmental Rights. These innovations could play a pivotal role in preventing the recurrence of new environmental cases similar to Ilva, thereby providing a comprehensive safeguard that future generations may perceive as the initial step toward worldwide environmental sustainability.

CHAPTER I
A GENERAL VIEW OF THE ILVA CASE: HISTORY AND CONSEQUENCES

1. History of Ilva

Ilva's history is marked by a long and difficult interplay of industrial development, corporate changes, environmental challenges, legal battles and attempts at balancing economic interests and environmental and public health concerns. In the pages that follow, this analysis will traverse Ilva's historical timeline.

It is imperative to gain a comprehensive understanding of Taranto's historical condition, often referred to as the queen of the *Magna Graecia*, previously referred to as *Taras*[1]. In the early 60s, Emilio Marisili directed a documentary film called *"Il Pianeta Acciaio"*, the steel planet, for Italsider[2], the current *Acciaierie d'Italia*, and in its first scene, the spectator is immediately presented with the scene of some excavators bringing down a group of olive trees, one of the most important symbols of the Ionic province and of Apulia, the southern region of Italy where Taranto is located[3]. This introductory scene aims to represent the radical transformation of the land where the new steel plant, Ilva, would be built. Before the establishment of the plant, Taranto was experiencing a very complicated period. At the end of the 19th century, Taranto was chosen as the perfect location for a Naval Military Arsenal[4] and during the early 20th century this provided work

[1] M. CARTWRIGHT, *Tarentum*, World History Encyclopedia, 24 August 2017, « *Tarentum (Taras, modern Taranto), located on the southern coast of Apulia, Italy, was a Greek and then Roman city. Controlling a large area of Magna Graecia and heading the Italiote League, Tarentum, with its excellent harbor, was a strategically significant city throughout antiquity* ».

[2] Ilva/Italsider was one of the major Italian steel companies of the 20th century. Its history is over a century old and began its works in the early 1900s when it was founded by industrialists from northern Italy as Ilva.

[3] S. ROMEO, *L'acciaio in fumo: L'Ilva di Taranto dal 1945 a oggi,* Donzelli Editore, 2019.

[4] After Italian unification, many politicians, concerned about defending the Adriatic coast and Italy's position in the Mediterranean, saw the need for constructing a Naval Military Arsenal in southern Italy. Taranto politicians were among the most enthusiastic proponents of using the Port of Taranto as the location for a strategically suitable naval base without hindering its commercial activities with the East. The construction of the Taranto Arsenal was authorized by Parliament through Law No. 833 on June 29, 1882, allocating 9,300,000 lire, Italy's currency before the euro. The Taranto Naval Military Arsenal was inaugurated on August 21, 1889, in the presence of King Umberto I of Savoy, to address Italy's growing defense needs in the Mediterranean.

in a consistent way. However, after the end of the Second World War, these activities centered around the Arsenal started to lose their prominent role. This was the beginning of the "Taranto Issue"[5], a general lack of valid work alternatives and consequent unemployment. The situation was incredibly tense during those years, so it is easily understandable why the Ionic location was considered appropriate for the establishment of an integrated cycle plant.

Taranto was chosen for a series of reasons. It had a favorable geographical position, with a natural harbor and a qualified workforce for industrial work. The city was also incredibly close to sources of raw materials, crucial for the plant, and to export markets in the Mediterranean. However, there were many evolutions regarding the final decision on the location of the steel mill. In 1956, the choice was oriented towards the western area of the city, in Caggioni, between Punta Rondinella and the mouth of the river Tara, called "the river of miracles[6]" by popular legends. Later, the choice was extended to the area of Chiapparo because of the unique characteristics of land and subsoil, the short distance from the northern shore of the Mar Grande and from the existing commercial port, which would have provided the possibility to « *construct new docking facilities in sheltered waters, containing the cost, and to connect the steel plant and any others both with the aforementioned facilities and with the commercial port through short connections* », the proximity to the Mar Piccolo, from which to obtain saltwater, and the Tara River, from which to draw fresh water; the proximity to limestone quarries, the convergence of road and rail connections[7]. However, other that geographical reasons, this choice was mainly political. The establishment of a public steel sector was a crucial aspect of a more extensive post-war modernization initiative. The introduction of the steel industry in Taranto undoubtedly disrupted the existing

[5] S. LAFORGIA, *"Se Taranto è l'Italia": il caso Ilva*, Lavoro e Diritto, fascicolo 1, 2022.
[6] COLLETTIVO DAV, *Tara, il fiume dei miracoli,* 2017, « *From an ancient legend about the miraculous healing of a sick donkey left to die by the river but restored to health by its waters, first emerged a popular belief in its miraculous and therapeutic properties, and then a religious devotion. Every first of September, at dawn, in this hidden corner of Apulia, people gather one by one to engage in a collective prayer. Despite the presence of Ilva, these people live their dream, allowing themselves to be comforted* ».
[7] Ivi, b. R83, Cosider S.p.A., Descrizione e caratterizzazione della zona proposta per il IV centro siderurgico, p. 1, s.d.

socio-economic framework and brought about pronounced trends of urbanization in a previously agrarian setting[8].

Initially, Ilva's stance was that of a public-owned activity, and the managerial analysis must begin in 1934, when IRI[9] (Institute for Industrial Reconstruction) was founded. The State was the main player for the iron and steel industry, and in 1937 IRI founded Finsider, which later became one of the most important holdings of the sector. In 1961, IRI's president, Oscar Sinigaglia, took advantage of the Marshall Plan's funds to modernize Cornigliano's steel plant and to merge Ilva with Cornigliano S.p.A., creating Italsider Alti Forni e Acciaierie Riunite Ilva e Cornigliano, a name which was changed back after four years in Italsider.

In 1961, the pipe mill became operational and in just a few years, production increased from 3 to 4.5 million tons of steel annually, and for this purpose, another 200 billion lire were allocated, resulting in an increase of 3000 jobs[10]. The increase in capacity of the plant seemed to be necessary, so the decision to expand was taken, but, if in 1959-1960 the technical choices regarding the location of the steel mill were made by those who had demonstrated their knowledge of the steel industry, in this second case, the voice of politics had become much stronger. Increasing national production capacity seemed like an obligatory choice; no one throughout Europe was able to foresee the crisis of the European steel market that would open in the 70s[11], let alone its duration and intensity.

It took five years, until 1980, to achieve acceptable production results. In the subsequent years, Finsider was engaged in a prolonged effort to enhance plant efficiency through a series of organizational measures, some of which were conducted with the direct consultation of a Japanese team from Nippon Steel[12].

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[8] L. GRECO, F. CHIARELLO, *The Failure of Regulation: Work, Environment and Production at Taranto's Ilva*, Economic and industrial democracy. 37.3 (2016): 517–534. Web.

[9] IRI, Institute for Industrial Reconstruction, was an Italian public economic entity with functions related to industrial policy. Established in 1933, during the fascist period, in the post-war period, it gradually expanded its areas of intervention and became the centerpiece of public intervention in the Italian economy.

[10] L. CAMPETTI, *Ilva Connection: inchiesta sulla ragnatela di corruzioni, omissioni, colpevoli negligenze, sui Riva e le istituzioni*, Campetti, 2013.

[11] A. PICCHIERI, *Confronting crisis in the European steel industry: diagnosis and strategy*, Industrial Crisis Quarterly, Vol. 4, no. 2, 1990.

[12] The old Nippon Steel Corporation was established in 1970 by the merger of Fuji Iron & Steel and Yawata Iron & Steel. Nippon Steel was the world's third largest steel producer by volume in 2019.

The workforce at the Taranto plant, which had reached a peak of 21.700 employees in 1980, rapidly decreased in the following years through a supported program of early retirements and other measures. The large new Taranto plant did not assist public steel production in regaining efficiency and competitiveness, but it cannot be said that its management was the primary cause of Finsider's decline[13]. On the 30th of November 1990, the industrial area of Taranto was declared a «*national site at high risk of environmental crisis*», leading to the provision of remediation measures and the approval of decontamination plans[14].

In the early 1990s began the privatization process of Italy's steel industry, including Ilva, driven by a complex interplay of economic and political forces. The failure of the industry insiders to efficiently restructure their consolidated steel assets under the new entity, Ilva, combined with rising competition from Eastern European countries, necessitated the shift towards privatization. The pivotal moment came in 1995 with the acquisition of the Taranto steelworks by the Riva group, which was immediately catapulted into the global elite of steel producers[15]. The Riva family, starting in the 1960s, began an undeniable ascent, becoming a part of the steel industry privatization phase and acquiring large plants in Italy and Europe. In 1995 the group, as the majority shareholder, acquired the entirety of Ilva's capital from IRI. This operation represented the most significant privatization within the framework of the Italian government's disengagement plan from the steel sector.

The Riva family favored non-unionized workers or the offspring of former employees who had never been union members, leading to discriminatory hiring practices against union members or sympathizers of labor organizations[16]. The rate of unionization at the plant started to decline[17] and so did work conditions. In fact,

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Nippon Steel Corporation (**日本製鉄株式会社**, *Nippon Seitetsu kabushiki gaisha*) was formed in 2012 by the merger of the old Nippon Steel and Sumitomo Metal.

[13] R. RANIERI, *La vicenda di Ilva e i rischi per il sistema industriale italiano: the crisis at the Taranto Ilva*, 2013.

[14] DPCM 30/11/1990.

[15] *The Failure of Regulation: Work, Environment and Production at Taranto's Ilva*, Economic and industrial democracy, op. cit.

[16] S. LAFORGIA, *"Se Taranto è l'Italia": il caso Ilva,* op. cit.

[17] S. LAFORGIA, *"Se Taranto è l'Italia": il caso Ilva,* op cit.

the Rivas soon found themselves facing severe issues related to pollution, health, and workers' protection, for which they would later face legal proceedings.

After the end of Riva's era in 2012, Ilva's management began to change drastically. From 2013 to 2015 it was subject to extraordinary commissionership, as stated in the Law Decree n. 61/2013: « *The Council of Ministers, upon the proposal of the Prime Minister, may decide on the extraordinary commissioning of the company, which can also be conducted in societal form* »[18]. In January 2015, the company, through another crucial decree[19], entered extraordinary administration.

On December 4th, 2015, Law-Decree n. 191, for the transfer to third parties of the business complexes of the Ilva Group, was issued, stating that there was an « *extraordinary necessity and urgency to expedite the transfer procedures of the Ilva group in extraordinary administration* »[20].

In January of 2016 followed the tender notice[21], and after a period of proposals, the extraordinary commissioners selected the consortium ArcelorMittal-Marcegaglia, which was brought together in the joint venture AmInvestCo (85% ArcelorMittal, 15% Marcegaglia). After the distancing of the Marcegaglia group from the procedure, on the 5th of June 2017, the Minister of Economic Development signed the decree assigning it to ArcelorMittal.

However, there is another crucial point to address: Law-Decree n. 98/2016 is of particular importance as it expands the exclusion from criminal or administrative liability to the tenant, buyer, and their duly appointed representatives, in relation to actions taken as part of the same plan; this is the so-

[18] Law-Decree 4 June 2013, n. 61, *Nuove disposizioni urgenti a tutela dell'ambiente, della salute e del lavoro nell'esercizio di imprese di interesse strategico nazionale*.
[19] Law-Decree 21 January 2015**,** *Apertura della procedura di amministrazione straordinaria e nomina del collegio commissariale della S.p.a. Ilva, ai sensi del decreto-legge 23 dicembre 2003, n. 347, convertito, con modificazioni, dalla legge 18 febbraio 2004, n. 39 e successive modifiche ed integrazioni.*
[20] Law-Decree 4 December 2015, n. 191*, Disposizioni urgenti per la cessione a terzi dei complessi aziendali del Gruppo Ilva*.
[21] AMMINISTRAZIONE STRAORDINARIA DI ILVA S.P.A. ILVA SERVIZI MARITTIMI S.P.A. ILVAFORM S.P.A. INNSE CILINDRI S.R.L. SANAC S.P.A. TARANTO ENERGIA S.R.L. SOCOVA S.A.S. TILLET S.A.S, *Invito a manifestare interesse in relazione all'operazione di trasferimento dei complessi aziendali facenti capo ad Ilva S.p.A. in Amministrazione Straordinaria e ad altre società del medesimo gruppo.*

called "*Scudo Penale*"[22] or "Criminal Shield". This immunity granted to ArcelorMittal was supposed to last until August 2023[23], but in 2019 the Government intervened placing a limit on the exemption, setting the deadline as September 6, 2019[24]. This decision prompted the industrial company to communicate its intention to withdraw from the accord, continuing to modify their position in following statements. The issue persisted for several months until, in December 2020, an agreement was reached with Invitalia[25], aimed at supporting businesses and employment in the South of Italy. The goal was to revitalize and reconvert the Ilva steel site into a "green" facility, in line with the strategy governed by the European Commission, which still aims to achieve "zero emissions" in Europe by 2050[26].

The joint entity formed by Invitalia and ArcelorMittal was named *Acciaierie d'Italia*. Ilva returns to be state-managed, with an incredibly complicated history up to this day. After the re-entry of the State and the start of activities under the new *Acciaierie d'Italia*, many protesters manifested against the current management of the plant[27].

Today, the situation is once again unstable, with risks of a brand-new extraordinary administration, protests at the gates of the steel mill and trade unions irritated by the continuous violation of workers' rights. The story of Ilva is still evolving and far from being over.

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[22] Law-Decree 9 June 2016 n.98**,** *Disposizioni urgenti per il completamento della procedura di cessione dei complessi aziendali del Gruppo Ilva.*
[23] Law-Decree 30 December 2016 n. 244, *Proroga e definizione di termini.*
[24] Law-Decree 30 April 2019, n. 34, *Misure urgenti di crescita economica e per la risoluzione di specifiche situazioni di crisi.*
[25] Invitalia, officially known as "Invitalia - Agenzia nazionale per l'attrazione degli investimenti e lo sviluppo d'impresa," is the National Agency for Investment Attraction and Business Development in Italy. It is a government agency responsible for promoting economic development, attracting investments, and supporting the growth of businesses in Italy. Invitalia offers various services and financial incentives to encourage domestic and foreign investments, as well as initiatives to foster entrepreneurship and regional development. It plays a significant role in supporting economic activities and job creation in Italy.
[26] European Commission, *Going climate-neutral by 2050, a strategic long-term vision for a prosperous, modern, competitive and climate-neutral EU economy.*
[27] Il Fatto Quotidiano, *Ex Ilva, Taranto tappezzata di manifesti contro la manager Lucia Morselli in vista dello sciopero: "Peggiore gestione di sempre",* 2023.

2. Damages deriving from Ilva's activity

The Ilva steel plant in Taranto has long been associated with severe environmental damages, creating one of the most contentious industrial and environmental cases in the country. The legally ascertained[28] environmental issues linked to Ilva are numerous and significant: air pollution, water pollution, soil contamination and health impact on the population. The environmental damages extend beyond the immediate vicinity of the plant, resulting in a general degradation of the ecosystem.

To grasp a partial insight into the environmental impact generated by a facility like the Ilva steel plant in Taranto, the following data must be considered: the plant encompasses a vast territory, including 90 kilometers of conveyor belts, 50 kilometers of roadways, 200 kilometers of railway tracks[29], and 6 docks for ships. The site comprises 8 mining areas, 2 quarries, 10 coke production units essential for fueling the blast furnaces, 5 blast furnaces, 2 steelmaking facilities equipped with LD converters, 5 continuous casting lines, 2 hot rolling mills for producing strips, a hot rolling mill for plates, a cold rolling mill, 3 galvanizing lines, and 3 pipe manufacturing facilities[30]. This extensive industrial infrastructure highlights the vast scale and intricacy of the Ilva facility in Taranto and, by extension, underscores the significant environmental challenges inherent in its operations[31], as demonstrated by the many legal proceedings, supported by concrete evidence of pollution[32], and revaluation initiatives.

The Ilva facility was constructed entirely within the urban landscape of Taranto, with the mining parks situated a mere 170 meters from the residential zone, the coke ovens[33] at 730 meters, and the perimeter wall located just 135 meters away

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[28] European Court of Human Rights, *Ardimento and others v. Italy*, 5 May 2022, n. 4642/17 - European Court of Human Rights, *Cordella and others v. Italy*, 24 January 2019, n. 54414/13 - reasonings for Judgement 31 May 2021, Corte d'Assise Taranto - Apulia, through regional law no. 21/2012, introduced the assessment of health damage (VDS). The VDS, based on toxicological risk assessment (RA), has highlighted a carcinogenic risk exceeding the acceptability threshold of 1x10-4 (US-EPA) for the emission scenario AIA 2012 of the former ILVA in Taranto.

[29] *Acciaierie d'Italia*, Facts & Figures, Stabilimento di Taranto, official website.

[30] Rapporto Ambiente e Sicurezza, 2010.

[31] Rapporto Ambiente e Sicurezza, 2011, p. 19.

[32] See supra n. 28.

[33] U.S. Energy Information Administration (EIA), glossary, « *Coke Oven: a chamber of brick or other heat-resistant material in which coal is heated to separate the coal gas, coal water, and tar. The coal gas and coal water fuse together with carbon and the remaining ash, forming a hard residue commonly referred to as coke. Coke is primarily used in steel production* ».

from the nearest house in the *rione* Tamburi, a community of around 18.000 residents. This close juxtaposition of Ilva's operations with the city's residential areas emphasizes the substantial overlap between industrial activities and urban life, giving rise to concerns about environmental[34] and health repercussions[35].

The pollution of air, water, and soil in the Taranto area has been analyzed through various scientific and epidemiologic studies, which will be discussed in the following sections. For years, various proposals have been put forward, ranging from cleaning thoroughly and making the current factory more environmentally friendly by covering the mining and coal areas to changing the production process by using natural gas instead of coal. Other ideas include using scrap metal as raw material for electric furnaces, as is the case in many other Italian steelworks, and the option of closing everything and transforming Ilva into a large park after cleaning up the soil[36]. It is truly crucial at this moment of the discussion to understand the objective results of the steel mill's activities on the ionic population and territory.

2.1 Consequences on the Environment

Ilva has emerged as the perfect example of a steel activity that profoundly influences and consumes an entire region. The rapid population growth, extensive urban development driven by property speculation, the occupation of significant urban areas, and, subsequently, pollution reaching the status of a possible environmental disaster all vividly illustrate the stark contrast between the industrial facility and the city, along with its population residing in the vicinity[37]. The damages revolve around many areas.

[34] *Monitoraggio della qualità dell'aria*, rete Acciaierie d'Italia S.p.A., report year 2022, ARPA Puglia, Direzione Scientifica Centro Regionale Aria.
[35] B. RUSCIO, *Legami di ferro*, Narcissus, 2015.
[36] G. NEBBIA, *Come funziona l'Ilva di Taranto, e i suoi impatti*, Settimanale Ambientale l'Extraterrestre de "Il Manifesto", 2018.
[37] S. LAFORGIA, *"Se Taranto è l'Italia": il caso Ilva,* op. cit.

2.1.1 Air pollution

Air pollution in Taranto has been a significant and longstanding concern due to the industrial activities of the steel mill. The plant's operations have released various pollutants into the air such as particulate matter, heavy metals (including lead, nickel, and chromium), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and polycyclic aromatic hydrocarbons (PAH_s), leading to severe environmental and health problems. These emissions result from steel production, coal and coke combustion, and port activities.

An in-depth study funded by the Apulia region[38] in 2019 supported the results of traditional studies regarding the link between industrial emissions and mortality of the population living in the Taranto area. In the following years, researchers have found significant increases in the levels of pollution. In 2022, ARPA published its annual Report on Air Quality where some fundamental findings were shown, like the incrementation of « *benzene, which showed a further increase (particularly in 4 out of 6 monitoring stations), already recorded since 2020 compared to 2019. It can be inferred that the quality of emissions containment of benzene, with a direct impact on air quality, has deteriorated.. The increase in benzene did not affect only the cokeria station but, to varying degrees, all the stations within the Taranto steel plant, including the cabin located outside the industrial area in the Tamburi neighborhood, known as Tamburi-Via Orsini* »[39].

Levels keep rising, and even if some are starting to lower, it must be taken into consideration that these anomalies have continued to persist for years, causing incredible harm to the population of Taranto and especially that of *rione* Tamburi. A fundamental aspect of air pollution in Taranto is the condition during the so-called "Wind Days"[40]. During those days, citizens barricade themselves in their

[38] S. LEOGRANDE, E. R. ALESSANDRINI, M. STAFOGGIA, A. MORABITO, A. NOCIONI, C. ANCONA, L. BISCEGLIA, F. MATALONI, R. GIUA, A. MINCUZZI, S. MINERBA, S. SPAGNOLO, T. PASTORE, A. TANZARELLA, G. ASSENNATO, F. FORASTIERE, *Industrial air pollution and mortality in the Taranto area, Southern Italy: A difference-in-differences approach*, Environment International,Volume 132, 2019.

[39] *Monitoraggio della qualità dell'aria*, rete Acciaierie d'Italia S.p.A., report year 2022, ARPA Puglia, Direzione Scientifica Centro Regionale Aria.

[40] The definition of "Wind Day" originates from a study on historical data related to the year 2011 of PM10 and B(a)p, or Benzo(a)pyrene ($C_{20}H_{12}$), recorded by the air quality monitoring station on Machiavelli Street in Taranto (*rione* Tamburi) and meteorological data recorded at the ARPA station

homes and ARPA Puglia is required to provide a 48-hour advance notice to the companies subject to the Integrated Environmental Authorization (AIA) within the Taranto and Statte area. According to the plan, these companies, during the designated "Wind Day", must implement a series of measures aimed at reducing pollutant emissions into the atmosphere[41]. Celeste Fortunato, a mother affected by a severe form of leukemia who passed away in July 2023, during a meeting with the Prefect of Taranto just a few months before her death, stated: « *We had learned to stock up on food to avoid going out during those days, except for work or medical visits, but our children still went to school and waited at the bus stop. That's how we learned to use masks, long before the pandemic. We mothers are not like mothers all over Italy because we constantly fear that our children will get sick. I've reached the point of thanking God that it happened to me and not to my child* »[42]. In September 2018, ARPA detected very high concentrations of a carcinogenic gas, radon[43], in schools in the *rione* Tamburi. This was confirmed by ARPA, particularly around thirty classrooms on the ground floor of the Vico-De Carolis complex, which also includes the Deledda school. On the "Wind Days", based on a regional law and subsequent decisions by the Municipality of Taranto, the windows of the schools in the Tamburi neighborhood had to remain closed to prevent toxic gases and contaminated dust from the mining parks and steel plant facilities from entering the classrooms and harming the health of those present[44]. The "red district"[45] of

in San Vito (Taranto). It had emerged that under certain wind conditions (from the northwest quadrant and speeds exceeding 7 m/s recorded at the San Vito station), there was an increase in the concentrations of the two pollutants in the Tamburi neighborhood alone, with an impact on the number of legal exceedances for PM10. This was due to the proximity of the site to the industrial area. A subsequent study, conducted using the SKYNET air quality forecasting model system at the DAP in Brindisi, now part of the *Centro Regionale Aria*, allowed for the identification and selection of meteorological prediction parameters directly related to critical air quality impact situations highlighted by historical data.

[41] Agenzia Regionale per la Prevenzione e la Protezione dell'Ambiente Puglia (ARPA), "*Piano contenente le prime misure di intervento per il risanamento della qualità dell'aria nel quartiere Tamburi (Ta) per gli inquinanti PM10 e benzo(a)pirene ai sensi del D.lgs.155/2010 art. 9 comma 1 e comma 2*".

[42] Redazione Peacelink, *La testimonianza di Celeste Fortunato: ha portato al Prefetto di Taranto la voce dei pazienti di oncoematologia*, 2023.

[43] Radon (Rn) is a natural, radioactive gas that is colorless and odorless. It is generated through the decay of radium, which is the process by which a radioactive substance spontaneously transforms into another substance, emitting radiation.

[44] E. ALLIEGRO, *Contaminazione ambientale ed elaborazione del rischio sanitario: i costi dell'incertezza. Una ricerca antropologica sul "gass-ra-doon" nel quartiere "Tamburi" (Taranto)*, Archivio antropologico mediterraneo [Online], Year XXI, n. 20, 2018.

[45] S. FERRARO, *Fabbriche del suicidio. Lavoro, patologie e "produzione" di morte a Taranto*, 2014.

Tamburi is subjected to daily social and environmental vulnerabilities. The constant exposure to high levels of air pollution severely impacts the quality of life, to the extent that communal spaces become impassable on windy days[46].

2.1.2 Soil contamination and Agriculture

Soil contamination in the Ilva Taranto area primarily stems from emissions originating from the steel plant. These emissions carry a mix of heavy metals and pollutants, settling on the ground and gradually leading to soil contamination. Furthermore, the presence of substantial stockpiles of raw materials and waste materials, including slag and coal, within the plant premises has further compounded the issue of soil contamination. It's essential to acknowledge the scale of the issue. A study focuses on the rural region of Statte, near Taranto and Ilva, distinguished by the presence of livestock farms and extensive grazing areas. Consequently, the presence of pollutants in this environment was considered to be capable to contaminate both agricultural and animal yields. In the Statte region, the presence of contamination[47] was detected in various environmental components, including soil, groundwater, forage, and animal-derived food products. Consequently, in 2008, the local health authority implemented measures such as establishing no-grazing zones and the culling of more than two thousand units of livestock[48]. The levels of dioxins and PCBs found in the animals and in the surrounding lands of the industrial area in Taranto were linked to the emissions of fumes and dust from the Ilva plant[49]. Additionally, ARPA conducted comprehensive analyses in the Statte area, encompassing evaluations of concentration of PCDDs and PCB in surface soil and groundwater[50].

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[46] S. GOMES, M. CROTTI, I. TONTI, *Taranto. Dalla città rossa alla città blu,* FROM SOCIAL HOUSING TO SOCIAL HABITAT. Prospettive e Innovazioni. Il caso di Taranto, 2023.

[47] PCCDDs and PCB: Polychlorinated dibenzodioxins, which contribute to toxic, persistent organic pollution in the environment, and Polychlorinated biphenyls (PCBs) are highly carcinogenic chemical compounds, formerly used in industrial and consumer products.

[48] Tribunale di Taranto, Ufficio del GIP, n. 5488/10 R. G.I.P, Decreto di sequestro preventivo, p. 72.

[49] A. BONELLI, *Good Morning Diossina. Taranto, un caso italiano ed europeo*, The Green Foundation, 2014.

[50] S. PASCUZZI, G. RUSSO, G. SCARAMASCIA MUGNOZZA, G. VERDIANI, G. LAGALLOTTA, *Contamination of the environmental matrices in agricultural areas produced by industrial discharges: the case study of the land of the city of Statte (Taranto, Southern Italy),* Procedia Environmental Sciences 19, 2013.

In 2019, another situation arose. This was the case of some ecological hills which were initially intended as a green barrier to protect the city from mineral dust emissions of the Ilva steel plant. These hills turned into dumping grounds for hazardous waste, leading to their seizure on the orders of Taranto's Public Prosecutor's Office. The ecological hills were found to contain toxic substances, such as dioxins, furans, PCBs, and metals, resulting from industrial processes. Despite the initial intention to mitigate pollution, the ecological hills contributed to environmental harm[51].

Another focal issue is that of the state of agriculture in the Ionic area. Confagricoltura[52] Taranto, acting as a civil party in the "*Ambiente Svenduto*" trial focused on Ilva and the alleged environmental disasters caused by the steel mill during the years of the Riva family's management, has requested 10 million euros in damages to compensate for the harm caused to the Provincial Farmers' Union of Taranto. The organization demanded 10 million euros to protect its members and emphasize the importance of the agri-food sector in the economic restructuring of the Taranto area, urging support from politics and the community[53]. Luca Lazzàro, president of Confagricoltura Taranto, stated: « *The agri-food sector is not secondary to industry. On the contrary, it is now a fundamental component of the economic revitalization of the Taranto region. Our future and that of the young people in the area lies in agriculture, fishing, and tourism. This is a principle that needs to be asserted and supported by both politics and the social fabric* »[54].

[51] D. PALMIOTTI, *Ilva, sequestrate le collinette ecologiche che inquinano Taranto*, in Il Sole 24 Ore, 5 February 2019.
[52] Confagricoltura is the first organization for the protection and representation of agricultural businesses. It works for the development of farming businesses, as well as the primary sector in general, for the good of the community, the economy, the environment and the territory. It favors access to business innovation, to the sustainability of agricultural practices, as well as to company competition on domestic and international markets.
[53] *Processo Ilva: Confagricoltura chiede danni per 10 milioni di euro*, Peacelink official website, 23 February 2021.
[54] *Ambiente Svenduto, Confagricoltura Taranto chiede danni per 10 milioni di euro*, Confagricoltura official website, 24 February 2021.

2.1.3 Toxic seawaters in front of Ilva

Emissions from the Ilva plant have also been said to have a direct and detrimental impact on the seawater quality in the Taranto area. The introduction of heavy metals, organic contaminants, and other pollutants into the sea resulted in a noticeable decline in water quality.

The contamination of seawaters in Taranto has understandably sparked concerns about potential health risks for the local population. Hazardous substances such as dioxins, heavy metals, and other toxic compounds can enter the food chain through seafood consumption, creating the possibility of health issues among residents.

The RITMARE Project[55], financed by the Italian Ministry of University and Research, conducted extensive examinations on marine and maritime issues, focusing on strategically significant areas in the Mediterranean. The project also examined the coastal area of Taranto, which hosts extensive industrial activities and has a substantial impact on the marine environment, notably the Mar Piccolo of Taranto. This intricate marine ecosystem has experienced significant environmental pollution from a range of industrial sources, including heavy metals, polycyclic aromatic hydrocarbons (PAHs), organic solvents, polychlorinated biphenyls (PCBs), and dioxin. A multidisciplinary team of researchers collaborated to develop a comprehensive conceptual model with the goal of identifying sources of human-induced stress, evaluating their effects, and suggesting potential solutions for environmental remediation[56].

In 2009, another research promoted by the National Research Council Institute for Marine and Coastal Environment of Taranto Stated that Ilva industrial

[55] RITMARE is a five-year Italian flagship project (2012-2016) funded by the Italian Ministry of University and Research (MIUR) and coordinated by the National Research Council (CNR). The project's objective is to enhance Italy's ability to address the challenges of globalization and competitiveness, climate change, marine environment degradation, maritime security, and the security and sustainability of energy supply.

[56] N. CARDELLICCHIO, S. COVELLI, T. CIBIC, *Integrated environmental characterization of the contaminated marine coastal area of Taranto, Ionian Sea (southern Italy)*, Springer-verlag Berlin Heidelberg, 2016.

wastewaters discharges are of 3.480.000 m^3/per day[57]. Another study found that the Mar Piccolo of Taranto is highly affected by pollution. Research has revealed the presence of various inorganic and organic pollutants in the sediment. Specifically, certain trace elements exceeded commonly used sediment quality standards. By using *in situ* experiments, the outcomes have verified that considerable daily metal flows are associated with the decomposition of organic substances. This raises concerns, particularly when considering the extensive fishing and mussel farming activities in the region[58].

In another study conducted in the area, mercury, cadmium, lead, copper, nickel, vanadium, and tin levels were assessed in marine sediments from the Taranto Gulf. These sediments serve as indicators of heavy metal pollution. The study revealed substantial contamination in the Mar Piccolo, particularly from mercury and lead, showcasing the environmental impact of industrialization on the region[59].

Another fundamental aspect is that of mussel contamination in the Taranto gulf. In 2022, the black mussel of Taranto was honored with the "Slow Food Presidium" recognition, granted by the Slow Food association. This recognition underscores its importance as a local culinary tradition and its role in advocating sustainable fishing and cultivation. It also raises awareness about preserving this species for the future and promotes its appreciation regionally and nationally, benefiting the communities involved in its production[60]. Mussels are employed as bioindicators for the surveillance of marine pollutants due to their ability to accumulate contaminants in their tissues, providing a reflection of environmental

[57] N. CARDELLICCHIO, L. LOPEZ, *Il monitoraggio di microinquinanti organici nei sedimenti dell'area costiera di Taranto,* Consiglio Nazionale delle Ricerche Istituto per l'Ambiente Marino Costiero di Taranto.

[58] A. EMILI, A. ACQUAVITA, S. COVELLI, L. SPADA, A. DI LEO, S. GIANDOMENICO, N. CARDELLICCHIO, *Mobility of heavy metals from polluted sediments of a semi-enclosed basin: in situ benthic chamber experiments in Taranto's Mar Piccolo (Ionian Sea, Southern Italy),* Environmental Science and Pollution Research, September 2015.

[59] N. CARDELLICCHIO, *Methodological Approach for Metal Pollution Evaluation in Sediments collected from the Taranto Gulf (Ionian Sea, Southern Italy)*, Toxicological & Environmental Chemistry, October 2008.

[60] *Un presidio Slow Food che è più di un presidio Slow Food: la cozza nera di Taranto*, Slow Food Association press release, 24 March 2022.

pollutant levels[61]. Mussels are at risk because they are filter-feeding organisms, and the areas from which they are collected are severely polluted. Levels of six heavy metals (namely Hg, Pb, Cd, Cr, Zn, and Sn) were assessed in mussels gathered during the period from June to September 1997 in the Gulf of Taranto[62].

A thorough chemical analysis conducted in 2020 has shown similar results, focusing again on the contamination of mussels in Taranto's Mar Piccolo. Dioxins and PCBs were found in higher concentrations in the 1st Inlet of Mar Piccolo, which is most affected due to its proximity to the industrial area. Mussel contamination levels exhibited seasonality, with the highest concentrations observed during the summer months. The research also highlighted a geographical correlation between pollutant levels and the resuspension of sediments near the coast. Addressing the issue requires a comprehensive approach, including sediment remediation, reduction of pollutant emissions, and ecosystem preservation. Long-term solutions are essential for safeguarding consumer health and the local production chain while restoring the marine environment[63].

2.2 Consequences on population

Ilva has also persistently raised concerns due to its detrimental effects on the health of the population. The industrial activities carried out by the steel mill have resulted in environmental pollution, contributing to a spectrum of health-related problems among residents staying close to the facility. Multiple studies, assessments, and epidemiological surveys have been conducted to comprehend and quantify these health challenges. In this context, a meticulous exploration of these health issues becomes imperative, encompassing both the documented consequences and the debates that unraveled on the findings from research endeavors. This balanced viewpoint is instrumental in fostering a comprehensive understanding of the health-

[61] E. D. GOLDBERG, *The mussel watch, a first step in global marine monitoring*, Mar Pollution Bulletin, 1975.
[62] M. M. STORELLI, A. STORELLI, G. O. MARCOTRIGIANO, *Heavy Metals in Mussels (Mytilus galloprovincialis) from the Ionian Sea*, Italy, Journal of Food Protection, vol. 63 no. 2, 2000.
[63] O. GIANNICCO, F. DESIANTE, F. BASILE, E. FRANCO, S. BALDACCI, G. FRAGNELLI, G. DILETTI, M. CONVERSANO, *Dioxins and PCBs contamination in mussels from Taranto (Ionian Sea, Southern Italy): a seven years spatio-temporal monitoring study*, Ann Ist Super Sanità vol. 56 no. 4 452-461, 2020.

related impediments confronted by the Taranto community. Moreover, an equally fundamental concern necessitates examination when scrutinizing the individual standpoint of Taranto's inhabitants, namely the predicaments faced by Ilva's workforce. These workers have contended with an array of intricate challenges and concerns that exert an influence on their overall well-being, economic sustenance, and the broader societal framework.

This indicates that the reported facts reveal significant conflicts, with the most striking one stemming from the interplay between health and employment. The pollution emanating from Ilva affects the individual and collective health of both the workers and the citizens of Taranto. However, it is worth noting that Ilva grants employment to many, representing a crucial asset of Taranto's economy[64].

2.2.1 Workers

The scenario at Ilva is emblematic of the overarching ethical dilemma concerning the equilibrium between fostering economic advancement and employment opportunities while upholding the fundamental right to a healthy and safe environment. Historically, the plant has constituted a pivotal source of employment within the region, offering jobs to a significant segment of the local population. This economic dimension has been a compelling concern for the continuance of the steel mill's operations, notwithstanding escalating apprehensions about its ecological and health-related ramifications.

The coking plant within Ilva presents a substantial carcinogenic risk to workers due to the dispersion of dust, polycyclic aromatic hydrocarbons (PAHs), benzene vapors, and the presence of asbestos. Additionally, this risk extends to the general population due to the proximity of coal distillation plants to residential areas and the inadequacy of emission control measures. The coking process involves the production of coke, a dry residue resulting from the distillation of a combination of fossil carbons, essential for the operation of blast furnaces[65]. These coking plants, functioning as ovens, often working in pairs and sharing common equipment,

[64] G. DE MONTE, *Il conflitto ambientale nell'agenda mediatica. Il caso Ilva*, H-ermes Journal of Communication, 2014.
[65] *Ambiente in genere. Vicenda Ilva di Taranto*, Lexambiente, 20 August 2012.

operate under exceedingly high temperatures (approximately 1,200°C) and continuous cycles. The steel mill comprises ten sets of these ovens, with some undergoing structural renovations called "refreshing" while others have not. Workers' safety representatives, due to poor maintenance, report numerous structural problems in various machines, chargers, unloaders, guiding machinery, and locomotives. These issues encompass non-hermetic door seals and a malfunctioning automation system, resulting in emissions into the environment. Considering these concerns, metalworkers' unions, specifically FIM, FIOM, and UILM, urgently request intervention to reinstate proper plant functionality and ensure the safety and health of the workforce[66]. Deficiencies pertaining to safety and the protection of workers have come to the forefront. Of particular concern is the fact that labor within the coke oven batteries leads to the emission of pollutants, which include fossil dust, polycyclic aromatic hydrocarbons, and benzene, thereby posing risks to human health. It is explicitly affirmed that Ilva's management possessed knowledge of these structural shortcomings and the associated hazards yet refrained from implementing the requisite safety measures for their workforce[67].

The case of Alessandro Morricella and of the *Afo2* (*Altoforno 2*) must be discussed. Alessandro Morricella was a 35-year-old worker at Ilva who, in June of 2015, suffered severe burns on 90% of his body surface. The incident took place in one of Ilva's departments that had been the subject of legal controversies and judicial seizures[68]. Alessandro Morricella was one of five workers who had lost their lives in workplace accidents at Ilva since the summer of 2012, when the factory was reopened through the first *Decreto salva-Ilva* despite judicial seizures. His death raised concerns about workplace safety, the conditions within Ilva, and corporate responsibilities. His death represented an emblematic case of the challenges and tragedies associated with working in complex industrial environments like that of Ilva, within a context of conflict involving the government, the judiciary, and the company[69]. This incident could be considered the triggering event for all future controversies related to Ilva that persist to this

[66] *Ex Ilva: sindacati 'emissioni nocive in reparto cokeria'*, Regione Puglia, Ansa, 30th August 2023.
[67] *Ambiente in genere. Vicenda Ilva di Taranto*, op. cit.
[68] Tribunale di Taranto, Decreto di sequestro preventivo n. 5488/10 R. G.I.P., op. cit.
[69] V. PETRINI, *Il cielo oltre le polveri: storie, tragedie e menzogne sull'Ilva*, Solferino, 2022.

day, in 2024, when governance issues are being discussed between government and Unions.[70] The pivotal event, leading to Mr. Morricella's death, has been viewed as a turning point prompting discussions on future protections for both workers and citizens. The argument is made that economic considerations or the company's investments cannot justify the omission of worker safety and protection. Furthermore, it is highlighted that the well-being of workers holds constitutional priority over corporate profitability[71]. Analyzing the position of workers is crucial to better understand the general position of the population affected by the Ilva case in all its intricacy.

2.2.2 Effects on the population

A plethora of comprehensive studies and rigorous investigations conducted over the years have consistently underscored the profound and adverse health effects on the local population directly attributed to the operational activities of Ilva. Of particular concern are the conspicuous high levels of airborne pollutants, most notably heavy metals and carcinogenic agents, which have unequivocally and systematically been correlated with a spectrum of debilitating health afflictions experienced by the community in the immediate proximity of the plant.

A study conducted in 2012 has revealed excessive mortality and a higher incidence of tumor-related diseases in Taranto and the surrounding areas. The objective of the study was to provide an overview of mortality and hospitalization among residents in Taranto, Massafra, and Statte. A cohort of individuals residing in these areas was established, and their socioeconomic status and neighborhood were recorded. The study found significant disparities in mortality and morbidity based on socioeconomic status, even after adjusting for this factor.

Neighborhoods closest to industrial zones, such as Tamburi, Paolo VI, and Statte, exhibited higher mortality and hospitalization rates, indicating a strong relationship between socioeconomic status and health outcomes in the Taranto area.

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[70] *Ex Ilva, si decide il futuro delle acciaierie: vertice governo-azienda, ma c'è il giallo della convocazione dei sindacati*, La Stampa, 8 January 2024 - *Ex Ilva, alle 19 l'incontro tra Governo e sindacati. Urso: "Posizione di Mittal inaccettabile"*, Rai News, 11 January 2024.
[71] *Ambiente in genere. Vicenda Ilva di Taranto*, op. cit.

This underscores the need for further investigation and action to address the health challenges faced by these communities[72]. The link was found in many other detailed studies conducted on the effects of Ilva's activities on the population of the Ionic province, during the years. Risk of carcinogenic contamination in coke production sites of Taranto's steel mill[73], toxic contaminants[74] and polycyclic aromatic hydrocarbon emissions[75] from the same coke-oven plants.

Another fundamental study is the SENTIERI project[76], which stands for: "*Studio Epidemiologico Nazionale dei Territori e Insediamenti Esposti a Rischio da Inquinamento*". SENTIERI's findings have highlighted a higher incidence of various health issues, including respiratory diseases, cardiovascular problems, and cancers among residents in the vicinity of the Ilva plant.

Covering the period from 1995 to 2009, SENTIERI revealed certain mortality patterns in Taranto:

1. The number of cancer-related deaths is 10-15% higher than the regional average for both genders.
2. The number of lung cancer-related deaths is 30% higher than the regional average for both genders.
3. The number of mesothelioma-related deaths is higher than the regional average for both genders.

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[72] F. MATALONI, M. STAFOGGIA, E. ALESSANDRINI, M. TRIASSI, A. BIGGERI, F. FORASTIERE, *A cohort study on mortality and morbidity in the area of Taranto, Southern Italy*, Epidemiol year 36, 2012.

[73] R. GIUA, M. SPARTERA, G. VIVIANO, G. ZIEMACKI, G. CARBOTTI, *Cancer risk for coke-oven workers in the Taranto steel plant*, Epidemiol, 2005.

[74] L. LIBERTI, M. NOTARNICOLA, R. PRIMERANO, G. VITUCCI, *Air pollution from a large steelfactory: toxiccontaminants from coke-ovenplants*, Brebbia CA (ed). Air Pollution XII Southampton (GB), WIT Press, 2004.

[75] L. LIBERTI, M. NOTARNICOLA, R. PRIMERANO, P. ZANNETTI *Air pollution from a large steel factory: polycyclic aromatic hydrocarbon emissions from coke-oven batteries*, J Air Waste Manag Assoc, 2006.

[76] SENTIERI is Italy's system for continuous epidemiological monitoring of communities residing near significant pollution sites. It was established to respond to local authorities' concerns regarding the health impact of environmental contamination on these communities. SENTIERI emphasizes risk management by providing evidence-based insights into mortality, cancer rates, hospital admissions, congenital anomalies and so on. The system evaluates causal links between diseases and exposures, considering *a priori* evidence, to guide public health interventions.

4. The number of deaths from severe respiratory diseases is 50% higher in men and 40% higher in women compared to the regional average for both genders.

5. The number of deaths from gastrointestinal diseases is 15% higher in men and 40% higher in women compared to the regional average for both genders.

In an update of SENTIERI, it was highlighted that between 2001 and 2008, lung cancer mortality increased by 5%, while the Italian average decreased by 10%[77]. Other findings showed that over a period of 14 years, from 2002 to 2015, 600 malformed children were born in Taranto, with a prevalence higher than expected based on regional calculations. SENTIERI specifies that congenital malformations of the nervous system and limbs exceeded the expected number[78]. From the data of SENTIERI and other detailed studies on the matter, it appears that Ilva represents one of the main reasons why the inhabitants of the Ionic province are being more and more afflicted by various health issues, with a general increase of cancer rates[79]. The SENTIERI results, together with many other studies, have been used not only in the *Ambiente Svenduto* trial as proof for the steel mill environmental abuses, but also in the *Cordella and others v. Italy*[80] case.

Another study[81] found the presence of PCDDs and PCDFs (polychlorinated dibenzo-p-dioxins and dibenzofurans) in human breast milk samples collected by women in Taranto. The study also highlights the potential risks of dioxin exposure through breastfeeding and the importance of monitoring breast milk in industrialized areas. The text concludes by emphasizing the need to eliminate environmental sources of these hazardous substances to protect children's health.

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[77] R. PIRATSU, A. ZONA, C. ANCONA, C. BRUNO, V. FANO, L. FAZZO, I. IAVARONE, F. MINICHILLI, F. MITIS, R. PASETTO, P. COMBA, *Mortality results in the SENTIERI project*, Epidemiol Prev, 2011.

[78] *Ex Ilva: studio Sentieri, 600 bimbi malformati a Taranto*, Salute&Benessere, Ansa, 30th July 2022.

[79] R. CAZZOLLA GATTI, A. VELICHEVSKAYA, *Taranto's long shadow? Cancer mortality shows alarming peaks for specific types in the most polluted city of Italy but also in surrounding towns,* Sustainability, December 2020.

[80] See infra Chapter 2, 3.4.2.

[81] G. BIANCO, R. ZIANNI, G. ANZILLOTTA, A. PALMA, V. VITACCO, L. SCRANO, T. CATALDI, *Dibenzo-p-dioxins and dibenzofurans in human breast milk collected in the area of Taranto (Southern Italy): first case study,* 24th January 2013.

These findings are crucial to direct this analysis to the next step: the damages that will be suffered by future generations, a point which is fundamental for this discussion.

2.2.3 Damages on Future Generations

Taranto's future generations are confronted with the prospect of elevated incidences of illnesses, respiratory problems, and other health adversities attributable to protracted exposure to pollution. Notably, this pollution has been correlated with an increased prevalence of congenital anomalies among newborns, thereby putting at risk the health and welfare of the population of tomorrow. Furthermore, it is imperative to recognize that the environmental impact extends beyond atmospheric contamination, encompassing the substantial dangers associated with soil and water pollution. Contaminated soil has the potential to cause repercussions on agriculture and food safety, thereby endangering the livelihoods of future generations. Environmental and health concerns are not confined to the spheres of public health alone. They also reverberate within the economic domain, where regions grappling with pollution are susceptible to the devaluation of real estate assets and lowered economic prospects. In a broader ethical context, this issue impels contemplation of the principles of intergenerational justice, where future generations inherit the consequences of actions undertaken by their predecessors. Consequently, the welfare of future generations stands on the engagement of governmental and corporate entities to mitigate pollution and its effects. Significantly, legal interventions concerning environmental protection in cases like Ilva will have lasting implications for future generations. The international and national acknowledgment of environmental rights, a crucial aspect of this issue, will be further explored in the subsequent sections. All the themes which were previously discussed are inexorably intertwined with the trajectory of Taranto's future, and the respect of these concerns is imperative for safeguarding the prosperity and well-being of forthcoming generations.

Studies have explained that young people are growing up in uncertain and precarious times and are therefore increasingly concerned about the social, cultural,

and environmental effects of environmental problems on their everyday lives, including waste production, loss of biodiversity, and pollution.

A recent study, conducted by geographers and anthropologists on the concept of "future" in areas grappling with environmental crisis, emphasizes on the importance of considering age and generational differences in understanding people's experiences with pollution, particularly how young people approach the future in contaminated places, and by using the stories of young *Tarantini*, aged from 24 to 35 years old, addresses environmental pollution's negative consequences, aiming to incorporate their diverse voices into the discussions, highlighting narratives of social change. It underscores how young people are key to promote hope for alternative futures, towards innovation and evolution. It also introduces the concept of "breathing new futures" with a clear parallelism between the need for a brighter, greener future and the objective contamination of air suffered by the population of yesterday, today and tomorrow. This concept emphasizes the potential for positive change and sustainable futures through collective actions, focusing on the mundane actions of young people reshaping their communities, suggesting that their efforts challenge victimization narratives. « *The inhalation of the young people prompts an exhalation that feels different from older generations' breathing. The young people's exhalation incites feelings of hope and pushes for activities, for realizing new futures in Taranto that are detached from the past*»[82]. To fortify the standing of future generations, a comprehensive set of measures is essential. These actions should encompass legal remedies, such as the acknowledgment of the right to a healthy environment at both national and international levels, but this point will be further explored in the third chapter. Additionally, other solutions must be taken into consideration: for example, adopting environmentally friendly technologies in the steel making process, and leveraging funding from various European Union initiatives, such as the European Green Deal.

Having stated the importance of future generations' rights, this discussion must transition to an analysis of the judicial path of the Ilva case.

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[82] M. JOKELA-PANSINI, E. MILITZ, *Breathing new futures in polluted environments (Taranto, Italy*), Royal Geographical Society with IBG, February 2022.

3. Italian judgements and European investigations after Italy failed to conform to Environmental Protection Standards

The Ilva case involves a mix of legal and environmental issues that have caused significant concern both in Italy and the European Union. This intricate story revolves around environmental problems, legal disputes, and European investigations. It all fits into a larger discussion about how a country should manage its environment and industry while following the European Union's strict rules. As people became more aware of environmental issues, legal battles over Ilva grew. Italian authorities had to find a balance between protecting the environment and supporting the steel industry, which is crucial for the local economy. This struggle played out in Italian courts, which had the challenging task of making sure the environment was protected while considering the well-being of the community and the national economy, all while following the environmental standards set by the European Union[83]. In response to the persistent inability to adhere to European environmental benchmarks, a series of European investigations were set in motion, designed to gauge the extent of environmental violations and their far-reaching implications for public health and the ecosystem that surrounds the plant. This intricate web of national and European interests and obligations has propelled the Ilva case into the heart of discussions about the equilibrium between national autonomy and the enforcement of EU directives. It incites contemplation regarding the authority and efficacy of European Union institutions in ensuring Member States' adherence to environmental standards, and the role of the European legal framework in confronting these pressing challenges[84]. In the following pages the focus will shift to the intricate web of Italian legal judgments and proceedings related to the Ilva steel mill, tracing the evolution of the case through its many legal iterations. An examination will also be conducted on the European investigations and their findings, shedding light on the broader implications for Italy's relationship with the EU and the pursuit of environmental protection and sustainable industrial practices.

[83] See infra Chapter 1, 3.3.1.
[84] L. CAMPETTI, *Ilva Connection: inchiesta sulla ragnatela di corruzioni, omissioni, colpevoli negligenze, sui Riva e le istituzioni,* op. cit.

3.1 The Italian *Iter*: from 1990 to 2012

The legal trajectory of Ilva can be broadly categorized into two phases: the initial period spanning from 1990 to 2012, and an ongoing phase up to the present day.

In 1990, the Italian Council of Ministers designated Taranto as a « *high-risk area for environmental crisis* »[85]. Over the years, Ilva's pollution emissions have been subject to various legal actions before the judicial authorities. These actions encompass charges of pollution, deliberate and negligent environmental disasters, contamination of food substances, intentional omission of safety precautions at the workplace, aggravated damage to public property, discharge and release of hazardous substances, and atmospheric pollution[86]. This classification was reaffirmed in 1997, confirming the high risk for the Ionic area[87].

In April 1998, a Presidential Decree established an environmental recovery plan for the Taranto region[88]. This decree explicitly identified Ilva as the most significant potential source of environmental impact in the area. The development of the recovery plan progressed through *ad hoc* phases[89].

In 2005, the management of Ilva faced legal repercussions when the *Corte di Cassazione* (Italian Supreme Court) ruled that they had committed the crime of "dangerous emissions of substances" [90]. This judgment[91] was based on their release of significant quantities of mineral dust from the plant's deposits into the surrounding areas.[92] Within the organization of Ilva, it was necessary to identify those responsible. These were, first and foremost, the defendants Emilio Riva and

[85] Decision of the *Consiglio dei Ministri* on the 30th of November 1990.
[86] FIDH, PEACELINK, UFDU, HRIC, *Il disastro ambientale dell'Ilva di Taranto e la violazione dei Diritti Umani*, 2018.
[87] Decision of the *Consiglio dei Ministri* on the 11th of July 1997.
[88] Decree of the *Presidente della Repubblica* on the 23rd of April 1998.
[89] *Piano di Risanamento Ambientale dell'area ad elevato rischio di crisi ambientale di Taranto, Supplemento ordinario alla Gazzetta Ufficiale*, general series n. 280, 30th of November 1998.
[90] Article 674 of the *Codice Penale* (Criminal Code) « *Anyone who, without due precautions, places or suspends objects which, when falling in a public place or in a private place of common or others' use, may offend, dirty, or inconvenience people, shall be subject to an administrative pecuniary penalty ranging from 103 to 619 euros* ».
[91] Cass. Pen., Third Section, 28th of September 2005, n. 38936.
[92] *The Ilva industrial site: In-Depth Analysis for the ENVI Committee*, Directorate-General for Internal Policies, Environment, Public Health and Food Safety, 2015.

Luigi Capogrosso, as they held the top positions, respectively, in the administrative and technical structure of the company.

Then, In May 2005, a trial was commenced by the GUP of Taranto (Judge for the Preliminary Hearing) against the Rivas. The various charges were:

1. failure to implement precautionary measures against workplace accidents.
2. non-compliance with a public authority's order (specifically, an injunction by the Mayor of Taranto to halt certain activities at the coke plant).
3. the dangerous emission of substances (specifically, the failure to prevent mineral dust and gas emissions).
4. damage to public goods related to emissions and their impact on the soil.

In this trial, the Provincial UIL trade union and *Legambiente Puglia*, an environmental NGO[93], participated as civil parties[94].

In 2012, a transition regarding the positions of governmental and judiciary intervention took place[95], and a new chapter was about to begin, one where regulatory, administrative, and jurisprudential actions concerning the operations of Ilva occurred at such an incessant pace that even the most vigilant observers found it challenging to have a comprehensive, exhaustive, and up-to-date understanding[96].

3.2 The Italian *Iter*: the seizures of 2012, "*Ambiente Svenduto*" and the Italian Constitutional Court's judgements n. 85/2013 and 58/2018 and the fair balance between Constitutional rights

In 2012, the Italian government became increasingly involved in addressing environmental concerns related to Ilva's operations in Taranto. On the 20th of October of the same year, a thorough review of Ilva's AIA[97] was completed (greatly

[93] Non-governmental organization: a non-profit organization without any governmental influence, typically moved by social or political missions.
[94] *The Ilva industrial site: In-Depth Analysis for the ENVI Committee,* op. cit.
[95] S. LAFORGIA, *Se Taranto è l'Italia: il caso Ilva*, op. cit.
[96] C. CONTESSA, *Il decreto Ilva*, libro dell'anno del Diritto, Treccani, 2014.
[97] AIA stands for "Autorizzazione Integrata Ambientale," which translates to Integrated Environmental Authorization. AIA is a regulatory framework that governs industrial activities with the aim of protecting the environment and public health. It is a comprehensive permit system that

influenced by the European BAT conclusions[98]). The revised AIA imposed more stringent conditions and restrictions compared to the previous year. ARPA provided important recommendations, like specific measures on the so-called "Wind Days"[99]. Meanwhile, regional legislation introduced the *Vds*[100], designed to assess the effectiveness of prescribed measures in relation to their impact on public health[101].

In the same year, the Prosecutor's Office in Taranto ordered the arrest of some members of the management of the group and political representatives, accusing them of deliberately causing a high level of pollution that compromised the environment and the health of Taranto's residents[102]. This was the *incipit* for a still ongoing process called "*Ambiente Svenduto*". In 2013, the prosecutor's office concluded its investigations: among the 47 individuals involved, Nicola Vendola, former president of the Apulia Region, was also among the accused. In July 2015, the trial began before the *Corte d'Assise* of Taranto. This was initially annulled, but a second trial began in 2016 and in 2021 the Court delivered its verdict in first

integrates multiple environmental permits into a single authorization, making it more efficient and effective for both regulatory authorities and industries. The AIA covers a wide range of environmental aspects. Its primary objective is to ensure that industrial activities comply with environmental regulations and standards while promoting the use of Best Available Techniques (BAT) to minimize environmental impact. Industries are required to submit detailed applications that outline their environmental management plans and provide information on emissions, discharges, and waste management. These applications are rigorously reviewed, and permits are issued with specific conditions and limits to ensure compliance with environmental laws. The AIA system is a crucial tool for regulating and monitoring industrial activities, with a strong emphasis on environmental protection and sustainability.

[98] BAT (Best Available Techniques) conclusions are a key concept in European environmental regulations. They are part of the Industrial Emissions Directive or IED Directive (2010/75/EU) in the European Union and provide guidance on the best available techniques and technologies for reducing emissions and minimizing environmental impact in various industrial sectors.

[99] *Piano contenete le prime misure di intervento per il risanamento della qualità dell'aria nel quartiere Tamburi per gli inquinanti PM10 e B(a)p"*, op. cit.

[100] "VdS" stands for "Valutazione del Danno Sanitario". The VdS is a legal and regulatory concept used to evaluate the impact of industrial activities on public health, specifically in relation to the potential harm caused by these activities. The VdS is typically applied in the context of environmental regulations and concerns, especially in areas where industrial operations may have an adverse effect on the health of nearby communities. It is used to assess the consequences of pollution, emissions, and other environmental factors on the well-being of residents in the vicinity of industrial facilities. The VdS process involves a comprehensive evaluation of various health-related factors, including the potential risks associated with exposure to pollutants, contaminants, or hazardous materials. This assessment aims to determine the effectiveness of measures and safeguards put in place by industrial operators to protect public health.

[101] Apulian Regional Law n. 21/ 24th July 2012.

[102] *The Ilva industrial site: In-Depth Analysis for the ENVI Committee,* op. cit.

degree which resulted in significant sentences[103]. This was a gargantuan process, with 1481 civil plaintiffs, 33 charges, 332 hearings, 3700 pages of legal justifications for the ruling, sentences up to 22 years of imprisonment and confiscations totaling 2.1 billion euros.

Before the judges, leaders of the Italian Industry sector and the political power of the Apulia Region paraded, all accused in various ways of poisoning, internal disaster, criminal association, manslaughter, crimes against the Public Administration, and much more. A lengthy, complex trial, not without moments of tension, as evidenced by the 200 rulings, including recusals and requests for case referral, clashes between defense and the judiciary, and constitutional issues[104]. In 2023, the convicted individuals started filing their appeals[105]. Within the extensive 3700-page rationale presented by the Taranto *Corte d'Assise*, a notable statement asserts that « *the management of the Ilva plant in Taranto, overseen by the present defendants, has been calamitous, posing a severe threat to public safety and health* »[106].

Furthermore, on the 26th of July 2012, the Judge for Preliminary Investigations (*Gip*) of Taranto ordered the seizure of Ilva's hot plants with no authorization for use[107]. The seizure concerned the entire hot area of the steel plant[108]. This ruling unveiled significant data concerning the profound repercussions of Ilva's operations on both human rights and the environment. Expert reports in the realms of chemistry[109] and epidemiology[110] were instrumental in revealing the extent of this impact. Consequently, the legal directive calculated the expenditure required for the environmental remediation of the region at a staggering 8 billion euros. Despite the seizure order that had the potential to halt the

[103] Tribunal of Taranto, first *Corte d'Assise*, 31st May 2021 (deposited on the 28th November 2022), n.1.
[104] G. RUGGIERO, *Il processo Ambiente svenduto. Il tentativo, tardivo, di risolvere il conflitto sociale sul Mar Piccolo di Taranto*, Diritto penale e processo, September 2023.
[105] *Ex Ilva, dopo condanne pronti gli appelli di Riva e Vendola*, Ansa.it, January 2023.
[106] *Ex Ilva, riparte il processo "Ambiente svenduto"*, RaiNews, 14 December 2023.
[107] S. BARCA, E. LEONARDI, *Class, inequality and community development*, *working class communities and ecology: reframing environmental justice around the Ilva steel plant in Taranto (Apulia, Italy*), Policy Press, University of Bristol, 2016.
[108] Court of Taranto, Examining Judge Office, Preventive Seizure Decree, 22 May 2013, following appeal R.G.N.R. 938/2010.
[109] M. SANNA, R. MONEGAZZI, N. SANTILLI, R. FELICI, *Conclusioni Perizia Chimica Ilva,* 2012.
[110] S.E.N.T.I.E.R.I., *Assessment of epidemiological evidence*, 2010.

plant's operations, and under the influence of labor unions and segments of the population which protested fiercely against the closing of certain portions of the plant[111], causing sudden unemployment, the Italian government opted to allow production to resume. This was achieved through the implementation of the so-called "*Decreti Salva-Ilva*", a series of extraordinary legislative decrees enacted by the Italian government to address the situation of Ilva. Their primary objectives were to ensure production continuity and tackle the environmental and economic challenges associated with the company. These decrees have been a subject of debate and controversy in Italy, as they raised fundamental questions concerning the balance between employment significance and the safeguarding of environmental and public health interests[112].

In this context, our attention must focus on the "*Decreto Salva-Ilva*" of December 2012[113], by which the government exerted influence on the judicial measures that had been implemented, effectively suspending the execution of the seizures. This raised doubts regarding its constitutionality the reasonableness of the balance between constitutional principles achieved by the legislator in this instance, and the impact of the same act on an ongoing criminal proceeding and the effects on a judicial seizure order[114]. The decree also included a specific provision that directly pertained to Ilva, as outlined in Article 3[115], where it is expressly stated that the regulation was to be applied to the Ilva company, which, was granted direct authorization to sustain its production activities and engage in the trade of its production. Consequently, this legal intervention sparked criticisms and, even earlier, objections of illegitimacy. These objections revolved around the notion that the regulatory measures were custom-tailored to address the specific requirements

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[111] *Taranto, chiusura Ilva: la protesta operaia*, La Stampa, 27 November 2012.
[112] A. GIURICKOVIC DATO, *Il bilanciamento tra principi costituzionali e la nuova dialettica tra interessi alla luce della riforma Madia. Riflessioni in margine al 'caso Ilva'*, Federalismi, journal of italian public law, comparato ed europeo, 19 June 2019.
[113] Decreto-legge 3 dicembre 2012, n. 207**,** *Disposizioni urgenti a tutela della salute, dell'ambiente e dei livelli di occupazione, in caso di crisi di stabilimenti industriali di interesse strategico nazionale*, *Decreto-Legge* converted with amendments by Law No. 231 of December 24, 2012 (published in the *Gazzetta Ufficiale* on 03/01/2013, No. 2).
[114] A. MORELLI, *Il decreto Ilva: un drammatico bilanciamento tra principi costituzionali*, Diritto Penale Contemporaneo 1/2013, 12 December 2012.
[115] Art. 3 - *Efficacia dell'autorizzazione integrata ambientale rilasciata in data 26 ottobre 2012 alla società Ilva S.p.A. Controlli e garanzie.*

of Ilva[116], thus contravening the principles of equality and non-discrimination. Following the conversion of the decree into law, the Judge for Preliminary Investigations of Taranto brought forth multiple constitutional questions, stating that the legislator failed to effectively strike a balance between the constitutionally guaranteed interests at play, choosing to sacrifice the "right to health" and the "right to a healthy environment" in favor of economic interests[117]; an emergency measure in response of the economic crisis. The judge underscored the "prevalence" of the rights to health and to a healthy environment. As a result, it is Stated that these rights should not be subject to a balancing act with the rights to work and to productive activity. The latter can only be upheld to the extent that they do not undermine the former[118].

However, the Italian Constitutional Court in ruling n. 85 rendered on the 9th of April 2013 rejected the claim that the legislator's balance between constitutional principles amounted to an unlawful compression of those values. The Court argued that the « *rationale of the challenged regulation consists of achieving a reasonable balance between fundamental rights protected by the Constitution, particularly the right to health[119], which implies the right to a healthy environment, and the right to work[120]*». The Court also Stated that « *all fundamental rights protected by the Constitution are mutually integrated, and none can have absolute precedence over the others. This approach ensures a systematic and non-fragmented protection, avoiding potential conflicts between rights* ». The Court, therefore, rejected the static hierarchical order of values suggested in the referral order and maintained that *« there is a dynamic interaction between these rights* »[121]. In this judgment, the issue of constitutional balance indeed formed the heart of the judge's reasoning. However, at a practical level, right after this contemplation, the Constitutional Court engaged in a comparison that raised more than a few doubts[122]. Rather than

[116] R. BIN, *L'Ilva e il soldato Baldini*, Diritto Penale Contemporaneo, 2013.
[117] GIP Taranto, *ordinanza r.o.* n.19 on the 22nd of January 2013.
[118] A. GIURICKOVIC DATO, *Il bilanciamento tra principi costituzionali e la nuova dialettica tra interessi alla luce della riforma Madia. Riflessioni in margine al 'caso Ilva'*, op cit.
[119] Art. 32 Cost.
[120] Art. 4 Cost.
[121] Corte Costituzionale, ruling n. 85, 9 April 2013.
[122] A. CIERVO, *Esercizi di neo-liberismo: in margine alla sentenza della Corte Costituzionale sul caso Ilva,* Questione giustizia, n. 2, 2014.

charting the way out of the labyrinth, the thread of balance seemed to have taken a different path[123].

The sequence of "*Decreti Salva-Ilva*" did not stop and on the 4th of July 2015 a new decree[124] was enacted: its objective was, once again, that of ensuring the continuation of Ilva's activities. The referring judge raised a plurality of constitutional legitimacy questions[125], believing that the challenged provision violated a series of parameters[126]. On this occasion, the emphasis was placed on the legislator's obligation to meticulously ascertain an intricate equilibrium between all the constitutional values under consideration[127]. This balance should be established based on the principles of proportionality and reasonableness, and it should refrain from permitting one fundamental right to overshadow the rest[128]. The Court contended that the government, in its endeavor to favor industrial production, neglected the safeguarding of fundamental rights. Expanding on Article 3 of Legislative Decree No. 92/2015, the Court added: « *the legislator, however, did not respect the need to balance all relevant constitutional interests reasonably and proportionally. This failure led to a constitutional illegitimacy because the legislator did not take into adequate consideration the requirements for safeguarding the health, safety, and well-being of workers in situations exposing them to life-threatening risks* »[129]. Indeed, Article 3 of Legislative Decree No. 92/2015 mandated the continuation of business activities exclusively upon the unilateral formulation of a plan by the company, without the involvement of public authorities. This provision granted a timeframe, even if temporary, of thirty days for the formulation of the plan without necessitating immediate measures to mitigate the hazardous conditions impacting the environment and the well-being of

[123] E. VERDOLINI, *Il caso Ilva Taranto e il fil rouge degli interessi costituzionali: commento alla sentenza 182 del 2017 della Corte Costituzionale*, 2018.
[124] Decreto-legge n. 92, 4 July 2015, *Misure urgenti in materia di rifiuti e di autorizzazione integrata ambientale, nonché per l'esercizio dell'attività d'impresa di stabilimenti industriali di interesse strategico nazionale.*
[125] Trib. Taranto, Uff. Gip, Ord., 14th of July 2015.
[126] M. C. PIETRAVALLE, *Corte costituzionale - sent. 58/2018: Ilva, prosecuzione dell'attività di impresa e tutela della salute*, Biodiritto, February 2018.
[127] A. CAPITTA, *Decreto "salva Ilva" – Corte cost. n. 58 del 2018*, Archivio Penale, 2018.
[128] A. GIURICKOVIC DATO, *Il bilanciamento tra principi costituzionali e la nuova dialettica tra interessi alla luce della riforma Madia. Riflessioni in margine al 'caso Ilva'*, op cit.
[129] Corte Costituzionale, ruling n. 58, 7 February 2018.

both workers and the public[130]. Given these distinct characteristics of the regulation, the Court Stated that: « *unlike what happened in 2012, the legislator has ended up excessively prioritizing the interest in continuing the production activity, completely neglecting the inviolable constitutional rights associated with the protection of health and life itself (Articles 2 and 32 of the Constitution), which is inherently connected to the right to work in a safe and non-dangerous environment (Articles 4 and 35 of the Constitution)* »[131]. According to this fundamental ruling, the balancing between principles and subjective situations, according to proportionality and reasonableness, is the sole suitable instrument in order to avoid « *tyranny* » or « *the unlimited expansion of a right* »[132].

3.3 The European Commission and Italy: lack of conformity and illicit State support

The EU has consistently stressed the significance of establishing a common language and standardized approaches for environmental protection across its 27 member States[133]. Standardization serves as a fundamental tool within the EU's regulatory framework, allowing it to set forth essential requirements for environmental safeguarding. Simultaneously, standards offer specific details that facilitate industries and stakeholders in meeting these requirements. Nevertheless, ensuring the implementation of high-level environmental protection within these standards can present challenges. The core environmental objectives of the Union, which revolve around the transformation of the EU economy into a more environmentally sustainable system, the preservation of natural ecosystems, and the assurance of public health and quality life throughout Europe, face significant impediments when EU policies are not adhered to by Member States[134]. Therefore,

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[130] G. CATALISANO, *Il caso Ilva: commento alla sentenza n. 58/2018 della Corte Costituzionale,* Ambiente Diritto, 2018.
[131] Corte Costituzionale, ruling n. 58, 7 February 2018, op. cit.
[132] G. PERLINGIERI, *Reasonableness and balancing in recent interpretation by the Italian Constitutional Court*, The Italian Law Journal, vol. 04, no. 2, 2018.
[133] M. JACHTENFUCHS, M. STRUEBEL, *Environmental policy in Europe. Assessment, challenges and perspectives,* Baden-Baden: Nomos-Verl.-Ges., 1992.
[134] E. BONDAROUK, E. MASTENBROEK, *Reconsidering EU Compliance: Implementation performance in the field of environmental policy*, Environmental Policy and Governance, vol. 28, 2017.

active engagement of the public sector from MSs in standardization processes, coupled with the inclusion of environmental expertise within relevant committees, holds significant importance. Standards confer concrete advantages for environmental regulation and legislation. They undergo regular updates to accommodate new technological advancements, ensuring that governmental regulations remain in alignment with the latest progress. By actively participating in standardization endeavors, the public sector can remain well-informed about these developments. The European Commission carries the responsibility of overseeing compliance with environmental regulations and standards.

In response to a substantial number of petitions and complaints from citizens of the Ionic province and NGOs, the Commission, following a thorough monitoring process, directed its attention towards Italy for the Taranto steel mill, raising questions about adherence to EU requirements[135]. The Ilva case prompted numerous interactions between Italy and the European Commission. The European body, functioning as the guardian of EU environmental law, conducted investigations into potential breaches of EU environmental legislation, particularly in the context of suspicions that Italy was inadequately enforcing the standards. A more in-depth exploration of the complex relationship between the Commission and Italy regarding the Ilva matter is certainly warranted.

3.3.1 Italy fails to conform to the Integrated Pollution Prevention and Control Directives (IPPC), to the Industrial Emissions Directive (IED) and to the Environmental Liability Directive establishing the "Polluter Pays" principle

The EU has made significant advancements in environmental protection, with a serious commitment to establishing a harmonized framework that effectively safeguards the natural environment, the well-being of its inhabitants, and the overall quality of life within its Member States. The environmental policies formulated at the EU level are intentionally designed to complement national systems, ensuring that every MS upholds identical and rigorous standards[136]. The objective is to strike

[135] European Commission Press Release, Brussels, 26 September 2013.
[136] European Committee for Standardization (CEN) and European Committee for Electrotechnical Standardization (CENELEC), *Standards for the Environment*, Andreea Gulacsi, 2020.

a just equilibrium between the imperatives of economic development and environmental sustainability, a fundamental principle firmly embedded within EU directives. Nevertheless, the situation that unfolded in Taranto posed a visible disruption to this balance. The operations of Ilva inflicted substantial environmental pollution and harm, resulting in a cascade of complaints raised by residents, environmental groups, and civil society at large.

The first step to this discussion is the initial dispute between Italy and the European Commission regarding the IPPC Directives[137]. These Directives represented a significant effort by the EU to proactively address pollution stemming from diverse industrial activities. They established a comprehensive framework aimed at achieving a high level of environmental and public health protection through a comprehensive approach to pollution prevention and control. The Directives were applicable to a wide array of industrial sectors, including activities such as the production and processing of metals. A pivotal component of the IPPC Directives was the implementation of the permit system, a regulatory instrument employed to regulate and oversee industrial emissions and activities that could potentially impact the environment. Operators of industrial facilities falling within the scope of the Directives were demanded to seek a permit from the competent authority of their respective MS. These permits were required to encompass a wide spectrum of environmental considerations, including emissions into the atmosphere, water bodies, and soil. Furthermore, these authorities were obliged to adhere to the so-called “Best Available Techniques” (BATs)[138], which constituted a fundamental concept within the IPPC Directives.

[137] Council Directive 96/61/EC on Integrated Pollution Prevention and Control was adopted in September 1996. Its aim was to prevent and control pollution in industrial activities, focusing on emissions to air, water, and land, waste production, energy use, accidents, and site contamination. The Directive covered six main industrial sectors and required transposition into national law by October 30, 1999, with existing installations granted an eight-year transition period until 2007. Emission limit values were established, primarily based on best available techniques (BAT). Implementation included information exchange and BAT reference documents (BREFs). The Directive targeted large installations, and its success relied on the legislative framework used by MSs. Potential integration with Environmental Impact Assessment (EIA) was suggested to streamline approvals, and IPPC and Environmental Management Systems (EMS) were seen as complementary. It was later replaced by Directive 2008/1/EC of the European Parliament and of the Council of January 2008.

[138] The IED Directive in Article 3 (10) contains a thorough definition of "Best Available Techniques": they are the most effective and advanced stage in the development of activities and their methods of operation which indicates the practical suitability of particular techniques for

Regarding this initial phase, Italy persistently deferred the issuance of IPPC permits, postponing the Directive's deadlines. This represented a breach and in 2008 an infringement procedure was initiated, culminating in a crucial judgement by the European Court of Justice on the 31st of March, 2011[139] in which the Court found that Italy had violated Art. 5 of the Directive[140] because it had not conducted a comprehensive review to ascertain whether the existing authorizations for Ilva and numerous other facilities falling within the scope of the IPPC Directive adhered to its requirements. Consequently, on the 4th of August 2011, the Italian Ministry of the Environment issued an IPPC permit known as the "*Autorizzazione Integrata Ambientale*" (AIA) for the Ilva plant. This permit was subsequently revised by the Ministry as per Decree No. 547 dated October 26, 2012[141]. The revision aimed to ensure compliance with the Industrial Emissions Directive (IED)[142], which substituted the IPPC Directive[143].

Concurrently with the initial provisional measures taken in the "*Ambiente Svenduto*" trial, the European Parliament passed a Resolution[144], explicitly urging the Italian authorities and EU institutions to address the Ilva situation. In September

providing the basis for emission limit values and other permit conditions designed to prevent and reduce emissions and the impact on the environment as a whole. BATs served as benchmarks for regulating emissions and controlling environmental impacts.

[139] Judgment of the Court (Seventh Chamber) of 31 March 2011, European Commission v Italian Republic, *Failure of a Member State to fulfil obligations - Environment - Directive 2008/1/EC - Integrated pollution prevention and control - Requirements for the granting of permits for existing installations*, Case C-50/10.

[140] Art. 5 (1) « *Member States shall take the necessary measures to ensure that the competent authorities see to it, by means of permits in accordance with Articles 6 and 8 or, as appropriate, by reconsidering and, where necessary, by updating the conditions, that existing installations operate in accordance with the requirements of Articles 3, 7, 9, 10 and 13, Article 14(a) and (b) and Article 15(2) not later than 30 October 2007, without prejudice to specific Community legislation* ».

[141] Il Ministro dell'Ambiente e della Tutela del Territorio e del Mare, *Riesame dell'autorizzazione integrate ambientale n. DVA/DEC/2011/450 del 4/08/2011 rilasciato per l'esercizio dello stabilimento siderurgico della società Ilva S.p.A. ubicato nei comuni di Taranto e Statte*, Decree n. 547 of 26 October 2012.

[142] The Industrial Emissions Directive (IED) is aimed at regulating and reducing pollution caused by various industrial activities. The IED broadens the scope of the IPPC Directive, introducing stricter requirements and aligning with the latest environmental legislation. The IED continues to focus on preventing and controlling pollution from industries, applying to various categories of industrial facilities. The directive establishes emission limits based on Best Available Techniques (BATs) and requires national authorities to issue permits to industries. MSs are responsible for implementing the IED in their national legislation. The IED is a dynamic regulation that can undergo further revisions to account for technological advancements, BATs, and new environmental challenges.

[143] *The Ilva industrial site: In-Depth Analysis for the ENVI Committee,* op. cit.

[144] European Parliament, resolution of 13 December 2012 on a new sustainable and competitive steel industry, based on a petition received.

2013[145] and April 2014, the European Commission, with two letters of formal notice, urged Italy to « *bring the Ilva steel plant up to environmental standards* ». The Commission asserted that Italy not only fell short of meeting the criteria outlined in the IED Directive but also violated the polluter pays principle as established in the Environmental Liability Directive (ELD)[146]. This principle, ancient enough to be associated with Plato[147], is a fundamental EU principle with constitutional status[148] which stipulates that those who pollute the environment or cause environmental damage should be held responsible for the costs and damages resulting from their actions. This principle is based on the concept that anyone who benefits from industrial or economic activities that cause harm to the environment should bear the costs of environmental restoration and compensation for such damages. The principle, designed to provide an economic incentive for reducing pollution and promoting sustainable practices, applies exclusively to specific, well-defined activities: large industrial installations that are already under the purview of the EU's industrial licensing regulations and waste management operations subject to the EU's waste legislation. National public authorities play a central role in enforcing civil sanctions in cases of EU environmental law violations. Furthermore, they bear the responsibility of ensuring that the operators covered by the directive take necessary measures to prevent or rectify any environmental damage within its scope[149].

The Commission emphasized that ELD institutes a regime of strict liability[150] when it comes to environmental damage. In the context of strict liability, it is imperative that the party responsible for environmental harm bears the full burden of the social costs resulting from its actions. This means that the polluter must be capable to provide comprehensive compensation for the inflicted

[145] European Commission press release, 26 September 2013, *European Commission urges Italy to bring a steel plant in Taranto up to environmental standards.*
[146] Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004, *environmental liability with regard to the prevention and remedying of environmental damage.*
[147] B. JOWETT, *The Dialogues of Plato*, Vol. 4 Laws & Index to Writings of Plato, book 8, « *If anyone intentionally spoils the water of another (...) let him not only pay damages but purify the stream or cistern which contains the water* ».
[148] Art. 191 (2) TFEU.
[149] S. KINGSTON, *The Polluter Pays Principle in EU Climate Law: an Effective Tool before Courts?*, Climate Law 10, 2020.
[150] M. G. FAURE, *Environmental Liability of companies*, study requested by the JURI Committee, 2020.

damages[151]. In this context, once a causal connection between the activity and the damage has been established, there is no requirement to demonstrate negligence. Italian authorities were obliged to implement measures to ensure that the Ilva steel mill conformed to EU legislation and to amend national laws to address and rectify ongoing breaches of environmental regulations. After the second letter of formal notice in April 2014 and Italy's unresponsiveness, following the usual path for the infringement procedure[152], the Commission issued a reasoned opinion[153] pursuant to Art. 258 TFEU[154], stating that violation of the IED and ELD Directives had not ceased.

On the 19th of July 2023, the Italian Senate approved the *"decreto Salva-infrazioni"*[155], designed to meet the obligations arising from the European Union and address pending infringement procedures against Italy. This decree simplifies the closure of the still-ongoing infringement procedure related to the Ilva plant, focusing on environmental improvement and the transposition of the IED Directive. This legislative intervention facilitates the modernization and decarbonization[156] of

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[151] M. G. FAURE, *Environmental Liability of companies,* ibidem.

[152] The European Commission can initiate an infringement procedure if an EU MS fails to communicate measures that align with EU directives or doesn't address suspected violations of EU law. The Commission starts by sending a letter of formal notice to the MS, requesting further information. The MS must provide a detailed reply within a specified period (usually two months). If the Commission determines that the MS is not complying with its obligations under EU law, it may issue a reasoned opinion. This formal request asks the country to conform to EU law, outlines the reasons for the breach, and requires the MS to report the measures taken within a specified period. If the MS remains non-compliant, the Commission can decide to refer the matter to the Court of Justice. If an EU country fails to communicate measures that implement the provisions of a directive in time, the Commission may ask the CJEU to impose penalties. If the court finds that a country has breached EU law, the national authorities must take action to comply with the court's judgment. If, despite the court's judgment, the country still doesn't rectify the situation, the Commission may refer the country back to the court. When referring an EU country to the court for the second time, the Commission proposes that the court impose financial penalties. The Commission proposes an amount based on certain factors, like the importance of rules breached, but the Court decides on the final amount to be paid by the country.

[153] European Commission press release, 16 October 2014, *European Commission urges Italy to address severe pollution issues at Europe's biggest steel plant.*

[154] Art. 258 (1) TFEU *« If the Commission considers that a Member State has failed to fulfil an obligation under the Treaties, it shall deliver a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations ».*
Art. 258 (2) TFEU *« If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice of the European Union ».*

[155] D.L. 69/2023, *Salva-infrazioni.*

[156] Dossier XIX Legislatura, *Disposizioni urgenti per l'attuazione di obblighi derivanti da atti dell'Unione europea e da procedure di infrazione e preinfrazione pendenti nei confronti dello Stato italiano*, A.C. 1322 – D.L. 69/2023, 25 July 2023.

the Ilva plant, ensuring the continuity of production, safeguarding employment, future generations, and compliance with environmental standards. Nonetheless, the recent issues in governance, together with a general difficulty in the introduction and interpretation of legal environmental defensive tools, may further complicate this transition.

3.3.2 The European Commission on illicit State aid granted by Italy for the continuation of Ilva's activities

State aid control within the EU plays a central role in upholding equitable competition and maintaining a level playing field throughout the EU's single market. The primary legal foundation governing the regulation of State aid is firmly anchored in the TFEU, which defines the parameters of State aid, articulating both a general prohibition and delineating exceptions, which include, among others, aid aimed at advancing economic development in disadvantaged regions[157], and, on the other hand, prescribes the detailed procedure for the notification and subsequent evaluation of State aid measures[158].

The concept of State Aid, as outlined in the first paragraph of Art. 107 TFEU, has evolved and gained specificity through a protracted process of application and interpretation by the EU courts. The definition that has emerged over time finds its most comprehensive application in the Commission Notice[159] on the notion of State aid. This definition entails the fulfillment of five key conditions[160]:

- an undertaking engaged in economic activity
- State origin
- an advantage
- selectivity
- an effect on trade and competition

[157] Art. 107 TFEU.
[158] Art. 108 TFEU.
[159] *Commission Communication on the concept of State aid as referred to in Article 107(1) of the Treaty on the Functioning of the European Union*, OJ C 262 of 19 July 2016.
[160] S. BLAZEK, J. C. HEGENER, *Substantive and Procedural Parallels and Overlaps. Between Art. 107, 108 TFEU and the (Draft) Regulation*, ZEuS 3, 2022.

The European Commission is the central authority entrusted with the responsibility of overseeing and enforcing the regulatory framework governing State aid. The Commission, in this capacity, meticulously scrutinizes notifications received from MSs and, when necessary, initiates in-depth investigations to ensure the conformity of proposed State aid measures with established EU standards. On multiple occasions, the European Commission has issued unfavorable decisions concerning State aid related to the steel industry. EU State aid rules aim to promote long-term competitiveness and efficiency in steelworks but certainly do not permit the support of financially distressed producers. The European Commission has, on multiple occasions, examined State aid received by Ilva to assess its compatibility with regulations. During the period spanning from 2014 to 2015, the Commission was presented with four complaints by anonymous competitors in the market, wherein allegations were made regarding Ilva's reception of unlawful State aid[161]. Italy was once again subject to an infringement procedure regarding Taranto's steel mill.

In December 2017, the Commission determined the illegitimacy of these aids due to the absence of prior notification as required by law[162], and stated that, among the five measures implemented by the Italian government, two contravened State aid norms. These specific measures encompassed a statal loan for 400 million euros and a public loan for 300 million euros[163] and were found to fulfil all the requirements prescribed by law. The Italian government received communication mandating Ilva to initiate the reimbursement of the funds it had received. Consequently, Italy was under an obligation to recover this benefit, which was estimated at approximately 84 million euros, representing the difference between the financial terms governing the loan and guarantee that Ilva enjoyed and the prevailing market conditions. EU State aid rules impose the necessity of recovering unlawful State aid to rectify the competitive imbalance stemming from such

[161] R. TAHIRAJ, *Ex Ilva e aiuti di Stato: una nota ricostruttiva*, Euro-Balkan Law and Economics Review, 30 June 2023.
[162] Art. 108 (3) TFEU: « *The Commission shall be informed, in sufficient time to enable it to submit its comments, of any plans to grant or alter aid. If it considers that any such plan is not compatible with the internal market having regard to Article 107, it shall without delay initiate the procedure provided for in paragraph 2. The Member State concerned shall not put its proposed measures into effect until this procedure has resulted in a final decision* ».
[163] Commission Decision (EU) 2018/1498 of 21 December 2017 on *the State aid and the measures SA.38613 (2016/C) (ex 2015/NN) implemented by Italy for Ilva SpA in Amministrazione Straordinaria.*

assistance[164]. Importantly, it should be noted that EU State aid rules do not involve the imposition of fines, and the recovery procedure is not punitive towards the concerned company. Its primary purpose is the restoration of parity in treatment with other enterprises[165].

The discussion must now broaden its scope, examining the Ilva case through the possible application of international environmental principles and the understanding of its violations in the context of human rights protection. Having established a foundational understanding of principles and legal outcomes, the discourse will then concentrate on the legal safeguarding of future generations against potential environmental abuses.

[164] R. TAHIRAJ, *Ex Ilva e aiuti di Stato: una nota ricostruttiva*, Euro-Balkan Law and Economics Review, op. cit.
[165] European Commission press release, *State aid: Commission concludes in-depth investigation on support to Italy's largest steelmaker Ilva S.p.A. in A.S. and orders recovery on two measures that involved illegal State aid*, Brussels, 21 December 2017, IP/17/5401.

CHAPTER II
INTERNATIONAL IMPLICATIONS OF THE ILVA CASE: GENERAL PRINCIPLES, COMPLIANCE ISSUES, AND HUMAN RIGHTS VIOLATIONS

1. A General Introduction to Environmental Principles

International Environmental Law constitutes a specialized branch within the purview of international law, dedicated to the objective of safeguarding and conserving the global environment for the sake of all. It is crucial to understand how this branch of international law has evolved through time, starting from the aftermath of the Second World War. Its profound impact on the world gave rise to a growing consciousness regarding not only international cooperation, but also environmental concerns. The 1960s and 70s witnessed a surge in environmental awareness, culminating in the United Nations Conference on the Human Environment[166] held in Stockholm in 1972 when an action plan[167] aimed at providing guidance to governments and international organizations on the improvement of the quality of the human environment was adopted[168]. Another pivotal innovation was the adoption of the Stockholm Declaration[169], a foundational document which represents one of the pillars of modern international environmental law.

During the 1980s there was an increasing awareness of climate change as a worldwide danger. In 1985 the Vienna Convention on the Protection of the Ozone Layer[170] was adopted, taking half a decade to be negotiated. Such increase of

[166] The 1972 United Nations Conference on the Human Environment in Stockholm was the first world conference to make the environment a major issue. The participants adopted a series of principles for sound management of the environment including the Stockholm Declaration and Action Plan for the Human Environment and several resolutions.
[167] *Report of the United Nations Conference on the Human Environment*, United Nations Publication, A/CONF.48/14/Rev.1, 1973.
[168] M. W. BALBOA, *United Nations Conference on the Human Environment*, Women Lawyers Journal 59, 1973.
[169] United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm « *The Stockholm Declaration, which contained 26 principles, placed environmental issues at the forefront of international concerns and marked the start of a dialogue between industrialized and developing countries on the link between economic growth, the pollution of the air, water, and oceans and the well-being of people around the world* ».
[170] The Vienna Convention, formalized in 1985, served as a foundational agreement wherein nations pledged their cooperation in essential research and scientific assessments pertaining to ozone layer

attention led to the adoption in 1992 of the United Nations Framework Convention on Climate Change (UNFCCC[171]) during the Earth Summit in Rio de Janeiro. The convention aimed to embrace a holistic strategy that incorporated environmental concerns into conventional economic development. Additionally, it established, within a legal framework, the rights and responsibilities of various members of the international community in the pursuit of "sustainable development"[172] introducing general concepts like the Precautionary Principle which calls on States in cases of threats of serious environmental damage[173], while the Rio Earth Summit's objective was to craft a range of voluntary frameworks and legally binding treaties, enabling participating States to accelerate a more sustainable global development trajectory[174].

These events represented a significant juncture in the development of International Environmental Law, serving as a catalyst for subsequent pacts, such as the Kyoto Protocol of 1997[175], which was principally designed to establish mandatory emission reduction targets for developed nations (referred to as Annex I parties) and to address climate change by reducing global greenhouse gas

concerns. They committed to sharing information and instituting "appropriate measures" to prevent activities that could harm the ozone layer. Notably, the Vienna Convention held the distinction of being the first convention of its kind to receive unanimous signatures from all participating countries. It came into effect in 1988 and achieved universal ratification in 2009, underscoring the severity of the ozone depletion issue at the time and the global willingness to collaborate on its resolution. The Convention's primary objective was to facilitate international cooperation by enabling the exchange of information regarding the impact of human activities on the ozone layer.

[171] The United Nations Framework Convention on Climate Change (UNFCCC) was established as an international environmental treaty with the aim of addressing dangerous human interference with the climate system, primarily through the stabilization of greenhouse gas concentrations in the atmosphere. The UNFCCC was signed by 154 States during the Rio Earth Summit (officially UNCED) from June 3 to 14, 1992. The UNFCCC called for continuous scientific research, regular meetings, negotiations, and future policy agreements to facilitate the natural adaptation of ecosystems to climate change. The Kyoto Protocol, initiated in 1997 and operational from 2005 to 2020, marked the first implementation of measures under the UNFCCC. The Paris Agreement, which took effect in 2016, succeeded the Kyoto Protocol. As of 2022, the UNFCCC boasts 198 parties.

[172] P. SANDS, *The United Nations Framework Convention on Climate Change,* review of European, Comparative & International Environmental Law, vol. 1 n. 3, 1992.

[173] J. DELBEKE, A. RUNGE-METZER, Y. SLINGENBERG, J. WERKSMAN*, The Paris Agreement*, Towards a climate-neutral Europe, Routledge, 2019.

[174] M. PELLING, *The Rio Earth Summit*, The Companion to development Studies, 2nd edition, Routledge, 2013.

[175] The Kyoto Protocol was adopted on 11 December 1997. Owing to a complex ratification process, it entered into force on 16 February 2005. Currently, there are 192 Parties to the Kyoto Protocol.

emissions[176], and the Paris Agreement[177] in 2015, which aimed to reduce global warming-caused temperatures by strengthening international collaboration and commitments to cut greenhouse gas emissions, promote climate resilience and advance adaptive measures while also seeking to secure financial assistance for developing nations in their climate endeavors[178].

International governance emerges as a fundamental safeguard for environmental preservation. An essential companion to international regulation lies in the establishment of oversight bodies and the strengthening of interstate collaboration, especially when sustained and coordinated efforts are imperative. International Environmental Law must guarantee adherence to these standards[179]. Regulation thus assumes a fundamental role in securing environmental preservation. The formulation of standards, designed to avert environmental harm, proves inadequate at ensuring comprehensive environmental safeguarding. A vital adjunct to international regulation lies in the establishment of regulatory bodies and the perpetuation of collaborative relationships among nations, particularly when coordinated efforts are essential[180].

International environmental law is distinguished by a set of principles and concepts that provide the guiding framework for the formulation and execution of international pacts and standards directed towards the protection of the environment. For these reasons, the complexity of the Ilva case cannot be tackled without first highlighting the centrality that principles assume in the protection of environmental interests. Indeed, only principles can play a guiding role in shaping

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[176] C. BÖHRINGER, *The Kyoto Protocol: a review and perspectives*, Oxford Review of Economic Policy, vol. 19 n. 3, 1 September 2003.

[177] The Paris Agreement stands as a legally binding international treaty addressing climate change, officially adopted by 196 Parties during the UN Climate Change Conference (COP21) held in Paris, France, on December 12, 2015. Effectively coming into force on November 4, 2016, its primary objective is to curb "*the increase in the global average temperature to well below 2°C above pre-industrial levels*" and endeavor "*to limit the temperature increase to 1.5°C above pre-industrial levels*." In recent times, there has been an emphasis from world leaders on the necessity of constraining global warming to the ambitious target of 1.5°C by the close of this century. The Paris Agreement is a groundbreaking milestone in the realm of multilateral climate change initiatives, marking the first instance where a binding accord unites nations worldwide in the collective effort to combat climate change and adapt to its ramifications.

[178] A. SAVARESI, *The Paris Agreement: a new beginning?,* Journal of Energy & Natural Resources Law, 2016.

[179] D. SHELTON, *International Environmental Law*, 3rd edition, 2021.

[180] T. KOIVUROVA, *Introduction to international environmental law*, Abingdon, Oxon: Routledge, 2014.

policies and legislative activities for the safeguarding of the environment. It is these key principles that have the capacity to balance various interests and values, such as economic, social, environmental, and health-related interests, as is well illustrated in the case of the Apulian plant[181].

1.1 Principle of Due Diligence

The principle of due diligence is a fundamental concept in International Law, imposing an imperative on States and other entities to undertake reasonable and essential actions to prevent harm or breaches of international legal standards. It necessitates that States exercise vigilance, prudence, and proactive measures to prevent harm to other States or their citizens and to address or forestall activities that may lead to infringements of international law.

The Alabama Arbitration of 1872[182], a significant instance of inter-State arbitration, marked the initial application of the principle. This arbitration involved a dispute between the United States and the United Kingdom concerning the UK's alleged failure to maintain neutrality during the American Civil War, primarily related to the construction and arming of warships, such as the Alabama, by private UK companies. The central question revolved around whether the UK had fulfilled its due diligence obligations in permitting these activities within its territory. The standard for the application of the principle was delineated in the Treaty between Great Britain and the United States of America for the Amicable Settlement of all Causes of Difference between the Two Countries, signed in May 1871. The Arbitral Tribunal stressed that due diligence should be proportionate to the risks and rejected the argument that insufficient legal means could justify a lack of due diligence. The impact of the Alabama Arbitration extended to the subsequent codification of obligations for neutral States[183].

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[181] R. LEONARDI*, Il caso Ilva: la Cedu condanna l'Italia per la violazione del diritto ad un ambiente salubre*, European Law Journal, Year II, n. 1, July 2019.
[182] Office of the Historian, official website, « *The Alabama claims (...) established a significant precedent for addressing substantial international disputes through the mechanism of arbitration* ».
[183] T. KOIVUROVA, K. SINGH, *Due Diligence*, Max Planck Encyclopedias of International Law (MPIL), August 2022.

Due diligence kept on evolving in the 19th and 20th centuries in relation to the obligation of State neutrality during maritime and land conflicts and the protection of foreigners and their property. During the work of the International Law Commission (ILC)[184], the principle was avoided to prevent critical questions regarding fault in international responsibility. However, after the adoption of the ILC's Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA[185]) and the draft Articles on Prevention of Transboundary Harm from Hazardous Activities in 2001, the principle became an essential component of international obligations[186]. Due Diligence also manifested itself in certain early international agreements related to human rights and international humanitarian law[187]. Now, the principle stands as a cornerstone across various areas of international law, including environmental protection, and is used by courts and treaty bodies as a practical tool to apply primary rules. This proliferation of the concept has sparked academic discussions about its nature as a general principle of law and its role in the contemporary international legal order.

[184] The International Law Commission (ILC) is a panel of experts tasked with the advancement and codification of international law. It consists of 34 individuals renowned for their expertise and qualifications in the field of international law, who are elected by the United Nations General Assembly (UNGA) every five years. The roots of the ILC can be traced back to the 19th century when the Congress of Vienna in Europe established numerous international rules and principles to govern interactions among its member States. The ILC was established in 1947 by the UNGA in accordance with the United Nations Charter, which mandates the Assembly to contribute to the development and organization of international law. The Commission conducted its inaugural session in 1949, with its early work influenced by the aftermath of the Second World War and the growing concerns surrounding international crimes such as genocide.

[185] *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries*, text adopted by the International Law Commission (ILC) at its fifty-third session, in 2001, and submitted to the General Assembly as a part of the Commission's report covering the work of that session (A/56/10), « *These articles seek to formulate, by way of codification and progressive development, the basic rules of international law concerning the responsibility of States for their internationally wrongful acts. The emphasis is on the secondary rules of State responsibility: that is to say, the general conditions under international law for the State to be considered responsible for wrongful actions or omissions, and the legal consequences which flow therefrom. The articles do not attempt to define the content of the international obligations, the breach of which gives rise to responsibility. This is the function of the primary rules, whose codification would involve restating most of substantive customary and conventional international law* », 2001.

[186] A. OLLINO, *Due Diligence Obligations in International Law*, Cambridge University Press, 2022.

[187] T. KOIVUROVA, K. SINGH, *Due Diligence*, Max Planck Encyclopedias of International Law (MPIL), op. cit.

1.1.1 Evolution and extension in International Environmental Law

Between 2014 and 2016, the International Law Association (ILA)[188] conducted a comprehensive examination of the concept of due diligence within the framework of International Law. ILA's interest in this subject was motivated by the increasing use of due diligence as a standard of behavior across various international obligations in international law. A study on due diligence, established by the ILA, produced two reports, and the conclusion was that due diligence is an "evolving principle of international law". Specifically, the second report emphasized that due diligence, as a principle, occupied a central role in the implementation of a wide range of international obligations and, more broadly, in the realm of global governance[189].

Duties pertaining to diligence have developed as an essential component of legal standards, with their most significant presence found in the domains of neutrality, the treatment of foreign nationals, and environmental law. The concept of due diligence does not mandate the complete prevention of harm to the interests of other States, but rather it obliges States to employ their best efforts and take the utmost measures to prevent or minimize such harm.

Furthermore, there has always been a fundamental lack of clarity regarding the status of the principle: this uncertainty is associated with a perplexing array of terms used to characterize its normative nature, such as "*general principle of international law*[190]*",* an "*obligation or duty*[191]", or a "*concept*[192]". This wide spectrum of designations[193] reveals that the international legal discourse has not yet

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[188] ILA's official website, About Us, « *The International Law Association was founded in Brussels in 1873. Its objectives, under its Constitution, are "the study, clarification and development of international law, both public and private, and the furtherance of international understanding and respect for international law". The ILA has consultative status, as an international non-governmental organisation, with a number of the United Nations specialized agencies* ».

[189] A. OLLINO, *Due Diligence Obligations in International Law,* ibidem.

[190] A. SEIBERT-FOHR, *From Complicity to Due Diligence: When Do States Incur Responsibility for Their Involvement in Serious International Wrongdoing?,* German Yearbook of International Law 60, 2017.

[191] J.E. VIÑUALES, *Due Diligence in International Environmental Law: A Fine-grained Cartography*, Due Diligence in the International Legal Order, *Neth Int Law Rev* 68, 2021.

[192] A. OUEDRAOGO, *La neutralité et l'émergence du concept de due diligence en droit international. L'affaire de l'Alabama revisitée*, Journal of the History of International Law 13, 2011.

[193] H. KRIEGER, A. PETERS, L. KRUEZER, *Due Diligence in the International Legal Order,* Oxford University Press, 2020.

fully articulated the concept of due diligence. These diverse terms are not merely matters of terminology but inherently suggest a particular normative character and imply specific relationships with international legal norms[194]. The phrasing denoting due diligence varies among different treaties and encompasses terms like "take all measures", "all appropriate measures", "all necessary measures" and "to ensure". The precise term "due diligence" is seldom employed in treaty law, as these alternative expressions are often deemed less technical and more straightforward in clarifying the State's expected actions, thus minimizing confusion. The concept of due diligence is not a fixed, one-size-fits-all standard; it varies depending on the specific context, as validated by the Seabed Mining Advisory Opinion. According to the Seabed Dispute Chamber of the International Tribunal for the Law of the Sea[195], due diligence is not easily defined with precision because it's adaptable. This means that it can evolve over time and may differ based on the risks associated with a given activity[196]. Although the due diligence standard lacks specific precision, it essentially reflects the conduct expected of a competent and responsible government. This means that each State is obligated to operate to the best of its ability and capacity. In simpler terms, every State must make its utmost effort and implement all suitable actions. The due diligence standard of care is typically determined by three key factors: opportunity to act or prevent, foreseeability of potential harm and ensuring that the measures taken to prevent harm or reduce risks are proportionate[197].

As stated, the concept is variable but, even in this vagueness, it has acquired crucial influence in different sectors of International Law, one being Environmental Law. In the context of environmental protection, the idea of due diligence projects

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[194] H. KRIEGER, A. PETERS, L. KRUEZER, *Due Diligence in the International Legal Order,* op. cit.
[195] International Tribunal for the Law of the Sea official website, « *The International Tribunal for the Law of the Sea (ITLOS) is an independent judicial body established by the 1982 United Nations Convention on the Law of the Sea. It has jurisdiction over any dispute concerning the interpretation or application of the Convention, and over all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal. Disputes relating to the Convention may concern the delimitation of maritime zones, navigation, conservation and management of the living resources of the sea, protection and preservation of the marine environment and marine scientific research».*
[196] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area*, Advisory Opinion, 1 February 2011.
[197] C. VOIGT, *The Paris Agreement: What is the standard of conduct for parties?,* QIL, Zoom-in 26, 2016.

the principle of prevention as outlined in Principle 21 of the Stockholm Declaration or in Principle 2 of the Rio Declaration[198]. However, between these two articles and the actual conceptualization of the principle some key differences are evident[199]. In fact, lingering uncertainties surround the interplay between prevention and due diligence. These two concepts are often used interchangeably, as their close resemblance sometimes blurs the line between them.

It is crucial to recognize some significant differences between due diligence and prevention in this context. First and foremost, the duty of due diligence has a broader scope. It extends to various forms of harm and risks, encompassing more than just environmental issues, as evident in the Alabama arbitration case. In contrast, the prevention principle exclusively addresses the prevention of harm of specific extent and magnitude. Another notable distinction relates to the breadth of the duty. The prevention principle primarily focuses on preventing environmental harm when it reaches a certain level of dimension. In contrast, the duty of due diligence doesn't impose a similar restriction. It governs actions or inactions that lead to harm or environmental risks, even if they fall below the threshold necessary to trigger a violation of the prevention principle. This means that they may still potentially constitute a breach of the duty of due diligence[200].

1.1.2 The Prevention Principle as a Due Diligence obligation

The concept of prevention as a due diligence obligation generally garners widespread consensus. The prevention principle aims to proactively address environmental risks. The initial aspect of this definition concerns its underlying logic and sets it apart from the conventional law of State responsibility, which primarily focuses on the actual occurrence of harm and the subsequent remedy. Treaty law, codification efforts, case law, and scholarly opinions all align on this

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[198] Principle 2 of the Rio Declaration: « *States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction* ».

[199] See infra Chapter 2, 1.1.2.

[200] J.E. VIÑUALES, *Due Diligence in International Environmental Law: A Fine-grained Cartography,* op cit.

matter. Due diligence obligations are gaining significance in the regulation of non-State actors' actions within a globalized context, promoting a sense of good neighborliness among States to avert transboundary and global issues.

The prevention principle in international law has its roots in the prohibition of causing harm to another State's territory, established by the *Trail Smelter* dispute[201] in 1941. The establishment of the prevention principle aligned with a pivotal shift in humanity's perspective on Earth in the 1960s. This change in viewpoint led to the recognition of the need for legal frameworks to safeguard the environment and its resources. As our comprehension of environmental risks improved, the preventive approach emerged as the paramount legal remedy at International, European, and domestic levels[202].

In 1972 the Stockholm Declaration, specifically in Principle 21[203], represented a progressive step at the time, encapsulating both an aspect of general international law with the no-harm principle[204] and an initial approach towards prevention even outside State jurisdiction. The third element of Principle 21 serves as a vital legal principle that influenced the creation of international treaties. It has been used in treaty obligation, establishing a responsibility to safeguard the environment in various global commons (such as outer space[205], the Antarctic[206],

[201] Trail Smelter (United States v. Canada), 16 April 1938 and 11 March 1941, United Nations.
[202] L. DUVIC-PAOLI, *Principle of Prevention*, Elgar Encyclopedia of Environmental Law, 2018.
[203] Principle 21 of the Stockholm Declaration: « *States have the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction* ».
[204] L. DUVIC-PAOLI, *The Prevention Principle in International Environmental Law*, Cambridge University Press, 2018, pp. 63-176, « *the principle of prevention is not expressed in a uniform, consistent manner. The manifestations of prevention vary depending on the specificity of the harm to be avoided and on the divergent understanding that international negotiators and judges have of the norm. In sum, the widespread use of the preventive approach has resulted in the consolidation of the norm in the field but has also created inconsistencies in its definition and content that make it more difficult to analyse* ».
[205] Treaty Banning Nuclear Weapon Testing in the Atmosphere, in Outer Space and Under Water, Moscow, 5 August 1963, in force 10 October 1963, 480 UNTS 43; Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, New York, 5 December 1979, in force 11 July 1984, (1979) 18 ILM 1434, Article 7(1).
[206] Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, in force 14 January 1998, (1991) 30 ILM 1461, Article 2.

the high seas[207], the deep seabed[208], and the atmosphere[209]) and these commitments are widely regarded as the foundation of a customary duty to prevent harm in regions that fall outside of national jurisdiction[210].

Principle 21 presents a certain innate duality. Firstly, Principle 21 originates from acknowledging a State's sovereignty to utilize resources within its territory, whereas the principle of prevention arises from the imperative of safeguarding the environment as an independent objective. Secondly, the principle of prevention doesn't restrict itself to addressing transboundary consequences of specific activities but instead has a more extensive scope, aiming to reduce the risk of environmental pollution with a broader width[211]. Nowadays, it is universally acknowledged that the prevention principle combines three fundamental aspects of international law: the principle of permanent sovereignty over natural resources, the no-harm principle and its extension beyond the limits of national jurisdiction. This overlapping of three seemingly conflicting clauses presents a challenging dilemma regarding the harmonization of national interests and environmental goals. However, it is widely accepted as a well-established embodiment of the preventive principle, exemplified by its near-identical restatement in the 1992 Rio Declaration on Environment and Development[212]. The principle of prevention underpins the logic behind most environmental treaties and is a firmly established rule in international law, acknowledged in significant codification efforts like the work of the International Law Commission (ILC) and supported by the decisions of international courts and tribunals, including the International Court of Justice[213].

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[207] United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, in force 16 November 1994, 1833 UNTS 3, Articles 116–18 (on conservation and management of the living resources of the high seas) and Article 192 (on a general obligation to protect and preserve the marine environment).
[208] United Nations Convention on the Law of the Sea, Article 145.
[209] *Air Transport Association of America and Others v. Secretary of State for Energy and Climate Change* (Judgment of the Court), C 366/10, Court of Justice of the European Union, Grand Chamber, 21 December 2011.
[210] P. BIRNIE, A. BOYLE, C. REDGWELL, *International Law and the Environment*, 3rd edition, Oxford University Press, 2009.
[211] A. G. WIBISANA, *Three principles of environmental law: The polluter-pays principle, the principle of prevention, and the precautionary principle*, Environmental Law in Development: lessons from the Indonesian Experience, Edward Elgar: Northampton UK, 2006.
[212] Principle 2 of the Rio de Janeiro Declaration on Environment and Development, 3 to 14 June 1992.
[213] L. DUVIC-PAOLI, *Principle of Prevention*, Elgar Encyclopedia of Environmental Law, op. cit.

The principle gains greater significance as we face a period where environmental deterioration is causing shifts in the Earth's systems that are unparalleled throughout human history[214]. Prevention is an anticipatory concept aiming to mitigate foreseeable risks, differing from the conventional reactive approach used in international law for addressing wrongful actions. It focuses on averting harm in the first place and obliges States and other entities to exercise due diligence when confronted with environmental risks.

However, the prevention principle lacks a standardized, uniform expression. The way prevention is articulated differs based on the nature of the harm to be averted and the distinct interpretations held by international negotiators and judges regarding the standard. In essence, the extensive application of the preventive approach has both established the norm's presence in the field and given rise to discrepancies in its characterization and substance, thereby complicating its analysis[215]. The prevention principle and the precautionary principle also share a close connection.

1.1.3 The Precautionary Principle

It may be tempting to categorize the precautionary principle as a formal doctrine, but there is no singular, universally accepted statement or formulation. Instead, there exist various versions of the Precautionary Principle.

The concept of Precaution originates from German environmental policies concerning the *Vorsorgeprinzip*[216] in the early 1970s. It has later been introduced in many treaties such as the Vienna Convention for the Protection of the Ozone Layer[217] of 1985 and the Montreal Protocol[218] of 1987, and from that moment on,

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[214] UNEP, *Global Environmental Outlook 5: Environment for the Future We Want*, Summary for Policy-Makers, 2012.
[215] L. A. DUVIC-PAOLI, *The Prevention Principle in International Environmental Law*, Cambridge University Press, op. cit.
[216] I. ROSE, *A Precautionary Tale*, JSTOR Daily, September 2022.
[217] The Vienna Convention, concluded in 1985, is a framework agreement in which States agree to cooperate in relevant research and scientific assessments of the ozone problem, to exchange information, and to adopt "appropriate measures" to prevent activities that harm the ozone layer.
[218] The Montreal Protocol on Substances that Deplete the Ozone Layer is the landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 man-made chemicals referred to as Ozone Depleting Substances (ODS). When released into the atmosphere, those chemicals damage the stratospheric ozone layer, Earth's protective shield that protects humans

it has become increasingly more stated, especially after its formulation in Principle 15 of the Rio Declaration[219] which states that « *In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation* ». The Precautionary Principle has been formally recognized as a pillar of EU environmental protection policy thanks to its introduction and formulation in Art. 191 of the Treaty on the Functioning of the European Union (TFEU)[220]. The precautionary principle has now obtained an uncontested position not only in the international area but also the EU spectrum, almost overshadowing the prevention principle[221].

While prevention addresses risks when they are certain, the precautionary principle requires precautionary actions even in the absence of full scientific certainty. Precaution applies even when the damage is unforeseeable because of a general lack of scientific certainty. The precautionary principle arises from an increasing focus on environmental conservation, prompting States to implement measures aimed at averting environmental harm, even in cases where the harmful consequences of such damage are not conclusively and scientifically proven. Precaution seeks to close the gap between scientists exploring the edges of scientific understanding and decision-makers eager to establish what level of safety is adequate. In simpler terms, precaution signifies a novel interaction with science, where its role is not just about providing knowledge, but also about addressing uncertainties and apprehensions[222]. An attentive application of this approach

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and the environment from harmful levels of ultraviolet radiation from the sun. Adopted on 16 September 1987, the Protocol is to date one of the rare treaties to achieve universal ratification.

[219] J. E. VIÑUALES, *International Emnvironmental Law*, 2nd edition, Cambridge, 2018.

[220] Art. 191.2 TFEU, « *Union policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Union. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay».*

[221] N. DE SADELEER, *The principles of prevention and precaution in international law: two heads of the same coin?*, Research Handbook on International Environmental Law, Edward Elgar publishing, 2010.

[222] N. DE SADELEER, *The principles of prevention and precaution in international law: two heads of the same coin?*, ibidem.

implies a need to weigh the potential risks of foregoing benefits against the risks associated with incurring unnecessary protective measures[223].

Preventive actions can be crucial in addressing the risks associated with hidden, delayed consequences. When impacts do not manifest until long after their causes, waiting for definitive proof of the extent of harm could mean waiting until it is too late to rectify the situation. Furthermore, the potential for catastrophic consequences strongly supports a proactive approach. The uncertainty surrounding potential tipping points in climate change intensifies the need for precautionary climate policies. However, the precautionary approach may have its challenges. Firstly, implementing precautionary measures can be expensive. Critics of precaution express concerns that anticipatory actions to limit emerging technologies might stifle innovation. Some more balanced versions of the precautionary principle, such as the one in the Rio Declaration, take cost into account, emphasizing the need to be "cost-effective". Thoughtfully designed precautionary policies can even encourage innovation in safer technologies[224].

Now, it becomes essential to explore the concept of precaution from a specific perspective: can the preventive principle, when regarded as a legally binding and fully effective obligation, whether of customary nature or not, dictate a specific procedural conduct that, if breached, could be deemed a violation?

The Cartagena Protocol[225] embodies a procedural interpretation of the precautionary principle by outlining risk assessments and obligations, ultimately emphasizing the spirit of precaution. However, it grants States the freedom to decide whether to implement precaution based on the evaluation results. Reversing

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[223] M. FAURE, N. NIESSEN, *Environmental Law in Development: lessons from the Indonesian Experience*, Edward Elgar Publishing, 2006, op. cit.

[224] J. B. WIENER, *Precautionary Principle*, Encyclopedia of Environmental Law, volume VI.

[225] The Cartagena Protocol on Biosafety is an international agreement associated with the Convention on Biological Diversity (CBD) and has been in effect since 2003. This protocol is designed to address the potential risks of genetically modified organisms (GMOs) resulting from modern biotechnology, with the primary goal of safeguarding biological diversity. One key aspect of the Biosafety Protocol is its commitment to applying the precautionary principle to products derived from new technologies. This means that it encourages a cautious approach, particularly in situations where there may be uncertainties about the safety of such products. Additionally, the protocol provides developing nations with the flexibility to balance concerns related to public health and economic benefits. For example, it allows countries to restrict the import of GMOs if they believe there is insufficient scientific evidence supporting the safety of these products. Furthermore, it imposes labeling requirements on shipments containing genetically modified commodities, such as corn or cotton.

of the burden of proof[226] is another procedural aspect, but these procedures may fall short of fully realizing the essence of precaution, particularly in preventing potentially irreversible harm. If the principle is seen as a procedural obligation, it allows for building a responsibility system where violations trigger legal consequences. Attempts have been made to define such a regime, both on international and domestic levels. However, if the principle includes an obligation to achieve a specific outcome, failing to prevent irreversible damage poses a challenge for determining appropriate sanctions once the damage has occurred. Traditional remedies, like restitution, may no longer be meaningful. One potential solution would be that of imposing responsibility before damage occurs when it becomes clear that a party is not capable of meeting its obligations, although monitoring this exceptional regime would be challenging[227].

Precaution in the EU system, however, needs specific attention. The principle now enjoys total recognition after Art. 191 TFEU, making it one of the pillars of EU Environmental Policy. Institutions and MSs are obliged to respect and apply the principle when taking actions in the environment, as established in the *Waddenzee* case[228]. The precautionary principle has been detailed in various measures, which encompass notification procedures, prior authorization systems, limitations on product usage or sale, the inclusion of safeguard clauses[229], and even bans[230]. However, the regulatory approach is not consistently applied, with some EU legislation incorporating the principle while other legislation on related matters may not acknowledge it[231].

The European Commission's non-binding Communication on the Precautionary Principle in 2000[232] aims to guide the application of the principle in

[226] In the conventional approach, the burden of proof falls on the party asserting that an activity could result in harm. They are required to provide evidence to support their claim. The precautionary principle, however, shifts this burden: the individual or entity suggesting the activity must demonstrate that it is not harmful.
[227] S. BOUTILLON, *The Precautionary Principle: Development of an International Standard*, Michigan Journal of International Law, vol. 23:429, 2002.
[228] C.127/02, *Waddenzee*, Judgement of the Court (Grand Chamber), 7 September 2004.
[229] C-6/99, *Greenpeace v. France*, paragraph 44, 2000.
[230] *Pfizer Animal Health v. Council,* T-13/99, paragraph 457, 2002
[231] N. DE SADELEER, *The principles of prevention and precaution in international law: two heads of the same coin?*, Research Handbook on International Environmental Law, op. cit.
[232] Communication from the Commission on the precautionary principle, COM/2000/1, 25 November 2000.

EU law. It highlights three prerequisites for invoking the precautionary principle: identifying possible negative effects, conducting a scientific evaluation, and facing scientific uncertainty. The document outlines a four-step risk assessment and suggests considering advice from minority scientific factions. Once the principle is invoked, a range of measures can be adopted, with guidelines focusing on proportionality, non-discrimination, consistency, cost–benefit analysis, reviewability, and responsibility assignment for scientific evidence[233]. The document concludes with the idea that reversing the burden of proof onto the producer can be considered in the absence of prior approval systems, but this is not a general rule.

The CJEU's role in applying the precautionary principle in the EU legal order is crucial, but inconsistencies have emerged. Between 2000 and 2019, references to the precautionary principle in case law were more detailed than in legal acts, with 147 results in EUR-Lex[234]. The courts contributed to the understanding of the principle in milestone cases[235], providing various definitions formalized over time. The main factor for invoking the precautionary principle is scientific uncertainty, allowing for provisional risk management measures. The principle can be applied without explicit evidence of risks, emphasizing the provisional nature of measures and the need for an initial assessment of available information[236].

1.1.4 Italy's compliance in the Ilva case relating to International Environmental Principles and promises of Due Diligence

Italy's actions were closely examined within the framework of International Environmental Law principles, namely precaution, due diligence, and prevention.

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[233] R. LOFSTEDT, *the precautionary principle in the EU: Why a formal review is long overdue,* Risk Management, vol. 16 n. 3, August 2014.

[234] EUR-Lex is a website managed by the Publications Office of the EU, providing access to European legislation. Users can access it for free and have various search methods available in all official languages of the Union.

[235] *Alpharma (2002), Artegodan (2002), Pfizer (2002), Solvay Pharmaceuticals (2002), Paraquat (2007), Gowan (2009), SPCM (2009), Afton (2010), Bayer CropScience (2018) and Confederation Paysanne (2018).*

[236] K. DE SMEDT, E. VOS, *The Application of the Precautionary Principle in the EU*, The Responsibility of Science, Studies in History and Philosophy of Science, vol. 57, Springer, 2022.

According to the precautionary principle, if Italy had concerns about potential environmental harm from Ilva's activities, it would have been obliged to take measures to mitigate or prevent such harm, particularly in the presence of uncertainties regarding the actual risks. However, through the implementation of *ad hoc* decrees, the government avoided that duty. The Italian Constitutional Court explicitly Stated that Italy failed to balance constitutional interests by shielding Ilva's activities, protecting the steel mill from the local judiciary.

In 2016, however, Italy adopted its first *Piano di Azione Nazionale* su *Impresa e Diritti Umani*[237], a strategic document outlining the country's objectives and actions in various areas, including the environment. By adopting this plan, which set out fundamental objectives such as biodiversity conservation, environmental governance and international commitments with systems of monitoring and reporting through public engagement and awareness, Italy « *commits to promoting and implementing key actions - within the legislative, institutional, and operational framework that regulates economic activities - to give priority to human rights in such a way as to avoid and minimize the potential negative impact of business activities in this context* ». In the Plan, in line with the foundational concepts Stated in the UN Guiding Principles[238], the Italian government requires companies to define their own human rights respect policy and to adopt due diligence mechanisms to identify, prevent, and remedy potential risks associated with their activities. It is also stated that « *in the context of environmental protection, the promotion of high environmental standards guaranteed by companies beyond the current national and European legislative framework should be considered a key factor for the respect, promotion, and enjoyment of human rights* »[239]. In general, it highlighted the commitment of the Italian government to promote sustainable development and encourage companies to adopt due diligence processes, if necessary, through future legislative reforms.

The Plan was directly tied to the Ilva case in a specific way. Regarding State-controlled companies, Italy « *commits to ensuring that i) companies controlled or*

[237] *Piano di Azione Nazionale Impresa e diritti Umani*, 2016-2021.
[238] United Nations, *Guiding Principles on Business and Human Rights – Implementing the United Nations "Protect, Respect and Remedy" Framework*, 16 June 2011.
[239] *Piano di Azione Nazionale Impresa e diritti Umani*, 2016-2021, op. cit.

participated by the State; ii) receiving support or substantial benefits from government agencies; iii) contracting or engaging in commercial transactions with the State, operate in full compliance with human rights as contained in domestic legislation and provided by international regulations and soft law instruments »[240]. Ilva has seen State participation both since 2015 and prior to 1995. During this period, it received substantial financial assistance from the government to navigate through economic challenges, prompting an investigation by the European Commission to ensure compliance with State aid regulations that led to an important decision[241]. Consequently, the Italian government's commitment in the National Action Plan was notably rigorous for Ilva. This commitment extended beyond adherence to Italian environmental regulations or national standards tailored to Ilva's circumstances. Explicitly outlined in the Plan was the obligation for companies to operate fully respecting human rights as outlined in international regulations and soft law instruments. Italy's commitments in the Plan aimed at fostering respect for human rights by businesses were crucial[242].

The Plan was renewed in 2021[243], meaning that Italy's proactivity in respecting its objectives is still a primary goal of the government. Italy's position seems to be shifting towards a more standard-oriented path, even if doubts of violations and lack of care are still a profound stigma in the Ilva case.

1.2 The Differentiation Principle for International Environmental Duties

Historically, International Law has been characterized by the principle of sovereign equality of States, emphasizing equal rights and obligations for all[244]. However, given the substantial differences among States, considerations of cooperation, effectiveness, and solidarity, necessitate the acknowledgment of these disparities to establish an equitable international legal order. Consequently, differential

[240] *Piano di Azione Nazionale Impresa e diritti Umani*, 2016-2021, op. cit.
[241] Commission Decision (EU) 2018/1498 of 21 December 2017 on *the State aid and the measures SA.38613 (2016/C) (ex 2015/NN) implemented by Italy for Ilva SpA in Amministrazione Straordinaria,* op. cit.
[242] FIDH, PEACELINK, UFDU, HRIC, *Il disastro ambientale dell'Ilva di Taranto e la violazione dei Diritti Umani*, op. cit.
[243] *Piano di Azione Nazionale su Impresa e Diritti Umani*, 2021-2026.
[244] M. KOSKENNIEMI, *The Politics of International Law*, Bloomsbury, 2011.

treatment, or the differentiation between States, has emerged as a significant aspect of International Law. The underlying rationale is to foster practical, as opposed to formal, equality among inherently unequal States, promoting increased participation and efficacy in international agreements[245]. Differentiation aims to navigate the diverse capacities and responsibilities of countries engaged in the global pursuit of environmental protection, seeking to guarantee an equitable allocation of burdens and costs associated with environmental actions, taking into consideration the unique circumstances and capabilities of individual States.

Within the current body of literature on the matter, a significant argument revolves around the fact that the principle of differentiation in International Environmental Law plays a dual role. Firstly, it serves an instrumental function by incentivizing widespread participation in MEAs by both developed and developing countries, a division which will be analyzed later in the discussion. Secondly, it assumes a value-based role in fostering the equitable allocation of environmental burdens and costs among States with differing levels of capacity[246].

Differentiation aims to direct the distribution of the burdens and costs associated with global environmental action among countries based on:

1. their individual contributions to global environmental problems
2. their capacities to undertake and finance environmental actions
3. their developmental needs[247]

Nations bear distinct levels of responsibility for contributing to global environmental damages like marine pollution and greenhouse gases. Developed countries, for instance, are accountable for 76% of cumulative CO_2 emissions spanning from 1850 to 2002[248]. Conversely, in 2015, five developing nations

[245] C. VOIGT, F. FERREIRA, *'Dynamic Differentiation': The Principles of CBDR-RC, Progression and Highest Possible Ambition in the Paris Agreement,* Transnational Environmental Law, vol. 5, Cambridge University Press, October 2016.
[246] P. G. FERREIRA, *Differentiation in International Environmental Law Has Pragmatism Displaced Considerations of Justice?,* Global Environmental Change and Innovation in International Law, 2018.
[247] L. RAJAMANI, *Differential Treatment in International Environmental Law*, Oxford Monographs in International Law, January 2006.
[248] K. A. BAUMERT, T. HERZOG, J. PERSHING*, Navigating the Numbers: Greenhouse Gas Data and International Climate Policy*, World Resources Institute, 2005.

(China, Indonesia, the Philippines, Thailand, and Vietnam) were responsible for 55-60% of the plastic waste in the oceans[249]. Furthermore, the financial and technological capacities, crucial in addressing global environmental issues, exhibit substantial variations among different States[250]. Should developing countries allocate their limited resources towards addressing global environmental challenges, they might compromise their capacity to tackle other urgent issues, including, but not limited to, poverty alleviation, insufficient healthcare provision and elevated unemployment rates[251].

The principle of differentiation has been identified as an innovative mechanism that proactively integrates considerations of corrective justice into International Environmental Law, aiming to prevent environmental harm[252] together with the application of other tools and principles such as precaution. Additionally, this principle is recognized for encompassing distributive environmental justice concerns within MEAs as it endeavors to offer support to States lacking the financial or technical capacity to adhere to environmental standards. Now, a question arises: Could the Differentiation Principle be used as an instrument to create greener measures?

1.2.1 Using Differentiation for preferable environmental measures: aligning with States' capabilities

Differentiation stands out as a cornerstone in devising effective environmental protection strategies. Its strength lies in its capacity to tailor approaches to the unique circumstances of each nation. Recognizing the different levels of development, resources, and historical contributions to environmental issues, differentiation allows for the creation of measures that are both realistic and achievable for single countries. Moreover, differentiation operates as a catalyst for equity, fostering a broader participation in environmental agreements by

[249] *Ocean Conservancy, Stemming the Tide: Land-based Strategies for a Plastic-free* Ocean (2015).
[250] D. SHELTON, *Equity*, The Oxford Handbook of International Environmental Law, Oxford: Oxford University Press, 2012.
[251] United Nations Development Programme, Human Development Report 2016: Human Development for Everyone, 2016.
[252] T. HONKONEN, *The Common but Differentiated Responsability Principle in Miltilateral Environmental Agreements: regulatory and policy aspects*, Wolters Kluwer Law & Business, 2009.

acknowledging historical contexts and disparities among States. This acknowledgment creates a sense of fairness, encouraging a more inclusive global collaboration in environmental efforts. Particularly crucial for developing nations, differentiation offers the flexibility needed to navigate the delicate balance between economic development and environmental conservation. It empowers these countries to pursue sustainable paths that align with their economic needs while still contributing to global environmental goals. In the realm of international negotiations, differentiation also becomes an invaluable diplomatic tool. By recognizing and respecting the diverse perspectives and concerns of nations, it facilitates consensus-building. This diplomatic flexibility proves vital for the success of environmental agreements, ensuring that measures are agreed upon collectively. Furthermore, differentiation serves as a motivational force for compliance, especially among developing countries. The knowledge that efforts are acknowledged and differentiated based on specific circumstances provides an incentive for active engagement and adherence to international environmental agreements. Differentiation, when judiciously applied, emerges as a potent and indispensable tool in the pursuit of successful environmental measures.

Nevertheless, differentiation has encountered criticism for its perceived role in potentially introducing double standards in environmental protection. There is a suggestion that differential treatment may not inherently lead to agreements conducive to sustainable evolution[253]. In this view, the mere existence of differentiation is considered the primary factor contributing to the dilution of environmental measures. Alternatively, from another perspective, it is proposed that, within the framework of a specific treaty, the degree of differential treatment should ideally be constrained to align closely with the object and purpose of the same treaty[254]. Concerns have been raised about the risk of weakening the juridical nature of norms and creating incentives for multinational companies to exploit weaker regulations. Despite these critiques, differentiation remains integral to

[253] Y. LE BOUTHILLIER, *Des constats et des questions sur le principe des responsabilités communes mais différenciées,* Cahiers de Droit, 2014.
[254] L. RAJAMANI, *Differential Treatment in International Environmental Law*, Oxford Monographs in International Law, op. cit.

sustainable development, a reflection evident in documents such as the Rio Declaration[255].

1.2.2 Differentiated Treatment in consideration of States' complexity: protection of disadvantaged communities

Differentiated treatment is pivotal in addressing the protection of disadvantaged groups, especially when considering the complexity of States. The current paradigm of differentiation has fallen short in recognizing the complexity and diversification of States, especially large nations.

It is imperative to broaden the conceptualization of differential treatment, still anchored in the nation-State framework but extending beyond it to consider additional factors. This approach acknowledges that a State may be assessed differently based on the specific issue under consideration, as contributions to environmental harm may not be uniformly distributed across its entire territory. Furthermore, within countries, there exist significant inequalities, and differentiation must ensure that its advantages predominantly reach the most vulnerable and disadvantaged populations. A critical challenge for International Law lies in transcending the sovereignty veil when assigning responsibility for environmental damage and its mitigation. It becomes essential to determine how a country's responsibility and capacity are measured concerning its least advantaged members. Even a nation resilient in the aggregate may warrant differentiation if the majority of its population is vulnerable and at risk of bearing disproportionate consequences from environmental harm[256]. Regions characterized by low resilience and fragility require methods and data that enable policymakers to recognize their specific challenges. This recognition is essential for developing effective strategies and policies aimed at addressing the unique criticalities these regions face[257].

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[255] P. CULLET, *Differential Treatment in Environmental Law: Addressing Critiques and Conceptualizing the Next Steps,* op. cit.
[256] P. CULLET, *Differential Treatment in Environmental Law: Addressing Critiques and Conceptualizing the Next Steps,* op. cit.
[257] N. BELLANTUONO, F. P. LAGRASTA, P. PONTRANDOLFO, B. SCOZZI, *Well-being and Sustainability in Crisis areas: the Case of Taranto*, Sustainability Journal, vol. 13, issue 3, February 2021.

Now, considering all the environmental challenges and their potential effects on the community's health, the area of Taranto could be characterized as an environmentally disadvantaged community. Residents may have faced increased risks and vulnerabilities due to environmental conditions stemming from Ilva's industrial activities, warranting attention and differentiated treatment in environmental policies to address specific needs and concerns.

It is imperative to shift our focus and engage in a more systematic discussion of international accountability, examining States' obligations and duties.

2. Ensuring International Accountability for violations: directly enforcing International Environmental Law

The general definition of accountability states that it is «*the fact of being responsible for what you do and able to give a satisfactory reason for it, or the degree to which this happens*»[258]. However, this definition underscores accountability as a relational concept, with the involved parties not easily discernible[259]. Thus, accountability takes on varied meanings based on the context, making it inherently elusive and characterized as «*ever-expanding*»[260]. Accountability has also proven to be a dynamic concept in the realm of environmental compliance, where many have been the actors. Since the conference on environmental protection in Stockholm in 1972, the global community has consistently demonstrated its commitment by prolifically establishing numerous MEAs[261]. Even if this proactivity is universally appreciated, some critical issues have risen. For example, the predominant role of States in international relations poses substantial challenges when attempting to establish international agreements on environmental issues. Despite the transboundary nature of environmental

[258] *Online Cambridge Dictionary*, "Accountability".
[259] M. NEHME, O. W. PEDERSEN, *Accountability and offsetting in environmental law enforcement,* Journal of Law and Society, Vol. 49 issue 1, February 2022.
[260] R. MULGAN, *"Accountability": An Ever-Expanding Concept,* PA, Public Administration, vol. 78, 2000.
[261] Multilateral Environmental Agreement (MEA) is a generic term for treaties, conventions, protocols and other binding instruments related to the environment. It is usually applied or referred to instruments of a geographic scope wider than that of a bilateral agreement. Since the 1970s, multilateral environmental agreements were developed, negotiated and agreed on, to address the myriad of environmental issues and challenges, manage, conserve and protect the environment as well as ensuring the sustainable use of natural resources.

concerns, international law is constrained by borders. The principle of sovereign equality among States[262], a cornerstone of international law, necessitates that the substance and evolution of any MEA addressing environmental problems hinge upon the consent of each contracting party, unless explicitly stated otherwise. This dilemma raises the issue of how to prevent the adoption of international environmental standards determined by the least stringent requirements. Additionally, the well-established principle granting States exclusive control over activities within their boundaries, provided such activities do not cause significant adverse environmental effects elsewhere, poses further complexity[263].

It is widely recognized that creating mechanisms to ensure the compliance of States with their international obligations regarding environmental protection is pivotal for maintaining the credibility and effectiveness of International Environmental Law, but securing accountability for violations of international environmental law and compelling States to adhere to standards constitutes a complex and imperative challenge within the global effort to tackle environmental issues. Several MEA frameworks have observed that numerous contracting parties consistently neglect their treaty obligations, particularly concerning the submission of national reports containing information essential for facilitating reviews of their implementation performance. These are some problematic deficiencies in implementation[264]. This entails the need for the renewal and adjustment of certain elements, establishing a system that compels States to comply and enabling the creation of a framework capable of preventing cases similar to Ilva. The realm of international environmental law is delineated by an array of treaties, conventions, and agreements, collectively formulating the structure for mitigating environmental concerns. Notwithstanding, the efficacy of enforcement mechanisms is frequently discussed and criticized, with States exhibiting distance towards compliance attributable to diverse factors including economic interests, inadequate institutional capacity, or political considerations.

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[262] Art. 2.1 Charter of the United Nations, « *The Organization is based on the principle of the sovereign equality of all its members* ».
[263] M.HEDEMANN-ROBINSON, *Enforcement of International Environmental Law: Challenges and Responses at the International Level*, Routledge research in International Environmental Law, 2018.
[264] M.HEDEMANN-ROBINSON, *Enforcement of International Environmental Law: Challenges and Responses at the International Level,* ibidem.

It is imperative to conduct a more thorough examination of the subject, scrutinizing key factors such as differentiation, which serves as a fundamental instrument essential for constructing a dependable framework for environmental protection.

2.1 Obligations in International Law and their extension towards environmental application

In the context of International Law, positive and negative obligations represent two fundamental categories to which States must adhere to in order to promote and protect human rights. Positive obligations require national authorities to act, specifically by implementing reasonable and appropriate measures to safeguard individual rights. Negative obligations, on the other side, mandate refraining from actions that could violate such rights. Positive and negative obligations play a crucial role in maintaining peace, security, and mutual respect among States. These principles derive from international treaties, customs, and general principles of law recognized by the international community[265]. The recognition of positive and negative obligations has also been extended over time in the field of environmental law, reflecting the growing awareness of the need to preserve the global ecosystem for current and future generations. International agreements underscore the importance of global cooperation in addressing environmental challenges. At this point in the analysis, it is crucial to focus on some of these obligations to better understand how they can serve the international community to ensure a more robust form of compliance.

The realm of International Environmental Law involves serious considerations of State responsibility and liability. In the context of environmental harm, the terminology of State responsibility, akin to general international law, is distinguished from the domestic law concept of liability. Liability in IEL encompasses fault liability, strict and absolute liability, and civil liability, reflecting a complex landscape. IEL's unique challenge is holding States accountable for

[265] B. GRONEMEYER, *Why We Need More Positive Obligations in International Law*, St. Andrews Law Review, 11 October 2022.

transboundary environmental harm. The doctrinal debate on fault as a component of the primary obligation reveals that it may not be a requisite in certain IEL cases. For instance, instruments like the Stockholm Declaration do not mandate intention or negligence for a wrongful act related to transboundary harm.

Key State obligations of prevention, cooperation, notification, restoration, and compensation play crucial roles in ensuring compliance in IEL[266]. The precautionary, preventative, and sustainable development principles guide the implementation and compliance of IEL. However, further specifications are needed.

2.1.1 Obligations on States: Monitoring and Reporting

Monitoring and reporting obligations IEL constitute a pivotal element in the collective endeavor to tackle global environmental issues. These responsibilities necessitate proactive steps to methodically observe, evaluate, and share details about State's environmental undertakings. The mechanisms for monitoring and reporting play a vital role in fostering transparency, ensuring accountability, and facilitating international collaboration, all of which are essential for advancing sustainable environmental practices.

These mechanisms have emerged as predominant tools across multiple MEAs, with major treaty bodies instituting specific mechanisms for this purpose. The evolution of this system is exemplified by the Montreal Protocol[267], established in 1987, which marked a notable shift in compliance control mechanisms within the environmental domain, transitioning from a confrontational approach to compliance control to a system characterized by cooperation and partnership principles[268]. Some mechanisms employed to ensure compliance with environmental obligations focus particularly on monitoring and reporting. A distinction must be made between primary norms, which prescribe specific behavior or conditions triggering legal consequences, and secondary norms, which

[266] B. O. GIUPPONI, *International Environmental Law Compliance in Context: mechanisms and case studies*, Routledge, 2021.
[267] See n. 218.
[268] U. BEYERLIN, P. T. STOLL, R. WOLFRUM, *Conclusions Drawn from the Conference on Ensuring Compliance with MEAs.*

outline consequences for breach or fulfillment. Substantive obligations include duties like preventing environmental damage, while procedural obligations contribute to the implementation of substantive obligations. Within procedural obligations, there are two main types of mechanisms. The first involves States submitting reports to a treaty body on measures taken to implement obligations, often accompanied by monitoring systems. The second type, more precise in deadlines and formats, grants the receiving treaty body greater powers, such as verification and the ability to request additional information. Examples include the Protocol on the Reduction of Sulphur Emissions[269], where States report on progress towards emission reduction goals.

The Ramsar Convention[270] establishes a mechanism for communication and verification of information on protected sites, while CITES[271] requires parties to establish and communicate reports on convention implementation[272]. Meanwhile, the UNFCCC systems necessitates further specifications. Article 12 of the UNFCCC delineates the procedural obligation linked to monitoring emissions and absorptions, with the frequency, content, and level of verification contingent on a State's circumstances. Annex I States are obligated to furnish annual reports on their greenhouse gas emissions through the "Common Reporting Format" (CRF) and "National Inventory Report" (NIR), supplemented by information mandated by the Kyoto Protocol. Additionally, they are required to submit regular national

[269] The 1985 Helsinki Protocol, focusing on reducing Sulphur emissions or their transboundary fluxes by a minimum of 30%, was adopted by the Executive Body in Helsinki on July 8, 1985. The baseline year for calculating reductions is set at 1980. Parties to the protocol are obligated to formulate national programs, policies, and strategies to achieve the targeted reduction in Sulphur emissions. Furthermore, the parties are encouraged to assess the need for additional reductions.

[270] The Ramsar Convention, officially known as the Convention on Wetlands of International Importance, was signed in Ramsar, Iran, on February 2, 1971, by a group of governments, scientific institutions, and international organizations participating in the International Conference on Wetlands and Waterbirds. This conference was promoted by the International Office for Wetlands and Waterbird Research.

[271] CITES, also known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora or the Washington Convention, is a multilateral treaty established to safeguard endangered plants and animals from the perils of international trade. The initiative originated from a resolution adopted in 1963 during a meeting of the International Union for Conservation of Nature (IUCN). Opened for signature in 1973, CITES officially came into force on July 1, 1975. Its primary objective is to ensure that the international trade, both import and export, of specimens from animals and plants listed under CITES does not pose a threat to the survival of these species in their natural habitats. This is accomplished through a framework of permits and certificates, offering varying levels of protection to over 38,000 species.

[272] P. M. DUPUY, J. E. VIÑUALES. *International Environmental Law*, Cambridge Uiversity Press, 2018.

communications outlining measures implemented to curtail emissions. These reports may be subject to "in-depth reviews" conducted by expert teams coordinated by the Secretariat[273].

The pivotal role played by monitoring and reporting mechanisms within the framework of IEL emphasizes their profound significance as indispensable instruments that facilitate transparency, accountability, and efficacious global collaboration in confronting environmental challenges while advancing sustainable practices.

2.1.2 Obligations of conduct and of result: too much discretion left to States

There is a fundamental object of discussion which regards States' obligations and duties, and this entails their innate characteristics. The discussions must now shift to the differentiation between obligations of conduct and of result. All obligations can be categorized into two types.

The first type, known as "obligations of result", necessitates the achievement of a specific outcome. In contrast, the second type, termed "obligations of conduct", demands efforts directed toward a goal or outcome[274]. An example can be used to better understand the two: In the medical context, the distinction between obligations of conduct and result is evident. If a doctor is obligated to cure a patient (result), it implies a commitment difficult to guarantee due to uncertainties in healthcare. Instead, the doctor typically assumes an obligation of conduct, pledging to make every reasonable effort to treat the patient. The focus is on the doctor's conduct rather than the guaranteed result. This distinction holds significance because it shifts the burden of proof between parties. In obligations of result, the debtor is presumed responsible unless proven otherwise, placing the burden on the doctor to demonstrate the impossibility of fulfilling the obligation. Conversely, in obligations of conduct, the burden rests on the patient to prove that the doctor failed to exert best efforts. Additionally, the patient must demonstrate the damage caused by the doctor's negligence, making the breach

[273] P. M. DUPUY, J. E. VIÑUALES. *International Environmental Law*, op. cit.
[274] B. MAYER, *Obligations of Conduct in the International Law on Climate Change: a Defence*, Review of European, Comparative and International Environmental Law, September 2019.

harder to prove. Another practical aspect is that the distinction aids in pinpointing the exact moment of a violation. In obligations of result, the violation occurs when the intended outcome is not achieved. In contrast, obligations of conduct focus on the occurrence of the prohibited situation, disregarding the potential outcome[275].

Distinguishing between obligations of result and of conduct is crucial for assessing compliance conditions and processes. While the Kyoto Protocol imposes an obligation of result on Annex I parties to ensure their greenhouse gas emissions stay within assigned limits, the general international law obligation, such as the no-harm principle, is better characterized as an obligation of conduct. In the Paris Agreement, Article 4(2) emphasizes an obligation of conduct for country parties to pursue domestic mitigation measures in line with the objectives of their NDCs[276], marking a significant aspect of the agreement. The Stockholm and Rio Declarations, for instance, incorporate a "responsibility to ensure", a phrase that has been construed alternatively as an obligation of result[277] and as an obligation of conduct[278]. However, the prevailing interpretation[279] suggests that the "responsibility to ensure" in the Stockholm and Rio Declarations is to be understood as the acknowledgment of an obligation of conduct[280].

Many scholars have discussed about the significance of the implementation of obligations of conduct. Opinions on these mechanisms diverge, with some regarding them as valuable instruments guided by fundamental behavioral principles such as Reasonableness and Good Faith. The notion of Reasonableness originates from the *bonus pater familias* principle, which dictates that an individual must exercise a certain level of reasonable care when impacting other individuals

[275] M. MALAIHOLLO, *Due Diligence in International Environmental Law and International Human Rights Law: A Comparative Legal Study of the Nationally Determined Contributions under the Paris Agreement and Positive Obligations under the European Convention on Human Rights*, Netherlands International Law Review, April 2021.
[276] See supra Chapter 2, 2.1.1.
[277] Proceedings Pursuant to the OSPAR Convention (Ireland v United Kingdom) (Final Award) (2003) 23 RIAA 59 paras 132-137.
[278] *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area* (Advisory Opinion), ITLOS Rep 10 paras 110ff, 2011.
[279] J. E. VIÑUALES, *The Rio Declaration on Environment and Development: a commentary,* Oxford Commentaries on International Law, February 2015 and L.A. DUVIC PAOLI, "Principle 2".
[280] B. MAYER, *Obligations of Conduct in the International Law on Climate Change: A Defence*, op. cit.

or their property. Early legal scholars and international legal practice applied this principle to ascertain the expected degree of care from a State[281].
Conversely, critics contend that their application to States is characterized by an excessively broad and flexible margin.

2.1.3 The Margin of Appreciation granted to States

The margin of appreciation is the discretionary space afforded to States for implementing and interpreting their international legal obligations. In IEL this acknowledges the varying capacities, resources, and circumstances among States, providing flexibility in meeting commitments while aligning with overall environmental protection and sustainable development objectives. Nevertheless, the concept is contentious, critics express concerns about potential abuse or inadequate fulfillment of international environmental commitments due to excessive discretion. There is also a risk that a broad margin of appreciation could weaken the establishment of consistent and robust international environmental standards.

An example is needed to better understand these criticisms: an essential analysis on this matter must be dedicated, for example, to the margin granted to States in relation to their obligations stemming from the European Convention on Human Rights (ECHR). Here, the concept of the margin can be interpreted as the latitude that the Strasbourg institutions are willing to grant national authorities in meeting their obligations under the ECHR[282]. The extensive margin of appreciation applied in environmental protection cases, particularly concerning Articles 2 and 8 ECHR[283], reduces the probability of identifying a violation, possibly resulting in unaddressed environmental concerns. The Court places environmental concerns within the context of individual rights, weighing them against competing economic interests. A broader margin of appreciation would allow States to prioritize economic interests over environmental protection, leading to an under-appreciation

[281] G. BARTOLINI, *The historical roots of the due diligence standard,* Due diligence in the international legal order, Oxford University Press, 2020.
[282] S. GREER, *The Margin of Appreciation: Interpretation and discretion under the European Convention on Human Rights,* Human Rights Files, 2000.
[283] See infra Chapter 2, 3.

of environmental concerns[284]. Under the ECHR, the concept of the margin of appreciation acknowledges States' discretion in choosing necessary means to fulfill human rights obligations[285]. Developed by the European Court of Human Rights (ECtHR) to reconcile national perspectives with a uniform application of the ECHR, the margin of appreciation sets a minimum standard while considering the specificities of each State. Rooted in the principle of subsidiarity[286], it recognizes that States, being closest to the relevant social context, are better positioned to assess required measures. In environmental pollution cases and positive obligations under Article 8 ECHR, the margin of appreciation aligns with the fair balance test[287]. The degree of scrutiny applied by the Court in the fair balance test inversely affects the width of the State's margin of appreciation. The Court may intensify scrutiny if nuisance exceeds reasonable levels, indicating a nuanced approach to balancing State discretion and effective human rights protection[288].

The concept of the margin recognizes the practical realities that States face in implementing international environmental obligations. Striking the right balance between providing flexibility and ensuring effective enforcement remains a challenge in the development and enforcement of IEL.

2.2 Implementation of EU Environmental Legislation

In evaluating international systems designed to strengthen enforcement of global environmental commitments, it is crucial to consider the distinctive characteristics

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[284] H. MÜLLEROVÁ, *Environment Playing Short-handed: Margin of Appreciation in Environmental Jurisprudence of the European Court of Human Rights,* Reciel, review of European Community & International Environmental Law, 2015.
[285] Y.ARAI-TAKAHASHI, *The margin of appreciation doctrine and the principle of proportionality in the jurisprudence of the ECHR*, Intersentia, 2002.
[286] P. CAROZZA, *Subsidiarity as a structural principle of international human rights law,* American Journal of International Law*,* 2003.
[287] The ECtHR employs a fair balance test. This is evident in the ECtHR's handling of environmental pollution cases related to Article 8 ECHR. The *Powell and Rayner v. UK* case illustrates this approach, emphasizing the need to strike a fair balance between individual interests (protected by Article 8 ECHR) and the broader community's concerns, like economic well-being. In this case, the Court rejected the applicants' argument, highlighting the importance of maintaining equilibrium between conflicting interests.
[288] M. MALAIHOLLO, *Due Diligence in International Environmental Law and International Human Rights Law: A Comparative Legal Study of the Nationally Determined Contributions under the Paris Agreement and Positive Obligations under the European Convention on Human Rights,* op. cit.

of the EU's supranational legal framework. The impact of the Union should not be underestimated in discussions about enforcing international environmental obligations, given its integral role within the network of international organizations working collectively to promote global environmental cooperation. The EU's robust approach to overseeing the implementation of its environmental norms stands out, presenting a marked contrast to the typically more lenient engagement with law enforcement issues observed in international environmental agreements. This assertive stance by the EU merits specific attention and scrutiny[289].

Since the 1960s, despite initially lacking explicit legal foundations, as environmental protection is not mentioned in the Treaty of Rome[290], the EU has adopted an astonishing number of regulations and directives. The Union's environmental legislation now comprehensively addresses various environmental issues, such as waste management, material recycling, atmospheric pollution, noise, water quality and much more. While the EU demonstrated efficiency and motivation in formulating policies, the implementation of this extensive legal framework was neglected for a considerable period. The notion of an "implementation deficit" in EU environmental policy gained prominence in the policy debate in the late 1980s[291].

Then came the Single European Act[292] in 1986 and amended the Union's founding treaty framework. Since then, the EU's constitutional structure formally includes and further solidifies a common environmental protection policy as an

[289] M.HEDEMANN-ROBINSON, *Enforcement of International Environmental Law: Challenges and Responses at the International Level*, op. cit.

[290] The Treaty of Rome, also known as the EEC Treaty (formally the Treaty establishing the European Economic Community), marked the establishment of the European Economic Community (EEC), a prominent entity within the European Communities (EC). This treaty, initially signed on 25 March 1957 by Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany, took effect on 1 January 1958. Originally titled the "Treaty establishing the European Economic Community" and presently referred to as the "Treaty on the Functioning of the European Union", it remains one of the two pivotal treaties in the current EU.

[291] M. GLACHANT, *The Need for Adaptability in EU Environmental Policy design and Implementation, European Environment*, the journal of European environment policy, 2001.

[292] The Single European Act (SEA), signed in 1986 and effective from 1987, marked a significant amendment to the 1957 Treaty of Rome, representing the first major revision. Among its key objectives, the SEA aimed to establish a single market within the European Community by 1992, eliminating non-tariff barriers and fostering cross-border trade and investment. The Act also introduced the cooperation procedure and expanded Qualified Majority Voting to new areas, streamlining the legislative process. In anticipation of the 1992 Maastricht Treaty, the SEA signatories expressed a collective will to transform their relations into a European Union.

integral part of its activities. This policy mandates that the realization of the internal market align with the sustainable development of Europe and is grounded in a high level of protection and improvement of the quality of the environment. The current founding treaty framework anchors the EU's environmental policy to principles such as precaution, preventive action, proximity, and the polluter pays principle. Additionally, it specifies that environmental protection requirements must be integrated into the definition and implementation of Union policies and activities[293].

Article 191 TFEU mandates that the Union environmental policy should contribute to « *promoting measures at international level to deal with regional or worldwide environmental problems, and in particular climate change* »[294]. The EU's Charter of Fundamental Rights[295], integrated into the Union's legal framework since December 1, 2009, emphasizes the need for a high level of environmental protection and sustainable development. These legal principles have led to the adoption of around 200 pieces of legislation covering various environmental areas, forming a significant part of national environmental policies in MSs. The European Commission has evaluated these measures as foundational to a significant portion of national environmental policies within the EU's MSs. It estimates that approximately 80% of environmental laws enacted at the national level in the Union are derived from EU environmental legislation[296].

For what concerns the enforcement of EU environmental law, The Union has established a notably robust, centralized, and supranational institutional system. Two key institutions, the European Commission[297] and the Court of Justice of the European Union (CJEU)[298], bear the responsibility for ensuring the proper application of rules. The Commission is authorized to initiate legal proceedings,

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[293] M.HEDEMANN-ROBINSON, *Enforcement of International Environmental Law: Challenges and Responses at the International Level*, op. cit.
[294] Art. 191 TFEU.
[295] The Charter of Fundamental Rights of the European Union incorporates specific political, social, and economic rights for European Union (EU) citizens and residents into EU law. Initially drafted by the European Convention, it was formally proclaimed on December 7, 2000, by the European Parliament, the Council of Ministers, and the European Commission. However, its legal status was unclear until it gained full legal effect with the entry into force of the Treaty of Lisbon on December 1, 2009.
[296] Environment Directorate General (DGENV), European Commission: Management Plan 2013 (Ref. ARES (2013) 416906, 14 January 2013.
[297] Art. 17 TEU.
[298] Art. 19 TEU.

commonly known as infringement proceedings, against MSs that violate EU law. Reflecting a cooperative approach similar to international collective compliance mechanisms, the Commission initially engages with the concerned MS to seek an amicable resolution outside the court whenever possible. Originally, the EU legal framework only allowed the CJEU to issue a judicial declaration of non-compliance. However, following treaty amendments in 1993 and 2009[299], the CJEU is now endowed with additional powers to levy financial penalties on MSs that fail to comply. EU's infringement procedures have played a crucial role in supervising MS adherence to EU environmental protection legislation. By the conclusion of 2014, the CJEU had issued over 550 judgments related to environmental infringements[300]. As of the end of March 2018, 16 out of 29 CJEU judgments (55%)[301] that led to the imposition of financial penalties on non-compliant MSs were related to breaches of EU environmental law[302].

Italy's interaction with European Institutions concerning the Ilva case, as outlined in the first chapter, has been complex. Nevertheless, there have been general criticisms directed at EU bodies for the perceived absence of a more stringent non-compliance mechanism. The issue of non-compliance with EU environmental law is fundamental and warrants discussion to gain a deeper understanding of the broader context that led to Italy being found in violation of its implementation duties.

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[299] Treaty on European Union (TEU), original version, 1992 Maastricht Treaty, OJ 1992 C224, 2007 Lisbon Treaty, OJ 2007 C306.

[300] M. HEDEMANN-ROBINSON, *Enforcement of European Union Environmental Law*, Routledge, 2nd edition, 2015.

[301] Case C-387/97 Commission v Greece (Kouroupitos landfill), Case C-278/01 Commission v Spain (Bathing Waters), Case C-304/02 Commission v France (Fishing Controls), Case C-121/07 Commission v France (GMO Controls), Case C-279/11 Commission v Ireland (EIA), Case C-374/11 Commission v Ireland (Waste Water Treatment Systems), Case C-533/11 Commission v Belgium (Waste Water Treatment Systems), Case C-576/11Commission v Luxembourg (Waste Water Treatment Systems), Case C-196/13 Commission v Italy (Italian Illegal Landfills), Case C-378/13 Commission v Greece (Greek Illegal Landfills), Case C-243/13 Commission v Sweden (Swedish IPPC), Case C-653/13 Commission v Italy (Campania Waste), Case C-167/14 Commission v Greece (Greek Urban Wastewater (2), Case C-557/14 Commission v Portugal (Portuguese Urban Wastewater (2), Case C-584/14 Commission v Greece (Greek Hazardous Waste Planning), Case C-328/16 Commission v Greece (Thriasio Pedio Wastewater (2).

[302] M.HEDEMANN-ROBINSON, *Enforcement of International Environmental Law: Challenges and Responses at the International Level*, op. cit.

2.2.1 The Non-Compliance Problem

Ensuring adherence within the multi-tiered EU system is a substantial challenge. The tally of ongoing infringement proceedings with the Commission surpassed all prior records by the conclusion of 2016. In stark contrast, the instances brought before the CJEU have exhibited a consistent and substantial decline, plummeting from 212 in 2007 to a mere 31 in 2016[303]. In addition to this, governments tend to apply a tactic when faced with binding EU policies: the so-called threat of non-compliance to prompt the Commission to act and implement the domestically unpopular policy. In doing so, governments seek to shift responsibility to the EU. When a government, with a deliberate and politically motivated intent[304], threatens non-compliance, it makes a strategic choice[305] to evade becoming the target of public blame[306].

Scholars attribute major causes of non-compliance to factors at the MS level. Country-specific variables, including legal culture, administrative traditions, State power, and capacity, are identified as key considerations explaining variations in non-compliance. This perspective was evident during the accession of Greece, Portugal, and Spain in the 1980s, sparking a debate on whether the EU faced a "Southern problem"[307]. The challenges faced by the new members, particularly in adhering to EU environmental policy, were linked in the literature to common deficiencies within the Mediterranean countries concerning their administrative and political systems[308]. A study shows that spikes of non-compliance were registered after the accession of new MSs. However, numbers (as evident in Figure 1)

[303] G. FALKNER, *A causal loop? The Commission's new enforcement approach in the context of non-compliance with EU law even after CJEU judgements*, Journal of European Integration, vol. 40, 2018.
[304] O. TREIB, *Implementing and Complying with EU Governance Outputs*, Living Reviews in European Governance, 2014.
[305] B. SCHLIPPHAK, O. TREIB, *Playing the Blame Game on Brussels: The Domestic Political Effects of EU Interventions against Democratic Backsliding*, Journal of European Public Policy, 2017.
[306] L. KRIEGMAIR, B. RITTBERGER, B. ZANGL, T. HEINKELMANN-WILD, *Dolce far niente? Non-compliance and blame avoidance in the EU*, western European politics, vol. 45, 2022.
[307] A. LA SPINA, G. SCIORTINO, *Common agenda, Southern rules: European integration and environmental change in the Mediterranean States,* Liefferink, J.D., Lowe, P.D. & Mol, A.P.J. eds. European integration and environmental policy, 1993.
[308] A. BUZOGANY, T. A. BÖRZEL, *Compliance with EU Environmental Law. The iceberg is Melting*, Environmental Politics, July 2018.

indicated not only the failure to comply of newcomers, but also of other cemented MSs, implying how the problem was of a broader nature.

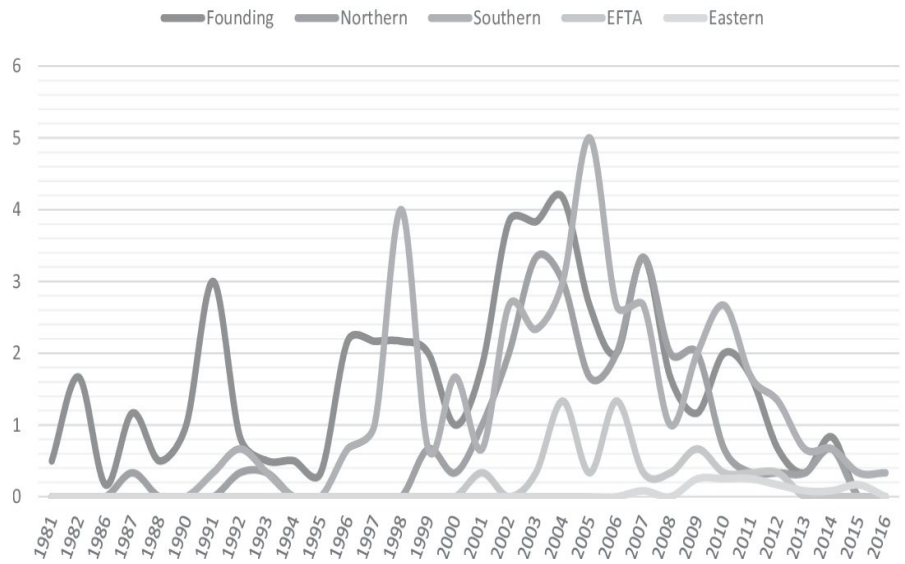

Figure 1: (average) annual court decisions in the area of environmental policy per MS [309].

Infringement procedures certainly provide an overview of non-compliance within the EU, but they are also uncapable of representing an absolute measure of the issue, as scholars criticize them for representing only the "tip of the iceberg"[310]. From a legal perspective, initiation of infringement procedures does not necessarily imply breaches of the law. Rather, they are launched when the Commission has reasonable grounds to suspect non-compliance. Legal confirmation requires a judgment from the CJEU, and in over 90% of cases, the CJEU supports the Commission against MSs. Despite these criticisms, infringement proceedings undoubtedly offer unbiased insights into MS non-compliance with fundamental aspects of the *acquis*

[309] A. BUZOGANY, T. A. BÖRZEL, *Compliance with EU Environmental Law. The iceberg is Melting*, op. cit.
[310] M. HARTLAPP, G. FALKNER, *Problems of operationalisation and data in EU compliance research*, European Union Politics, 2009.

communautaire[311]. Another important finding is that by the end of 2009, the Environment Directorate General had 451 infringement cases open against MSs[312].

The EU, in recent times, has introduced new ways to augment its enforcement system, basing it more on a cooperation with MSs. In 2022, the Commission enhanced its operational methods by introducing the stocktaking exercise[313] aimed at ensuring that « *the best possible enforcement tools are available to make it work in practice* »[314]. However, Infringement procedures have not reduced in number. In 2022, it opened 551 new infringement cases in all areas of EU law, and in 2021 the Commission referred a total of 35 cases to the CJEU, 4 four more than in 2020[315].

It is crucial at this point to comprehend the sanctioning mechanism and assess how the Union could benefit from a system built on providing its MSs with enhanced guidance. Such a system could effectively push States to comply, thereby preventing the recurrence of cases like Ilva, where Italy's inactivity and lack of implementation has sparked a long and tumultuous *continuum* of legal consequences.

2.2.2 Pushing States to comply: from financial sanctions to a combination of management and enforcement

The primary punitive measure within the EU involves the imposition of financial sanctions on a MS when a breach is determined by the CJEU. The Court holds the authority to levy financial penalties against the non-compliant MS, aiming to incentivize adherence to EU environmental legislation. However, this sanctioning

[311] The term "*acquis communautaire*", derived from the French language, refers to the aggregate of rights, legal responsibilities, and political objectives that serve to unify and obligate the member States within the EU. Countries aspiring to join the EU must wholeheartedly embrace and adopt this framework without any reservations.
[312] *Statistics on Environmental Infringements*, European Commission publication.
[313] *Stocktaking report on the Commission working methods for monitoring the application of EU law*, publication of the European Commission, 14 July 2023.
[314] *Enforcing EU law: Commission action brings concrete benefits for citizens and businesses and protects rule of law*, EU Commission press release, 14 July 2023.
[315] *Enforcing EU law: Commission action brings concrete benefits for citizens and businesses and protects rule of law*, ibidem.

mechanism has been subject to criticism during the years. It is crucial at this point to analyze two cases where the Court imposed penalty payments.

In the first case[316], the court mandated Greece to pay a daily fine of €20,000 until compliance with a previous judgment concerning the operation of an illegal landfill site. Greece was failing to comply with Article 4 of the Waste Framework Directive[317], specifically regarding the safe disposal of waste without endangering human health and the environment. Upon the eventual closure of the site, the Commission closed the case, overlooking the need to address the environmental hazard posed by the waste. This led to the condoning of an ongoing breach, rectified only through new infringement proceedings[318].

In a second case[319], Spain was ordered by the court to pay €624,500 per annum for each 1% of its bathing waters that continued to fall short of standards outlined in the 1976 Bathing Water Directive[320]. The Commission misinterpreted the Directive's requirements and closed the case without requiring Spain to make payments, erroneously stating that 95% of Spain's bathing waters complied with set standards. This decision rendered the Court's financial penalty ineffective, as 5% of Spain's bathing waters still failed to meet the required standards[321].

The Commission also faces challenges in effectively handling environmental cases due to its limited inspection powers. Unlike areas like agriculture, fisheries, and competition policy, the Commission lacks the authority

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316 Case C-387/97, *Commission v Greece*, ECR I-5047, 2000.

317 The Waste Framework Directive (WFD) is a directive within the EU aimed at implementing measures to safeguard the environment and human health by preventing or mitigating the adverse impacts associated with waste generation and management. Additionally, it seeks to reduce the overall environmental footprint of resource use and enhance resource efficiency. The initial Waste Framework Directive dates back to 1975, with substantial amendments introduced in 1991 and 2006. The current version of the directive was adopted on 19 November 2008. The primary objective of the WFD is to establish the foundation for transforming the EU into a "recycling society", emphasizing the avoidance of waste generation and the utilization of waste as a valuable resource, as Stated in its preamble.

318 B. JACK, *Enforcing Member State Compliance with EU Environmental Law: A Critical Evaluation of the Use of Financial Penalties*, Journal of Environmental Law, Oxford University Press, 26 November 2010.

319 Case C-278/01, *Commission v Spain,* ECR I-14141, 2003.

320 The Bathing Water Directive was introduced in 1976 to protect and improve bathing water quality, with the aim of protecting human health and facilitating recreational use of natural waters. It was replaced by the 2006 Bathing Waters Directive in 2021, replacing the old three-tier classification scheme with a tighter four-tier scheme.

321 B. JACK, *Enforcing Member State Compliance with EU Environmental Law: A Critical Evaluation of the Use of Financial Penalties,* op. cit.

to inspect MS adherence to EU environmental law. The Commission, however, may initiate independent and limited investigations. Given its resource constraints, the Commission heavily depends on decentralized monitoring data furnished through citizen and business complaints, parliamentary inquiries, and petitions. Additionally, it relies on information from MSs regarding the transposition of directives into national law, known as non-notifications or non-communication[322]. This semi-absence of inspection powers hinders the Commission's capacity to substantiate instances where a MS has not fully complied with a Court judgment. Additionally, it affects the efficiency of Article 260(2) TFEU[323], making it more challenging for the Commission to secure judgments against MSs in the early stages of infringement cases. The potential imposition of financial penalties outlined in Article 260(2) has resulted in varied reactions from MSs. In certain instances, this prospect has motivated them to promptly address Court judgments and even prevent infringement actions altogether. Conversely, in other situations, MSs have aimed to prolong compliance as much as possible[324].

These difficulties for the EU could be avoided by the implementation of a different system, where compliance is managed through guidance rather than enforced to MSs. The majority of EU MSs admitted in recent decades struggle with weak capacities, facing challenges in aligning with EU laws transferred to the supranational level by States with more robust regulatory standards. Recognizing this, the Commission has developed an extensive toolkit to bolster the compliance capacities of these MSs. The Commission's emphasis on management strategies has played a pivotal role in narrowing the implementation gap. Prioritizing capacity-building and alleviating compliance costs has demonstrated greater

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[322] A. BUZOGANY, T. A. BÖRZEL, *Compliance with EU Environmental Law. The iceberg is Melting*, op. cit.

[323] Article 260 (2) TFEU « *If the Commission considers that the Member State concerned has not taken the necessary measures to comply with the judgment of the Court, it may bring the case before the Court after giving that State the opportunity to submit its observations. It shall specify the amount of the lump sum or penalty payment to be paid by the Member State concerned which it considers appropriate in the circumstances. If the Court finds that the Member State concerned has not complied with its judgment it may impose a lump sum or penalty payment on it. This procedure shall be without prejudice to Article 259.* »

[324] B. JACK, *Enforcing Member State Compliance with EU Environmental Law: A Critical Evaluation of the Use of Financial Penalties,* ibidem.

efficacy than relying solely on surveillance and punitive measures[325]. It is not surprising that the Commission has shown a clear preference for management over enforcement[326]. By adopting less stringent legislation and enhancing MS capacities to handle compliance obligations, the Commission has successfully reduced the necessity for legal action against non-compliant MSs. However, it is crucial to note that non-compliance is not solely a matter of capacity; enforcement remains a vital component in the Commission's compliance approach, often employed in conjunction with management strategies[327].

3. Human Rights at stake

The Ilva case presents intricate challenges at the convergence between environmental law and human rights, underscoring the need for a stringent approach that carefully weighs environmental protection against the welfare of affected individuals and communities. Central to the Ilva case are profound considerations pertaining to human rights, for example entailing the right to a healthy environment and its expanded interpretation in the right to life and the right to respect for private and family life as enshrined in the European Convention on Human Rights[328]. The foundational right of individuals to reside in an environment conducive to their health and overall well-being is integral to this discourse. Even though the Court does not enshrine a right to a healthy environment as such, the ECtHR does recognize a specific environmental case-law. Or to put it in their own words « *the European Court of Human Rights has been called upon to develop its case-law in environmental matters on account of the fact that the exercise of certain Convention rights may be undermined by the existence of harm to the environment and exposure to environmental risks* »[329].

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[325] R. BIEBER, F. MAIANI, *Enhancing centralized enforcement of EU law: Pandora's toolbox?'*. Common Market Law Review, 2014.
[326] M. HARTLAPP, *On enforcement, management and persuasion: Different logics of implementation policy in the EU and the ILO*, Journal of Common Market Studies, 2007.
[327] A. BUZOGANY, T. A. BÖRZEL, *Compliance with EU Environmental Law. The iceberg is Melting*, op. cit.
[328] Artt. 2 and 8 ECHR.
[329] European Court of Human Rights, *Factsheet Environment and the European Convention of Human Rights*.

But before the analysis of the Strasbourg Court's own activity, it is crucial to gain a more general understanding of the human rights at stake in the Ilva case. The contemporary perception of the "synergies"[330] between human rights and environmental conservation as inherently complementary traces its origins to the 1972 Stockholm Conference. The Stockholm Declaration underscored a profound interconnection between these two facets of international law. Specifically, Principle 1 articulates that « *man has the fundamental right to freedom, equality, and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being* »[331]. Today, this "synergistic view" is firmly entrenched in international practice[332], reflecting a recognition of the interdependence of environmental well-being and fundamental human rights, further accentuating the significance of a serious and equitable resolution to the multifaceted challenges posed by the Ilva case.

It is now essential for the discussion to examine the core human rights associated with the Ilva case. This analysis will commence with a broad acknowledgment of the right to life, followed by an exploration of the specifics within the Strasbourg regime. Similarly, the right to respect for private and family life will be addressed before delving into Ilva's direct jurisprudence.

3.1 Right to Life

The right to life represents a paramount and universally acknowledged human right, encapsulating the intrinsic dignity and value inherent in every individual. This right, delineated in several international and national legal frameworks, functions as a cornerstone in the safeguarding of human rights. The significance of this right is now universally acknowledged. It is considered absolute and exceptionally valuable in and of itself, being inherent in every human being and essential for the realization of all other human rights. Often termed the "supreme right" [333] and the "fountain

[330] P. M. DUPUY, J. E. VIÑUALES. *International Environmental Law,* op. cit.
[331] Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972.
[332] P. M. DUPUY, J. E. VIÑUALES. *International Environmental Law,* op. cit.
[333] UN Human Rights Committee, General Comment No. 36 on Article 6 of the International Covenant on Civil and Political Rights, on the Right to Life.

from which all human rights spring"[334], no public entity is permitted to deprive an individual of this right[335]. The right to life has also been designated as a norm of *ius cogens*"[336]. The acknowledgment of its existence is inviolable, and no government is permitted to deny its recognition. The State's duty to protect the right to life encompasses both negative and positive obligations. In the negative sense, governments are obligated to take all reasonable measures to prevent unlawful deprivations, including arbitrary deprivation. In the positive sense, governments must undertake all reasonable measures to enhance the right to life, such as reducing infant mortality and increasing life expectancy. This involves providing an adequate healthcare service to address the health needs of the population[337].

The initial explicit articulation of the right to life appeared in the 1776 Virginia Declaration of Rights in the United States[338]. This declaration, unanimously adopted on June 12, 1776, affirmed the inherent rights of all individuals, asserting that upon entering society, they could not, through any agreement, deprive their descendants of certain inherent rights, notably the enjoyment of life and liberty.

The international recognition of fundamental human rights, including the right to life, emerged in 1945 with the Charter of the United Nations[339] (UN Charter). Prompted largely by the aftermath of the Second World War and the Holocaust, the UN Charter laid the groundwork for these rights.

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[334] UNCHR, Summary or Arbitrary Executions: Report by the Special Rapporteur, 1983.
[335] A. CARCANO, *Notable Cases of the European Court of Human Rights on the Right to Life- E-Book: Materials and Analysis*, Giappichelli, 2020.
[336] A. REDELBACH, *Protection of the Right to Life by Law and by Other Means*, in Ramcharan, B.G. (ed.) The Right to Life in International Law, Martinus Nijhoff Publishers, 1985.
[337] J. YORKE, *The Right to Life and the Value of Life: Orientations in Law, Politics and Ethics*, Routledge, 2016.
[338] Crafted in 1776, the Virginia Declaration of Rights was formulated to assert the innate rights of individuals, notably the entitlement to reform or dismantle a government deemed "inadequate". Its influence resonated in subsequent documents such as the United States Declaration of Independence (1776) and the United States Bill of Rights (1789).
[339] The Charter of the United Nations (UN) serves as the foundational treaty for the United Nations, an intergovernmental organization. It delineates the purposes, organizational structure, and overarching framework of the UN system. It outlines the functions of its six principal organs: the Secretariat, the General Assembly, the Security Council, the Economic and Social Council, the International Court of Justice, and the Trusteeship Council.

Addressing a conspicuous gap in human rights, the Universal Declaration of Human Rights[340] in 1948 explicitly affirmed in Article 3 that « *everyone has the right to life, liberty, and security of person* ». Although ostensibly a soft-law instrument without direct legal binding force, the Universal Declaration of Human Rights is often considered reflective of customary law.

A pivotal development in global treaty law concerning the right to life is embodied in the International Covenant on Civil and Political Rights[341] (ICCPR). Adopted by the UN General Assembly on December 16, 1966, and coming into force a decade later, on March 23rd, 1976, Article 6 (1) of the ICCPR unequivocally declares that « *every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of their life* ».

Following this definition of the ICCPR, it is crucial to analyze the prospective of the UN Human Rights Committee. In October 2018, the Human Rights Committee (HRC), the monitoring body of the International Covenant on Civil and Political Rights (ICCPR), adopted General Comment 36, which focuses on the right to life as outlined in Article 6 of the ICCPR. This latest General Comment replaces two prior ones, namely General Comment 6 of 1982[342] and 14 of 1984[343]. The development of General Comment 36 spanned four years and involved extensive feedback opportunities from States, various UN institutions, national human rights institutions, academics, and civil society.

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[340] The Universal Declaration of Human Rights (UDHR) constitutes an international instrument endorsed by the United Nations General Assembly, safeguarding the rights and freedoms inherent to all human beings. Formulated by a United Nations committee under the leadership of Eleanor Roosevelt, it received approval from the General Assembly as Resolution 217 during its third session on December 10, 1948, at the *Palais de Chaillot* in Paris, France. Among the 58 members of the United Nations at that time, 48 cast affirmative votes, none dissented, eight abstained, and two refrained from voting.

[341] The International Covenant on Civil and Political Rights (ICCPR) is a multilateral treaty that obligates nations to uphold the civil and political rights of individuals, encompassing the right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights, and rights to due process and a fair trial. Adopted by the United Nations General Assembly on December 16, 1966, it became effective on March 23, 1976, following its thirty-fifth ratification or accession. Regarded as a seminal document in the annals of international law and human rights, the ICCPR is an integral component of the International Bill of Human Rights, alongside the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Universal Declaration of Human Rights (UDHR).

[342] Human Rights Committee, General Comment No. 6: *Article 6 (Right to Life),* 30 April 1982.

[343] Human Rights Committee, General Comment No. 14: *Article 6 (Right to Life) Nuclear Weapons and the Right to Life*, 9 November 1984.

Distinguished by a novel approach, General Comment 36 surpasses the HRC's own jurisprudence by providing a comprehensive elucidation of the right's scope. It dedicates substantial attention to delineating how States parties to the ICCPR are obligated to safeguard lives, addressing acts and omissions from both the State and other actors. It also clarifies the territorial reach of Article 6, affirming that States parties have extraterritorial obligations concerning external territories under their effective control and over all persons over whose enjoyment of the right to life it exercises power or effective control.

Emphasizing a proactive stance, General Comment 36 stipulates that States must take affirmative actions to prevent unnecessary or premature deaths while refraining from acts that arbitrarily deprive individuals of life. Notably, the HRC's incorporation of comparative jurisprudence on human rights in General Comment 36 is a positive development. While predominantly drawing from its own jurisprudence, the document includes numerous references, with 281 footnotes, to other international sources, such as the jurisprudence of UN treaty bodies, regional courts, special rapporteurs, and other UN entities[344].

General Comment n. 36 also states that *« the duty to protect life also implies that States parties should take appropriate measures to address the general conditions in society that may give rise to direct threats to life* » and « *these general conditions may include (...) degradation of the environment* »[345].

It also affirms that « *environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life. The obligations of States parties under international environmental law should thus inform the content of article 6 of the Covenant, and the obligation of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law* »[346]. These paragraphs assume paramount significance in the present analysis, as General Comment No. 36 augments the comprehension of the right to life in a manner which is relevant to environmental

[344] S. JOSEPH, *Extending the Right to Life Under the International Covenant on Civil and Political Rights: General Comment 36,* Human Rights Law Review, vol. 19, issue 2, 24 April 2019.
[345] Paragraph 26, General Comment n. 36 on the Right to Life.
[346] Paragraph 62, General Comment n. 36 on the Right to Life.

issues. The HRC has paved the road for an interpretation of the Right to Life that aligns more closely with environmental considerations, particularly the right to a healthy environment.

The Inter-American Court of Human Rights (IACtHR[347]) recognizes the right to life as a fundamental human right within its jurisdiction, as articulated in Article 4 of the American Convention on Human Rights[348]. Throughout its jurisprudential history, the Court has employed diverse perspectives on the right to life to construct a comprehensive and significant application of this fundamental right[349]. In the sphere of environmental matters, the IACtHR has played a pivotal role in adapting its jurisprudence to address situations where environmental degradation or harm poses a direct threat to the right to life. The Court's decisions contribute to the ongoing development of principles that acknowledge the intrinsic connection between the right to a healthy environment and the fundamental right to life[350].

It is now important to move on from this broader perspective and delve into the specificities of the ECHR regime.

3.1.1 The process of "greening" the ECHR

The interconnectedness of human rights and the environment is now widely acknowledged. The symbiotic relationship between the two can be conceptualized in two ways.

Firstly, environmental protection serves to uphold human rights standards. Given that the deterioration of the physical environment can directly result in the

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[347] The Inter-American Court of Human Rights, one of three regional human rights tribunals alongside the European Court of Human Rights and the African Court of Human and Peoples' Rights, functions as an independent legal institution with the primary goal of interpreting and applying the American Convention. It performs several key functions, including a contentious role, where it adjudicates on disputes and oversees judgments; an advisory role; and the authority to issue provisional measures. Collaborating with the Inter-American Commission, the Court works to uphold and advance fundamental rights and freedoms.

[348] Art. 4.1 IACHR: « *Every person has the right to have his life respected. This right shall be protected by law and, in general, from the moment of conception. No one shall be arbitrarily deprived of his life* ».

[349] A. R. HARRINGTON, *Life as We Know It: The Expansion of the Right t now It: The Expansion of the Right to Life Under the e Under the Jurisprudence of the Inter-American Court of Human Rights*, Loyola of Los Angeles International and Comparative Review, vol. 35, n. 2, Spring 2013.

[350] See infra Chapter 3, 4.1.1.

violation of various human rights, activities causing environmental harm may constitute an immediate infringement of these rights. Establishing a robust and effective environmental protection system is thus crucial for safeguarding human rights standards[351]. Prominent international organizations, such as the United Nations or the Inter-American Court of Human Rights, have recognized and endorsed the mutually reinforcing link between the environment and human rights. A closer examination of decisions made by human rights bodies globally reveals a growing trend since the 1980s in utilizing human rights as a tool to enhance environmental protection[352]. Notably, the European Court of Human Rights has emerged as a trailblazer in addressing environmental cases. Despite the absence of explicit references to the environment or the right to a healthy environment in the ECHR, the Court has heard numerous cases related to environmental issues and has developed an extensive body of environmental case law.

Despite the absence of explicit environmental rights within the Convention, the Court, to a certain degree, safeguards the environment by progressively interpreting specific Convention rights. This process of "greening" the Convention is facilitated by three fundamental interpretative tools: the principle of evolutive and extensive interpretation of the Convention, the doctrine of positive duties of States and the doctrine of horizontal effect of the Convention. According to the principle of evolutive and extensive interpretation, the Convention must be construed in accordance with contemporary conditions, functioning as a « *living instrument* »[353]. The existence of positive duties on States implies that, within certain Convention rights, mere abstention from violating human rights is insufficient as the State party must ensure the effective exercise of the right and is obliged to actively engage. The doctrine of horizontal effect suggests that, in specific realms of human rights protection, the State may infringe upon the right by

[351] A. E. BOYLE, M. R. ANDERSON, *Human Rights approaches to Environmental Protection*, Oxford, Clarendon Press, 2003.
[352] O. W. PEDERSEN, *The Ties That Bind: The Environment, the European Convention on Human Rights and the Rule of Law*, SSRN Electronic Journal, 2010.
[353] G. LETSAS, *The ECHR as a Living Instrument: Its Meaning and Legitimacy*, in "Constituting Europe: The European Court of Human Rights in a National, European and Global Context", Cambridge University Press, 2013.

neglecting to appropriately regulate the activities of the private sector[354]. The jurisprudence of the Court has grown in a vivid way over the years[355].

The foundation of this evolution is based on the Court's assertion that the Convention should be construed as a dynamic instrument, considering present day conditions[356]. In the *Fredin v. Sweden* case, the Court remarked that « *in today's society, the protection of the environment is an increasingly important consideration* »[357]. The Court associated environmental considerations primarily with the right to respect for private and family life and the right to life[358].

In the Ilva case, as will become evident in the following sections, these considerations hold significant importance, particularly considering the judicial determinations emanating from Strasbourg. However, prior to delving into the case law of Ilva, it is imperative to gain a more profound understanding of the rights in question, starting with Art. 2 ECHR.

3.1.2 Art. 2 ECHR and its implications on the Environment: extension to the Right to a Healthy Environment

The inaugural right articulated in the European Convention on Human Rights is the Right to Life, delineated in Article 2. This primacy is bestowed upon the right to life due to its fundamental nature as the most essential of all human rights[359].

Several cases have arisen concerning environmental issues purportedly directly impacting individual rights safeguarded by the Convention, notably the right to life. Nevertheless, in such instances, applicants have raised additional rights, such as the right to the respect for private and family life, prompting the Commission and Court to address the issues at times under Article 2 and at other

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[354] *Hatton and Others v. the United Kingdom*, ECHR, 8 July 2003, « *Article 8 may apply in environmental cases whether the pollution is directly caused by the State or whether State responsibility arises from the failure to regulate private-sector activities properly* ».
[355] H. MÜLLEROVÁ, *Environment Playing Short-handed: Margin of Appreciation in Environmental Jurisprudence of the European Court of Human Rights,* op. cit.
[356] F. CARELLI, *Enforcing a right to a helthy environment in the ECHR system: the "Cordella v. Italy" case*, Rivista giuridica ambienteDiritto.it, fascicolo 4, 2019.
[357] ECtHR, *Fredin v. Sweden*, application n. 12033/86, 18 February 1991.
[358] ECtHR, *Oneryildiz v. Turkey*, application n. 48939/99,2004.
[359] R. WEEKES, Focus on ECHR, Article 2, Judicial Review 19, 2005.

times under alternative articles[360]. The State's obligations under Article 2 are primarily characterized by their preventive nature. It is recognized that the State is obligated to establish a comprehensive system of legal regulations and administrative mechanisms designed to effectively safeguard human life against various hazards, including those originating from private entities[361]. Secondly, it must ensure the diligent enforcement of these regulations by public authorities[362] and implement preventive measures to forestall both specific and general future dangers[363]. Lastly, it must take proactive steps to prevent emergencies or alleviate their consequences, encompassing natural disasters and mudslides[364].

These obligations encompass the imperative of safeguarding the right to life, a concept that can be construed in the context of an interrelated synergy with the protection of the environment as an inherent right of the individual: the right to a healthy environment. While the Convention does not explicitly envision the right to a healthy environment[365], jurisprudence has progressively acknowledged its existence through extension. Drawing on a framework of fundamental rights safeguarded by the ECHR through a *par ricochet* mechanism[366], the jurisprudence has gradually asserted the extension. It has been recognized both as a constraint on the extension of the right to property and as a defining element of individual rights, particularly the right for respect of private and family life and the right to life[367].

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[360] D. KORFF, *A guide to the implementation of Article 2 of the European Convention on Human Rights*, Human Rights Handbooks, no. 8, 2006.
[361] *Budayeva and Others v Russia*, applications 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, ECtHR, 20 March 2008, paras 131–132. 39 and *Öneryildiz v Turkey*, application 48939/99, ECtHR, 30 November 2004, paras 89–90.
[362] *Lopez Ostra v. Spain*, application n.16798/90, A/303-C, [1994] ECHR 46, (1995) 20 EHRR 277, IHRL 3079 (ECHR 1994), 9th December 1994, European Court of Human Rights [ECHR] and *Moreno Gomez v. Spain*, application n. 4143/02, ECtHR, 16 February 2005 and *Fadeyeva v. Russia,* application n. 55723/00, ECtHR, 30 November 2005.
[363] *Osman v. the United Kingdom,* application n. 23452/94, ECtHR, 28 October 1998, para 115 and *Mastromatteo v Italy*, application n. 37703/97, ECtHR, 24 October 2002, para 67.
[364] *Budayeva and Others v Russia,* para 133*,* op. cit.
[365] A. R. MOWBRAY, *The creativity of the European Court of Human Rights*, Human Rights Law Review, no. 5, 2006.
[366] A. GALINSOGA, European Court of Human Rights, Introductory Note. The Global Community Yearbook of International Law and Jurisprudence, no. 2, 2007.
[367] G. R. MINELLI, *Protection of the Environment as a Human Right. The Impact of ECHR decisions on the Italian environmental criminal law*, Yearbook Human Rights Protection, 2018.

This "rebound" mechanism entails an expansive interpretation of the scope of certain rights explicitly articulated in the provisions of the Convention[368]. The ECtHR, along with the European Commission, has acknowledged in its jurisprudence that specific environmental deteriorations with significant implications for individuals or even the failure of public authorities to furnish information concerning ecological risks to individuals may constitute violations of certain rights safeguarded by the provisions of the Convention[369].

From a human rights perspective, the right to a healthy and quality environment stands as a fundamental right, characterized by a nature and attributes that remain unaltered over the course of time or because of changing circumstances. Fundamental human rights, including the right to a healthy environment, are inherently inalienable. Alongside the right to life and the right to private and family life, the right to a healthy environment has been prominently invoked in cases involving environmental damage caused by pollution. The Court's evolving interpretation of these concepts has facilitated the inclusion of environmental damages within the purview of the notions of the "right to life", "private life", and "family life"[370].

Specific cases adjudicated by the ECtHR are pivotal for an in-depth comprehension of the extension, a significance that will be particularly pronounced when, in the subsequent sections, attention turns to the Court's rulings on the Ilva debacle. The right to a healthy environment will also represent a crucial passage of this discussion when intergenerational rights will come into play in the third section, where the focus will shift to the possible legal solutions to avoid environmental cases like Ilva.

[368] F. SUDRE, *La protection du droit a l'environment par la Convention européenne des droits de l'homme*, Vol. Communaute européenne et environment, Documentation française, 1997.
[369] M. DÉJEANT-PONS, M. PALLEMAERTS, *Human rights and the Environment*, published by Council of Europe, 2001.
[370] L. DOGARU, *Preserving the Right to A Healthy environment: European Jurisprudence*, Procedia: Science and Behavioral Sciences 141, 2014.

3.1.3 The Strasbourg Court case law on the Right to Life: *Öneryıldız v. Turkey* and *Brincat and others v. Malta*

First, an important decision came from the Strasbourg court regarding waste and hazardous substances. In *Öneryıldız v. Turkey* the applicant submitted that national authorities bore responsibility for the fatalities of their immediate family members and the consequential damage to their property due to a methane explosion that occurred at a municipal landfill in the Kazım Karabekir slum district in Ümraniye. The applicant's residence was constructed without proper authorization on property adjacent to a waste disposal site operated by four district councils.

In April 1993, the explosion caused debris to inundate over ten residences positioned beneath it, including the one owned by the applicant. The applicant, losing nine relatives in the incident, specifically lamented the absence of precautionary measures despite an expert report having alerted the authorities of the imperative need for preventive action, given the foreseeable risk of such an explosion[371]. In its judgement, the Court stated that « *the situation had been exacerbated by a general policy which had proved powerless in dealing with general town-planning issues and had undoubtedly played a part in the sequence of events leading to the accident* »[372]. The Turkish authorities were conscious of the evident and immediate danger posed to several individuals residing near the Ümraniye municipal rubbish tip. Consequently, they bore a positive obligation in accordance with Article 2 ECHR to implement necessary preventive measures to safeguard these individuals. The Court underscored that the prompt implementation of a gas-extraction system could have constituted an efficacious measure without unduly burdening the State's resources or presenting significant policy challenges. This responsibility was particularly emphasized since the authorities were instrumental in establishing the site and authorizing its operation, thereby contributing to the identified risk[373], while also allowing the applicant and his

[371] ECtHR, *Environment and the European Convention on Human Right*, Factsheet.
[372] *Öneryildiz v Turkey*, application 48939/99, ECtHR, 30 November 2004, op. cit.
[373] InforMEA (the United Nations Information Portal on Multilateral Environmental Agreements, a one-stop portal for information on MEAs searchable by key terms across treaty texts, COP decisions, national plans and reports, laws, court decisions and more), *Oneryldiz v. Turkey*.

relatives to live near the refuse tip[374]. The Court, however, noted that national authorities demonstrated promptness and diligence in their efforts. While those responsible were identified, criminal proceedings were initiated against the mayor of Istanbul and the mayor of the district where the rubbish tip was situated. However, the charges brought against them did not pertain to a violation of the right to life but rather negligence in the execution of their duties. The resulting sentences were in the form of suspended fines, amounting to a mere 9.70 euros, which were defined by the Court as "derisory". The Court determined that the response of the Turkish criminal justice system to the tragedy inadequately ensured the complete accountability of State officials[375]. The Court determined a violation of Article 2 under its procedural aspect due to the absence of sufficient legal protection ensuring the right to life. From the *Öneryildiz v. Turkey* case, the Court began interpreting the scope of certain provisions to acknowledge a procedural dimension within them.

Another fundamental case is that of *Brincat and others v. Malta*[376]. The issue pertained to workers of the State-owned Malta Drydocks Corporation involved in shipyard repairs who encountered asbestos exposure spanning several decades from 1968 to early 2003. Asbestos was known to be dangerous since the early 1950s. This prolonged exposure resulted in the development of asbestos-related illnesses. The complainants raised concerns about their own or their deceased family member's contact with asbestos and asserted that the Maltese government did not adequately shield them from the lethal repercussions of such exposure[377]. The Court highlighted that the sole practical step taken by the State, acting as the employer, was the distribution of masks, which ultimately proved insufficient. Additionally, it pointed out the absence of any information provided or made accessible to the applicants during the relevant period of their careers, hindering their ability to assess risks. Despite the State's margin of appreciation in choosing means, the Court concluded that the government fell short of fulfilling its positive obligations, whether through legislation or other practical measures.

[374] ECtHR, *Guide to the case-law of the European Court of Human Right*s, Environment, 31 august 2022.
[375] ECtHR, *Guide to the case-law of the European Court of Human Right*s, Environment, op cit.
[376] ECtHR, *Brincat and others v. Malta*, applications n. 60908/11, 62110/11, 62129/11, 62312/11, 62338/11, 24 October 2014.
[377] ECtHR, *Environment and the European Convention on Human Right*, Factsheet, op. cit.

Consequently, the Court determined a violation of Article 2 concerning the applicant who succumbed to mesothelioma[378].

These cases underscore the Strasbourg court's clarification that the positive obligation to ensure the right to life involves a primary duty to implement an effective legislative and administrative framework designed to prevent harm. In fact, preventive regulations must also encompass suitable procedures, considering the technical aspects of the relevant activity, to identify deficiencies in the processes involved and any mistakes made by accountable individuals at various levels. The choice of measure, however, stays within States' boundaries, seen the margin of appreciation or "room for *manoeuvre*" granted by the Court which must not impose disproportionate or impossible burdens on authorities.

3.2 Right to Respect for Private and Family Life

The concept of private life is challenging to precisely define, exhibiting variability and ambiguity. Certain interpretations adopt a broad understanding of it, encompassing privacy, confidentiality, and various personal and social elements. Private life encompasses aspects like a person's marital life, activities, identity, sexual preferences, health, and identification elements such as home, name, and marital status[379]. The right to respect for private life is multifaceted. It encompasses the right to privacy, the confidentiality of personal life, protection of personal and sexual identity, preservation of physical and moral integrity, and the right to a healthy environment as we will expressly analyze in the next section. The expansive interpretation of private life reflects its complex nature with diverse dimensions according to European jurisprudence, like the right to freedom of movement[380] and the right of minorities to maintain their traditional way of life[381].

The right to protection from arbitrary interference with personal and family life is safeguarded by major international legal instruments, including Article 12 of

[378] ECtHR, *Guide to the case-law of the European Court of Human Right*s, Environment, op cit.
[379] I. MURARU, E. S. TĂNĂSESCU, C. H. BECK, *Constituția României. Comentariu pe articole*, Publishing House, Bucharest, 2008.
[380] ECtHR, *Iletmis v. Turkey*, application n. 29871/96, 6 March 2006.
[381] V. TUDOR, *Legal aspects of the Right to Respect Private and Family Life*, De Gruyter Open, vol. 21, 2015.

the Universal Declaration of Human Rights[382] of 1948, Article 17 of the International Covenant on Civil and Political Rights (ICCPR)[383] of 1966, Article 11 of the American Convention on Human Rights[384], all sharing the same formulation, and Article 8 ECHR which ensures everyone the right to respect for private and family life, home, and correspondence. The European Court of Human Rights plays a central role in enforcing these rights. Between 1959 and 2014, the ECtHR rendered 1085 judgments on complaints related to violations of Article 8. Notably, Italy, Russia, and Poland faced the highest number of violations during this period. The substantial number of regulations adopted by the ECtHR emphasizes the significance of protecting this right, which holds a prominent place in the practical enforcement of the Court[385].

3.2.1 Art. 8 ECHR extending towards the Right to a Healthy Environment

In conjunction with the right to life, as outlined in Article 2 ECHR, the right to respect for private and family life specified in Article 8 has been frequently invoked in cases related to environmental damages. The first paragraph of Article 8 states that « *everyone has the right to respect for his private and family life, his home and his correspondence* »[386]. The Court's evolving interpretation has facilitated the inclusion of environmental damages within the scope of the "right to life", "private life", and "family life"[387]. However, despite recognizing the increasing importance of environmental protection, the Court does not automatically consider Article 8 applicable in cases of any environmental disturbance. While acknowledging the

[382] See supra note 340, Art. 12 « *No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks* ».
[383] See supra note 341, Art. 17 « *No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home or correspondence, nor to unlawful attacks on his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks* ».
[384] Art. 11 ACHR « *Everyone has the right to have his honor respected and his dignity recognized. No one may be the object of arbitrary or abusive interference with his private life, his family, his home, or his correspondence, or of unlawful attacks on his honor or reputation. Everyone has the right to the protection of the law against such interference or attacks* ».
[385] L. Y. FOMINA, *Protection of the Right to Respect for Private and Family Life in European Court of Human Rights*, European Research Studies, vol. 19, special issue 3, 2016.
[386] Art. 8 (1) ECHR.
[387] L. DOGARU, *Preserving the Right to A Healthy environment: European Jurisprudence,* op. cit.

relevance of the broader environmental context, the mere general deterioration of the environment is insufficient. Article 8 is deemed applicable only when it can be demonstrated that the environmental situation complained of constitutes a tangible interference with the rights embedded in that Article, reaching a minimum level of severity. The determination of this minimum level of interference is relative upon various case-specific factors, including the intensity and duration of the nuisance, as well as its impact on the applicant's mental and physical well-being. Consideration should also be given to the broader environmental context. A claim under Article 8 would not be viable if the alleged detriment were negligible compared to the normal environmental hazards of urban life in modern cities. Exposure to an environmental hazard, distinct from pollution or nuisance, may be adequate to invoke Article 8 if the effects are experienced directly. The environmental hazard must significantly encroach upon the person's ability to enjoy their home, private, or family life. The Court[388] underscores that failing to meet this criterion would render the positive obligation on the State to safeguard the applicant's rights under Article 8 meaningless[389].

In essence, environmental pollution must directly and immediately impact the right to respect for the applicant's home, private life, and family life for Article 8 to be invoked[390]. A matter falls within the scope of Article 8 only if individuals are directly and significantly impacted by the nuisance in question and can substantiate the direct influence on their quality of life[391]. Article 8 may apply whether the pollution originates directly from the State or if State responsibility stems from inadequately regulating private sector activities. The determination of Article 8's applicability has been contingent on a severity test. Hence, upon the satisfaction of these rigorous conditions, a State's affirmative obligation may be activated, depending on the circumstances of the case. Regarding the substance, it is crucial to consider the fair balance that must be maintained between the conflicting interests of the individual and the broader community. The State is

[388] ECtHR, *Taskin and others, v. Turkey*, application n. 46117/99, 30 March 2005.
[389] ECtHR, *Guide to the case-law of the European Court of Human Right*s, Environment, op cit.
[390] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, Digitalization and green transformation of the EU, vol. 7, 2023.
[391] ECtHR, *Çiçek and others v. Turkey*, Application n. 44837/07, 4 February 2020.

afforded a certain margin of appreciation in deciding the measures to be implemented for compliance with the Convention[392]. The Court has clarified that the margin granted to States is not unlimited, emphasizing its responsibility to ensure adherence to Convention obligations. The Court plays a decisive role in determining whether an interference with a Convention right can be justified, and the domestic margin of appreciation is coupled with European supervision. The application of the margin of appreciation occurs in two main scenarios: assessing the justifiability of an interference based on public interest grounds and evaluating State's compliance with positive obligations under this provision[393]. Another crucial point is the existence of positive and negative obligations on States. The central question is whether the respondent State has achieved a fair equilibrium between the interests of individuals affected by pollution and the broader societal interests[394].

Regarding negative obligations, where authorities encroach upon an individual's right to privacy and family life, the Court is tasked with evaluating whether the interference was prescribed by law, pursued a legitimate aim, and was necessary in a democratic society. In environmental cases, the interference with the right to privacy and family life often stems from the economic interests of the country or a local area, like the fundamental economic importance of the Ilva steel mill in the area of Taranto. A well-established general principle consistently applied by the Court in these cases is that national authorities, being better situated than an international court to assess local needs and conditions, enjoy a broad margin of appreciation in determining measures for ECHR compliance and in the initial assessment of the necessity for interference[395]. The margin of appreciation technique has faced criticism for granting autonomy to respondent States and

[392] ECtHR, *Guide on Article 8 of the European Convention on Human Rights – right to respect for private and family life, home and correspondence*, 31 August 2022.
[393] U. KILKELLY, *The Right to respect for Private and Family Life, a life to the implementation of article 8 of the European Convention on Human Rights*, Human Rights handbooks, n. 1. 2001.
[394] For example: *Giacomelli v Italy,* no. 59909/00, 2006 and *Kapa and Others v Poland*, applications nos. 75031/13 and others, 2022.
[395] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, op. cit.

potentially allowing the Court to abstain from reviewing certain issues, with the burden of proving an exceedance of the margin typically resting on the applicant[396].

Regarding positive obligations, States must take all reasonable and appropriate measures to ensure protection of the right to respect for private and family life. For instance, a breach of the State's obligations may arise due to a failure to regulate private industry or implement measures safeguarding the rights of individuals exposed to pollution and associated health risks[397], as it is clear from the *Cordella* case regarding Ilva[398]. Moreover, the positive obligations of States encompass not only the duty to provide information upon request, but also an obligation to proactively inform individuals facing a health hazard about the associated risks[399].

In environmental cases, for Article 8 to be pertinent, the applicant must demonstrate that there was indeed an interference with his private life regarding the environmental situation complained of, and that this interference had a direct effect on the applicant's home and family or private life[400]. General deterioration is not enough. It is better to analyze the Court's case law to better understand these key concepts.

3.2.2 The Strasbourg Court case law on the Right to Respect for Private and Family Life: *Lòpez Ostra v. Spain, Guerra and others v. Italy* and *Dubetska and Others v Ukraine*

In the case of *López Ostra v. Spain*, the complainant raised concerns about fumes and disruptive noise emanating from a waste treatment facility located near her residence, rendering her family's living conditions intolerable[401]. The plant, upon startup, experienced malfunctions leading to the release of gas fumes and unpleasant odors. These emissions not only caused health issues but also posed a

[396] For example, *Hatton and others v United Kingdom*, application n. 36022/97, op. cit.
[397] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, op. cit.
[398] See infra Chapter 2, 3.3.2.
[399] For example, *Guerra and others v Italy*, see Chapter 2, 3.2.2.
[400] ECtHR, *Guerra and others v. Italy*, application n. 116/1996/735/932, 19 February 1998.
[401] *Manual on Human Rights and the Environment*, Council of Europe Publishing, second edition, 2012.

nuisance to the local community. In response, several locals, including Gregoria Lòpez Ostra, were evacuated and relocated by the town council. While the council partially halted one aspect of the plant'' operations, other activities were allowed to continue.

López Ostra initiated legal proceedings locally, asserting that the authorities had inadequately addressed the health risks posed by the waste-treatment plant. The local court ruled against her, acknowledging the nuisance but contending that it did not present a significant health risk. Additionally, the authorities were deemed not liable as they had taken responsive measures to address the plant's risks. López Ostra subsequently appealed to the Supreme and Constitutional Courts, both of which ruled against her[402]. The applicant submitted a complaint to the European Commission of Human Rights, contending that Spanish law failed to provide her with relief from the detrimental emissions of the plant, leading to a violation of Article 3 (prohibiting degrading treatment) and Article 8 (protecting the right to respect for private and family life) of the Convention. The Commission determined a breach of Article 8 but not Article 3.

The case was subsequently referred to the ECtHR, which unanimously upheld the Commission's findings, emphasizing that severe consequences of environmental degradation could impact an individual's well-being and undermine the enjoyment of private and family life. The Court affirmed the obligation of public authorities to take necessary measures to safeguard these rights and concluded that the conditions endured did not constitute degrading treatment[403]. The Court determined that significant environmental pollution, even without constituting serious health risks, could violate the right to respect for home, family, and private life by stating: « *Naturally, severe environmental pollution may affect individuals' well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health* »[404]. The Spanish authorities were obligated to implement measures safeguarding the applicant's home and private and family life, which they failed to

[402] *Lòpez-Ostra v. Spain,* Global Health & Human Rights Database, facts.
[403] R. DESGAGNÈ, *Lopez Ostra v. Spain*, The American Journal of International Law, vol. 89, n. 4, 1995.
[404] ECtHR*, Lòpez Ostra v. Spain*, application n. 16798/90, para. 51, 9 december 1994.

do. Instead of acting against the plant, they either delayed or resisted implementing court orders instructing the plant to cease its activities. The authorities' argument that rehousing local families was a sufficient measure was dismissed, as they had procrastinated for three years before acting. The Court concluded that these considerations outweighed the State's economic well-being, which might have otherwise justified the plant's operation under Article 8. A fair balance was struck, and the severity test was respected. This judgment marked one of the initial instances where the Court leaned towards an environmentally conscious expansive interpretation, although some found it concerning due to a perceived lack of clarity in the Court's definitions and applications[405].

In *Guerra and others v. Italy*, citizens of Manfredonia, an Apulian city like Taranto, initiated legal proceedings against the Italian government, alleging various violations of their rights. The applicants resided approximately one kilometer from the *Enichem Agricoltura* company's chemical factory. In 1988, the factory, specializing in fertilizer production, received a "high risk" classification concerning major-accident hazards associated with specific industrial activities posing risks to the environment and local population well-being, the same classification which was given to the Ilva steel plant. Furthermore, various incidents had taken place at the factory on multiple occasions. In 1988, a committee of technical experts determined that the factory's geographical location often resulted in the concentration of these emissions in the town of Manfredonia[406]. 420 residents sought criminal proceedings against seven *Enichem* directors, citing environmental and health risks. Five defendants were not sentenced due to amnesty provisions, statutes of limitation, or on-the-spot fine payments. The remaining two were convicted but acquitted on appeal, which also dismissed the compensation claim. Despite the obligation for local authorities to inform the public of risks and establish emergency plans, there was still no plan in 1995, and no procedures were in place to notify the public in case of an accident.

The residents took their case to the ECtHR, arguing that the lack of relevant information violated their rights, including the one arising from Article 8. In its

[405] R. DESGAGNÈ, *Lopez Ostra v. Spain*, op. cit.
[406] InforMEA, *Case of Guerra and others v. Italy*.

reasoning, the Court concluded that the authorities failed to implement measures for the effective protection of the residents' right by not giving crucial information about the factory's risks or emergency procedures until its production ceased in 1994. Article 8 necessitates individuals exposed to health risks to have access to information that allows them to evaluate the risk, independent of any decision-making process[407]. The applicants had awaited crucial information, necessary for assessing the risks they and their families might face by residing near the factory, until the production ceased in 1994. The conclusion was that Italy had failed to fulfill its obligation under Article 8 ECHR[408]. Considering all this, the Court confirmed the violation by reiterating what was previously stated in the *Lòpez Ostra v. Spain* case, creating a line of application which, in the following years, would have accompanied the Court in many more judgements.

Other crucial cases are *Taşkın and Others v Turkey*[409], *Băcilă v Romania*[410], or *Mileva and others v Bulgaria*[411] where it is indicated that, in addition to the evident direct and severe impact on the health and overall well-being of the applicants and their family, or the presence of a high level of risk, the proximity of the pollution source or the risk factor is a noteworthy consideration, and this will also become a key factor in the considerations regarding Ilva in the *Cordella* case. This observation is also corroborated in the *Giacomelli v Italy* case[412], which involves the issuance of an operating license to a waste treatment plant situated merely 30 meters from the applicant's residence without a prior study. In this instance, the Court determined that the State neglected to ensure the effective enjoyment of the applicant's right to the respect of their home and private and family life[413].

Another case in which the Court supported the protection of environmental rights through Article 8 ECHR is *Dubetska and Others v Ukraine*[414] where the

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[407] ECtHR, *Guide to the case-law of the European Court of Human Right*s, Environment, op. cit.
[408] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, op. cit.
[409] *Taşkın and Other v Turkey*, application n. 46117/99, 30 March 2005.
[410] *Băcilă v Romania,* application n. 19234/04, 30 March 2010.
[411] *Mileva and others v Bulgaria,* applications nos. 43449/02 and 21475/04, 25 February 2011.
[412] See supra note 394.
[413] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, ibidem.
[414] *Dubetska and Others v Ukraine,* application n. 30499/03, 10 February 2011.

applicants brought a case against the Ukrainian Government, accusing State authorities of neglecting their duty to safeguard their home, private, and family life from excessive pollution emanating from two state-owned industrial facilities. These sites had accumulated soil heaps, causing adverse environmental effects, including groundwater pollution leading to a shortage of drinking water and air pollution resulting from excessive dust. The absence of clean drinking water contributed to the development of chronic health conditions such as carcinoma and brochities. The Strasbourg Court ruled that the State had a responsibility under Article 8 to resettle the applicants, emphasizing the strong connection between pollutant emissions and state activities, stating that they « *appear to be palpably affected by environmental considerations* »[415]. The Court found a breach of Article 8, stating that the government failed to balance the interests of affected individuals and the broader community. The lack of efforts to relocate the applicants or implement a policy to shield them from health and environmental risks posed by pollution constituted a violation of the Convention[416].

After stating how the Court has progressively improved its evolving interpretation, the discourse must now shift back to Taranto, analyzing how these principles were applied in the context of the Ilva steel mill.

3.3 Case Law of the Strasbourg Court: applications from Taranto

The Strasbourg Court has underscored the intricate relationship between the environment and the safeguarding of human rights. This connection was initially established through the *par ricochet*[417] mechanism, wherein the Court acknowledged and upheld the importance of the environment concerning the respect for domicile, personal and family life, and the right to life. As the

[415] *Dubetska and Others v Ukraine,* op. cit.
[416] A. RADINA, *The Right to Respect for Private and Family Life as means of Environmental Protection*, op. cit.
[417] V. ESPOSITO, *Diritto ambientale e diritti umani*, Dir. pen. cont., 12 November 2012, the mechanism of "protection *par ricochet*", a concept crafted by Pretorian creation, « *has allowed the safeguarding bodies in Strasbourg to extend the protection of certain rights guaranteed by the Convention to other rights not directly protected by it* », A. GALANTI, *La giurisprudenza della Corte Europea dei Diritti dell'uomo sulla tutela dell'ambiente: approdi, prospettive e portata precettiva*, RGA online, rivista giuridica dell'ambiente, 1 April 2022.

jurisprudence evolved, the Court developed a comprehensive environmental framework[418], effectively transforming the Convention into a dynamic instrument that adapts and interprets prevailing societal concepts. Consequently, the environment emerges as a societal value warranting the restriction of other rights acknowledged by the Convention, thereby necessitating proactive measures by the State for its preservation[419].

Starting with the *López Ostra v. Spain* judgment, whose principles were subsequently reiterated in *Guerra* case, the Court recognized by extension an inviolable right to a healthy environment under Article 8, mediating potential harm to life, family, or domicile. These rulings assert that serious harm to the environment can compromise the well-being of individuals and deprive them of the enjoyment of their domicile in a manner that harms their private life. The argument has been presented that Article 8 may also be applicable to instances of severe environmental pollution resulting from violations of positive obligations imposed on the State, with direct consequences for domicile or private life. However, general environmental degradation is insufficient; furthermore, the endured disturbance must attain a minimum level of severity, subject to evaluation based on the specific circumstances of each case[420]. It is imperative to delve into an exploration of how the ECtHR has implemented these groundbreaking principles within the context of the Ilva case.

The cases of *Smaltini v. Italy* and *Cordella and others v. Italy* now stand as noteworthy illustrations within the jurisprudence of the ECtHR regarding environmental matters. These legal proceedings underscore the pivotal role played by the Court in navigating the intricate intersection of environmental considerations and human rights, with a particular emphasis on the right to a healthy environment. Delving into the examination of these cases becomes imperative to discern the trajectory of the Court's decisions, ultimately culminating in landmark judgments

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[418] A. SCARCELLA, *Giurisprudenza C.e.d.u. e diritto dell'ambiente: i principali "filoni" della Corte di Strasburgo*, Ambiente&Sviluppo, February 2013.
[419] V. MANCA, *The protection of Victims of Environmental Crimes: the Case-law Ilva, a point of the theory of positive obligations under the European Convention on Human Rights*, The New Environmental Criminal Law, 2018.
[420] V. CAVANNA, *Tutela multilivello di ambiente e salute: il ruolo di Cedu e Unione Europea alla luce del caso dell'Ilva di Taranto*, Rivista giuridica AmbienteDiritto, Year XX, vol. 4, 2020.

that have exerted a profound influence on the complex and contentious history surrounding Ilva.

3.3.1 *Smaltini v. Italy*

On 12 September 2006, Ms. Smaltini received a diagnosis of acute myeloid leukemia, attributing her condition to the polluted air emissions from the Ilva steel plant. She initiated legal proceedings against an Ilva manager, asserting that the increased cancer-related deaths in the Taranto region were linked to the plant's emissions. However, on 10 September 2007, the public prosecutor proposed discontinuing the proceedings, citing the lack of an established causal link between the emissions and Ms. Smaltini's illness. Despite this, the preliminary investigation judge rejected the discontinuation request and ordered a haematological report to identify the causes of her illness. Experts determined that leukemia incidence in Ms. Smaltini's age group was not higher in Taranto compared to other Italian regions[421]. Despite acknowledging the health consequences of Ilva plant emissions, the experts, relying on scientific data, ruled out a causal link between the emissions and Ms. Smaltini's leukemia. Consequently, on 19 January 2009, the investigating judge terminated the proceedings. On 7 August 2009, Ms. Smaltini initiated the proceeding before the ECtHR. Following Ms. Smaltini's death on 21 December 2012 due to meningitis (a cause not linked to her leukemia), her husband and children expressed their intention to pursue legal proceedings[422]. The question was forwarded to the Strasbourg Court alleging a violation of Article 2 ECHR (right to life) because the Italian government did not find a causal link between her illness and the emissions of Ilva, compromising her livelihood[423].

On 16 April 2015, the Court delivered its final judgement, clarifying that the applicant did not assert that national authorities had neglected to implement legislative or administrative measures to safeguard her right to life, but that her claim centered on the authorities' failure to recognize a causal link between

[421] Report on the health State of the Puglia population, 2006 edition.
[422] ECtHR, *Court declares inadmissible case concerning complaint that polluting factory emissions caused leukaemia*, press release issued by the Registrar of the Court, 16 April 2015.
[423] J. SEGHERS, *Scientific evidence in Strasbourg's environmental jurisprudence through the prism of Ilva Taranto*, Dissect, evidence in International Human Rights Adjudication, 7 March 2023.

emissions and her illness. Thus, only the procedural aspect of Article 2 ECHR was implicated, with its substantive dimension falling entirely outside the scope of the application[424]. Ms. Smaltini did not prove that, considering the scientific data available during the relevant period and without preempting potential outcomes of future scientific research, the authorities had neglected their duty to safeguard her right to life, particularly under the procedural dimension of Article 2. The evidence presented was inadequate to conclusively establish the extent of the harm, both in terms of quantity and quality, particularly from a medical perspective. Consequently, the application was dismissed as clearly lacking in merit. The Court, however, considered the prospect that such a connection might be proved in the future, based on more compelling evidence and emerging scientific discoveries[425].

In this light, a question arises. What if the case was considered under Article 8 ECHR? The right to respect for private and family life encompasses a broader range than the right to life and necessitates a less severe infringement to be violated. An overemphasis on the right to life in environmental matters would likely lead to a reduced application by the Court. Reassessing Ms. Smaltini's complaint grounded in Article 2 ECHR under Article 8 ECHR would, in such instances, facilitate the condemnation of detrimental and heavily polluting emissions from the plant[426].

The lack of precision in the Smaltini case was crucial. The Court, however, left room for possible future complaints. In fact, another case brought before the Strasbourg Court demonstrated a learning experience from those mistakes. The *Cordella and others v. Italy* case moved beyond the procedural realm, emphasizing the substance of the violation.

[424] L. FERRARIS, *Smaltini v. Italy: a missed opportunity to sanction Ilva's polluting activity within the ECHR system*, Journal for European Environmental & Planning Law 13, 2016.
[425] ECtHR*, Smaltini v. Italy*, application n. 43961/09, 16 April 2015.
[426] L. FERRARIS, *Smaltini v. Italy: a missed opportunity to sanction Ilva's polluting activity within the ECHR system,* op. cit.

3.3.2 *Cordella and others v. Italy*: full circle

The utilization of scientific evidence in supporting the Court's determination of a violation in the *Cordella and others v. Italy* case may have created an opportunity for the Grand Chamber to advance its approach in future climate cases[427].

The judgement arises from two distinct appeals, subsequently consolidated by the same court, filed on 29 July 2013 and 21 October 2015. The 180 applicants[428] were individuals who resided (or had previously resided) in Taranto and neighboring areas. The grievances pivoted around two primary pillars: scientific studies, including epidemiological ones, spotlighting the severe health conditions resulting from the pollution generated by Ilva over the years; and the actions of the Italian State, which, through *ad hoc* measures (such as the previously observed *decreti Salva-Ilva*), sanctioned the continuation of industrial activity, thereby nullifying the punitive measures initiated by the judicial authority within the extensive criminal proceedings against the company's executives. These executives faced accusations, specifically due to the significant environmental compromise of the area and its health ramifications for workers and the local population, involving offenses against public safety and public health[429]. Based on Articles 2 and 8 ECHR, the applicants raised concerns that the State had not implemented legal and statutory measures to safeguard their health and the environment. They also asserted that the State had neglected to furnish them with information regarding pollution and the associated health risks. The Court opted to examine these complaints exclusively under Article 8[430]. They also alleged a violation of Article 13 ECHR (right to an effective remedy).

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[427] J. SEGHERS, *Scientific evidence in Strasbourg's environmental jurisprudence through the prism of Ilva Taranto,* op. cit.

[428] 52 individuals for application n. 54414/13 and 128 for application n. 54264/15. 19 of the 180 applicants, however, were considered by the Court as not having victim status, since they did not live in the areas affected by Ilva's emissions, which were: Taranto, Crispiano, Massafra, Montesemola, Statte.

[429] S. ZIRULIA, *Ambiente e Diritti Umani nella sentenza della Corte di Strasburgo sul caso Ilva*, Diritto Penale Contemporaneo, vol. 3, 2019.

[430] ECtHR, *The Italian authorities failed to protect the applicants living in the areas affected by toxic emissions from the Ilva factory in Taranto*, press release issued by the Registrar of the Court, 24 January 2019.

The Court deemed the applicants' grievances well-founded and declared a violation of Article 8. The assessment regarding the surpassing of the minimum level of severity considered the intensity and duration of the nuisances caused by the polluting factor, as well as their physical and psychological effects on the health and *qualité de vie*[431] (quality of life), of the individual concerned. The Court observed that the key was to establish whether the State had struck a *« correct balance between the interests of individuals threatened by polluting activities and those of society as a whole* »[432]. To do so, the Court was tasked with verifying, within a certain margin of internal appreciation, whether adequate regulation had been established for the specificities of the activity in question, with reference to risk prevention. Furthermore, the Court initially confined the scope of its scrutiny to the diligence exercised by competent national authorities and the reasonableness of justifications put forth by the government in support of the need to curtail individual interests in favor of general ones. The ruling emphasized its numerous scientific evidence (which played a significant role throughout the decision-making process), attesting to the existence of a causal link between environmental exposure to harmful substances emitted by Ilva and the excess cases of tumor, cardiovascular, and digestive pathologies recorded in the population of the Taranto area. The Court judged the measures taken by national authorities as simultaneously inadequate and tilted in favor of production needs. Not only had the interventions over the years failed to yield satisfactory results, as evidenced by the infringement procedure against Italy before the European Commission, but the *decreti Salva-Ilva* had also authorized the continuation of an activity deemed seriously risky to health and the environment by the judicial authority. Based on these considerations, the Court concluded that « *the Italian State has so far been unable to strike a fair balance between the applicants' interest in not suffering environmental harm that could affect their well-being and the interest of society as a whole* »[433]. As anticipated, the Court also recognized a violation of Article 13 ECHR, having noted the absence, in the Italian legal system, of effective remedies through which the applicants could

[431] ECtHR, *Cordella and others v. Italy*, applications n. 54414/13 and 54264/15, 24 January 2019.
[432] ECtHR, *Cordella and others v. Italy*, ibidem.
[433] ECtHR, *Cordella and others v. Italy*, ibidem.

have complained to national authorities about the impossibility of obtaining measures aimed at ensuring the recovery of areas affected by Ilva's pollution[434].

Some key information can be obtained by analyzing the differences between *Cordella* and *Smaltini*. The Court highlighted that the first did not revolve around individual causality but centered on how the government's failure to implement environmental and health protection measures impacted the applicants. It further asserted that, supported by scientific evidence, a causal link had been established between exposure to pollutants emitted by Ilva and the occurrence of diseases among individuals residing in the vicinity of the plant.

In the first case, the Court rejected the acknowledgment of a causal link between pollution and the individual cancer case because, despite the evident health risks posed by the plant, no presented evidence connected the specific cancer type afflicting Ms. Smaltini to the emissions from the plant.

In the second case, where the applicants provided more substantial evidence, the Court acknowledged that a potential adverse effect resulting from the absence of State action could constitute a violation of Convention rights. However, it limited this judgment to Article 8, as the Court declined to rule on Article 2.

In *Smaltini*, the Court deemed the scientific evidence insufficient, requiring a stringent standard of proof and strict causality.

Conversely, in *Cordella*, numerous scientific and epidemiological studies persuaded the Court to recognize a causal link, enabling the application of the precautionary principle. This approach took a more risk-based stance, aiming to prevent future harms. The success of the *Cordella* applicants in presenting compelling scientific evidence highlighted a crucial distinction in the standard of proof and its attainability, depending on the underlying legal principles.

The comparison between *Cordella* and *Smaltini* underscored that a strict causality requirement, as in *Smaltini*, poses significant challenges for applicants, especially in a legal context reluctant to admit probabilistic evidence. Conversely, adopting a precautionary, risk-based approach, as evident in *Cordella*, facilitates the demonstration of a causal link between pollution and environmental/health

[434] S. ZIRULIA, *Ambiente e Diritti Umani nella sentenza della Corte di Strasburgo sul caso Ilva*, op cit.

risks, thereby establishing a breach of a State's positive obligations under Article 8[435]. Contrasting these two cases underscores the Court's dynamic approach to its "living instrument" philosophy, showcasing its capacity for transformation and reinterpretation.

It is worth noting that, in *Cordella*, the Court extended its considerations beyond the immediate scope of the case, acknowledging that pollution in Taranto posed a threat not only to the health of the applicants but also to the entire population residing in the affected areas. This broad and practical perspective adopted by the Court reflects a recognition of the dual impact of environmental cases, addressing both individual and public interests[436].

Against the backdrop of the judgment, one of the most dramatic "problems of modernity"[437] emerges, namely the identification of a harmonious reconciliation between the pursuit of risky activities and the protection of human rights. Focusing the debate specifically on the front of the respect for private life, within the argumentative fabric of *Cordella*, a total disregard for any individual causal relationship becomes apparent. Indeed, in this case, the crucial point was to determine whether Italy had taken the necessary measures to protect citizens' health and the environment. The Court did not rely on the previously mentioned epidemiological studies to identify relevant causal relationships. Instead, the studies were used solely to establish that Ilva's emissions were indeed dangerous and requested State intervention, highlighting Italy's failure to adopt measures. Upon noting this omission, a violation of the private life of those concerned was inferred, which, however, did not justify any compensation. Hence, the assertion that the determination of the violations constituted sufficient compensation for the incurred moral damage.

By analyzing the *Cordella* case, this discussion came full circle. Due Diligence and Prevention, obligations of the State, human rights violation and

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[435] J. SEGHERS, *Scientific evidence in Strasbourg's environmental jurisprudence through the prism of Ilva Taranto,* op. cit.
[436] C. HERI, *Climate Change before the European Court of Human Rights: Capturing Risk, Ill-Treatment and Vulnerability*, The European Journal of International Law, vol. 33, n. 3, Oxford University Press, 2022.
[437] F. STELLA*, Giustizia e Modernità – la protezione dell'innocente e la tutela delle vittime*, Milano, 2001.

verification of such abuse. The *Cordella* case marks a crucial juncture in a protracted journey. Once again, the ECtHR, with an opportunity to definitively acknowledge the existence of a right to a healthy environment, chose not to pursue this course. The protection of the environment has evolved through a prolonged process with the Strasbourg Court playing a central role. However, as previously emphasized, the Court has refrained from explicitly recognizing the actuality of such a right; instead, it provides a mediated safeguard for the environment through rebound. The absence of a dedicated provision mandating the respect for the environment in a unilateral manner should not be surprising, considering that the Convention was drafted in 1950, a time when environmental concerns were not considered of primary importance. Nevertheless, European culture has a historical precedent for addressing environmental disturbances, as evidenced by ancient Rome, where such disturbances were regarded as a form of *immissiones in alienum*, as sanctioned by the *Digestum*[438]. Furthermore, beyond the strict European context, numerous nations have incorporated environmental protection within the ambit of human rights. This trend underscores the growing significance attached to the condition of the environment in which people reside. It is not inconceivable that this concern may eventually find a place within the general framework[439].

Following the *Cordella* case, the Court rendered four more judgements[440] regarding Italy's violations in Taranto. On 5 May 2022, the ECtHR condemned Italy for the violation of Art. 8 and 13 ECHR, following what was already established in *Cordella*. The government's incomplete implementation of the 2019 judgment raised concerns. It was crucial for the Court's ruling to be promptly and comprehensively enforced. This action could emphasize that corporate human rights and environmental abuses will indeed face consequences, and individuals who are victims of such violations can indeed seek and obtain justice[441]. Specifically, the Court has found no new evidence or arguments in connection with

[438] Dig.8.5.8.5, *Ulpianus* 17.
[439] R. PICONE, *A difficult balance of interests: the ILVA case reaches the European Court of Human Rights*, Ambientediritto, Year XX, vol. 4, 2020.
[440] *Ardimento and others v. Italy*, n. 4642/17, *Briganti and others v. Italy*, n. 48820/19, *Parelli and others v. Italy*, n. 45242/17, *A.A. and others v. Italy*, n. 37277/16, 5 May 2022.
[441] *Strasbourg Court rebukes Italy for failure to uphold rights violated by corporations in ILVA case*, International Federation for Human Rights, 6 May 2022.

the *Cordella* judgment that would lead it to revise its findings regarding the violations of rights outlined in Articles 8 and 13 ECHR in relation to the applicants. The Court maintains the perspective that Italian authorities are still grappling with a deadlock in addressing the environmental challenges associated with the industrial operations of the steel plant. Similarly, the persisting scenario of significant environmental pollution poses a threat not only to the health of the applicants but also to the broader population residing in the areas at risk. The Court has emphasized once again the pressing need for the implementation of remediation measures and the execution of the environmental plan endorsed by national authorities to protect the environment and the well-being of citizens[442].

Continuing the discussion logically, the next step is to explore the potential revaluation of the Ilva steel mill through the acknowledgment of the right to a healthy environment, serving as a legal instrument to ensure a more environmentally sustainable future for next generations, in line with the concept of intergenerational equity. The legal incorporation of this right becomes a pivotal stride toward enhancing environmental protection, benefiting both individuals and the international community. After introducing the topic in earlier sections, a more in-depth examination is needed. The discourse will revolve around various initiatives aimed at solidifying environmental protection and the potential recognition and application of the right to a healthy environment in the context of the Ilva facility with the goal of preventing further environmental nuances.

[442] *Corte europea: nuova condanna dell'Italia per il caso ex Ilva di Taranto*, Saccucci & Partners, studio legale internazionale, Salute e Ambiente, 6 May 2022.

CHAPTER III
FUTURE GENERATIONS AND REVALUATION OF ILVA: GRANTING THE RIGHT TO A HEALTHY ENVIRONMENT

1. Damages on Future Generations: the immediate need for revaluation

The adverse impacts of industrial operations on the community have consequences that transcend the immediate present. The effects of environmental degradation cast a lasting shadow on the ecosystem, thereby influencing the quality of life for both current and future generations. A critical aspect in this context is the concept of intergenerational equity[443], emphasizing the need to ensure that the present generation does not compromise the ability of succeeding generations to fulfill their own needs. In the case of Ilva, the industrial activities may be viewed as jeopardizing intergenerational equity, potentially leaving behind a legacy of environmental and health challenges. Effectively addressing the harms inflicted on future generations necessitates a fundamental shift toward long-term planning and the adoption of sustainable development practices. This transformation involves striking a balance between industrial activities and considerations related to the environment and societal well-being. The complexities surrounding the damages to future generations in Taranto span environmental, health, legal, and ethical dimensions. The case calls for a strategy that acknowledges the interconnectedness of these dimensions and tries to find an equilibrium for the well-being of the entire community.

Ilva's transition towards environmentally sustainable practices is not just a choice but a necessity to address the urgent call for industrial activities' environmental revaluation. The transformative process can be guided by several proposals that collectively contribute to this shift like the implementation of cleaner and more sustainable technologies within Ilva's industrial processes. Equally essential is Ilva's commitment to adherence to environmental regulations and standards. Such diligence not only ensures legal compliance but also establishes a

[443] V. I. VIBHUTE, *Environment, Present and Future Generations: Intergenerational Equity, Justice and Responsibility*, Journal of the Indian Law Institute, vol. 39, n. 2/4, 1997.

framework of accountability, aligning with the objective of environmental protection. A proactive measure in this transition involves periodic environmental impact assessments, providing critical insights into the ecological repercussions of Ilva's activities. Ilva's journey towards a greener future is more than a corporate initiative; it is a commitment to responsible industrial practices that prioritize environmental stewardship and long-term sustainability. The revaluation of contaminated sites has emerged as a crucial issue within Italy's environmental protection goals over the past several years. The urgency to address individual polluting sites' concerns underscores the imperative for swift and targeted measures to safeguard public health and preserve environmental integrity[444]. A complex and articulated urban condition, like that of the city of Taranto, demands to be addressed with a multitude and heterogeneity of transition and revaluation responses, challenging to tackle with a unified and synchronous vision[445]. The comprehensive process of environmental transition of the Ilva-affected area encompasses a multifaceted approach, addressing environmental, social, and economic dimensions.

A way to effectively initiate this transition and progressive recognition is through programs and operations directed towards sustainability: both Ilva and the EU have operated in this way, creating a body of initiatives which emphasizes the need for a greener propension. It is imperative at this time to analyze these initiatives to better grasp this progress.

2. The Green Transition for Ilva

The prosperity of future generations relies not only on recognizing a broader right to a healthy environment but also on the imperative for institutions to collectively formulate comprehensive plans for environmental growth and evolution. The green transition for Ilva, or any industrial facility, traditionally signifies a thorough shift

[444] V. DEL GIUDICE, P. DE PAOLA, P. BEVILACQUA, A. PINO, F.P. DEL GIUDICE, *Abandoned Industrial Areas with Critical Environmental Pollution: Evaluation Model and Stigma Effect*, Sustainability, 2020.
[445] G. MONDAINI, P. BONVINI, M. FERRETTI, F. ROTONDO, *From Social Housing to Social Habitat, Perspectives and Innovations. The case of Taranto*, Villard, 2023.

towards more sustainable and environmentally responsible practices. Given its prominence as a major steel-producing company, Ilva would presumably need to focus on initiatives aimed at minimizing its environmental footprint. If executed effectively, this initiative could prove beneficial for both the current and future generations in Taranto, providing employment opportunities without adversely impacting the environment.

At this juncture in the analysis, it seems essential to explore the proposals that have emerged and the institutions from which they originated. The first topic under consideration is the Green Steel proposal. Subsequently, the discussion will transition to EU institutions and their various plans aimed at fostering a greener future. The EU has embarked on an ambitious path toward a sustainable and environmentally friendly future through several initiatives such as the European Green Deal and NextGenerationEU. Advocating for a green transition and transformation for the Ilva facility and garnering support from EU institutions is crucial to harmonize with environmental sustainability objectives. This not only addresses the apprehensions of future generations but also lays the groundwork for potential recognition of environmental human rights, enhancing protection within the framework of international environmental law.

2.1 Green Steel: *Acciaierie d'Italia's* plan to be greener

In the pursuit of mitigating greenhouse gas emissions from steel production, several substantial decarbonization initiatives have emerged within the European industrial landscape. Nonetheless, the commercialization of low-emission steel technology encounters systemic obstacles, including insufficient infrastructure and an indistinct demand for environmentally friendly steel. As part of its renewed commitment to climate neutrality, the European Commission has unveiled plans to actively foster and reshape markets for sustainable basic materials. According to the Commission, « *it takes 25 years, a generation, to transform an industrial sector and all the value chains. To be ready in 2050, decisions and actions need to be taken in the next five years* »[446]. The Commission is steadfast in its commitment to

[446] European Commission, *The European green Deal,* 2019.

industry transformation in alignment with climate neutrality. Taking inspiration from the successful policies in wind and solar energy, there is a noticeable shift toward a more interventionist policy approach, utilizing subsidies and market creation, advocated by both energy-intensive industries and European policymakers. Achieving the complete decarbonization of the steel sector by 2050 necessitates the commercialization of the first industrial-scale steel mills producing green steel within the next decade. Given the inherent risks and probable increases in production costs, this undertaking demands targeted policy interventions[447].

The Paris Agreement imposes the imperative of achieving global greenhouse gas emissions reduction to zero between 2050 and 2070[448]. Aligned with the CBDR principle, articulated in the UNFCCC, developed nations bear the *onus* of pioneering this effort, necessitating a more rapid reduction in emissions than the global average. Steel production stands as one of the most significant global contributors to emissions, accounting for 5% of the world's greenhouse gas emissions[449]. Moreover, it represents one of the most challenging economic sectors to decarbonize. The urgency of addressing climate change demands a comprehensive transformation of the global steel industry. In Europe, the recent proposition of achieving net-zero emissions by 2050 provides a significant timeframe for the complete decarbonization of the sector and the role of governments and the EU extends beyond merely allocating research funding. The enormity of the challenge facing the industry, coupled with high associated risks, implies that substantial public support on a large scale will be indispensable for the sector's successful decarbonization[450].

The currently State-owned Ilva has embraced these initiatives through a series of innovative projects and proposals aimed at reducing emissions stemming from the plant. In 2021, *Acciaierie d'Italia* unveiled a plan for the environmental

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[447] V. VOGL, M. AHMAN, L. J. NILSSON, *The making of green steel in the EU: a policy evaluation for the early commercialization phase*, Climate Policy, vol. 21, n. 1, 78-92, 2021.
[448] J. ROGELJ ET AL., *Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development*, 2018.
[449] M. FISCHEDICK ET AL., *Industry*, Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, 2014.
[450] V. VOGL, M. AHMAN, *What is green steel? Towards a strategic decision tool for decarbonising EU steel*, ESTAD proceedings, 2019.

transformation of the plant focused on the ecological transition of its entire hot area, incorporating innovative and environmentally compatible technologies. The primary objective was a gradual and consistent reduction of emission levels. This multi-year project aligned with the ecological compatibility objectives mandated by the EU for climate and energy impact targets. The aim was to facilitate the production of green steel within the country. *Acciaierie d'Italia* expressed its willingness to engage with all stakeholders involved, including institutions, trade unions, and associated industries. This announcement followed the Italian *Consiglio di Stato* decision[451] to annul the ruling of the TAR (Regional Administrative Court) of Lecce, which had previously mandated the cessation of activities in the hot area of the Taranto plant to mitigate emissions[452]. Ilva's management recognizes the imperative of implementing environmentally sustainable practices in the steel manufacturing process, drawing inspiration from successful initiatives in other EU States. For instance, Sweden, through the HYBRIT model[453], has set ambitious targets to produce 1.3 million tons of environmentally friendly steel annually starting in 2026, employing a green hydrogen Direct Reduction Iron (DRI) plant[454].

In October 2023, *Acciaierie d'Italia* launched a new low-carbon steel brand called *Penisola Steel* during "Steel Commitment, Primary[455]", a commercial roadshow in Taranto attended by more than 500 companies[456]. The brand is set to certify and represent an environmentally friendly steel produced by the Taranto plant, tracing its Italian origin. *Acciaierie d'Italia* has also planned to invest over 2 billion euros for the transformation of the Taranto plant towards sustainability[457]. The decarbonization of the sector is underway, but *Acciaierie d'Italia* faces a

[451] *Consiglio di Stato* (State Council), fourth section, judgement 23 June 2021 n. 4802, *Poteri di ordinanza contingibile e urgente del Sindaco, tutela della salute pubblica da immissioni da impianto siderurgico, principio di precauzione.*
[452] Judgement TAR Lecce n. 249/2021.
[453] European Commission, *The HYBRIT story: unlocking the secret of green steel production*, 20 June 2023.
[454] See infra Chapter 3, 3.1.
[455] Acciaierie d'Italia official website, *Steel Commitment 2023: il reportage, and Penisola Steel: il video*, 2-4 October 2023.
[456] Eurometal, *Acciaierie d'Italia launches low-carbon steel brand*, 2 October 2023.
[457] Acciaierie d'Italia official website, *La decarbonizzazione dell'industria siderurgica: un passo avanti*, 17 November 2023.

horizon of at least 10 years, during which some complexities need to be resolved to avoid losing competitiveness and market share for European integrated steel mills.

2.2 The European Green Deal

With the aim of addressing and mitigating the potential impact of severe climate change, the EU embraced the "Green Deal" in 2019 as its innovative growth strategy. It « *aims to transform the EU into a fair and prosperous society with […] a competitive economy* »[458]. It constitutes an integral element of the EU's strategy to realize the 2030 Agenda for Sustainable Development[459]. Additionally, it commits to shielding citizens from environmental risks and consequences while emphasizing principles of justice and inclusivity[460].

In this context, the European Green Deal emerges as a fundamental initiative for safeguarding the interests of future generations. The Green Deal is guided by two primary objectives: attaining net-zero emissions by 2050 and aligning with the Sustainable Development Goals, encompassing the environmental, economic, and social dimensions of sustainability[461]. This initiative has the potential to reduce environmental legal cases and to provoke the gradual acknowledgment of environmental rights at the national level, a trend already observed in numerous EU states[462]. The comprehensive influence of the Green Deal could extend to the Ilva steel mill context, intensifying efforts from EU institutions to promote innovation in the Taranto area and prevent additional environmental challenges. Italy, as well as other MSs, has been positively impacted by the objectives of the Green Deal.

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[458] European Commission, *Communication From The Commission To The European Parliament, The Council, The European Economic And Social Committee And The Committee Of The Regions,* The European Green Deal, 2020.

[459] This agenda serves as a comprehensive strategy for fostering well-being among individuals, sustaining the planet, and promoting prosperity. Additionally, it endeavors to enhance universal peace within a broader scope of freedom. The Global Goals and the 2030 Agenda for Sustainable Development aim to eradicate poverty and hunger, uphold the human rights of all individuals, attain gender equality along with the empowerment of women and girls, and secure enduring protection for the planet and its natural resources. These goals are interconnected and inseparable, striving to harmonize the three dimensions of sustainable development: the economic, social, and environmental aspects.

[460] C. FETTING, *The European Green Deal*, ESDN Report, December 2020.

[461] S. FILIPOVIC, N. LIOR, M. RADOVANOVIC, *the green deal – just transition and sustainable development goals Nexus*, Renewable and Sustainable Energy Reviews, vol. 168, October 2022.

[462] See infra Chapter 3, 4.1.3.

However, the state remained behind in achieving certain reductions. In fact, there was a 32% reduction in greenhouse gas emissions in 2020 compared to 1990 and a 25% decrease compared to 2019. However, Italy has not met the established targets for renewable energy. The European Commission aims for a 45% share of renewable energy in final consumption by 2030, yet Italy is currently at 19%[463]. The European Green Deal encompasses a set of targets, eight key areas, intentions, and objectives, providing the overarching framework essential for the required green transition. Additionally, ensuring that no one is left behind and preventing disproportionate negative impacts on the most vulnerable are critical aspects of this comprehensive initiative[464]. The goals of the Green Deal are fundamental in the context of Ilva, since they are capable of raising national attention regarding environmentally degraded areas like Taranto.

The examination of the Green Deal should be directed towards its core objectives and essential operational domains, considering how the successful execution of this initiative can contribute to the revaluation of the Ilva steel mill.

2.2.1 Implications of the Green Deal: sustainable development in its target areas

The Green Deal serves as the cornerstone of an expansive strategic framework, known as the European Green Deal Strategic Framework (EGDSF), with the primary objective of transforming the EU into a climate-neutral and competitive economy by 2050. The EGDSF employs a multifaceted approach encompassing regulatory, economic, and voluntary instruments, as well as horizontal strategies involving financing, education, information, and research. Legal tools play a pivotal role within the EGDSF. The seamless evolution and alignment of the substantial body of EU environmental legislation with the objectives of the EGDSF constitute crucial facilitators for their effective implementation. In contrast to previous

[463] Openpolis, *L'avanzamento dell'Italia rispetto agli obiettivi del green deal, Ecologia e Innovazione*, 31 March 2023.
[464] C. FETTING, *The European Green Deal*, op. cit.

strategies like “Europe 2020[465]” the EGDSF delineates a growth strategy propelled by environmental considerations, addressing all facets of environmental policy[466].

In March 2020, the European Commission introduced a proposal for a Climate Law[467] as part of the reform of the governance framework. This proposal exemplifies framework legislation, outlining general targets and the governance structure needed to monitor, evaluate, and guide the actions of the EU and MSs toward the specified objectives. Alongside the existing Governance Regulation on the Energy Union and Climate Action[468], the proposed Climate Law aims to establish a regulatory framework that supersedes the various legislations previously enacted by the EU to combat climate change. The inclusion of binding targets and obligations for adopting, implementing, and reviewing suitable measures at both the EU and national levels is essential for enforcing the outlined targets and trajectories. This not only empowers the Commission but also involves the judiciary and the public, making the governance framework a crucial conduit toward achieving climate neutrality[469]. The Commission commits to emphasizing coherent use of planning tools and effective implementation by MSs[470] in all the areas targeted by the Green Deal.

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[465] European Commission official document, 2010, EUROPE 2020, a European strategy for smart, sustainable and inclusive growth, « *Europe 2020 is a decade-long strategy proposed by the European Commission on March 3, 2010, to foster "smart, sustainable, and inclusive growth" through enhanced coordination of economic and social policies between the European Union and its member states* ».

[466] S. PALEARI ET AL., *The impact of the European Green Deal on EU Environmental Policy*, The journal of Environment & Development, vol. 31, issue 2, March 2022.

[467] European Commission official website, European Climate Law « *The European Climate Law writes into law the goal set out in the European Green Deal. The law also sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. The European Climate Law sets a legally binding target of net zero greenhouse gas emissions by 2050. The EU Institutions and the Member States are bound to take the necessary measures at EU and national level to meet the target, taking into account the importance of promoting fairness and solidarity among Member States.The Climate Law includes measures to keep track of progress and adjust our actions* ».

[468] European Commission official website « *the Regulation on the Governance of the Energy Union sets common rules for planning, reporting and monitoring. The Regulation also ensures that EU planning and reporting are synchronised with the ambition cycles under the Paris Agreement. Under the Governance Regulation, EU Member States develop integrated national energy and climate plans based on a common template. The plans cover the five dimensions of the Energy Union* ».

[469] M. REESE, *Das EU-Klimagesetz - Nachhaltigkeit durch Umweltpolitikplanungsrecht? Standpunkt*, Zeitschrift für Umweltrecht (ZUR), 2020.

[470] J. JENDRÒSKA, M. REESE, L. SQUINTANI, *Towards a new legal framework for sustainability under the European Green Deal*, OSAP, vol. 19, issue 2, 2021.

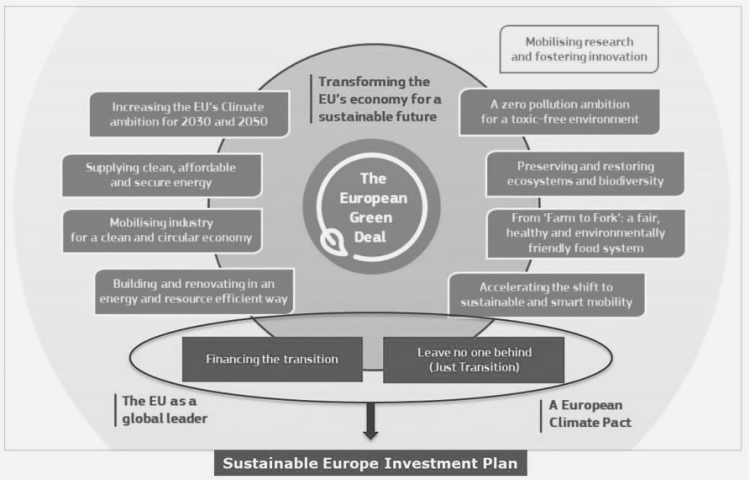

Figure 2. The European Green Deal target areas in the Investment Plan[471]

2.3 The European Union for Next Generations

The EU's many initiatives emerge as pivotal pillars within the framework of the Union's dedication to sustainable development. Taranto, a city profoundly impacted by environmental events, underscores the crucial role which must be played in the future by EU institutions to safeguard the rights of its residents. The Ilva case serves as a stark reminder of the profound consequences that industrial activities can inflict on local communities. The many EU initiatives seamlessly align with the objectives of the Green Deal, and the main program aimed in this direction is NextGenerationEU, an initiative which focuses on many areas of action, one being environmental protection through the "make it green" objectives.

The Union aims to implement robust environmental regulations, champion sustainable practices, and offer support to communities grappling with the aftermath of environmental violations. Furthermore, the stance of the EU in developing and implementing these initiatives serves a dual purpose: rectifying past environmental crises and preventing their recurrence in the future. The EU's approach involves establishing stringent environmental standards, fostering green transitions, and holding industries accountable for their environmental impact. This collective effort is designed to construct a comprehensive framework that not only

[471] European Commission, *Comunication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Sustainable Europe Investment Plan,* Brussels, 14 January 2020.

safeguards the well-being of the present generation but also ensures a sustainable and equitable future for generations to come.

NextGenerationEU, born in the immediate aftermath of the COVID-19 pandemic, is a financial instrument (806.9 billion euros to be expended by 2025) strategically crafted to instigate a « *sustainable, even, inclusive, and fair recovery* »[472]. Within this plan, a substantial allocation of investment is directed toward areas crucial for advancing environmental objectives[473]. NextGenerationEU is one of the most influential EU initiatives, especially regarding the total amount of founding which is allocated by the Union itself [474]. At the core of NextGenerationEU lies the pivotal instrument known as the Recovery and Resilience Facility[475], designed to extend both grants and loans to support reforms and investments across MSs.

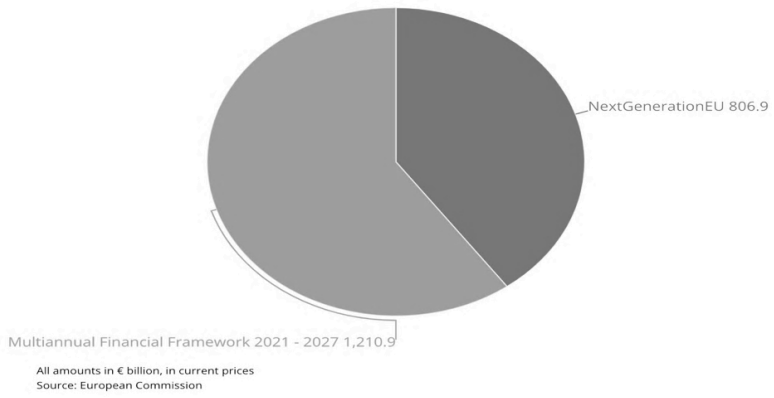

Figure 3: Total EU funding[476]

The disbursement of funds through the Recovery and Resilience Facility adheres to the national Recovery and Resilience plans of MSs. These plans serve as roadmaps

[472] European Commission official website, *Europe's moment: Repair and prepare for the next generation*, 27 May 2020.
[473] Enel official website, *The European Green Deal: how the 27 EU countries are preparing for 2050*, 17 April 2023.
[474] Enel official website, *The European Green Deal: how the 27 EU countries are preparing for 2050*, ibidem.
[475] European Commission website, The Recovery and Resiliance Facility, « *The Recovery and Resilience Facility (RRF) is a temporary instrument that is the centrepiece of NextGenerationEU. Through the Facility, the Commission raises funds by borrowing on the capital markets (issuing bonds on behalf of the EU). These are then available to its Member States, to implement ambitious reforms and investments.* »
[476] *Next Generation EU: Pandemic Recovery Plan to build a greener, more innovative, stronger Europe*, Deloitte website, 20 December 2023.

outlining reforms and investments intended to render EU economies more environmentally sustainable, digitally advanced, and resilient[477]. Italy's plan, known as "Italia Domani[478]" encompasses diverse objectives, with a particular focus on green initiatives. NextGenerationEU has the potential to revolutionize the Italian landscape by directing funds toward innovation and national development, particularly in the environmental sector. It is for this reason that, from the standpoint of the Taranto steel mill and analogous cases, these funds prove highly advantageous for effecting a comprehensive enhancement towards a more environmentally sustainable State. The infusion of European funds for the revitalization of the Taranto area holds the promise of securing improved prospects for the next generations of *Tarantini*. By enacting the plan, the EU underscores its dedication to embrace international environmental agreements, emphasizing the significance of global adherence to such initiatives. It is imperative now to delve into the environmental objectives of the plan, specifically the "make it green" goals and the Green Bond program.

2.3.1 Green Bonds and the "make it green" objectives

A pivotal aspect of Next Generation EU is the allocation of at least 37% of spending in MS' national Recovery and Resilience Plans (RRPs) to sustainable investments, encompassing areas such as green infrastructure and renewable energy.

The establishment of the NGEU Green Bond programme[479] serves as a tangible expression of the EU's dedication to sustainability. It provides additional assurance that funds raised for financing the sustainable component of the RRPs will be exclusively directed towards green projects, like the innovation of the

[477] European Commission official website, *NextGenerationEU*.
[478] Italia Domani official website, « *With the integration of measures outlined in Repower EU, Italy will be able to reduce its dependence on fossil fuels and expedite the green transition process. It aims to cultivate widespread expertise in both public and private sectors regarding green topics, enhance energy infrastructure and facilities, and promote the production of energy from renewable sources* ».
[479] European Commission official website, NextGenerationEU Green Bonds « *NextGenerationEU green bonds are generating numerous advantages for the EU, the capital markets and the market for sustainable finance in particular. After adopting the independently evaluated NextGenerationEU Green Bond framework, the Commission proceeded with the issuance of the first NextGenerationEU green bond in October 2021. Through this 15-year bond, the Commission raised €12 billion, making it the world's largest green bond transaction to date* ».

Taranto steel mill and the recovery of its area. To ensure the rigorous utilization of these funds, the Commission has implemented a robust multi-level framework of control and assessment procedures. The process commences with MSs submitting RRPs to the Commission, outlining planned investments under the Recovery and Resilience Facility and their associated costs. Following a positive assessment by the Commission, the RRPs are adopted by the Council through a Council Implementing Decision, detailing the reforms and investments slated for implementation. Subsequently, all climate-relevant measures in the RRPs undergo an additional due diligence exercise by Commission services before being admitted to the green bond eligibility pool. This meticulous due diligence process is designed to ensure that projects financed by NGEU green bonds align with rigorous standards and prudent criteria expected by investors in terms of climate relevance and impact. Known as the "Due Diligence" process, this thorough examination aims to uphold the strict standards and prudent approach integral to investors' expectations.

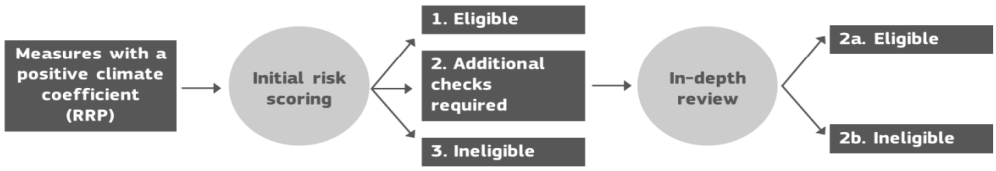

Figure 4: the "Due Diligence" process[480]

MSs have reported a total allocation of 13.5 billion euros of green bond proceeds to eligible expenditures. Italy has reported the highest amount of proceeds allocated to green expenditures, constituting 50.7% of the total[481].

NextGenerationEU is focused on achieving certain green goals or objectives which represent the institutions' will to usher in a newer, greener Europe: the "make it green" objectives. The key areas of focus include reducing greenhouse gas emissions, transitioning to clean energy, enhancing sustainable transportation, protecting the environment, promoting sustainable consumption, shaping the future of food through the Farm to Fork strategy, and creating a greener Europe for

[480] European Commission, *NextGenerationEU Green Bonds Allocation Report*, 16 December 2022.
[481] European Commission, *NextGenerationEU Green Bonds Allocation Report*, ibidem.

everyone. The initiative seeks to ensure a fair transition through investments, training, and a commitment to a zero-emission greenhouse gas economy[482].

It is crucial now to explore how European funds could be directed towards the revitalization of the Taranto region, marking the beginning of a robust and decisive transition. NextGenerationEU and the Green Deal offer substantial backing for State intervention in the area. The examination of these initiatives aims to comprehend the potential outcomes resulting from the efficient utilization of their funding by national governments. However, the discourse on the transition extends beyond mere State involvement. It inherently progresses toward the conclusive aspect of the discussion: the recognition of the right to a healthy environment. This represents the ultimate step in the progressive trajectory, ensuring a safer future for generations to come.

3. Improving Ilva for the transition

Acciaierie d'Italia has demonstrated significant engagement in the requalification of its facility. Nevertheless, the transition process remains underway, necessitating substantial efforts to ensure alignment with the stringent requirements and standards set forth by the EU. A paramount objective of the Ilva steel mill is the attainment of a substantial reduction in hazardous emissions, in strict accordance with the emission standards established by the Union.

A fundamental element of Ilva's innovation passes through the requalification of its steel-making process. The steel sector heavily relies on coal in the conventional blast-furnace production method, contributing to approximately 8% of global energy-related CO_2 emissions[483]. A potential pathway to achieve near-zero CO_2 emissions by 2050 involves relining existing blast furnaces until 2030 and subsequently replacing them with low-carbon steelmaking processes. However, the industry's transformation is gradual, with many companies delaying initiatives. Transitioning primary steel production to nearly zero emissions entail not only technological shifts but also modifications to technical and institutional aspects

[482] European Commission official webiste, Directorate-General for communication, *Make it Green.*
[483] WORLDSTEEL ASSOCIATION, 2020 World Steel in Figures, 2020.

within the industry[484]. The systemic shift is a time-consuming process, given its broad scope involving diverse actors, infrastructure alterations, and adjustments in legal and social institutions. Although achieving global decarbonization of steel production appears distant, measures such as enhancing energy and material efficiency, embracing circular economy principles, and exploring alternative energy sources like nuclear power or renewables remain crucial. While nuclear power could potentially contribute to a decarbonized future, its role in the context of coal-based steel production remains uncertain[485].

Ilva faces the imperative of a prompt transition, with numerous pathways available for consideration. The primary aspect warranting analysis is the decarbonization process, an imperative objective critical for environmental sustainability and in alignment with the EU's Green Deal objectives.

3.1 Detoxification through the reduction of CO_2 and NO_x emissions

The necessity of a detoxification process at Ilva is of utmost importance, addressing critical environmental concerns related to carbon dioxide (CO_2) emissions and nitrogen oxides (NO_x). The steel production process, particularly in conventional blast-furnace operations, significantly contributes to CO_2 emissions. Decarbonization entails transitioning towards low-carbon or carbon-neutral steelmaking processes to mitigate the carbon footprint. Aligning with the EU's Green Deal, which underscores sustainability and climate action, is pivotal. The implementation of a decarbonization process at Ilva is essential to meet the EU's ambitious targets.

Nitrogen oxides, specifically NO_x, pose threats as harmful pollutants with adverse effects on air quality and human health[486]. Introducing a detoxification process requires the adoption of technologies and practices aimed at minimizing or

[484] J.H. WESSELING, S. LECHTENBÖHMER, M. ÅHMAN, L.J. NILSSON, E. WORRELL, L. COENEN, *The transition of energy intensive processing industries towards deep decarbonization: characteristics and implications for future research,* Renew Sustain Energy Rev, 2017.
[485] M. ARENS, M. ÅHMAN, V. VOGL, *Which countries are prepared to green their coal-based steel industry with electricity? - Reviewing climate and energy policy as well as the implementation of renewable electricity*, Renewable and Sustainable Energy Reviews, Vol. 143, June 2021.
[486] C. ARROYAVE, M. MORCILLO, *The effect of nitrogen oxides in atmospheric corrosion of metals*, Corrosion Science, vol. 37, issue 2, 1995.

eliminating the release of NO_x during steel production. In essence, the commitment to decarbonization positions Ilva as a responsible entity aligned with global environmental objectives and dedicated to sustainable industrial practices. The existing plant management has entered into an agreement with the Iren Group[487] for the delivery of 50,000 tons of Bluair, a technopolymer produced through the mechanical processing of plastic waste. This strategic substitution for coal dust in the blast furnaces results in a notable 30% reduction in CO_2 emissions.

The use of Bluair at the former Ilva has many advantages. Used as a replacement for coal and its derivatives, this technopolymer[488] promotes the decarbonization of the steel industry, contributing to reducing dependence on coal imports, it increases the recycling of plastic packaging waste, with savings on the European plastic tax that Italy must pay to the EU on unrecovered quantities, it reduces CO_2 emissions by 30%[489], allowing savings on environmental offset certificates in the Emission Trading System[490](ETS)[491].

Numerous redevelopment initiatives for the Taranto plant have been proposed over the years, with some incorporating Carbon Capture and Storage (CCS) technology. These systems are designed to capture carbon dioxide emissions produced by the combustion of fossil fuels and specific industrial processes. Following capture, the CO_2 can either be stored in dedicated containment sites or utilized as a raw material for the manufacturing of various products, such as

[487] Iren is the leading multi-utility in the Northwest and one of the main operators in Italy, engaged in the sectors of electricity, gas, district heating, integrated water and environmental services management, and integrated solutions for energy efficiency.
[488] Technopolymers are polymers endowed with high physical and mechanical characteristics, allowing their use as substitutes for metals. They are advanced plastics designed to withstand extreme heat and mechanical stress, in contrast to traditional plastics, which are prone to damage when exposed to heat.
[489] Iren official website, *Iren porta all'ex Ilva il tecnopolimero che abbatte del 30% le emissioni*, 15 October 2023.
[490] The essence of the EU Emissions Trading System (ETS): it holds polluters accountable for their greenhouse gas emissions, facilitating emission reduction and generating funds for the EU's environmental initiatives, encompasses all EU MSs along with Iceland, Liechtenstein, and Norway, addresses emissions from approximately 10.000 facilities in the energy and manufacturing sectors, as well as aviation operators within and departing from the EU to Switzerland and the UK, constituting roughly 40% of the EU's emissions, will extend its coverage to emissions from maritime transport starting in 2024.
[491] Circular Economy Network, *Ex Ilva, con l'economia circolare -30% di emissioni CO_2*, 16 November 2023.

plastics, cement, or fuels. This process is known as Carbon Capture and Utilization (CCU)[492].

A shift to sustainable steel production hinges on abundant clean energy resources and robust infrastructure. The transformation of the industrial and steel sectors is contingent on the successful transition of the electricity sector toward renewable sources. Presently, policies aimed at fostering investments in green hydrogen infrastructure are pivotal for progressing large-scale processes and reducing associated costs. Utilizing public procurement strategies can play a significant role, and fostering practices in the private sector, especially within downstream supply chains of primary steel production, is crucial for the realization of this transition. Ilva currently relies on the blast furnace and basic oxygen furnace system (BF–BOF). However, there is a need for the plant to undergo a comprehensive transformation, transitioning to Direct Reduced Iron[493] (DRI) technology and Electric Air Furnaces (EAF).

In the effort to align Ilva with standards coming from the EU, an additional measure to curtail CO_2 emissions involves the utilization of genetically modified bacteria. Although carbon dioxide is a greenhouse gas, it can also serve in the production of various industrially significant chemical building blocks. In this context, a recent iteration of genetically modified *clostridium autoethanogenum*[494] bacteria has been engineered to absorb CO_2. This feature is pivotal, as it enables the method to effectively reduce atmospheric carbon dioxide[495].

In Europe, numerous major steel producers are actively investing in initiatives dedicated to advancing hydrogen DRI technology on a significant scale. An exemplary instance is the HYBRIT project[496] initiated in 2016 by SSAB,

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[492] M. LEONATI, G. NOVATI, *Taranto, primary steel production challenge of decarbonisation*, policy paper, ECCO, November 2021.
[493] R. L. STEPHENSON, R. M. SMAILER, *Direct Reduced Iron: technology and economics of production and use*, January 1980.
[494] *Clostridium autoethanogenum*, an anaerobic bacterium, uniquely engages in syngas fermentation, converting carbon monoxide into ethanol. This microorganism facilitates the generation of ethanol from the waste carbon monoxide gas emitted by industrial facilities.
[495] W. BERCEVILLE ET AL., *Taranto: Revitalizing the Energy of a Mediterranean Port City*, In D. B. AUDRETSCH ET AL., *The Strategic Management of Place at Work. Future of Business and Finance*, Springer, 2023.
[496] European Commission, *The HYBRIT story: unlocking the secret of green steel production*, op. cit.

LKAB, and Vattenfall[497]. This collaborative venture aims to develop a process that substitutes coal with hydrogen in steelmaking. Additionally, in 2019, ArcelorMittal launched a €65 million project focused on experimenting with green hydrogen in steel production in Hamburg, Germany. Notably, the Hamburg plant has been employing DRI technology since 1971, predominantly reliant on natural gas[498]. The H2FUTURE project[499], funded by the European Union in 2019, is another significant initiative investigating the industrial-scale production of green hydrogen for subsequent integration into the steel industry[500].

The steel industry is undergoing advancements, necessitating a corresponding evolution at Ilva to align with Europe's environmental objectives. Furthermore, the transformation and modernization of the plant have the potential to yield numerous positive outcomes for the Apulian community like, for example, the rejuvenation of the tourism sector, which has faced significant challenges due to the adverse impacts of Ilva's activities.

Tourism currently plays a minor role in Taranto's economy, with the city that faces accessibility challenges caused by underdeveloped transport infrastructure[501]. While Taranto is accessible by train from major Italian and foreign cities, connections are often intricate and/or costly[502]. Although enhancing transport

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[497] HYBRIT, fossil-free steel official website « *The HYBRIT technology has the potential to reduce Sweden's total carbon dioxide emissions by at least ten percent. This is equivalent to one third of the emissions from the industry and may, in the future, help to reduce emissions from iron and steel production globally* ».

[498] Arcelor Mittal official website « *(…) Europe's only DRI-EAF facility. The site is therefore a natural home for (…) flagship Innovative DRI technology pilot. Hamburg is already one of Europe's most energy efficient steel plants, using natural gas to reduce iron ore to make DRI, which is then fed into an EAF alongside scrap. The €110 million Hamburg H2 project, for which (it has been) received a commitment from the German government to provide €55 millions of funding support, is designed to test the ability to replace the use of natural gas with hydrogen to reduce iron ore and form DRI on an industrial scale, as well as then testing how that carbon-free DRI reacts in an EAF* ».

[499] H2Future official website « *H2FUTURE is a European flagship project for the generation of green hydrogen from electricity from renewable energy sources. Under the coordination of the utility VERBUND, the steel manufacturer voestalpine and Siemens Energy, a proton exchange membrane (PEM) electrolyser manufacturer, a large-scale 6 MW PEM electrolysis system will be installed and operated at the voestalpine Linz steel plant in Austria* ».

[500] M. LEONATI, G. NOVATI, *Taranto, primary steel production challenge of decarbonization*, op. cit.

[501] G. DI MEO, *«Taranto isolata, danno per la città. La comunità alzi la voce»*, Buonasera, June 2023.

[502] V. FERRI, R. PACE, *L'Italia dei trasporti tra Adriatico e Tirreno*, in Sicurezza e Scienze Sociali, 2016.

links is a potential solution, the primary emphasis should initially be placed on capturing the interest of potential visitors through comprehensive image improvement campaigns for the city. For example, in 2022, the highly anticipated third edition of the T.R.U.St. project[503] has come to a close, making Taranto the European capital of street art[504]. The current governance of Ilva has opened its doors to the adoption of sustainable steel practices and the implementation of emission controls, thereby contributing to enhanced air quality. These positive developments have the potential to reshape the perception of Taranto through continuous improvements and the implementation of innovative solutions. Furthermore, considering potential infrastructure investments in rail and air services connecting to Taranto's stations and airports, the overall travel experience to the region could be significantly streamlined compared to its current state[505].

These progressive measures are in harmony with the overall vision of the EU and its Green Deal initiative. The decontamination and subsequent revitalization of the plant are crucial for Italy's goal of raising environmental awareness through its "*Italia Domani*" plan and the constitutional introduction of green rights[506]. The cleanup and redevelopment of the Ionian region would be a result of the growing proactive stance of the international community, setting an example of how a site where environmental issues have occurred can undergo a complete shift in awareness, emphasizing the importance of respecting green rights for affected populations. Nevertheless, for the safeguard of future generations, a more stringent protection is imperative, surpassing the boundaries of EU programs. While procedures for green steel and EU fundings undeniably form a vital strategy for shaping prospects, legal instruments inherently wield a more potent scope of protection, granting individuals substantial defensive tools. One way to offer such benefits is through the formal recognition of the Right to a Healthy Environment.

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[503] T.R.U.St. official website, « *T.R.U.St. stands for Taranto Regeneration Urban Street. It is structured as a permanent festival of urban art with the aim of promoting contemporary arts and requalifying, enhancing, and developing untapped territorial potentials through new artistic forms and communication. The initiative seeks to facilitate conversations, support social regeneration, and open up neighborhoods to the public that were previously considered inaccessible or unattractive* ».

[504] La Repubblica XL, *T.R.U.ST. 2021: Taranto regeneration urban and street.*

[505] W. BERCEVILLE ET AL., Taranto*: Revitalizing the Energy of a Mediterranean Port City,* op. cit.

[506] See infra Chapter 3, 4.1.3.

4. Future Generations and the recognition of the Right to a Healthy Environment

In the same way that a favorable environment can enhance the fulfillment of human rights, there is an increasing recognition that environmental degradation and climate change generally have adverse impacts on the realization of human rights. Consequently, there is a growing understanding that the pursuit of human rights objectives inherently involves safeguarding the environment. As nations and communities confront worsening environmental conditions, there is a rising demand to move beyond this consensus and acknowledge a human right to a healthy environment. Framing environmental protection as a human rights' imperative holds the promise of fostering policy coherence and legitimacy, all the while reinforcing positive environmental outcomes[507].

In international law, the categorization of human rights based on the "generation" to which they belong is a common practice[508]. However, some new rights do not belong to the common classification of first and second generation[509]; they could not be accommodated within their confines. Instead, these rights could only be realized through the solidarity of all concerned States and invoked and demanded from the State itself. Their realization is contingent upon the collaborative efforts of various actors on the social stage, including the individual, the State, public and private entities, and the international community[510]. Environmental rights would thus exist beyond the confines of established

[507] R. BRATSPIES, *Do We Need a Human Right to a Healthy Environment*, Santa Clara Journal of International Law, vol. 13, no. 1, 2015.
[508] P. ALSTON, *A Third Generation of Solidarity Rights. Progressive Development or Obfuscation of International Human Rights Law*, 1985.
[509] P. ALSTON, *A Third Generation of Solidarity Rights. Progressive Development or Obfuscation of International Human Rights Law*, ibidem. Civil and political rights are commonly labeled as first-generation rights, with economic, social, and cultural rights falling into the category of second-generation rights. The latest extension to this framework is the introduction of third-generation rights, which involve solidarity rights. What sets third-generation rights apart is their attainment through collaborative efforts among diverse actors, distinguishing them from the first two generations.
[510] J. A. DOWNS, *A Healthy and Ecologically Balanced Environment. An Argument for a Third Generation Right*, DUKE J. COMP. & INT'L L. 351, 364, 1993.

classifications, either forming a distinct category[511] or transcending the boundaries of well-known categorizations.

The lack of a codified human right to a healthy environment raises substantial questions regarding the potential impacts that may arise from its introduction and widespread acknowledgement. Can the recognition of the right to a healthy environment be viewed as an effective mechanism for providing enhanced protection, particularly in the context of intergenerational justice? Some specifications are needed.

Emerging human rights norms, including the right to a healthy environment, have proven remarkably successful. Their assimilation and widespread adoption of ideas have generated transformative impacts on the legal, constitutional, and political cultures of numerous States and international institutions. Recognizing the power of environmental human rights norms to shape expectations and behavior is particularly pertinent given the consensus that, regardless of whether climate change effects are construed as human rights violations, human rights obligations play a crucial role in protecting individuals affected by climate change. If all human rights are genuinely « *universal, indivisible, interdependent, and interrelated* »[512] environmental activists have many tools at their disposal. Positioning a functioning and healthy environment as a human right serves more than emphasizing environmental protection amidst competing economic priorities. It establishes this environmental priority as a fundamental concern for international law, a pivotal component of the entire legal framework erected to preserve international peace and security. Such framing accentuates the obligation of States to respect and protect this right both nationally and internationally.

This fundamental legal transformation is already underway, albeit with intermittent progress. An expanding international movement aims to propel these changes beyond national boundaries and fundamentally reshape human perceptions of the environment. Initiatives like the World People's Conference on Climate Change and the Rights of Mother Earth in 2010, which produced the Universal

[511] S. MARKS, *Emerging Human Rights: A New Generation for the 1980s*, 33 RUTGERS L. REv. 435, 442-43, 1980.
[512] World Conference on Human Rights, June 14-25, 1993, Vienna Declaration and Programme of Action, 5, U.N. Doc. A/Conf 157/24, July 12, 1993.

Declaration of the Rights of Mother Earth[513], underscore the recognition of the Earth's inherent right to « *continue vital cycles free from human interference* »[514]. Numerous events, such as those at Rio+20[515], further explored the theme of rights for nature, indicating a growing momentum towards incorporating a rights-of-nature approach into legal thinking about human rights and environmental protection within the context of development[516].

Some scholars contend that the right to a healthy environment is too ambiguous to generate practical rights and obligations[517]. However, numerous fundamental rights are codified in imprecise language, with interpretation relying on judicial or other bodies. The fact that environmental rights have been adjudicated extensively by national courts worldwide[518], like in the case of the ECtHR, serves as compelling evidence that a new human right to a healthy environment might not necessarily be too vague to implement. Nevertheless, the multitude of these decisions may raise questions about the precise meaning of the right at the international level.

The anticipated global recognition of the right to a healthy environment is expected to enhance environmental protection in several ways, including emphasizing the significance of the environment in the realm of human rights, utilizing human rights norms to address gaps in international environmental law, reinforcing legal foundations for international enforcement and improving environmental practices at the national level. Immediate benefits of recognition could confirm that the universal language of rights is applicable to environmental

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513 *Universal Declaration of the Rights of Mother Earth*, 2010, draft published on 22 April 2010 at the World People's Conference on Climate Change and the Rights of Mother Earth, Cochbamba, Bolivia.

514 Art. 2 Universal Declaration of the Rights of Mother Earth.

515 The United Nations Conference on Sustainable Development, also known as Rio+20, was organized by the Department of Economic and Social Affairs of the UN and took place in Rio de Janeiro from June 20 to 22, 2012. The conference focused on the green economy within the context of sustainable development and its institutional framework. Its objectives included renewing commitment to sustainable development, assessing the level of achievement of goals set in the past two decades, and recognizing new challenges.

516 R. BRATSPIES, *Do We Need a Human Right to a Healthy Environment*, op. cit.

517 H. HANNUM, *Rescuing Human Rights: A Radically Moderate Approach*, Cambridge University Press, 2019 and J. B. RUHL*, the metrics of constitutional amendments: and why proposed environmental quality amendments don't measure up*, Notre Dame Law Rev., 1999.

518 D. R. BOYD, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights, and the Environment,* UBC Press, 2012.

issues. On the domestic front, explicit recognition of the right to a healthy environment might lead to the enactment of new environmental statutes and provide a basis for courts to address environmental issues in the absence of legislation. Additionally, it could equip civil society with new tools to hold governments accountable[519].

A comprehensive grasp of the escalating necessity for a broader implementation and transition towards recognizing the right to a healthy environment is essential. This transition should extend beyond predefined boundaries, encompassing a progressively growing array of cases. Embracing this fundamental right more extensively is imperative for the well-being of future generations, and the initiation of this process is already underway: it is now essential to analyze the ongoing recognition of the right both nationally and internationally.

4.1 International acknowledgement of the right

The recognition of the right to a healthy environment marks a significant milestone in the intersection of human rights and environmental preservation. Over the years, this recognition has evolved, garnering support at both the international and national levels. At the global stage, recent international acts have underscored the paramount importance of this right, acknowledging its relevance from a comprehensive standpoint. Simultaneously while States have made progress in recognizing this right by integrating it into their individual constitutions. Despite the diversity in the provisions adopted by different countries, the common thread is the integration of the right to a healthy environment within the broader framework of legal protection.

The initial focus of this analysis lies in international acknowledgment, a crucial progression that transforms the legal framework to promote sustainability. To grasp the full extent of this recognition, it is essential to initiate the exploration by examining the diverse manifestations it has assumed on the global stage before delving into the specifics of national recognition, with particular attention to

[519] J. H. KNOX, *Costructing the Human Right to a Healthy Environment*, The Annual Review of Law and Social Science, 2020.

advancements in Italy. Only through such analysis we can grasp the potential benefits that the effective recognition of this right holds for future generations in sites like Taranto.

In essence, the journey from international agreements to constitutional provisions signifies a collective commitment to safeguard the well-being of individuals in harmony with their environment. This evolving narrative not only reflects a growing awareness of the link between human rights and environmental health but also lays the groundwork for a more sustainable legal framework. The examination of existing recognitions serves as groundwork for understanding the transformative impact this acknowledgment could have on the future of environmentally distressed regions like Taranto.

4.1.1. UN Recognition and the Inter-American Court of Human Rights

The United Nations have struggled to link human rights with the environment for a long time. Since the Stockholm Conference, advancements in human rights and environmental protection have outpaced progress at the UN. In the mid-1990s, Costa Rica, South Africa, and Switzerland initiated resolutions at the UN Commission on Human Rights[520] addressing human rights and the environment, but they faced opposition and were eventually discontinued. Throughout the 1990s and the early 21st century, many powerful UN Member States maintained a separation between human rights and environmental policy. The interconnection of human rights and climate change gained prominence during the seventh session of the Human Rights Council (HRC[521]) in March 2008, culminating in the adoption of

[520] The primary purpose of the UN Commission on Human Rights, or UNHRC, was to investigate, oversee, and publicly disclose information about human rights conditions in particular countries or territories (referred to as country mechanisms or mandates) and significant instances of human rights abuses globally (referred to as thematic mechanisms or mandates). Additionally, the Human Rights division of the UN was tasked with safeguarding and promoting the principles outlined in the Universal Declaration of Human Rights.

[521] The Human Rights Council, formed in 2006 by the General Assembly, serves as the primary intergovernmental body within the United Nations dedicated to human rights. With a membership of 47 MSs, it functions as a multilateral platform to tackle human rights violations and address country-specific situations. The Council is actively involved in responding to human rights emergencies and formulating recommendations for the effective implementation of human rights on a global scale.

HRC Resolution 7/23[522] which marked the first explicit acknowledgment that climate change poses an immediate threat to human rights globally. From 2011 to 2019 the UN has seen progressive clearance regarding the relationship between human rights and the environment, paving the road for future recognition.

Recognizing the growing global movement towards national-level acknowledgment of the right to a healthy environment, a core group, led by Slovenia, organized an expert seminar on February 6, 2020. This seminar, supported by the Universal Rights Group[523] and the Commonwealth, aimed to explore the value of this right for individuals and the environment, posing the question: Is it time for UN recognition of the right to a healthy environment[524]?
On October 8, 2021, the UN Human Rights Council took a significant step by acknowledging that access to a healthy and sustainable environment is a universal right. While non-binding, this resolution addressed a crucial gap in international law and resulted from a years-long campaign by various civil society organizations and stakeholders. The resolution urged States to implement policies ensuring the enjoyment of this right, covering aspects like biodiversity, ecosystems, and identifying climate change as a major problem. The central provision explicitly recognized the right to a safe, clean, healthy, and sustainable environment as a human right crucial for the enjoyment of other rights. Although lacking legal binding force, the resolution reflects strong political commitment among UN Member States and is anticipated to enhance environmental outcomes by increasing public awareness, improving accountability, and serving as a foundation for environmental litigation. This enhancement is clear in the case of the European Parliament which, in a resolution[525], advocated for the recognition of the right to a healthy environment in the EU Charter, encouraging the EU to lead in its international recognition[526]. On July 28, 2022, the UN General Assembly (UNGA)

[522] HRC, Resolution 7/23, *Human Rights and Climate Change*, UN Doc A/HRC/RES/7/23.
[523] The URG is an independent think tank based in Geneva that offers policy-relevant research, analysis, and recommendations on global human rights policy. With a singular focus on enhancing the visibility and comprehension of the international human rights system, the organization provides fundamental insights into this cross-cutting theme.
[524] M. LIMON, *United Nations recognition of the universal right to a clean, healthy and sustainable environment: an eyewitness account*, Reciel, vol. 31, issue 2, 9 May 2022.
[525] European Parliament resolution, *EU Biodiversity Strategy for 2030: Bringing nature back into our lives*, 9 June 2021, (2020/2273(INI)).
[526] European Parliament Document, *A universal right to a healthy environment*, At a Glance, 2021.

echoed the recognition of the human right to a healthy environment, aligning with the HRC's acknowledgment in October 2021. This resolution from the General Assembly conveys a powerful global consensus supporting this right, which is already acknowledged in 156 countries at the national and regional levels. Historically, UNGA recognition of a human right has spurred States to take concrete actions to ensure the realization of that right. Consequently, the UNGA Resolution on the right to a healthy environment is anticipated to catalyze various positive effects. Embracing a rights-based approach is crucial for the effective development and implementation of policies concerning a healthy environment, and it is closely intertwined with the principles of environmental and climate justice[527].

This recognition is expected to spread a substantial echo that will reverberate in favor of current and future generation, but the UNGA is not the only international body which has recognized the right to a healthy environment. On February 6, 2020, the Inter-American Court of Human Rights (IACtHR[528]) issued a groundbreaking decision in *Indigenous Communities Members of the Lhaka Honhat Association v. Argentina*[529]. In this notable ruling, the Court, for the first time in a contentious case, examined the rights to a healthy environment, indigenous community property, cultural identity, food, and water based on Article 26 of the American Convention on Human Rights (ACHR[530]). The Court established that the right to a healthy environment safeguards elements of the environment, such as forests, seas, rivers, and other natural features, as intrinsic interests, independently of conclusive evidence regarding their impact on individuals. Similar to its 2017 advisory opinion[531], the Court indicated a

[527] United Nations Human Rights, office of the High Commissioner, *What is the Right to a Healthy Environment? Information Note*, UN environment programme, UNDP, January 2023.
[528] See supra note n. 347.
[529] Inter-American Court of Human Rights, *Comunidades Indígenas Miembros de la Asociación Lhaka Honhat (Nuestra Tierra) v. Argentina*, Inter-Am. Ct. H.R., 6 February 2020.
[530] Article 26 ACHR, *Progressive Development*, « *The States Parties undertake to adopt measures, both internally and through international cooperation, especially those of an economic and technical nature, with a view to achieving progressively, by legislation or other appropriate means, the full realization of the rights implicit in the economic, social, educational, scientific, and cultural standards set forth in the Charter of the Organization of American States as amended by the Protocol of Buenos Aires* »
[531] Inter-American Court of Human Rights, Advisory Opinion OC-23/17, *The Environment and Human Rights*, IACtHR Series A, No 23, 2017.

willingness to consider the so-called "rights of nature[532]". The decision reiterated the positive and negative obligations of States concerning the right to a healthy environment. In addition to the duty to respect the rights and freedoms outlined in the Convention[533], States are obliged to ensure compliance with their human rights commitments more broadly, including the right to a healthy environment, by preventing violations, including those perpetrated by private entities within their jurisdiction. The acknowledgment of a justiciable independent right to a healthy environment introduces the possibility of new types of claims in the Inter-American system, including the protection of the environment itself. This implies that harm to the environment could potentially be subject to legal scrutiny, even in the absence of demonstrated harm to individuals[534]. This shift has been suggested to represent a potential transition from an anthropocentric perspective to an eco-centric approach[535]. However, The IACtHR's interpretation of Article 26 of the ACHR has sparked intense debates, with three main criticisms under consideration. First, some argue that the Court's interpretation does not align with the actual wording of Article 26, which establishes an obligation of conduct, but not of result[536]. Critics claim that the provision allows monitoring of progressive development but does not create new justiciable rights. The second criticism is that the Court's interpretation conflicts with the intention of the States Parties, pointing to the Protocol of San Salvador[537], which limits the Court's jurisdiction over economic, social, and cultural rights. Finally, there's concern that the Court's approach could lead to a constant evolution of new rights, potentially compromising legal certainty and

[532] D. R. BOYD, *The Rights of Nature: A Legal Revolution That Could Save the World*, ECW Press, 2017.
[533] Article 1.1 ACHR, « *The States Parties to this Convention undertake to respect the rights and freedoms recognized herein and to ensure to all persons subject to their jurisdiction the free and full exercise of those rights and freedoms, without any discrimination for reasons of race, color, sex, language, religion, political or other opinion, national or social origin, economic status, birth, or any other social condition* ».
[534] M. A. TIGRE, *Inter-American Court of Human Rights Recognizes the Right to a Healthy Environment*, American Society of International Law, vol. 24, issue 14, 2 June 2020.
[535] M.A. TIGRE, N. URZOLA, *The 2017 Inter-American Court's Advisory Opinion: Changing the Paradigm for International Environmental Law in the Anthropocene*, 12 JHRE 24, 2021.
[536] Partially Dissenting Opinion, Judge Vio Grossi, Lhaka Honhat (n 4) para 18(e) and in Lagos del Campo (n 8) 10.
[537] Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social, and Cultural Rights, Protocol of San Salvador, signed at San Salvador, El Salvador, 18th Regular Session of the Assembly, November 17, 1988.

effectiveness in regions with weak institutions and unstable resources. The establishment of new rights requires careful justification, clarity, and assessment of alternative options for long-term persuasiveness and effectiveness[538].

Despite criticisms, these acknowledgments reflect a broader push for intervention by international institutions. This may pave the way for a more comprehensive formal adoption of the Right to a Healthy Environment, providing stronger legal protection in cases like Ilva, where the lack of a universally asserted principle has resulted in procedural uncertainty.

4.1.2 Benefits of recognition in the European Convention on Human Rights

The ECtHR has recognized various aspects of the right to a clean and healthy environment by interpreting key articles of the ECHR in environmental cases. The Court has considered environmental issues in relation to the right to life, prohibition of torture, right to home and family, right to information, and right to a fair trial. Substantively, the ECtHR has emphasized the duty of States to prosecute and penalize environmental polluters, following the "polluter pays" principle. Additionally, the Court has endorsed the precautionary principle, urging caution in dealing with technologies carrying potential unknown risks. Procedurally, the ECtHR has highlighted States' obligations to enact relevant environmental legislation and assess the environmental impact of projects[539]. In this context, interpreting the ECHR as a living instrument in the light of present-day conditions proves beneficial. While legal proceedings can establish a reliable legal remedy, they present challenges in proving the obligation of prevention due to the absence of widespread recognition of the right to a healthy environment[540]. This perspective fails to acknowledge the potential human rights implications that an independent recognition of the right to a healthy environment could bring about.

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[538] L. MARDIKIAN, *The Right to a Healthy Environment before the Inter-American Court of Human Rights,* British Institute of International and Comparative Law, Cambridge University Press, 2023.
[539] B. PETERS, *The Right to a Clean and Healthy Environment: International Protection*, 29 October 2020.
[540] N. SAURA-FREIXES, *Environmental human rights defenders, the rule of law and the human right to a healthy, clean, and sustainable environment: last trends and challenges*, Unio EU Law Journal, vol. 8, n. 1, pp. 53-79, December 2022.

Acknowledging the right to a healthy environment would bring legal coherence and certainty, empowering the court to issue binding rulings that enhance the enforcement of State obligations and the implementation of specific measures for the right protection. It is undeniable that environmental cases pose unique challenges in adjudication. Specifically, establishing a direct connection between the alleged act and the violation of human rights proves challenging. Scientific evidence regarding cause and effect is often measured in terms of risk levels rather than observed directly[541]. Recognition would bring certainly more clarity and would encompass both procedural aspects, such as access to environmental justice and participation in decision-making, and substantive elements, such as access to clean water and air, at a regional level. It could foster alignment among domestic regimes and potentially encourage heightened protection at the national level, especially if the EU completes its accession to the ECHR.

Additionally, establishing the right to a healthy environment as an independent right could open avenues for climate litigation, increasing the likelihood of success and promoting more comprehensive and consistent protection across the continent. This shift could also impact businesses, holding them more accountable for the human rights implications of their activities, providing stronger grounds for victims seeking remedies, and encouraging businesses to adhere to existing standards to mitigate the risks and costs associated with climate litigation[542]. This holds significant importance, especially in cases akin to Ilva, as the recognition of the right to a healthy environment could offer more tangible protection for both present and future generations, preventing the recurrence of fundamental abuses.

These possibilities need to be examined within the wider global perspective of the right to a healthy environment. At the same time, it is vital to evaluate domestic acknowledgments and endeavors toward enhanced environmental protection that could bring advantages for future generations. Understanding the

[541] B. VAN DYKE, *A proposal to introduce the right to a healthy environment into the European Convention regime*, Virginia Environmental Law Journal, vol. 13, n. 3, 1994.
[542] A. O. VAHÌ, *The Council of Europe and the right to a clean, healthy and sustainable environment*, Universal Rights Group, 21 June 2023.

implementation of environmental rights at the national level is crucial, indicating a heightened inclination toward recognition by individual States.

4.2 National Recognition through Climate Constitutionalism

The discourse must now follow its natural progression through the analysis of national recognition of environmental rights and the right to a healthy environment. The exploration of the national acknowledgment of the right to a healthy environment inevitably starts with the examination of Climate Constitutionalism. This concept entails the incorporation of principles, protections, and rights pertaining to the environment and climate change within a country's constitution. This reflects an increasing acknowledgment that tackling climate change and ensuring environmental sustainability are essential for the welfare of current and future generations.

At the core of Climate Constitutionalism is the recognition of the right to a healthy environment. This acknowledges that individuals possess a fundamental entitlement to reside in an environment that does not jeopardize their health or overall well-being. The inclusion of environmental values in constitutional texts, achieved either by establishing a right to a healthy environment or by imposing State obligations to safeguard or preserve environmental integrity, was perceived as yielding various significant advantages[543]. These benefits encompassed the guidance of public discourse, the establishment of comprehensive substantive safeguards for the environment, and an increased probability of adherence to environmental regulations[544]. Furthermore, the incorporation of environmental rights was viewed as improving access to justice and the availability of remedies for individuals affected by environmental harms. The acknowledgment of the right to a healthy environment in national constitutions has elevated the significance of environmental protection, serving as a foundation for the development of more robust environmental laws, standards, regulations, and policies. As of 2017, over

[543] J. SETZER, D. W. DE CARVALHO, *Climate Litigation to Protect the Brazilian Amazon: Establishing a Constitutional Right to a Stable Climate*, 30 Review of European, Comparative & International Environmental Law 197, 2021.
[544] D. R. BOYD, *The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment*, University of British Columbia Press, 2012.

150 countries globally[545] had integrated environmental provisions into their constitutions[546] and in the following years an even broader movement took place not only nationally, but also internationally, as the UNGA recognition clearly shows.

Italy has taken part in this progression, and this analysis must necessarily pass through the examination of such evolution.

4.2.1 Italian Integration: Articles 9 and 41 of the Italian Constitution

As for the Italian movement towards environmental recognition, On June 9, 2021, the Senate assembly, in its first reading, endorsed a constitutional revision amending Articles 9[547] and 41[548] of the Constitution to address environmental protection. The objective of this intervention was to emphasize the contemporary and urgent nature of environmental issues within a constitution conceived at a time when awareness of these matters was still evolving. The constitutional changes were also a response to initiatives from European institutions. The European economic constitution's architecture, which balances environmental concerns with other priorities like social progress and full employment, faces a subtle challenge from the European Green Deal. The possible advances which could stem from this influential European initiative have been already discussed, but it is fundamental to say that the Green Deal introduces a potentially transformative perspective by promoting sustainability and the circular economy, suggesting a development path that may not align seamlessly with other objectives of Union political action. The alignment with European regulations of the reform regarding the environment as an objective value rather than a subjective right is acknowledged. Additionally, the

[545] UN Environment Report, *Environmental Rule of Law: First Global Report*, UNEP (United Nations Environment Programme), Nairobi, 24 January 2019.
[546] N. S. GHALEIGH, J. SETZER, A. WELIKALA, *The Complexities of Comparative Climate Constitutionalism*, Journal of Environmental Law, 34, 517-528, Oxford University Press, 2022.
[547] Art. 9 Cost. « *The Republic shall promote the development of culture and of scientific and technical research. It shall safeguard the natural beauties and the historical and artistic heritage of the Nation. It shall safeguard the environment, biodiversity and ecosystems, also in the interest of future generations. State law shall regulate the methods and means of safeguarding animals* ».
[548] Art. 41 Cost. « *Private economic enterprise shall have the right to operate freely. It cannot be carried out in conflict with social utility or in such a manner as may harm health, the environment, safety, liberty and human dignity. The law shall determine appropriate programmes and checks to ensure that public and private economic enterprise activity be directed at and coordinated for social and environmental purposes* ».

reference to the interest of future generations is noteworthy, aligning with the long-term perspective ingrained in Union law[549].

With the reform, a new paragraph was introduced into Article 9 to recognize, within the Fundamental Principles Stated in the Constitution, a principle of environmental protection. The purpose of the amendment, based on what emerged during parliamentary proceedings, is primarily to provide articulation to the principle of environmental protection, going beyond the mention of protection as stipulated in the second paragraph of Art. 117 of the Constitution[550], introduced with the *Titolo V* reform approved in 2001. Additionally, the reform brought changes to Article 41 concerning the exercise of economic initiative. Firstly, it intervenes on the second paragraph and establishes that private economic initiative cannot operate to the detriment of health and the environment, adding these two limits to those already in force, namely safety, freedom, and human dignity. Regarding this point, the Ilva case immediately comes to mind. In fact, official documents of the Senate explicitly recall those events and the Constitutional Court's judgements regarding the case[551], stating that the judges ended up privileging « *excessively the interest in the continuation of productive activity, completely neglecting the needs of inviolable constitutional rights related to the protection of health and life itself* »[552]. The second modification affects the third paragraph of Article 41, reserving to the law the possibility of directing and coordinating economic activity, both public and private, not only for social purposes but also for environmental ones[553]. The intervention, in line with the principle of "do not cause significant harm" is in line with the NextGenerationEU initiatives and the national Recovery and Resilience Plan[554], "*Italia Domani*".

It is equally undeniable that an explicit reference in the Constitution to the interest of future generations is certainly capable of constituting an extremely

[549] G. SANTINI, *Costituzione e ambiente: la riforma degli artt. 9 e 41 Cost*., Forum di Quaderni Costituzionali, ISSN 2281-2113, 25 June 2021.
[550] Art. 117.2 of the Italian Constitution: « *The State has exclusive legislation in the following matters: (...) s) protection of the environment, ecosystem, and cultural assets* ».
[551] See supra Chapter 1, 3.2.
[552] Senato della Repubblica dossier, *Modifiche agli articoli 9 e 41 della Costituzione in materia di tutela dell'ambiente*, XVIII Legislatura, A.C. 3156-B, 7 February 2022.
[553] Senato della Repubblica dossier, *Modifiche agli articoli 9 e 41 della Costituzione in materia di tutela dell'ambiente*, ibidem.
[554] G. SANTINI, *Costituzione e ambiente: la riforma degli artt. 9 e 41 Cost.*, op. cit.

relevant constraint for the legislator and, therefore, a validity criterion rich in potential for the decision-making processes of environmental policies and judicial review of them. In other words, there is almost no doubt that the formalization in the constitutional text of the clause under consideration takes on a meaning that goes well beyond the mere recognition of an ontological characteristic of environmental protection policies. Indeed, the explicit reference to the « *interest of future generations »* rises, in all respects, to the rank of a substantial parameter of constitutional legitimacy, determining the typical consequences of constitutional law: shaping, with a legal constraint, the choices of the bodies holding legislative power, imposing inquiries, considerations, and balances specifically oriented to consider the long-term effects of those choices. This makes these choices, at the same time, measurable and evaluable in the context of a judicial review of reasonableness no longer limited to "not manifestly unreasonable" (or "arbitrariness") but fully achievable by applying the much more stringent tests of suitability, necessity, and strict proportionality of the scrutinized measures[555].

An example is needed to understand the importance of these interventions. In September of 2021, a class action was initiated following an application filed by ten Taranto citizens in conjunction with the "*Genitori Tarantini*" Association[556] and an eight-year-old boy afflicted with a rare genetic mutation. The legal action was directed against *Acciaierie d'Italia*. The court hearing took place on March 17, 2022, during which the association strengthened its class action by introducing additional elements. The constitutional amendments of the Italian Constitution in the preceding February brought about changes that highlighted the importance of environmental protection, explicitly stating that economic activities must not harm public health or the environment. Furthermore, the association submitted a recent report from the United Nations, compiled by the Human Rights Commission,

[555] M. CECCHETTI, *La revisione degli articoli 9 e 41 della Costituzione e il valore costituzionale dell'ambiente: tra i rischi scongiurati, qualche virtuosità (anche) innovativa e molte lacune*, Forum di Quaderni Costituzionali, ISSN 2281-2113, 25 August 2021.

[556] "*Genitori Tarantini*" is an Association comprised of parents and citizens residing in Taranto and its surrounding areas, like the *rione* Tamburi. Its primary mission is to safeguard the rights and health of citizens, particularly children and families, by addressing issues related to pollution and the adverse environmental impacts stemming from industrial activities and emissions of the former Ilva. The association advocates for a safer and healthier environment for the Taranto community and endeavors to raise public awareness regarding matters concerning pollution and environmental harm.

designating Taranto as a "sacrifice zone"[557]. This underscores how the introduction of environmental protection at the constitutional level is capable of igniting a spark of legal recognitions which, in the future, could become binding defenses against environmental abuses.

However, the reform has met some criticism. It has been accused of failing to establish a framework for decision-making processes that encompassed and regulated transparency, participation, and collaboration between science and politics, which is pivotal in ecological and environmental matters. Other critics were moved because of a lack of procedural legitimacy criteria and guidance on reconciling diverse interests. It was accused of overlooking key constitutional principles related to the theme, including the duty of solidarity, the principle of integration, and the notion that environmental protection should be aligned with its valorization[558].

However, the reform bears significant importance. With these acknowledgments, Italy has initiated a shift toward establishing a more tangible set of protective measures for future generations; these measures have the potential to reduce the likelihood of environmental abuses.

4.3 The future for a "transitioning" Ilva

The gradual acknowledgment of the significance of the right to a healthy environment signifies a proactive movement aimed at fortifying environmental protection and safeguarding the rights of future generations. The recognition of this right at both the national and international levels suggest an augmented emphasis on intergenerational rights. Initiatives undertaken by European institutions, exemplified by programmes such as the European Green Deal and NextGenerationEU, in conjunction with endeavors to refine the legal framework for environmental protections, constitute a pivotal foundation upon which to

[557] United Nations General Assembly, Human Rights Council, forty-ninth session 28 February–1 April 2022, Agenda item 3 Promotion and protection of all human rights, civil, political, economic, social and cultural rights, including the right to development, *The right to a clean, healthy and sustainable environment: non-toxic environment. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment.*

[558] G. SANTINI, *Costituzione e ambiente: la riforma degli artt. 9 e 41 Cost*., op. cit.

construct a more innovative and rigorous system, capable of ensuring efficacious legal safeguards. The city of Taranto has faced serious repercussions due to the operations of the Ilva steel mill, with damages perceived not only by the current generation but also poised to be inherited by future ones if comprehensive legal frameworks are not established. The transformative impacts of newly established environmental rights and funds allocated by the European Union present an auspicious starting point to secure a more sustainable future for the generations of Taranto.

The modernization initiatives for the steel plant, incorporating various environmentally friendly proposals, have significantly underscored this positive trajectory. However, a complete and satisfactory resolution remains elusive, as evidenced by the persistent protests within the Ionian city. The Ilva case serves as a perfect illustration, urging the expansion of discussions to encompass other instances of environmental rights violations and abuses against local populations. While the international broadening of perspectives holds promise, fast and concrete recognition is imperative for effective change. Numerous proposals advocating the complete closure of the Taranto plant have been presented, but the trajectory of a green transition has been favored, particularly given the potential repercussions of job loss at the steel plant. Coordinated with comprehensive and binding international acknowledgments and the national assimilation of international guidelines, this transition has the potential to empower Taranto, ensuring the adherence to the right to a healthy environment for future generations.

Conclusion

The most appropriate way to conclude this thesis is to delineate its findings, examining how the discourse has progressed through the chapters, culminating in the final stage of research. The initial phase involved providing a comprehensive background of the Ilva case, illustrating its impact on the national, European, and international landscapes. Subsequently, the case underwent scrutiny within the framework of International Environmental Law and its principles, yielding a broader perspective on compliance challenges. The exploration of human rights aspects demonstrated the gradual recognition of environmental cases like Ilva by International courts as tangible issues, albeit with complexities surrounding effective utilization of such protection. The *Cordella* case, together with the other four judgements rendered by the ECtHR in 2022[559], marked a pivotal point where the circle was finally closed, acknowledging Italy's violations and lack of implementation of the initial 2019 sentence.

Following this crucial discussion, the discourse shifted towards addressing the ultimate questions posed by this thesis: How can future generations be shielded from similar cases? Is the revaluation of Ilva sufficient to facilitate the transition and secure the Right to a Healthy Environment for future *Tarantini*? Will the progressive recognition of the Right to a Healthy Environment, both nationally and internationally, be deemed a fundamental step towards broader and more stringent legal environmental protection?

The response to the first question is a pivotal aspect of the discussion, as the Ilva case serves as an exemplary illustration of how future generations may benefit from innovative legal interventions, concrete national, and scientific strategies for environmental revaluation. Consequently, the answer to the second question emerges: a concerted effort in the revaluation of Ilva could serve as an instrument to rejuvenate Taranto and its future citizens, ensuring their Right to a Healthy Environment. However, this alone may not suffice. The legal recognition of the right to a healthy environment must be established as a protective legal instrument, providing the population with a set of environmental rights crucial to averting

[559] See supra Chapter 2, 3.3.2.

further disruptions of the environmental equilibrium. Numerous advancements have facilitated the acknowledgment of these rights, including the international *impetus* toward their general acceptance and the emergence of Climate Constitutionalism, fostering significant individual evolution for nations.

In conclusion, the Ilva case endures, marked by governance problems and economic challenges. However, by focusing on the legal perspectives of the environmental issue, the case emerges as a perfect example to illustrate the need for concerted efforts to protect future generations, all directed towards the pursuit of global environmental protection.

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