

GREECE : Transition to a circular economy model for sustainable production and consumption patterns

The shift to a circular economy constitutes a key priority for Greece and an integral part of the country's National Growth Strategy. The sustainable management and the efficient use of natural resources is an objective that has been already horizontally embedded, as a cross-cutting priority, in the country's current strategic planning. The ongoing Partnership Agreement (PA) 2014-2020 has integrated the principles of sustainable development by focusing on environmental protection requirements, resource efficiency, climate change mitigation and adaptation, biodiversity conservation, and disaster resilience, risk prevention and management. Apart from the overall PA, the specific Operational Programme for Transport Infrastructure, Environment and Sustainable Development 2014-2020, with approximately half of its budget for its environment component (i.e. around EUR 2.4 billion), is structured around four thematic objectives: (i) support the shift towards a low carbon economy in all sectors; (ii) ensure adaptation to climate change, risk prevention and management; (iii) preserve and protect the natural environment, the ecosystem services and green infrastructure, and promote resource efficiency (with a total budget of around EUR 2.05 billion); and (iv) promote sustainable urban development, energy efficiency projects in public buildings and broader diffusion of teleheating.

"Greening" the economy with positive impacts on creating new decent jobs for all, especially for youth and women, for a long-term equitable and inclusive growth, based on resource efficiency, promotion of small and medium size entrepreneurship, innovation and investment in new technologies, expansion of the knowledge-base and strengthening of the "social economy" potential, has been a key quest for Greece particularly in recent years.

A National Action Plan on Circular Economy, detailing short-term priority interventions for the longterm promotion of circular economy in the country, and responding to the measures included in the related EU Action Plan for the Circular Economy (December 2015), has been endorsed, in the beginning of 2018, by the Governmental Economic Policy Council (KYSOIP). In order to speed up delivery of concrete actions and improve the involvement of all related line ministries and stakeholders (local authorities, businesses, civil society), a dedicated Inter-ministerial Working Group has been set up to coordinate planning and implementation of the National Action Plan, steered by the Ministry of Environment and Energy and composed by representatives from the Ministries of Economy and Development, Interior, Finance, Infrastructure and Transport, Education, Research and Religious Affairs, Maritime and Insular Policy, and Rural Development and Food.

The strategic long-term goals for 2030 of the National Action Plan on Circular Economy focus on:

- further applying a hierarchy approach in waste management, focusing on the prevention of waste production and recycling rather than on the final disposal of waste, «closing the loop» of product life-cycles;
- supporting circular entrepreneurship by promoting "industrial symbiosis" and clustering of businesses, the secondary use of by-products and waste in new production processes as raw primary materials as well as the improvement of energy efficiency in industry;
- supporting circular consumption patterns of re-using, re-storing and re-pairing rather than buying new products, especially for electrical and electronic devices, thus creating a new

market and jobs in repairing services, as well as education and information of consumers so as to make more sustainable and responsible choices regarding appliances' energy efficiency and reparability potential;

- enhancing partnerships, synergies and communication between the various involved actors like businesses and industry, the scientific community and the civil society; and
- monitoring of progress in shifting from the linear to the circular economic model through SMART (specific, measurable, achievable, relevant and time-bound) indicators.

Priority actions envisaged by the National Action Plan on Circular Economy to be implemented in 2018, relate to:

(i) regulatory and legislative interventions to lift bureaucratic constrains for widely applying circular economy principles, such as:

- elaborating new legal definitions for wastes, by-products and re-use materials after first use intended for re-use, declassification of waste and quality standards for secondary raw materials;
- minimising food waste, inter alia, by enabling food donations and their use in fertilisers' production and organic compost;
- promoting of green public procurement (GPP);
- increasing the potential of re-utilisation of construction and demolition waste by setting and applying concrete standards to enable construction components' recoverability, adequate reuse (e.g. in road construction) and environmentally friendly decommissioning of old sites;
- revisiting the existing specifications for the re-use of treated wastewater as irrigational water and in energy production;
- integrating criteria for ecological design and life-cycle analysis of products, avoiding the use of chemical additives in products' production processes, thus increasing the potential of their reparability and adaptive re-use, and expanding their life-cycles;
- integrating circular economy considerations and criteria in the Environmental Impact Assessment and the Strategic Impact Assessment requirements for sites and projects as well as in the environmental permitting process;
- introducing the role of "brokers" or "mediators" between waste producers and the secondary material market to boost new entrepreneurship;
- endorsing measurable indicators to track progress, linked to material flows, to data related to material inputs and production outputs as well as to other electronic applications like the "Electronic Waste Registry";
- endorsing a regulatory framework that will enable the production of green gas from organic waste and its introduction into the natural gas pipeline grid with lower feed-in tariffs than biogas or its use as a vehicle fuel.

(ii) earmarking of existing funds from various sources¹ for financing the above regulatory interventions and for demo projects as well as increasing fiscal and financial incentives for businesses using secondary materials;

(iii) further enhancing knowledge, understanding, education, awareness and communication between producers and scientists and among consumers and the general public by means of extended public awareness campaigns particularly on the benefits of reducing food waste and on cooperative ventures as well as the elaboration of Codes, Guides and Standards for increasing energy efficiency in industrial processes;

(iv) improving governance structures to enable the shift to a production and consumption model which is more efficient and with a smaller environmental footprint, by setting up mechanisms such as an programme Executive Secretariat for the Circular Economy and a national Observatory to track progress, results and gaps on the economic, environmental and social dimension.

With regard to the first priority action (legislative framework), and specifically on waste management, which constitutes a longstanding priority and challenge for Greece, the National Plan for Waste Management and its accompanying National Strategic Plan for Waste Prevention (Ministerial Council Act 49/2015) already in implementation, the 13 Regional Waste Management Plans already endorsed with many of their corresponding projects already funded, as well as the National Plan for Hazardous Waste Management endorsed in 2016, provide the overall legislative framework in Greece to promote, in practice, the provisions of circular economy, with a special focus on waste management.

Additionally, a new Law on Recycling (law 4496/2017), has been endorsed in November 2017 to fully align previously existing legislation (i.e. law 2939/2001) with the circular economy principles. Law 4496/2017 aims at ensuring the optimum operation of the recycling systems which are based on the Extended Producer Responsibility, guaranteeing that all arising financial resources are channeled into improving the quality and quantity of recycling. The new law is also expected to stimulate the use of innovative technologies, the creation of a secondary materials' market and the boosting of new employment opportunities for high-skilled personnel. Today, 22 approved Extended Producer Responsibility (EPR) schemes are in operation in Greece for: packaging material; batteries; accumulators; waste of electrical and electronic equipment; waste tyres; end-of-life vehicles; oils and lubricant waste; and demolition and construction waste. For these waste streams, concrete quantitative recycling and recovery targets are set out in EU and in national legislation. All producers or importers of such waste are obliged to individually set up or participate collectively to a relevant EPR scheme. All schemes are assessed, approved and audited by the Hellenic Recycling Agency (EOAN).

In parallel, Greece has taken measures to drastically reduce the consumption of single-use lightweight plastic bags, as plastics and microplastics are the key source of pollution into the

¹ E.g. the budget of the Operational Programmes for “Competitiveness, Entrepreneurship and Innovation” and for “Transport Infrastructure, Environment and Sustainable Development” under the PA 2014-2020, the various Regional Operational Programmes for the Greek Regions, the Green Fund operating under the Hellenic Ministry of Environment and Energy, national funds from the budget of the new Investment Law (law 4399/2016), actions for promoting innovation under the National RIS3 as presented in chapter 5.2.1, other funds from EU research projects such as INTERREG and HORIZON etc.

seas, through a Joint Ministerial Decision issued in August 2017, specifying fees and consumers'/merchants' responsibilities. The measure of paying for the use of plastic bags by consumers, effective since the 1st of January 2018, has been very positively received by the general public, already resulting in a radical reduction of plastic bags consumption and awareness raising for consumers' behavioral change.

In figures, with the abovementioned intertwined National Plans together with the new law on Recycling, Greece aims, by 2020, to tentatively:

- (i) achieve a radical reduction of the per capita produced waste;
- (ii) (ii) increase reuse and recycling of wastes, with a separate collection of recyclable waste and of bio-waste, to reach 50% of total municipal solid waste produced from a 25% where it stands today;
- (iii) (iii) reach a 74% recovery and less than 30% disposal of total municipal solid waste produced from the current 82% disposal; and
- (iv) (iv) create around 15,900 new jobs and the increase of the annual turnover of the waste management related businesses.

Regarding **the adoption of sustainable practices** by large companies, Greece actively promotes the EU Eco-label for products and services that have a reduced environmental impact throughout their life-cycle. In late 2017, 12 paints and varnishes manufacturers with 274 products, 2 detergent producers with 21 products and 12 hotels were awarded the EU Eco-label in Greece.

Moreover, the Ministry of Environment and Energy supports the application of Environmental Management Systems in business, and in particular of the EU Eco-Management and Audit Scheme – EMAS. At the moment, 35 organisations with 1,334 sites are registered in the national EMAS registry. Financial and licensing incentives are granted to businesses that operate under the EMAS principles.

Finally, with regard to the promotion of **public procurement practices** that are sustainable, Greece has to speed up related processes and actions to catch up with other EU member states. To this end, the National Committee on Green Public Procurement has been established to operate onwards under the General Secretariat of Commerce and Consumer Protection of the Ministry of Economy and Development. The Committee, composed by representatives from various line ministries, is currently launching:

- (i) the compilation of a National Action Plan for Green Public Procurement, in line with the national strategic objectives for procurements laid out by the Hellenic Single Public Procurement Authority;
- (ii) the elaboration of “green” selection criteria for products and services to be incorporated in the technical specifications of public procurements; and
- (iii) the selection of products, services and projects where “environmental” criteria can be applied as minimum compulsory requirements or as additional voluntary performance criteria.