

MAIN PLANS AND STRATEGIES OF THE PORTUGUESE SECRETARY-GENERAL OF
THE ENVIRONMENT AND ENERGY TRANSITION, AND THEIR INTERACTION

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Abstract

The Secretary-General of the Environment and Energy Transition has as a mission to support the formulation of environmental policies and their strategic planning, the international performance of the Ministry of the Environment and Energy Transition in terms of policies, and the budget creation, to manage international and European funds for this area, to assure European directions are being followed.

The Secretary-General is divided into six different sectors one of them being Serviços de Prospetiva e Planeamento (SPP) that focuses on supporting the Ministry of the Environment through defining the goals to follow, strategies and formulation of policies. It tracks the evolution of political, economic, social, technological and territory occupation trends, develops methods of evaluation and simulation of the macroeconomic effects of the policies designed, analyses and monitors the policies implemented and acts as a coordinator of the Ministry's budget plan.

In this report I will state the main environmental plans and strategies to be implemented in the following years and outline their common features and ways they interact with each other. to simplify SPP's supervision, coordination and analysis of the plans' features.

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National Adaptation to Climate Change Strategy (ENAAC2020)

ENAAC2020 is part of the Climate Policies Strategic Board (QEPiC) establishes the climate policies' goals until 2030 aiming for the adaptation of the current economic activities to the threat that climate change poses to the sustainability of the country. Therefore, it focuses on improving the knowledge on climate change, implementing adaptation policies, and integrating them in the different economic sectors with the ultimate goal of shifting to a sustainable carbon-free economy.

The strategy is organized in theme areas which are investigation and innovation by promoting science and knowledge on the relevant areas, financing and implementation of adaptation measures, international cooperation, communication and promotion through supporting the development and spread of the information needed for decision making, and integrating adaptation measures in land use planning and water resource management.

These theme areas will allow international to local goals to be integrated within different sectors such as agriculture, biodiversity, economy, energy, forests, health, safety, transportation and communication, coastal areas and sea. This is possible due to workgroups for each sector managed by the main institution responsible for the administration of the particular sector, having the responsibilities of identifying existing vulnerabilities, integrating adaptation measures into the sector's policies, identifying needs and lack of knowledge in environmental matters, preparing activity reports, contributing towards the goals of the theme areas, and cooperating with other sectors when needed.

Action Plan for Circular Economy (PAEC2020)

A Circular Economy is set on the idea of preserving, restoring or reintroducing materials in the economic system that have already been harnessed, by restructuring production processes and business models focusing on digitalization, reuse, recycling and recovery of materials, opposing the linear economic system that we have experienced so far, where natural resources are extracted, transformed into transactional products, used by consumers, and discarded when they no longer serve their purpose.

This system not only brings environmental benefits with the significant reduction of greenhouse gas emissions through waste control, lower demand for primary resources and diminishing pressure on habitats as the materials contaminating them will be reused, there will also be economic gains as the acquisition of raw materials, which represents half of the production costs in the EU, would lose importance with the increasing employment of reused materials, and social benefits as employment will be fostered in the sanitation and recycling sectors, as well as in the design, architecture, materials engineering, and repair areas.

The strategies of PAEC2020 are to design products, services and business models that avoid the production of waste and the pollution of the natural system, to keep products and materials in use, at their fullest economic value and utility, for as long a time as possible, to foster the regeneration of used material resources and underlying natural systems, and spread awareness and knowledge through the creation of curricular programs, workshops and other means of making the community and businesses aware of the efficient use of resources.

The Action Plan for Circular Economy takes these principles into account and has specific policy goals to be implemented until 2020 for which the Ministry of the Environment will contribute

and guide in a political level using the political instruments that insure the sustainable use of resources from their extraction to the efficient use of residues, in a level of knowledge spreading awareness on how to deal with the resources, on case studies, on financing opportunities and promoting the development of new technologies that would contribute to these goals, and in an economic way through the intervention with financial institutions in order to promote initiatives that would contribute to a circular economy. The specific policies involve continuing the Strategy for Ecologic Public Spending, especially in the sectors of construction, transport and food, and incentivising business models that foster a circular economy such as through fiscal benefits.

Roadmap for Carbon Neutrality (RNC2050)

The ultimate goal of this Roadmap is to reduce the emissions of Greenhouse Gases so that they equal their removal by the atmosphere until 2050, reaching carbon neutrality. This is a mitigation plan as it seeks to limit the planet's rise in temperature to 2°C and attempt to lower it to 1,5°C as a result of the commitments made by Portugal in the Paris Agreement.

The strategy towards carbon neutrality involves identifying alternative trajectories that are economically technically and socially sustainable that contribute towards the reduction of GHG emissions that will only be possible through the active participation of all actors.

There are four intervention areas of the Roadmap, the energy, transport, residue and agriculture, forest and land use sectors.

In the energy sector, since it is the main contributor to GHG emissions, the goals are a shift in socioeconomic and behavior patterns, as well as the decarbonization of the energy system through low carbon technologies from endogenous and renewable sources and energetic efficiency, encouraging a better quality of air and a safer energy system.

In the transport sector, the motto “Avoid-Shift-Improve” sets the strategies towards avoiding the need of mobility by shortening the distance between residential and work areas or through co-working projects, shifting the transportation mode from individual vehicles to public transports, biking or walking and from road transports to railways on a regular basis, and improving the emission levels through introducing and fostering vehicles moved by hydrogen.

The production of residue and residual water is responsible for high Greenhouse Gas emissions particularly from its deposit in landfills but also from the treatment of residual water due to the anaerobic digestion of organic matter in the residue that releases methane. Even incineration has negative impacts in the environment as from the emission of other pollutant substances. Therefore, the strategy is to reduce this production and maximize the reutilization and recycling of goods and resources followed by a more appropriate management of existing residue.

In the sector of Agriculture, Forests and Land Use the core sources of GHG emissions are enteric fermentation, agricultural soils and manure management, hence agricultural policy measures and shifts in technologies and practices are needed as the agriculture sector is highly dependent on public support and is based on a model of intense chemist-mechanic technologies, and in the forest sector, measures related to the sustainable management of the forests and to improving the current methods of prevention and extinction of wildfires are necessary for an easier transition to carbon neutrality.

These intervention areas will be supported by pillars of a sustainable shift, which are: a Circular Economy, an economic model that seeks to reutilize, recover, reduce and recycle the resources used in the production process in order to diminish the extraction of new resources and its waste; Social participation, pointing out the need of a shared vision and common goals for carbon neutrality to be possible, therefore, the participation of the relevant stakeholders in setting

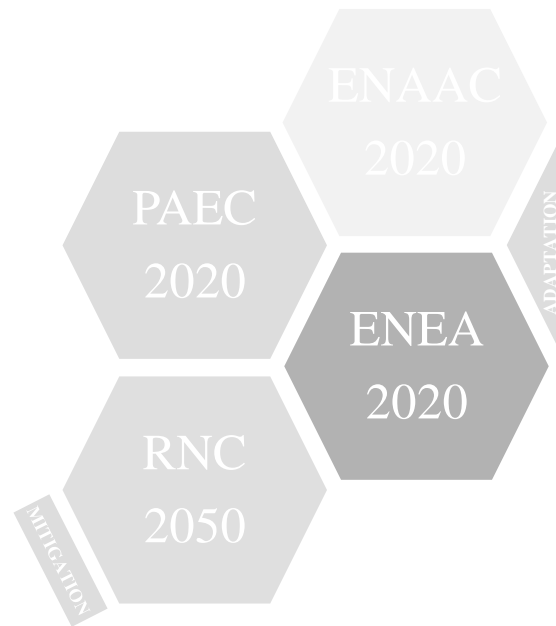
these goals and vision towards carbon neutrality and discussing the results as well as their involvement in finding new options for the decarbonization of productive processes and habits is essential.

National Strategy for Environmental Education (ENEA2020)

This strategy's goal is to promote a more interventive society in environmental matters so that behaviors and habits become more conscious and sustainable. An environmentally informed and active society is crucial for the success of all other environmental plans and strategies, contributing towards the achievement of commitments such as the Paris Agreement and the - United Nations Sustainable Development Goals – 2020 Agenda.

There are three foundations to this strategy which are to decarbonize the society, to foster a circular economy and to appreciate the territory, these frame the three goals that set 16 specific policies. The goals are: EA +Transversal, aiming towards a more cross-sectional Environmental Education mainly through the cooperation between the Ministry of the Environment and the Ministry of Education but also creating protocols with all other Ministries; EA +Aberta, seeking to recognize the importance of environmental volunteering actions and non-governmental environmental organizations, to make sure environmental matters are covered in education programs from pre-school to the university level, to foster investigation in these areas, to provide environmental training to workers in the public sector as well as to businesses, to encourage the development of programs and projects in a local and regional level through city halls and autarchies; EA +Participada, targeting an increased public participation through awareness campaigns and an electronic portal where citizens can be informed and interact.

Links and Interaction Between the Plans and Strategies



The above figure displays how I found the plans and strategies to be connected, pointing out that the National Strategy for Environmental Education (ENEA) is implicit and promotes all other plans and strategies, while the Action Plan for Circular Economy (PAEC) fosters directly the Roadmap for Carbon Neutrality (RNC) and indirectly the National Adaptation to Climate Change Strategy (ENAAAC). RNC and ENAAAC have no direct relation since they encourage different purposes, one of mitigation and the other of adaptation.

MITIGATION

ADAPTATION

The ENAAAC and ENEA were formulated with the intention of adaptation. This implies the acknowledgement that climate change is already having impacts and that there must be an adjustment to these new environmental circumstances. The Roadmap for Carbon Neutrality was

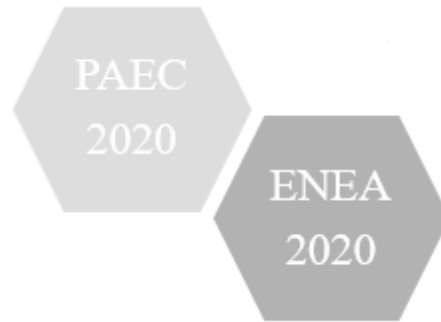
designed with an intention of mitigation. This translates to the effort of avoiding or extenuating future consequences from climate change. Along this spectrum of adaptation and mitigation there is PAEC which involves adapting the current economic model to a more sustainable circular one and, through that, mitigate the negative impacts on the environment that the economy has been creating so far.

A population more aware of environmental struggles, active in shifting their behaviors towards more sustainable ones and also interventive in their communities is essential for any ecological transition to take place, therefore, the National Strategy for Environmental Education (Enea) fosters all other strategies and plans.

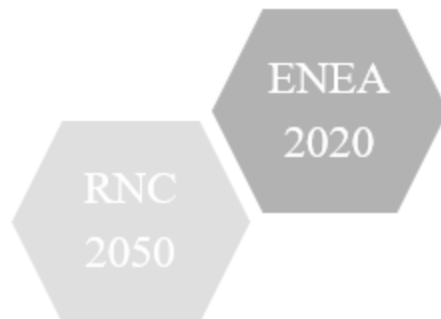


The National Adaptation to Climate Change Strategy has as one of its three main goals improving the information and knowledge on climate change, and implementing adaptation policies in different sectors, which is promoted by Enea through its specific measures to increase knowledge and awareness to workers in the public sector and to establish protocols with other ministries. ENAAC also seeks to spread information and increase the knowledge on the matters of climate change for which education is crucial, especially in the academic world, and Enea has as

specific goals making sure environmental matters are covered in education programs from pre-school to the university level, to foster investigation in these areas.

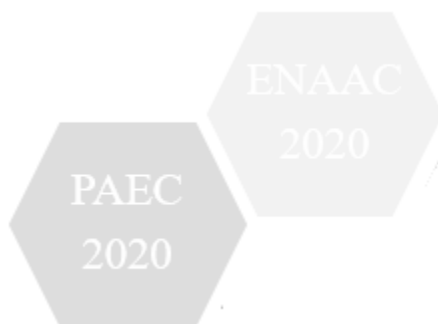


Informed and aware citizens, businesses and public authorities will maximize the appearance of new business models, product ideas, material reusing and recycling methods, and other initiatives that promote a circular economy, hence the importance of ENEA for the Action Plan for Circular Economy since one of its main pillars is to educate for a circular economy making the concept more familiar to the public which will encourage new business initiatives and minimize wasteful consumer preferences.



The Roadmap for Carbon Neutrality relates to ENEA since both aim for increased awareness and a change in behavior patterns by the population that translates in the involvement of society in the decarbonization process. The campaigns and educational projects promoted by

ENEAC, that involve children, students, businesses, workers and public authorities, endorse an increased conscience about carbon emissions, pollutant behaviors and production processes that encourages an active general attempt to mitigate its costs either through the form of more sustainable daily action or new business projects.



The link between the Action Plan for Circular Economy and the National Adaptation to Climate Change Strategy is not as direct as the previous ones. Nevertheless, ENAAC seeks to adapt the economic system to the current fragile environmental circumstances and implement sectorial policies that take this goal into account. A shift to a circular model is an adaptation of the economy to the current environmental concerns, followed by legislation directed towards it, will aid in these ultimate goals of ENAAC to be successfully met.



The Action Plan for Circular Economy and the Roadmap for Carbon Neutrality are directly interconnected and a one of the most important outcomes of a circular economy is the significant reduction in greenhouse gas emissions through the reutilization and recycling of resources and the preference for renewable, sustainable energies and the substantial decrease of waste. A circular economy is, in fact, one of the pillars of the Roadmap for Carbon Neutrality as it represents a very effective course of action to achieve its main goal of neutralizing greenhouse gas emissions by 2050. Therefore, I find RNC reliant on PAEC in order to be successful.



The Roadmap for Carbon Neutrality and the National Adaptation to Climate Change Strategy have no direct link between them since, as I have mentioned previously, they serve different purposes. ENAAC is an adaptation strategy whose emphases is on adapting the current policies to the issues related to climate change we see happening already while RNC intends to mitigate the future consequences of global warming by attempting to limit carbon emissions

through changes in behaviors and innovative ways to shift to a carbon-free economy. They both have in common the benefit from a circular economy which would both adapt the current economy and mitigate further negative environmental consequences.

Conclusion

In the final part of this report, after demonstrating the similarities, differences and connections between these plans and strategies, I would like to highlight some specific projects and initiatives taking place that display the real interaction of these in the country.

One initiative that links PAEC with RNC is “Coopérnico”, a Portuguese renewable energies cooperative that offers its clients a 100% renewable source of electricity as well as decision power within the cooperative. The goal is to encourage citizen’s and other economic actors’ participation in the development of a new energetic, social and business model that excludes pollutant energy sources. This cooperative use of renewable resources follows PAEC’s guidelines and by that it is contributing to the reduction of greenhouse gas emissions as appealed by RNC.

“Ciclaveiro” is another good example of the interaction of these two plans as it is a project of an association in Aveiro, Portugal that collects unused children bikes and donates them to kindergartens and primary schools in the municipality. Before the deliver, there are sessions dedicated to repairing these bikes where new owners learn how to repair them themselves. This project not only encourages a carbon-free transportation as it encourages a no-waste behavior where people upcycle goods instead of discarding them.

The initiative “O Prato Certo”, created by the University of Algarve, Algarve’s Regional Health Administration, the Municipal Association of Algarve and Faro’s Institute of Social Security, involves a website where local producers can register baskets of their produce making it easier for consumers to not only purchase them but access information about them. This fosters the information of consumers when wanting to make sustainable choices and a less intensive in carbon emission cycle of production as national and local products are being promoted. I believe this shows a link between ENEA, PAEC and RNC.

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