

Urban Planning

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SDGs and Port Systems: New Challenges and Opportunities for Marine Protection from the EU Green Deal Perspective

Summary

The attention to the climate emergency leaves us facing a scenario in which public officials must take sides if they do not want to face a planet in which the conditions for human life are extreme. The public administrations, guarantors and at the service of the general interest, must attend through the formulation of intervention mechanisms to this situation of exception and implement the necessary instruments for it. This paper addresses not only a global diagnosis of the situation of a pandemic world affected by an unprecedented environmental and climate crisis, but also reviews the main lines of the policies to combat climate change implemented, and their necessary interweaving in aspects such as urban planning, or the projection in the life of our oceans. Thus, it examines the interesting opportunity that nature itself offers us, within the framework of nature-based solutions, and green infrastructures, and the circular economy, to build new integrated regulatory approaches, which for their implementation can specify the corresponding sustainable "nudging", and allow the qualification of circular cities. In addition, attention to our seas and oceans passes on land through the port space and its integration into the space of the city. The ports are the prelude to the care of our seas, and the spaces in which an intense economic, tourist, and environmental impact activity takes place. The action of man has proven to be the catalyst for the great natural disasters that we experience today. The effects of climate change, as well as the inevitable search for spaces not yet explored, make us think that it is necessary to review to what extent it is precisely our port spaces that should exemplify the enhancement of the sustainable development goals, such as Millennium Development Goals, in the midst of crises and emergencies such as those that occur in this first half of the twenty-first century.

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Keywords

Marine Sustainability, Port Space, SDGs, Resilience, COVID-19, Blue Development

Abstract

The attention deserved by the sea projects into the space connected by the port system and its integration in the city fabric. In addition, ports represent an opportunity to care for the sea and involve intense activity in the economic, touristic and environmental arena. The action of humans forms the origin of the main natural disasters we are currently experiencing. The effect of climate change, and the unavoidable look in search of unexplored spaces, makes us reflect on the need for integrating the fulfilment of the SDG in our Ports System. The topic will be explored in the present paper.

Summary of sections

1. Legal Instruments for Sustainability: Code Red for the Planet. 2. Sustainability policies applied to climate change. 2.1. Strategy to combat climate change: From the European Climate Law to the new Spanish environmental scenario. 2.2. The projection of the Climate Change Law in urban agendas and urban planning. 3. National Green and "Blue" Infrastructure Strategy. 4. Energy and care for the Sea: A Treasure of Our Planet that requires attention; premises from the Blue development. 5. The projection of the SDGs in the port system. 6. Sustainable behaviour, rights and attitudes; approaching sustainable nudging. 7. Some Concluding Reflections.

1. Legal Instruments for Sustainability: Code Red for the Planet

Everything is connected. From a systemic – or ecosystemic, approach, the actions we carry out in one part of the planet have a drastic impact on other parts,¹ and time is running out.² These phrases that seem to be taken

1 This statement is not far from the expression contained in "the Butterfly Effect" Gleick, James. *Chaos: Making a new science*. Random House, 1997, or the expression of it in the conference given on December 29, 1972, by Edward Lorenz at MIT, whose consultation has no waste and can be seen in: https://web.archive.org/web/20130612164541/http://eaps4.mit.edu/research/Lorenz/Butterfly_1972.pdf.

2 The report of the United Nations Climate Panel made public on August 9, 2021, has shown that we are in a Code Red, meaning that the consequences for climate change on the planet will be irreversible.

from a fictional story are nevertheless part of the message that, from the International Panel on Climate Change, try to alert humanity about the dramatic consequences of climate change and the need to take action for the climate.³ The feared heat waves,⁴ floods, fires, prolonged droughts, unusual and intense snowfall,⁵ reflect the drastic consequences of global warming, and the impact that human activity is having on the climate. These conditions are receiving an inadequate response from community institutions in climate action packages, arguably notwithstanding the approval of the European Green Deal.⁶

Spain is one of the countries most affected by the Code Red of Climate Change, its geographical location, and the intensity of use and urbanization,⁷ has alerted ecologists and experts in the field about the consequences that a modification in ecosystems would have for the health of the planet and the specific condition for Spain. Recent examples of ecological disasters that reveal the intensity of the problem we have on our coasts, include the case of fish that day after day have appeared dead in the Mar Menor, for reasons not yet entirely clear, but warn about pollution levels, the possible low level of oxygen in the water, or the effect of high temperatures.⁸ Indeed, many risks have been described by the scientific community of a water nature (risk of availability of water resources, risk⁹ of increased eutrophication

3 The idea of Climate Action has given rise to grassroots actions as well.

4 According to the State Meteorological Agency (AEMET), heatwave frequency has doubled in Spain in a decade, which corresponds in figures to the forecasts contained in the World Meteorological Organization Report, "The State of the Climate" published in 2020, which indicated that the global average temperature has risen 1.2 degrees.

5 In the collective memory are the scenes of the unprecedented snowfall of early 2021, (Filomena) and its devastating effects in Madrid.

6 *Bibliography on the European Green Deal can be found at:* FAJARDO CASTILLO, T: *Climate diplomacy in the European Union. External action on climate change and the global green deal*, Editorial REUS, 2021.

7 The attention to intense urbanization and the model of occupation of space in our country was already the subject of attention by the European Parliament in the EUKEN Report, on the impact of extensive urbanization in our country.

8 <https://www.lavanguardia.com/natural/20210816/7665096/nuevo-episodio-muerte-masiva-peces-pone-alerta-mar-menor.html> with the foresight in this sense of the SOS Mar

9 Menor platform, which had been warning of the need to take proactive measures for the preservation of the Environment (<https://www.laopiniondemurcia.es/comunidad/2021/04/22/sos-mar-menor-denuncia-paralizacion-48577439.html>). One of the causes of the disaster that the Mar Menor has been suffering, derives from the existence of illegal irrigation that incorporated fertilizers in the form of nitrates, which has caused eutrophication. It resulted in a decrease in oxygen that has been causing the death of fish and fauna of the Mar Menor.

and decrease in water quality), terrestrial (desertification,¹⁰ increased erosion and loss of biodiversity, etc). Other risks relate to agriculture and livestock¹¹ (variation in the seasonality of horticultural activity, loss of livestock farms) and the marine environment (risks to the stability of marine ecosystems due to increased temperatures and heat waves, among others).¹² The time to address measures that can stop the deterioration of the environment and mitigate the effects of climate change, is running out. This has been shown by the latest reports on climate change, in a clear warning aimed at the anthropogenic action of man in the environment, with effects that cannot be totally reversed.¹³ In this scenario, the urgency to find solutions to avoid catastrophes derived from irreversible changes,¹⁴ must act as an engine to implement innovations that result in a new way of relating man with the environment.

The effects of climate change on health are incontestable,¹⁵ and affect all countries to varying degrees. Thus, the incidence of so-called climate

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- 10 The announced desertification also involves taking into account a risk that may affect 75 percent of the territory. Spanish (<https://www.efc.com/efc/espana/sociedad/mas-del-75-de-espana-esta-en-riesgo-desertificacion-segun-greenpeace/10004-4563933>). See in this sense, the measures addressed by the Administration: https://www.miteco.gob.es/es/biodiversidad/temas/desertificacion-restauracion/lucha-contra-la-desertificacion/lch_espana.aspx.
- 11 And this regardless of the initiatives that try to alleviate the effects of climate change, in European projects that try to enhance soils as carbon sinks. It is not only about reducing CO₂, but about mitigating emissions and designing policies that can address the effects of climate change on agriculture.
- 12 The report prepared by the Spanish Office of Climate Change points out the 35 environmental risks. You can also see the work developed in: http://escenarios.adaptecca.es/#&modelo=EURO-CORDEX-EQM.average&variable=tasmax&scenario=rcp85&temporalFilter=year&layers=AREAS&period=MEDIUM_FUTURE&anomaly=RAW_VALUE&cids=17.
- 13 Sea level rise is forecast, affecting the delicate balance of the entire ecosystem.
- 14 The idea of irreversibility implies the connection between activities and the tipping point that shows that the efforts made will not be enough to offset the devastating effects on climate change derived from human intervention. The COP26 report, incorporate in this sense 10 recommendations that address the necessary intervention and action to avoid reaching the turning point, and therefore irreversibility. And this is without prejudice to the recognition by the scientific community that irreversible changes and effects are taking place, https://www.eldiario.es/carnecruda/programas/cambio-climatico-irreversible-extremo_132_8346109.html.
- 15 Generating climatic migrations, and in the direct projection caused by floods or major droughts, at the same time that shortages of certain foods are foreseen when they cannot be guaranteed by agricultural activity. Climate migrations are one of the most serious consequences of climate change, on which initiatives such as those seen are being carried out in: https://www.eldiario.es/carnecruda/programas/cambio-climatico-irreversible-extremo_132_8346109.html.

refugees¹⁶ who must leave part of the territory where they were developing their lives looking for habitable spaces to live are a clear example of the impact of climate on our health and way of occupying space. The importance of vital conditions motivated by climate change, in the qualification of public policies, is reflected in the recommendations integrated in the document presented in the special report of the World Health Organization, at the height of COP26 that point out the health benefits derived from the fight against climate change. Other equally relevant reports such as the one published by *The Lancet*, or those issued by the Ministry of Health, Social Services and Equality during 2020, emphasize the need to address environmental issues that have a "recognized influence" on health and well-being. This logical interrelation between the health of the planet and our own health allows awareness for an active policy of attention to climate change in an approach that pays more attention to proposals for action than to risk analysis.¹⁷ This was highlighted during the Environment Council on 6 October 2021,¹⁸ by the environment ministers of the European Union in the conclusions drawn up for the United Nations Climate Change Panel on Climate Change COP26 held in Glasgow, and the "one health" approach. The latter is beginning to resonate strongly in the design of public policies.

2. Sustainability Policies Applied to Climate Change

In this context, the EU's regulatory activity on climate change has had several milestones of enormous interest, the first derived from the approval of the EU Green Deal, which was the subject of approval in the Communication of the European Parliament of December 2019.¹⁹ The idea behind communication is the need to make the European Union climate neutral by 2050, a goal that is emerging as the scenario in which many transformations are required both in our way of understanding the environment and caring

16 Prof. López Ramón, F would brilliantly illustrate them: "Climate refugees", *Environmental Legal News*, No. 68, 8 May 2017.

17 Thus, it has been evident in the valuable words of Prof. Martín Mateo, in his treatise on environmental law, when he began it by pointing out precisely this correlation between climate change and health or environmental health and its impact on human health. In this same sense and much more recently incorporating animals into the equation as well, the formulation of the ONE approach can be found. Health which refers to the idea that interdisciplinary collaboration is necessary for health care that affects people, animals and the environment.

18 Can be seen in: <https://www.consilium.europa.eu/es/meetings/env/2021/10/06/>.

19 COM (2019) 640 final.

for it,²⁰ and this without prejudice to the irreversible changes that have already taken place.²¹ The adoption of the European Green Deal raises awareness that action is needed at Community level to tackle climate change urgently. The projection of this action forecast has had a response in the field of regulation derived from the approval of the Regulation of the European Parliament and of the Council, which establishes the framework to achieve climate neutrality and modifies Regulation (EU) 2018/1999,²² the so-called Climate Law, approved by Regulation (EU) 2021/1119 of the European Parliament and of the Council of June 30, 2021.²³ The rule that takes as its legal basis Articles 191 to 193 of the Treaty on the Functioning of the European Union, recalls that climate change is a problem of a cross-border nature and therefore requires measures of a supra-national and supra-local nature. It is a Community policy outlined from the principle of subsidiarity, and governance requires Community coordination in the adoption of measures and policies aimed at achieving the objectives of climate neutrality. In other words, sectoral policies – whatever they may be – must be aligned with the objectives of mitigating and combating climate change and involve Community coordination, also taking into account the application of the principle of proportionality.²⁴

In this context, the European Climate Law directs attention to the need not only to reduce the emission of greenhouse gases, but also to absorb emissions through natural sinks "such as forests, soils, agricultural land and wetlands".²⁵ These natural sinks, which have perhaps received less attention than expected in national policy, are incorporated with the link to the so-called LULUCF, ("Land Use, Land Use Change and Forestry"). This is the projection of urban policies in the use of land and in the forestry field as determinants of the policy of attention to climate change. In addition to the above, the EU package "fit for 55" was approved, which identifies three major sectors in which action should be taken: energy sector, mobility sector and construction sector. Indeed, the thematic projection of the European

20 On the examination of carbon neutrality strategies, Gómez Jiménez, M.L., can be read: *Strategy for carbon neutrality of the Junta de Andalucía*, IEHPA, Seville, 2020.

21 The information revealed in the IPCC report for 2022, <https://www.unep.org/resources/report/ipcc-sixth-assessment-report-climate-change-2022>.

22 Official Journal of the European Union of 4 March 2020, extension://ieepebjnkhaiiojkepfniodjmjjihl/data/pdf.js/web/viewer.html?file=https%3A%2F%2Feur-lex.europa.eu%2Flegal-content%2FES%2FTXT%2FPDF%2F%3Furi%3DCELEX%3A52020PC0080%26from%3DEN.

23 The rule entered into force on July 29, 2021.

24 Page 6 Regulation of the European Climate Law.

25 Sic, p. 9 of the Climate Law.

Commission is increasingly prioritizing activities that address the climate protection of the planet and with that of life in the content – within the framework of the competences attributed in the sectors that may significantly affect it, such as the transport or construction sector, without forgetting the enormous problem that energy management versus consumption poses on a planetary scale. These are the major issues that Code Red has brought to the public policy stage, highlighting the thematic priority not only of European, but also national research proposals. There is also a necessary attention to food capacity, in a scenario of scarcity of resources,²⁶ and the need to generate new proposals that attend to the transformation of the agricultural sector. At the same time, we live in an increasingly sedentary society, which is witnessing the voracious integration of technology – in the form of metaverses and scenarios of digitalization and digital divide - that do not contribute to the traditional formulation of the markets of food,²⁷ but generate other new challenges for the law and new stress tests for our planet. From the projection of activities in defense of the environment to measures to address climate change and fight against its effects, attention is projected both internationally and nationally on our country. Thus, the scientific reports have been followed by a set of administrative soft-law working documents²⁸ that guide the action of the public authorities under the constitutional precept – ex article 149.1 EC, which attributes to the State the competence on the bases of the protection of the Environment.²⁹ In this context, the recent approval of Law 7/2021, of May 20,³⁰ on Climate Change, specifically addresses the need to adopt measures to adapt to climate change from the forecast of provisions that affect territorial and urban

26 The food crisis has already led to the investment of the world's great fortunes in farmland, or the assurance of the logistics of food production, as an investment portfolio since overpopulation and the scarcity of resources decimated by climate change and adverse weather events, will have a decisive impact on the way in which the food sector is conceived and managed.

27 3D printing of food, as a proposal and test that is currently taking place, design of new devices that allow to investigate the creation of products that serve human food and do not emanate only from the traditional garden - whether urban or urban garden, but from a laboratory, are ideas that are in the minds of innovators of the XXIst century.

28 The expression soft-law administrative, is by far one of those that best expresses the maelstrom of documents that, interwoven in the field of governance and public management rather than in the definition of regulatory, can be consulted in the fight against climate change.

29 28 See now article 193 TFEU.

30 BOE of 21 May 2021.

planning.³¹ The attention to sustainability however is not new and was already present in the Land Law in its reform operated in the Consolidated Text 7/2015, which detailed in its Article 3 the need to incorporate sustainable territorial and urban development as a principle of action.³² The sustainability present in territorial planning is thus predicated, in a transversal way for all urban actions, and has led to the necessary adaptation of regional urban regulation to implement the principles of sustainable urban development in urban activity and territorial planning.³³

31 Thus, it has been recalled in article 21 of the norm that states: "Territorial and urban planning and management, as well as interventions in the urban environment, building and transport infrastructures, for the purposes of their adaptation to the impacts of climate change, will mainly pursue the following objectives:

- The consideration, in its preparation, of the risks derived from climate change, in coherence with other related policies.
- The integration, in planning and management instruments, of the measures necessary to promote progressive adaptation and resilience to climate change.
- The adaptation of the new instructions for calculation and design of buildings and transport infrastructures to the effects derived from climate change, as well as the progressive adaptation of those already approved, all with the aim of reducing emissions.
- The consideration, in the design, remodeling and management of the mitigation of the so-called "heat island" effect, avoiding the dispersion into the atmosphere of waste energies generated in urban infrastructures and their use in them and in surface buildings as renewable energy sources.
- To ensure that new energy production facilities from renewable energy sources do not have a severe impact on biodiversity and other natural values, zoning will be established that identifies areas of sensitivity and exclusion for their importance for biodiversity, connectivity and provision of ecosystem services, as well as on other environmental values. To this end, the Ministry for the Ecological Transition and the Demographic Challenge will develop and periodically update a cartographic tool that reflects this zoning, and will ensure, in coordination with the Autonomous Communities, so that the deployment of renewable energy projects is carried out, preferably, in locations with less impact"

32 The precept in question has been the subject of attention in the jurisprudential field in the Judgment of the Constitutional Court 42/2018, of April 26 and STC 86/2019, of June 20; and is guided by the Judgment of the Superior Court of Justice of Asturias of May 29, 2020 and July 13, 2020.

33 The autonomic competence in matters of Urbanism, correctly expressed by the Constitutional Court in the historic Judgment 61/97, of March 30, has had, in sequence with the different jurisprudential pronouncements regarding the nullity of planning instruments, the opportunity to advance in the timely consideration of the elements that affect the qualification of urban sustainability, or enable sustainable urban development. Without prejudice to the examination that must be integrated at the regional level for each of the provisions approved in the field of urban planning, it is worth highlighting the recently approved Law to Promote the Sustainability of the Andalusian Territory (LISTA), which entered into force on December 23, 2021.

To this must be added the legal treatment of nature-based solutions, which the Climate Change Law, Law 7/2021, of May 20, anticipates, within the framework of the National Energy and Climate Plan.³⁴ Without prejudice to the detailed examination of the projection of the National Energy and Climate Plan (PNIEC), the figure that represents the integration of nature-based solutions, as part of a new approach to the fight against climate change, allows its implementation in sectoral areas linked to the territory, such as the field of hydrological planning, or action in the building field.³⁵ The focus on sectoral action to improve sustainability as a precise element in a strategic administrative intervention scenario is particularly consistent with the projection of the Next *Generation EU* recovery instrument.³⁶ Relevant too are the economic policy instruments linked to the Community policy of recovery in the midst of the pandemic, involving the mobilization of an unprecedented sum of economic resources to overcome the devastating effects of the pandemic. These provide financial instruments (whether loans, guarantees or grants) that allow reconstruction of the economy in strategic sectors, such as transport, health, education, infrastructure, energy, industry or housing-residential building sector. In addition, digital acceleration, and the need to operate a change in production model is linked to the sustainable development goals in their territorial projection, and their location and linkage with public policies,³⁷ mediating sustainability through attention to technology. This has resulted in the adoption of a European strategy that advocates digitalization, but without losing sight of the necessary environmental sustainability that this must entail. Thus,

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- 34 Thus, article 17.8 of the standard states: "The PNACC will promote and prioritize ecosystem-based adaptation to climate change, the development of green infrastructures and nature-based solutions".
- 35 Royal Decree Law 9/2021, of 5 October, introduced urgent measures in relation to the promotion of sustainable rehabilitation.
- 36 The Next Fund Generation EU, represents the investment of 806,900 million euros. Thus, in the multiannual framework from 2021-to 2027, Spain will be able to receive funds amounting to 71,604 million euros, through two large investment instruments: the Recovery and Resilience Facility, which will total 59, 168 million euros and the React-EU that will add up to 12,436 million euros. Expressions that as Zalba, P, has anticipated are incorporated into the State budget for 2022. <https://www2.deloitte.com/es/es/pages/about-deloitte/articles/fondos-next-generation-eu-pge-2021.html>.
- 37 On this particular you can see in its projection on governance the collective work: Alonso Ibáñez, R (Dir.); *Urban agendas and city governance: Transformations, challenges and instruments*, Editorial Reus, Madrid, 2021.

the Council of the European Union of December 11, 2020³⁸ approved the enhancement of digitalization for the improvement of the environment. As the Council conclusions point out, the aim was to highlight the interlinkages between the European digitalisation strategy and the objectives of the European Green Deal. This is intended to highlight the importance of the connection between both strategic lines of Community action and how attention to climate change must integrate elements linked to the European digitalization strategy. Along the same lines, the launch of the coalition of countries that are committed to the formation of a joint action scenario in which both aspects of digital transformation and attention to the mitigation of climate change and its effects converge would be approved, among other initiatives.

2.1. *Strategy to combat climate change: From the European Climate Law to the new Spanish environmental scenario*

In Spain, attention to environmental issues and in relation to climate change have been part of the legislative agenda of the IX legislature.³⁹ The development of public policy on attention to climate change has motivated the translation of community objectives in the field of public policies in a transversal way, both in their regulatory aspects and in the attention derived from the instruments of national and regional strategic planning.⁴⁰ In this regard, instruments of strategic planning and to some extent of a programmatic nature, have come to dominate the public agenda in the definition of the lines of action defined later in the normative field. This has been the case of the approval of the National Plan for Adaptation to Climate Change and the Integrated National Energy and Climate Plan 2021-2030. As pointed out above, both instruments introduce a strategic planning that links not only the climatological aspects but also the adaptation forecast that should allow Spain to become a carbon-neutral country by 2050. The challenge

38 <https://digital-strategy.ec.europa.eu/en/news/eu-countries-commit-leading-green-digital-transformation>, can be seen in the conclusions we outlined of the Council of the European Union.

39 This is being processed in addition to the recently approved Climate Change Law, other relevant regulations in the field such as: The Draft Law on waste and contaminated soils that was presented in Congress on May 20, 2021 and qualified on May 25, 2021 and has planned the implementation of initiatives that develop the European premises of the green deal and administrative action in the field of Sustainable mobility.

40 This is the case of the Andalusian Climate Action Plan approved by Decree 234/2021, of October 13, (BOJA of October 23, 2021), or the forecasts contained in the Transport and Mobility Infrastructure Plan of Andalusia 2021-2030.

adopted in the above-mentioned programme documents is modulated in the intervention in the field of an energy policy that draws its sources from the Community forecasts regarding the improvement of energy efficiency. The legislator's attention to energy planning, linked to the improvement of sustainability, contrasts however in the document with the formulation of derived or nature-based measures. The document addresses four key elements: the water resources sector, forestry, coastal and marine environment, and transport infrastructure.⁴¹ Thus, the energy transition, linked to the need to operate an ecological transition, is aligned with the projections made by the EU, via Directive 2018/2001, which is combined with the promotion of local energy communities.⁴² Be that as it may, the strategic planning instruments that deal with attention to climate change and the fight to mitigate its effects, incorporate forecasts that either meet the need for energy efficiency, or involve incorporating an ecological transition that implies a change of economic model and that affects our way of producing and managing the resources we have.⁴³

2.2 *The projection of the Climate Change Law in urban agendas and urbanism*

In this context, the need to operate a decarbonization in the year 2050 presupposes at national level the taking of sides for the transversal action in the reduction of the emission of CO₂. Thus, the plan raises the need to reduce GHGs, in line with European targets of up to 23 percent. Here, the examination of climate change has been integrated into the forecasts contained in the observatory of environmental policies of the Ministry (OPAM) of the year 2021. At the same time, the pandemic has meant a change of regulatory pace, serving to environmentalize and permeate public policies, as well as producing a significant increase in documents of administrative soft-law. Such documents, albeit without binding normative force, have advanced the lines of the actions that should be defined, implemented and developed in the public sphere. One of these instruments, linked to the achievement of the Sustainable Development Goals, has been the Urban Agendas to define the lines of action in terms of sustainability in territorial policies and the

41 It can be seen in this sense the scheme of areas and relationship with the risks derived from climate change in the energy system, page 50 PNIEC.

42 González Ríos, I: "Local Energy Communities: A New Challenge for Local Entities", RVAP No. 117 (2020, pp. 147-193).

43 This interest may result in reading the work of Prof. Martínez Villar, researcher of the SEJ-650 Group, "Past, present and future of Climate Change Turn or Transition?", *Diario Sur* February 28, 2022.

promotion of specific actions in the urban environment.⁴⁴ It is precisely the examination of these territorial policies that deserve special attention, when we think about the climatic effects on the inhabited environment and the interrelation between the provision of environmental and landscape protection, with the protection of the urban environment in which the activities come to develop.⁴⁵ That attention to climate change must permeate administrative action not only in initiatives directly connected to the environment, but in all activities and actions in the urban environment, is an essential premise of the effectiveness of climate action. The transversality therefore of the attention to the fight against climate change should be projected both in the actions in the field of territorial planning, as well as in the management and urban planning of our cities. In this context, the resilience of territorial planning instruments to climate change is a key element when addressing the problem from the territorial perspective. This is because, as Prof. Aguirre Font reminds us, "planning instruments must be able to identify risks and anticipate changes and respond to many of the challenges posed by society".⁴⁶ This kind of attention to planning as the legal instrument and tool in pursuit of the fight against climate change, contrasts however with the slowness associated with litigation, linked to the management of territorial planning instruments. Here there is a contrast between the territorial model and the synergies derived from the new social needs and occupation of space – which the pandemic has highlighted – among other relevant factors. This provision of territorial governance, and not only of government or custody of the territory, has been integrated in a relevant way in the new Leipzig Charter, in 2020. This new document of programmatic character and international projection in the governance of cities pays attention to the power of these and qualifies them from three di-

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- 44 On the notion of urban agendas and their legal nature, see further: "The Challenges of Artificial Intelligence in urban processes: new premises in the era post-covid and attention to public health in urban planning", in Alonso Ibáñez, R.: *Urban Policy and Localization of the Sustainable Development Goals: Theory and Practice*, Tirant lo Blanch, 2021, pp. 229-255, and in the same sense: Alonso Ibáñez, R (Dir.) "Urban Agendas and the government of Cities: Transformations, challenges and instruments", Editorial REUS, 2021.
- 45 Order TMA/957/2021, of 7 September, approving the regulatory bases for the granting of aid for the development of pilot projects of local action plans of the Spanish Urban Agenda and the call for the presentation of applications for obtaining subsidies by the procedure of competitive concurrence.
- 46 See Aguirre Font, "The Resilience of the Territory to Climate Change: Challenges and Legal Tools from Urban Planning", *Catalan Journal of Environmental Law*, no. 2 (2019).

mensions: the just city,⁴⁷ the green city,⁴⁸ and the productive city.^{49 50} Thus, the recent state forecast on climate change had preceded a disparate regional regulation that emphasizes the need to provide legal instruments not only with respect to the fight against climate change, but for the implementation of the energy transition. This is the case, for example, of the Balearic Legislation on climate change, Law 10/2019 of February 22,⁵¹ which, in relation to the effects on sectoral policies of climate change provides, with respect to urban planning, that: "Measures aimed at reducing energy consumption and greenhouse gas emissions will be promoted, in collaboration with the competent public administrations, as well as to reduce vulnerability to the impacts of climate change, and specifically aimed to:

- “Promote green urban spaces to reduce the urban heat island effect and fix carbon in these spaces, as well as tree planting objectives;
- Increase the permeability of soils and the implementation of sustainable urban drainage systems that reduce the risk of flooding and allow water infiltration;
- Adapt urban planning regulations to minimize barriers to the energy rehabilitation of the existing building stock;
- Minimize mobility needs;
- Progressively implement renewable energies".

All of these measures reveal a necessary management of uses, which takes into account the management of sustainable transport in urban environments, or the integration of green spaces, to which we will return below – with a projection of a strategic instrument. In this context, the Autonomous Community of Andalusia has embodied the commitment to sustainability in the scenario of intervention in the field of land and urban planning in the elaboration of the Law of Promotion of the Sustainability of the

47 The Leipzig Charter, initially adopted in 2007, the attention paid by the 2030 Agenda to the need for adaptation to climate change motivated ministers responsible for urban issues to approve the new Leipzig Charter in 2020.

48 On this dimension of the Just City, we have had the opportunity to approximate some ideas in the work *Participatory Urbanism and Urban Governance in Smart Cities: The Queen Red Effect in Administrative Law*, Aranzadi, 2019.

49 In a kind of attention to the environmental dimension of the city, which in our opinion transcends the limit of the urban to qualify as the sustainable city, and ultimately resilient.

50 This notion of productive city, linked to economic aspects, and the qualification of the city as a center of processes of economic content, should also be glimpsed under the forecast of production at the service of the common good, that is, in the field of a circular economy that draws efficiency in the management of public and private resources.

51 BOE of 2 May 2019.

Territory of Andalusia (LISTA).⁵² The preceding regulatory provisions as to an autonomous deployment in the territorial scope around the premises of urban sustainability, highlight the new territorial planning designed to serve as an instrument to mitigate the impact of climate change and to respond to the new questions that post-pandemic society requires, in a kind of resilient urbanism adapted to the new reality.

3. National Strategy for Green and „Blue” Infrastructures

One of the relevant elements, in the attention to biodiversity, is the definition of legal tools that safeguard it and guarantee its survival for future generations. Thus, the impact of climate change on the environment forces attention to the environmental elements present in urban intervention, which as we saw involve the recognition and protection of these in safeguarding biodiversity in both rural and urban spaces. In this context, green infrastructures play an important role. This is reflected in Article 51 of Royal Decree 106/18, of March 9, which regulated the State Housing Plan 2018-2021,⁵³ which contemplates among the eligible actions in the Program for the promotion of Urban and Rural Regeneration, and in relation to the protection of biodiversity to green infrastructures, the proposals for "connectivity of green spaces, facilities, services and water supply, sanitation, electricity supply, lighting, collection, separation and waste management, telecommunications and use of the subsoil". Green infrastructures, their definition and recognition, are therefore a core element in order to preserve ecosystems. It should be borne in mind that the first reference to green infrastructure is to be found within the framework of European environmental policy. Thus, the European Union's strategy on Biodiversity until 2020, set among its objectives "the maintenance and improvement of ecosystems and ecosystem services no later than 2020, through the creation of green infrastructure and the degradation of at least 15 percent of degraded ecosystems".⁵⁴ The EU's 2030 Biodiversity Strategy has been formulated in the same vein. In succession of continuity in the same direction, the Action Plan for the Environment for Nature was approved in April 2017.⁵⁵ Further documents of Community administrative soft-law have followed with the same idea of recognizing –

52 The Law to promote the Sustainability of the Territory of Andalusia hereinafter LIST).

53 BOE of 11 March 2018.

54 Thus, in the National Strategy on Green Infrastructure, p. 30.

55 It can be viewed and consulted at: <https://op.europa.eu/es/publication-detail/-/publication/58d58aa7-5c78-11e7-954d-01aa75ed71a1>.

beyond protected natural areas, ecological corridors and the definition of a European green infrastructure network. This integration of green infrastructure as systematic structuring elements of planning processes identifies them as investment priorities at European level.

In the Spanish context, Law 42/2007, of December 13, on natural heritage and biodiversity, as amended by Law 33/2015, of September 21, introduced the notion of green infrastructure, calling on the Government to develop within three years, a National Strategy for green infrastructure and connectivity and ecological restoration. Thus, Article 15 of the norm seeks to integrate the obligation of approval not only of the State strategy but of the autonomic strategies, within the framework of the State regulation.⁵⁶ The precursor standard of Order PCM/735/2021 on the National Strategy for Green Infrastructure and Ecological Connectivity and Restoration, highlights the value of having a green infrastructure that, in addition to being applied to urban spaces and rural environments, also includes marine ecosystems. This inclusion is relevant in order to address environmental problems holistically as the standard indicates, taking into consideration all areas in which nature is projected. The sea, as we will see below, is a space that requires attention beyond what can be foreseen and alternative forms of attention. Here, as Prof. Ortiz García, has suggested, adequate attention to 'blue development' may require an ecological transition from anthropo-centrism to bio-centrism, in which man sees himself as part of na-

⁵⁶ Thus, the rule states:

"...2. The State Strategy for Green Infrastructure and Ecological Connectivity and Restoration will aim to set the guidelines for the identification and conservation of the elements of the territory that make up the green infrastructure of the Spanish territory, terrestrial and marine, and for the territorial and sectoral planning carried out by the Public Administrations to allow and ensure the ecological connectivity and functionality of the ecosystems, mitigation and adaptation to the effects of climate change, defragmentation of strategic areas for connectivity and restoration of degraded ecosystems.

3. The State Green Infrastructure Strategy shall take special consideration, inter alia, of protected areas, habitats in danger of disappearing and endangered species, mountain areas, river courses, wetlands, livestock routes, ocean currents, submarine canyons, migratory routes that facilitate connectivity, and systems of high natural value originated as a result of good practices applied by the different economic sectors, as well as the priority habitats to be restored, the lands affected by the nature conservation banks and the instruments used by the competent administrations in the application of the European Landscape Convention, done in Florence on October 20, 2000.

4. On the basis of the guidelines of the State Strategy, the Autonomous Communities shall develop, within a maximum period of three years from the approval of said State Strategy, their own strategies, which shall include, at least, the objectives contained in the State Strategy."

ture, rather than it simply being at his service.⁵⁷ This holistic vision connects logically with the circularity of the cycles and with the necessary interaction of the ecosystems that begin to be discovered precise, from elements such as the qualification of "one health" approach, to which we referred, and that reports such as the VI prepared by *The Lancet* show once again.⁵⁸

In this context, in addition, the projection of green infrastructures in urban planning is reflected in the building scale in the so-called bioclimatic architecture,⁵⁹ which integrates attention to environmental protection into the building parameters. Thus, the draft Law on the quality of architecture, presently passing through the Spanish parliament, aims at the integration of European initiatives to promote energy efficiency, renewable energies and the fight against energy poverty, in accordance with the provisions of Commission Recommendation (EU) 2021/1749 of September 28, 2021. The interrelation, therefore, between the environmental conditions present in green infrastructures and building and urban forecasts, must be present to allow coordinated action that results in an efficient fight against climate change. It is true that the effects of this, as we pointed out, are far from being mitigated, but administrative actions and regulatory provisions must be oriented in a coordinated manner in that direction.⁶⁰

4. Energy and Care of the Sea: A Treasure of our Planet that requires Attention, Premises from the Blue Development

It was *Gunter Pauli*, who highlighted the need to turn our gaze to the oceans and remember that our blue planet demands special care towards ecosystems in a systemic way that pays attention to their biodiversity, and wealth by valuing policies that not only allow their protection against the impact of climate change, but that allow it to become a means to reduce the effects of this, as a regulating and rebalancing effect. Brief and succinct

57 See Prof. Ortiz García, M., Paper presented at the XVI Congress of the Spanish Association of Professors of Administrative Law, held in Oviedo in February 2022.

58 The report Report Lancet 2020 Countdown on Health and Climate Change, proclaims the need to apprehend the connection between caring for the environment, and the fight against climate change and how it is incide directly in our own health.

59 Bioclimatic architecture has been included among the measures to be financed within projects described in Royal Decree Law 25/2020, of July 3, on urgent measures to support economic reactivation and employment (BOE of July 6, 2020).

60 This is the case, for example, of the Waste and Contaminated Soil Bill approved in Congress on December 23, 2021, and sent to the Senate for processing, after having obtained the Opinion of the Commission on Ecological Transition and Demographic Challenge.

lines can be dedicated in this place, to reflect the meaning of our seas, not only in our history, shaping of cities and economic development, but in the richness of life, and biodiversity that they contain. That is why we cannot finish this reflective review on the different strategies and regulatory instruments aimed at caring for our planet, without incorporating mention of the potential that the sea offers in the very qualification of our cities. The sea is not only a generator of life, but of clean energy, and a space that deserves special protection. This entails returning with a different look to nature, in a kind of recovery of that ecological justice,⁶¹ and not only climatic. Some promising developments in this direction in Spain are apparent. Thus, on November 6, 2020, the announcement of the start of the procedures for the cataloguing of the Cala en Mijas area as a ZEC, Special Area of Conservation, was made public. Framed in the Sustainable Tourism Plan of the Seabed of Mijas, the area to be preserved would complete a very incipient - to date - map of underwater natural parks such as the one that holds the denomination in Isla de Hierro (Canary Islands), Medes Islands (Catalonia) and Isla de Ons (Galicia). The figure unexplored for the rest of the national territory, becomes in our opinion of enormous relevance for the preservation of the marine environment and biodiversity, in response to a constitutional obligation of attention and preservation of the environment. But, no matter how much we advance and explore different sectoral approaches, it is clear further legislation is necessary, including a focus on the implementation and applicability of the standard. This issue is linked to the behavioral sciences and that in its hybridization with law, highlight the importance of generating sustainable attitudes.

The oceans provide almost 50 percent of the oxygen humanity needs. The biodiversity in them, as well as the fragility manifested in the verification of devastating effects linked to human action, including plastic, pollution, and over-exploitation and the effects linked to climate change, reveal that the time has come to place them at the center of the debate and look at the sea. This requires a global, holistic and ecosystem perspective that incorporates the integrated reading of the common good that it represents for humanity, and the biological "jewel" that it represents. How we act in relation to marine ecosystems, and their territorial projection, will impact on our opportunities to resist and reduce to a greater or lesser extent the effects of climate change. It is therefore welcome that, in February 2022, a global alliance "High Ambition Coalition Biodiversity Beyond National Ju-

61 Vicente Gimenez, T. (2020): "From climate justice to ecological justice: the rights of nature", *Revista Catalana de Right Environmental*, Vol. XI, #1 2, pp. 1-42.

risdiction (hereinafter BBNJ)⁶² was launched. This Coalition comprises, in addition to the Member States of the European Union, 22 further countries from five continents.⁶³ The immeasurable value of this international alliance is understandable if one takes into account that 95 percent of the oceans are made up of areas that exceed the national jurisdiction of countries. The data reveals the need for careful action because the pollution of our oceans and their biodiversity will affect the provision of future food,⁶⁴ and the conformation of our territorial map in its port projection.

4.1. *The blurred metamorphosis of the subjects, from object to living ecosystems and subjects of rights: the case of the Mar Menor.*

The measures for the protection of marine environments are also beginning to make use of new protective figures, which arguably reflect the transition noted as part of the blue development from anthropocentrism to ecocentrism. The ecosystem mission, then, begins to permeate regulatory strategies, with the potential to offer valuable protection for the spaces that are at extreme environmental risk. A good example is the popular legislative initiative that took as its object the recognition and legal personality of the lagoon of the Mar Menor and its basin.⁶⁵ The relevant provision in parliamentary proceedings reflects the awareness of a proactive and not merely protective action as a passive subject or object of attention by the legislator. This resulted in Law 19/22, of September 30, for the recognition of the legal personality of the lagoon of the Mar Menor and its basin.⁶⁶ The innovation introduced through the recognition of legal personality

62 The alliance's founding document can be found at: https://oceans-and-fisheries.ec.europa.eu/ocean/international-ocean-governance/protecting-ocean-time-action_en.

63 Australia, Canada, Chile, Colombia*, ComorosCosta Rica Egypt, Iceland, India, Mexico, Monaco, Morocco, Namibia, New Zealand, NorwayPalace Peru, the Republic of the Congo, Singapore, Switzerland, Togo, the United Kingdom, the EU and its 27 Member States (Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, FinlandFrance Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

64 The sea has the capacity to feed a quarter of the world's population by 2050, as it points out.

65 Official Gazette of the Cortes Generales of 2 September 2022.

66 BOE de October 3, 2022.

enables the conferral of a catalogue of rights,⁶⁷ which are projected in the possibilities of environmental defense of this marine space.

4.2. *City and port space, disagreements and opportunities for territorial intelligence*

It will be the 2030 Agenda, which may mark, the line of action in linking actions towards the achievement of the sustainable development goals, in synergy with the projection in the port area of the new culture of respect for the environment in the port space (green port).⁶⁸ The aim of this is to counteract the tendency of cities to turn their backs on their ports, and instead integrate port infrastructure into the urban ecosystem. This integration goes beyond the mere strategic operation aimed at improving port traffic and maritime space management to integrate the so-called port megacities. The intention is that the strategic projection of the port of a city should become a key part of the projection of the city itself,⁶⁹ integrating spaces for coexistence in synergy with the use of uses that allow both cruise tourism and port activity. In the Spanish context, the reform of the Regulation of the Coastal Law, Royal Decree 668/2022, of August 1, which modifies the General Coastal Regulation, approved by Royal Decree 876/2014, of October 10,⁷⁰ proposes that modifications aimed at minimizing the effects of the rise in average sea level as a result of climate change, should be integrated, without detriment to the socio-economic effects of the reform.⁷¹ The realisation of

67 The standard comes to indicate the recognition of rights: to exist; protection, conservation and restoration. (Sic article 2 of the Act).

68 ESTEPA MONTERO, M: *Analysis of public policy on ports of general interest*, Marcial Pons, Madrid, 2021.p. 611.

69 Examples of the above we have in the international context when examining the case of the decline of global metropolises linked to the decay of their port spaces. This is the case of Bruges, Genoa, London, Lisbon, New York, Venice, Amsterdam, New York, among others, which contrasts with the case of cities that have been able to project themselves thanks to the strategic functioning of their ports, as is the case of Singapore.

70 BOE 184/2022, the 2nd August Nov 2022 Ref. Bulletin: A-2022-12932.

71 Thus, he has made it clear ORIOL TORRES, NATHALIE KLEFISCH since Marimon Abogaos, extension://iepebpjnkhaiioojkepfniodjmjjihl/data/pdf.js/web/viewer.html?file=https%3A%2F%2Fwww.marimon-abogados.com%2Fwp-content%2Fuploads%2F2022%2F09%2FNewsletter-novedades-en-el-Reglamento-de-Costas.pdf.

these synergies, as yet not adequately resolved in the integration of port spaces in urban dynamics, has been the object of academic attention.⁷²

5. The Projection of the SDGs in the Port Space

The debate on the UN Sustainable Development Goals continues to fill pages of the legal literature today.⁷³ Beyond the definition in the international scenario, their translation into projects and activities that allow them to be achieved and contribute to a more equitable and sustainable international order remains problematic. This has also created difficulties for the various sectors of administrative activity covered by the strategic and implementation measures in relation to the Strategic Framework of the Port System of General Interest, as approved in October 2022. The Strategic Framework of the port system aims to define which ports we want for the year 2030. In this context, it is not surprising that the strategic actions defined must be linked to the fulfillment of the SDGs, which more directly affect port activity. These include: SDG 6 on water sanitation; SDG 7 on affordable and clean energy; SDG 9 on the innovation and infrastructure industry; SDG 11 in the area of sustainable cities and communities; SDG 12 on responsible production and consumption; and SDG 14 on life below water. Below, without going into the detailed dynamics developed for the fulfillment of each of the objectives listed, we summarise their respective essential characteristics.

5.1. SDG 6: Clean water and sanitation

The first of the objectives related to management in the port system is the one that refers to the optimization of the management and use of water in ports. To this end, measures linked to the control of water consumpti-

72 LESTA COUPLE, E: The integration between port and city, University of La Coruña, Thesis; ESTEPA MONTERO, M: Analysis of Public Policy on Ports of General Interest, Marcial Pons, Madrid, 2021.

73 ALONSO IBÁÑEZ, R: *Urban policies and localization of sustainable development goals*. Tirant lo Blanch, 2021; TORRES FERNÁNDEZ, C; JEREZ RIBERO, W; CHEERFUL ARASCO: Policies Publications and SDGs. Interventions for Social Transformation, Dykinson 2022; Pensado Lejías, A: Implementation of the SDGs from Urbanism, *Consultant of the City Councils and Courts. Technical Journal specialized in Local Administration and municipal justice*, No. 2, 2022.

on have been foreseen, through the installation of meters of the level of said consumption, in the previous definition of consumption indicators. In addition, as foreseen in the linked goal,⁷⁴ and for its achievement, the progressive regularization of water distribution and marketing services in ports is foreseen, as well as the installation of an efficient irrigation system, collection and storage of rainwater and installation of non-permeable pipes with greater resistance to ground deformations.

5.2. SDG 7: Affordable and clean energy

In the same sense, and once the goal has been defined in the strategic document,⁷⁵ the achievement of objective 7 is guided through the definition of objectives linked to the reduction of energy consumption, and emissions, in buildings and services provided by the port authority,⁷⁶ as well as measures linked to the control and actual measurement at all points of consumption: the level of distribution and transformation of the port is also enhanced; further measures are linked to the lighting of port spaces, as well as air conditioning.⁷⁷

5.3. SDG 9: Industry Innovation and Infrastructure

The attention to infrastructures materializes at this point in the promotion of rail transport to and from ports.⁷⁸ At this point, the assistance

74 This is described as: "By 2030, significantly increase the efficient use of water resources in all sectors" and ensure the sustainability of freshwater abstraction and supply to address water scarcity and significantly reduce the number of people suffering from water deprivation".

75 As follows: "By 2030, significantly increase the share of renewable energy in the energy mix; Target 7.3: By 2030, double the global rate of improvement in energy efficiency".

76 Consideration should be given to the adoption of related guidance documents such as the "Port Energy Management Guide".

77 This is foreseen in the strategic documentation among the measures the air conditioning by pump of heat, and Geothermal energy is explored in some ports (sic, strategic document).

78 Thus the goal is defined as: "By 2030, 'modernize infrastructure' and reconvert industries to be sustainable, "using resources more effectively and promoting the adoption of clean and environmentally sound industrial technologies and processes", and getting "all countries to take action according to their respective capabilities".

derived from the Financial Fund for port accessibility is relevant.⁷⁹ In Spain, the improvement of the guidelines governing the 17 connection agreements signed between Puertos del Estado, the port authorities and ADIF, is foreseen.⁸⁰ In this context, reform is being implemented by Order TMA/822/2022, of 29 July, amending Annex III of the Consolidated Text of the Law on State Ports and the Merchant Marine, approved by Royal Legislative Decree 2/2011, of 5 September.⁸¹

5.4. SDG 11: Sustainable cities and communities

With regard to sustainable cities and communities, the link between the port system and the urban fabric is pursued under the provisions of the Strategy derived from the 2030 Agenda, for ports: "improvement of the mobility of heavy vehicles in the port environment: control of diffuse emissions in the handling of solid and liquid bulks; and the promotion of alternative energies in transport".⁸² Equally relevant among the planned measures is the review of the framework that regulates tolls for the use of the Spanish gas network: this aims to introduce modifications "that allow to make more competitive the services of supply of liquefied Natural Gas as fuel". However, we understand the initiatives foreseen in the linked strategic documents, which still require an urban-port city integration strategy that involves not only an improvement in the efficiency of infrastructures in the port environment, but also involves providing the city with "walkable" spaces". Thus, uses that do not alter those foreseen in the port system, must still respect the landscape and the parameters of urban sustainability.

79 Fund that was created by Royal Decree-Law 18/2014, of July 4 and that has been modified by: Royal decree 901/2022, of 25 October, which modifies the Royal decree 707/2015, of 24 July, which regulates the Financial Fund of Terrestrial Port Accessibility.

80 Sic, strategic document, which can be viewed in: extension://ieepebjnkhaiiojkepfnioid-jmjihl/data/pdf.js/web/viewer.html?file=https%3A%2F%2Fwww.puertos.es%2Fes-es%2Fmedioambiente%2FDocuments%2FODS%252009%2520-%2520Ferrocaril.pdf.

81 BOE of 27 August 2022.

82 Thus, the related target states: "By 2030, reduce the negative environmental impact per capita of cities, including by paying special attention to air quality" and municipal and other waste management.

5.5. SDG 12: Responsible production and consumption

Linked to the above is SDG 12, which addresses issues such as the recovery of construction waste. Without prejudice to the need to value waste management within the framework of the circular bio-economy, specific measures are provided for in the strategic documents, with respect to the contracting of work projects in which the use of these materials – waste – in the construction of port landfills is included as a condition. At this point we understand that the principles and measures are to be reviewed in the light of Law 7/2022, of April 8, on waste and contaminated soils for a circular economy,⁸³ and this because its provisions regarding the improvement of traceability will need to be taken into account, in order to avoid the abandonment of waste in ports. This will help to improve the implementation of environmental management systems in the port space. As for the measures provided for in the strategic documents – from the administrative point of view, it affects the regulation that impose conditions on licenses, authorizations and concessions aimed at guaranteeing the segregation, collection, storage and delivery to the authorized manager of the waste produced.⁸⁴

5.6 SDG 14: Life below water

Finally, the connection of actions in the port system with respect to their impact on underwater life is relevant. The goal at this point is defined as preventing and reducing marine pollution, optimizing the response to marine pollution emergencies. In this context, provision is made for the tendering of service contracts to provide schemes to act quickly in the event of an emergency.⁸⁵ The attention to underwater life is also manifested in the goal linked to the improvement of the quality of water and sediments of the ports.⁸⁶ This foresees the implementation of the Recommendation for maritime works 5.1 developed by state ports to contribute to achieving better management of the "quality of coastal waters in port areas".⁸⁷ To this end,

83 BOE of 9 April 2022.

84 Sic Strategy Agenda 2030 Portu Systemair.

85 At this point, surveillance, cleaning, maintenance, simulation, waste management and research measures are foreseen.

86 Thus the goal is formulated: "By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution".

87 Sic. ROME 5.1.

the introduction of operational and technical conditions is foreseen in the administrative regulation of licenses, authorizations and concessions aimed at giving adequate treatment to wastewater and rainwater and minimizing diffuse discharges. In addition, measures aimed at supervising operations by port police are incorporated into the strategies. With regard to wastewater, this also addresses the expansion of the coverage of the wastewater and industrial water network. In the case of runoff water, this includes the development and treatment for the treatment of those waters susceptible to being contaminated, and in the case of maintenance waters, the development of surfaces prepared for the maintenance of machinery equipped with separative networks and water treatment.⁸⁸ Finally, within the framework of this objective, initiatives are defined to prevent the dumping of waste from ships at sea.⁸⁹

6. Right behavior and sustainable attitudes, approaching sustainable nudging

Finding a way to make the population aware of the need to act responsibly and sustainably, implies not only an intervention in the field of education for sustainability but in the field of public policy or in the behavioral sciences, as has recently been explored as part of the administrativist doctrine, in the form of so-called "nudging" ", or spurs. This recognises that the rational action that is expected from an assumption of the responsibility that as citizens we have for our environment, may require not only administrative promotion measures, but an adequate nudging policy,⁹⁰ or small incentives that contribute to the improvement of actions and the preservation of the environment. The definition of a public policy is based on the recognizable elements that make it necessary, from the socio-economic

88 Sic, strategy 2030.

89 "By 2025, prevent and significantly reduce marine pollution of all kinds".

90 About the "nudging," and its application to Spanish administrative law, Prof. Ponce Solé has been a pioneer in the administrativist doctrine, by extrapolating some of the ideas derived from the initial formulation of the theory and its legal-administrative repercussion, from the works of Prof. Sunstein, with whom we had the opportunity to agree on related research at the University of Harvard. See for all: Juli Ponce Solé, Star, Montolio Durán, José Andrés, Rozas Valdes, "Behavioral Law and nudges: legal implications and linguistics", *Management and analysis of public policies*, ISSN 1134-6035, No. 25, 2021, pp. 58-72, and our latest work on the subject Gómez Jiménez, M.L *Procedural automation and electronic bias: the administrative procedure before artificial intelligence*, Aranzadi, 2021, in which we dedicate a chapter to nudging (Chapter V).

perspective. In this context, behavioral sciences have a prominent impact not only on the forecast of the precise behavioral attitudes to encourage the making of certain decisions, but also on the way in which the markets will react to it. They are relevant elements when formulating a public policy, so as to ensure its implementation reaches optimal levels of effectiveness. Therefore, a way to approach the improvement of sustainability and the ecosystem integration of elements of circular economy in cities, will involve a kind of sustainable "nudging" in the style of what has been happening in other branches of the legal system to motivate attitudes of recycling waste or improvement in environmental education actions.

7. Some Concluding Reflections

The need to address the climate emergency on our planet demands decisive responses from public officials, governance measures (or co-governance), and effective guidelines that can be applied by the population. The definition of the instruments provided for in the Climate Change Law 7/2021, represents a step forward in the definition of climate objectives, and orders the developments that must occur, initially in order to meet the temporary targets applicable until the year 2030. There are many administrative soft law instruments approved at both state and regional level, aimed at carbon neutrality. But none of these can be fully implemented unless "hard-law" normative mechanisms are available for it. In this context, nature-based solutions become important as an innovation mechanism that incorporates the cycle of ecosystems and natural resources, for the achievement of climate change mitigation and adaptation objectives. The policy proposals around Nature-Based Solutions have been important to date, but not been sufficiently applied, as they advocate either the financing of new implementation projects at the local or regional level or lack a specific normative reference beyond the generic framework provided by climate change regulations. The attention to the environment in the urban environment, addressing the conditions for promoting green infrastructures, including ecosystem integration that values the natural resources present in cities (green spaces, or facilities that allow sustainable connection with the environment), now needs to be matched by efforts towards the integration of the still incipient legal instruments linked to blue development. Perhaps the problem is not so much the lack of resources, or ultimately the lack of awareness, as the need for an ecosystem projection, lacking in the legal statements. While we struggle to approve new sectoral regulations, our marine ecosystem, especially, continues to suffer the effects of degradation that is increasingly

difficult to repair. Blue development, and the nudging strategies linked to its promotion can be at the basis of the response, if we can transcend the spirit of administrative soft-law to make it effective as a new form of ecological justice. As part of this process, our port system offers opportunities for the development of sustainable strategies, which in respect of the SDGs promote integrated ecosystems to safeguard the most valuable asset of our blue planet.

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