



GREEN Policies
DEVELOPMENT and
IN CEE Actions
COUNTRIES

CHIEF EDITOR Dr. KONG Tianping

Published by:

China-CEE Institute Nonprofit Ltd.

Telephone: +36-1-5858-690

E-mail: office@china-cee.eu

Webpage: www.china-cee.eu

Address: 1052, Budapest, Petőfi Sándor utca 11.

Chief Editor:

Dr. KONG Tianping

ISBN: 978-615-6124-63-0

Cover design:

Brád Grafika

Copyright: China-CEE Institute Nonprofit Ltd.

The reproduction of the study or parts of the study are prohibited.

The findings of the study may only be cited if the source is acknowledged.



Green Development in CEE Countries Policies and Actions

Chief Editor: Dr. KONG Tianping

CHINA-CEE INSTITUTE

Budapest, October 2022

Content

Preface.....	3
Green Development in Albania - Policies and Actions	6
Green Development Policy and Action in Bosnia and Herzegovina.....	13
Bulgarian Green Development Policy and Action	18
CEE Countries' Green Development Policy and Actions: The Case of Croatia	25
Green Recovery: The Czech Perspective	30
A Green Country Turning Greener?	36
Greece's Green Development Policy and Action.....	44
Green Development Policies of Hungary: Recent Trends and Actions...	52
Green Policy and Activities in Latvia	57
Lithuania's Green Economy Plan Gets the Highest Mark From Brussels	65
Green Development Policy and Action: Montenegro.....	72
Environmental Governance in N. Macedonia: Bridging The Gap Between Green Words and Green Actions	79
Green Transformation in Energy Sector Is A Big Challenge for Poland.	86
Romania's Green Development Policy and Action.....	92
Serbia's' Green Development Policy and Action	98
Current Environmental Issues and their Reflection in Slovakia's Policy	104
Green Development Policy and Action – Slovenia	111

Preface

In 1990s, we witnessed Central and Eastern European countries initiated the economic transition from centrally planned economy to market economy, global efforts to tackle climate change kickstarted as the United Nations Framework Convention on Climate Change was formally adopted and came into force. Now the Central and Eastern European countries are full-fledged market economies, the task of economic transition has been completed, however, the global journey to combat climate change has not ended, the green transition is far from over. For Central and Eastern Europe, the green transition is one of the greatest challenges before 2030.

Since 2015, sustainable development and green development has become one of the key tasks on the agenda of governments in the world. The 2030 Agenda for Sustainable Development adopted by the UN General Assembly provided a new global development framework, set sustainable development goals. The Paris Agreement adopted by 196 Parties at COP 21 in Paris set the long-term temperature goal, that is to limit global warming to well below 2 degrees Celsius, compared to pre-industrial levels, charted a new course in the global effort to fight climate change. There is no doubt that the endeavour to tackle climate change in Central and Eastern Europe is part of global efforts.

Even before 2020, the EU has been a pioneer in global environmental protection. New member states from the Central and Eastern Europe have harmonized their environmental legislations with the EU laws. The European Union takes the climate change seriously, assumes that the future of the Europe depends on the health of the planet. The European Green Deal approved 2020 maps out its strategy to achieve climate neutrality by 2050. Now the new member states from the Central and Eastern Europe have to implement the European Green Deal via reduction of greenhouse gas emission. The Western Balkan states are EU aspirants, their policy

choice in fighting climate change is affected by the EU. Decarbonization has become the major policy choice. Green transition can be regarded as one of the most far-reaching social and economic transformation in Europe. Comparing with the West European countries, Central and Eastern European countries lag behind in the pace of green transition, however, these countries have taken more active actions to deal with climate change in order to catch up with the old member states.

This book is a collection of reports originally published as the autumn issue of the Weekly Briefing in September, 2021, which is a key product of the China-CEE Institute. Nevertheless, the views in the book are solely represented by the individual authors instead of the China-CEE Institute.

The China-CEE Institute, registered as a non-profit limited company in Budapest, Hungary, was set up by the Chinese Academy of Social Sciences (CASS) in April, 2017. The China-CEE Institute builds ties and strengthens its partnerships with academic institutions and think tanks in Hungary, other Central and Eastern European countries, as well as other parts of Europe. The China-CEE Institute aims to facilitate scholars and researchers to carry out joint research projects and conduct field studies, to organize seminars and lecture series, to provide training programs for younger researchers and students, and finally to publish academic books, research reports and journal articles.

The authors provide first-hand in-depth observations over progress and challenges of the green development in relevant country. These reports touch upon a good deal of issues, such as environmental policy, development policy, energy policy, circular economy, green growth, green energy and renewable energy, green finance, Their insights are beneficial to get a full picture of national conditions and national response, understand the experiences of Central and Eastern European countries. The reports demonstrate governments in CEE attach great importance to green development, however policy implementation is not easy. There is no shortcut to the green transition. China is also committed to green transition,

and the experience and lessons of Central and Eastern European countries are quite valuable.

Prof. Dr. KONG Tianping
Institute of European Studies, CASS

Green Development in Albania - Policies and Actions

Marsela Musabelliu

Summary

In the Albanian path to modernization and free market economy, environment (as many others) has been an aspect of the nation's development that was sacrificed to the altar of turbo-capitalism and greed. After 1991, when the state was not meaning anything anymore, all resources were available for appropriation and usurpation. Adding here the extreme economic conditions of the country, environment was the least of perceived threat. Fast forward three decades, and all citizens are paying a hefty price for the mistakes of the past.

This briefing is an overview of Albania's conditions in terms of green development, awareness, results and trends.

Introduction

There are a number of known environmental issues in Albania. Main problematics include air and water pollution, poor waste management infrastructure and deforestation. For the purpose of this briefing we analyzed national and international reports manly focused on achievements and challenges.

While comparing the findings of these reports it was noted that the end-data and conclusions do not match. While Albanian institutions in charge of green development and action are portraying a very rosy reality with regards to achievements, international institutions are not that optimistic.

Current/constant issues

In 2015 the United Nations (UN) adopted the 2030 Agenda for Sustainable Development. At the core of this Agenda there are 17 Sustainable Development Goals (SDGs) and 169 associated targets. However, prioritization of the SDGs in Albania is a very challenging and complex

task.¹ The main four identified groups facing problems are a direct result of intrinsic economic and social challenges.

The sharp increase in air pollution in bigger cities resulted from a sharp increase in cars' ownership, increasing secondary activity and decrease of urban greenery.

Water pollution in Albania is caused by disposal of trash, and discharge of untreated wastewater and sewage.

The waste management system is composed by a weak collection systems in cities and very little collection systems in rural areas. Albania's collection coverage is around to 77%.

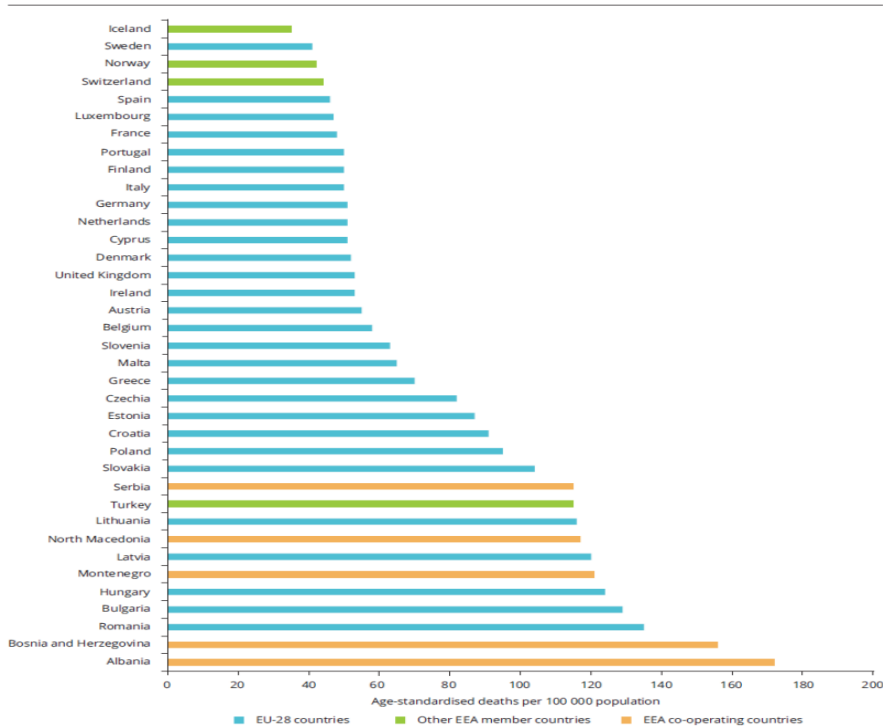
Recycling is done by private companies, which employ poor people to collect plastic, metallic, glass and paper waste which is processed or packed and then sold to other countries. The rest is mostly landfilled. Deforestation is another concerning issue and illegal logging remains the main threat to Albanian forests.

When green development is matter of saving many lives

A significant proportion of the burden of disease in Europe continues to be attributed to environmental pollution resulting from human activity. A report released by the European Environment Agency (EEA) highlights how the quality of Europe's environment plays a key role in determining citizens' health and well-being. As seen from the data below, Albania has the largest number of deceases caused by environmental deterioration.

Age-standardized deaths attributable to the environment in the EEA-39 countries per 100 000 people

¹ Ciko, I. (2018, Jan. 30). United Nations (UN) Albania, report on the harmonization of sustainable development goals with existing sectoral policies. Retrieved from: <https://www.un.org.al/sites/default/files/Albania%20Report%20on%20the%20Harmonization.pdf>



Source: WHO Global Health Observatory Data Repository (in EEA Report, 2019) ¹

In the official website of the ministry in charge for green development in Albania (Ministry of Tourism and Environment)² - as well as in the main specialized agency National Agency for Environment (AKM) ³ - it is visible that almost all projects are supported with foreign donations.

The list of donors is not long, and in many projects the same entity appears, namely the European Union (EU). After, there are also the German Development Agency (GIZ), the Swiss Government, the World Bank, the

¹ European Environment Agency, Report 21/2019. Healthy environment, healthy lives: how the environment influences health and well-being in Europe. Retrieved from: <https://www.eea.europa.eu/publications/healthy-environment-healthy-lives>

² Ministry of Tourism and Environment of Albania. Environmental projects with foreign and local donors. List available at: <https://turizmi.gov.al/informacion-permbledhes-mbi-projektet-me-financim-nga-donatore-te-huaj-dhe-bashkefinancim-nga-qev-eria-shqiptare/>

³ National Agency for Environment (Agjencia Kombetare e Mjedisit, AKM). Retrieved from: <http://www.akm.gov.al/kreu.html>

United States Agency for International Development (USAID), Swedish Development Agency, etc. The funding is millions of euros in the last five years, and still in international reports it seems that almost nothing has been achieved.

There are many strategies and actions plans, yet, the results are not tangible.

Where does Albania stand?

The United Nations Economic Commission for Europe (UNECE) releases a report every seven years for many countries, namely the Environmental Performance Review (EPR).

With regards to Albania it states that the membership to the EU is the overarching goal pursued by Albania that has been and will continue to be the main driver of change in the environmental domain.¹

The third review was released in 2018, and it assesses the progress made by Albania in managing its environment and addressing new challenges. The next one will be released in 2025.

Main Findings - Greening the economy

The report states that in governmental strategies provide policy declarations and some initiatives on renewable energy, energy efficiency and tourism, but these are not managed within a common framework referencing the principles of green economy.

Albania does not earmark financial resources for environmental protection. No national environmental fund or state budget line for an environment-related purpose has been established. Furthermore, the conditions for widening public and private environmental expenditure do not exist.

A significant lack of appropriate infrastructure is evident in the public utilities sector. It is considered responsible for some of the inefficiencies in this sector, including water leakage, inaccurate metering and poor waste management.

¹ UNECE (2018). Environmental Performance Reviews Albania. Retrieved from: https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Albania_Environmental%2BPerformance%2BReview.pdf

There is a general absence of information provided by the Albanian environmental authorities to the public on the status of Albania's participation in global, regional and bilateral agreements and on the implementation of those agreements.

Climate change mitigation and adaptation

Albania lacks data and studies on the impact of climate change on different components of nature, including water resources, land and soil cover, forest and other natural vegetation, biodiversity and ecosystems. Nor are studies and data available on the monetary impact of anthropogenic climate change on the country's economic sectors.

Albania has set important targets in the area of climate change. The Government committed to reduce CO₂ emissions in the period 2016–2030 by 11.5% compared with the baseline scenario. However, the country lacks policies on adaptation of different economic sectors and infrastructure to climate change, as well as to other natural and anthropogenic hazards.

Air protection

Air quality improved greatly in the course of the last ten years. Since 2005, emissions of sulphur oxides decreased some 35%, and emissions of ammonia around 10%, while emissions of NO_x, NMVOC and PM₁₀ increased slightly.

Intensive urbanization that is not followed by adequate development of infrastructure (e.g., district heating systems and sustainable public transport) poses a major threat to air quality. The number of monitoring stations is limited and the macro and micro locations of existing monitoring stations are not accurate.

Water management

The current monitoring data on the quality and quantity of water resources are insufficient. Water bodies have not been identified. Available monitoring data and assessment criteria do not yet allow for a comprehensive assessment of the environmental state of water bodies. Generally, most of the rivers are polluted in their middle or lower reaches. Most groundwater bodies appear to be still of good quality, although there are insufficient monitoring data to assess their possible pollution with pesticides or heavy metals.

Sustainable Development

By 2016, Albania had built – with donor support – eight urban wastewater treatment plants (UWWTPs), with a capacity covering around 25% of the country's urban population. However, the lack of financial capacities and limited technical capacities rendered three of them idle, with unclear long-term operational arrangements.

Waste and chemicals management

Waste management has undergone profound improvements during recent years in terms of legislative background: Albania has transposed the most important part of the EU acquis related to waste. However, the implementation and enforcement of these laws is at a very low level. Albania still lacks the basic infrastructure for proper waste management. The financing of the costs of waste management is still unresolved, due to the lack of a comprehensive cost and tariff system that reflects the real costs of the services.

Albania is the regional leader in the number of built and planned hydropower plants (HPPs). However, no cumulative impact assessment of HPPs in the country, and in particular in protected areas, has been undertaken. Implementation still lags behind, due to a lack of funds and overlap of monitoring responsibilities, impeding the analysis of trends.

Transport and environment

Albania has taken significant steps to improve its transport sector over recent years, with major investment projects and policy changes stimulating the growth of the sector. However, not enough efforts have been directed at facilitating the development of sustainable transport.

The lack of multimodal facilities is limiting the potential use of public transport and stifling the use of more sustainable modes of transport. Municipalities have yet to complete measures aimed at improving urban public transport services through the introduction and extension of bus and cycle lanes.

About 70% of newly registered cars are second hand.

Energy, industry and environment

Albania is highly dependent on a single source of energy – hydropower – that does not guarantee constant production. The renewable sources of energy other than hydropower, together with connection to natural gas following the implementation of the Trans-Adriatic Pipeline project, represent strategic opportunities for the country to reduce its vulnerability on a single source of energy.

Conclusions

It is clear that if it wasn't for the EU incentives and most of all, funding, independent/local initiatives on green development and sustainability would not be an issue for Albanian authorities.

As many initiatives in the country, most of the work remains in paper. In the Albanian reports the most used words are: *strategy, action plan, vision* and others. In the international reports the most used words are: *lack of, however, unresolved issue* and more.

The trend and the ongoing of these environmental reforms and adaptation to EU acquis is one of the most externally-funded domains in Albanian territory. And yet, with all the good intentions, promises and commitments, it is visible that very little has been achieved.

Green Development Policy and Action in Bosnia and Herzegovina

Zvonimir Stopić

Summary

Green development policy and action in Bosnia and Herzegovina is a complex issue that has to be grasped on many levels as there are no general state plans or agreements on it. Starting with January 2021, Bosnia and Herzegovina is being sanctioned by the European Union for not following the de-carbonization directives, but is furthermore planning to build new thermo-electric power plants. Both in the Federation of Bosnia and Herzegovina and Republika Srpska, environmental declarations are voted and laws planned to protect the exploitation of rivers, however hundreds of new hydro-power plants are planned to be built. Funded by Sweden, ESAP 2030+ is being envisioned in order to give an overview of the current environmental situation and challenges, putting forward a 10-year plan on how to address various environmental challenges, providing four jurisdiction strategies and action plans for Bosnia and Herzegovina level, Federation of Bosnia and Herzegovina, Republika Srpska and Brčko District.

Introduction

In this year's March and April Economy briefings we have been discussing the de-carbonization process in Bosnia and Herzegovina as a prerequisite to the possibility of the country's accession to the European Union, which is to be established as a mandatory green development policy. In this thematic briefing, we will look into the general green development policy and Action in Bosnia and Herzegovina through three perspectives: 1) the expected European Union de-carbonization development policy and current sanctions towards Bosnia and Herzegovina, 2) the making of the Environmental Strategy and Action Plan 2030+ (ESAP 2030+), and lastly, 3) the river protection issues, which we also partly covered previous

briefings, highlighted by the new Goldman Environmental Prize (also referred to as the “Green Nobel”) recipient from Bosnia and Herzegovina, Maida Bilal.

The EU de-carbonization requirements and current sanctions

In January 2021, the European Union sanctioned Bosnia and Herzegovina for serious and long-lasting breaching of the general European Union de-carbonization policy directives. As a non-negotiable condition which should direct the energy sector in Bosnia and Herzegovina towards a Green development Policy, the de-carbonization process is a prerequisite for Bosnia and Herzegovina’s possible accession to the European Union. Bosnia and Herzegovina signed a Declaration on the Green Agenda for Western Balkans in November 2020 which, among other things, promotes taxing carbon dioxide emitters, development of market models for increasing the use of renewable energy sources, gradual cutting of coal subventions and finally shutting down of all coal mines and thermo electric power plants until the year 2050. De-carbonization is one of the conditions for Bosnia and Herzegovina's accession to the European Union. Contrary to the Declaration there are at the moment ongoing plans on building more thermo-electric power plants rather than moving on renewable energy sources. The newest example is the plant in Ugljevik, a project lead by the Russian owned company Comsar Energy Republika Srpska, alongside with Chinese and Polish-Chinese strategic partner companies.

The ESAP 2030+ project

Right next to the Green Development Policy and Action stands the project titled “Environmental Strategy and Action Plan 2030+” (ESAP 2030+). The ESAP 2030+ is envisioned as a policy document that establishes the environmental policy goals and key activities up to 2032 in Bosnia and Herzegovina. The project’s main goal is to strengthen the environmental frameworks within Bosna and Herzegovina as an important step for the country to align with the European Union laws and procedures, giving Bosnia and Herzegovina better chances to join the European Union in the

future. As stated on the official pages, the ESAP 2030 + “will provide a critical tool for relevant authorities to reach environmental sustainability and improved citizen health and well-being for current and future generations across Bosnia and Herzegovina.” The project was put in development after a request was made by the authorities at the state level that the Federation of Bosnia and Herzegovina, the Republika Srpska and the Brčko District should put more effort in supporting the development of Bosnia and Herzegovina’s wide environmental strategy and action plan, including four jurisdiction strategies and action plans. The ESAP 2030+ is sponsored by the Embassy of Sweden and its development entrusted to the Stockholm Environment Institute (SEI) from Sweden.

The project’s goal is to create a specific document by April 2022, through which all the environmental, water and other authorities in Bosnia and Herzegovina would present their environmental strategy and action plans with ambitious strategic goals and thematic objectives, yet feasible actions that are clearly defined, agreed and adopted. This document should steer policy measures and domestic and international financing that will result in a better state of the environment in Bosnia and Herzegovina. The ESAP 2030+ should help to further align the Bosnia and Herzegovina’s legal and institutional frameworks with the European Union environmental laws and procedures, the so-called *environmental acquis*. Further on, the capacities of environmental organizations, institutions and networks in Bosnia and Herzegovina should be enhanced and the general public and the business sector become more aware of the importance of environmental issues in Bosnia and Herzegovina.

The content of ESAP 2030+ will cover the following seven European Union’s environmental policy areas: water, waste, biodiversity and nature conservation, air quality, climate and energy, chemical safety and noise, resource management and, finally, environmental management as horizontal policy. The development process of ESAP 2030+ is thought to follow a participatory approach, meaning it will include all relevant institutions, the general public, private sector and civil society

organizations, as well as the environment expert community in Bosnia and Herzegovina. By using a variety of communication tools, the wider public consultation should be conducted following the ESAP 2030+ and Strategic Environmental Assessment (SEA) development phases. Key activities of ESAP 2030+ include e-consultation on documents as they are drafted, invitation to provide inputs to the draft SEA program document, public forums to present the draft Action plans (thematic goals, targets and priority actions) and a formal extended consultation on the draft ESAP and SEA documents. Finally, in the long-term, the project should improve the state of the environment in Bosnia and Herzegovina as well as contribute to progress in the process of Bosnia and Herzegovina becoming a member of the European Union. The entire Bosnia and Herzegovina ESAP 2030+ should be developed for a 10-year period and begin in 2022.

Protection of rivers and the problem of small hydro-power plants

Maida Bilal is this year's European recipient of the Goldman Environmental Prize, also referred to as the "Green Nobel", for her year's long activist work against the building of small hydro-electric power plants on the river Kruščica. She is the president of the local ecology society "Eco Bistro" which was responsible for organizing successful citizen watches by the river from August 2017 to December 2018 in order to prevent the building of the small power-plants. This significant international award for Maida Bilal comes as a good reminder to the general situation of rivers and small power-plants in Bosnia and Herzegovina.

On June 24th 2020, the Parliament of Federation of Bosnia and Herzegovina had voted the Declaration of protection of rivers and a conclusion of complete ban of small power-plants on the territory of the Federation of Bosnia and Herzegovina. With this, the Government of the Federation of Bosnia and Herzegovina was granted a three-month deadline to conduct a proper analysis and suggest legislative changes that will put the ban in practice. Yet, at the session of the House of Representatives on April 27th this year, the suggested Law on Electric Energy which is supposed to implement the ban, was not amended by the representatives.

Republika Srpska had voted the Declaration of protection of rivers in February this years, and next steps are expected towards the suggestion and implementation of the new law dealing with the specific environmental issue.

The small power-plants are proven to destroy the natural river potentials and habitats, while currently producing less than 3 % of all electric energy. Bosnia and Herzegovina has 114 small hydro-power pants, 67 in the Federation of Bosnia and Herzegovina and 47 in Republika. Most importantly, contrary to the suggested environmental declarations and planned law changes, 342 new power plants are planned.

Conclusion

At the moment there are no significant state decisions being implemented in order to remove the current sanctions due to the non-implementation of the European Union's de-carbonization directives, but, on the contrary, plans to build new thermo-electric power plants are in process, such as the one in Ugljevik. A positive move towards a green development of Bosnia and Herzegovina is the ESAP 2030+ policy initiative, which starting document should comprise of four jurisdiction strategies and action plans for Bosnia and Herzegovina level, Federation of Bosnia and Herzegovina, Republika Srpska and Brčko District, providing an overview of the current environmental situation and challenges, putting forward a 10-year plan on how to address various environmental challenges. Addressing the issues of the river endangered by the building of small hydro-power plant, considering that more than 300 new power plants are planned, it is expected that the actual announced legal bans will be prolonged for quite some time.

Bulgarian Green Development Policy and Action

Evgeniy Kandilarov

Summary

The Bulgarian economy is one of the most resource-intensive in the EU, lagging behind the Member States of the Community in terms of applying the principle of circular economy and implementing eco-innovation activities. The main risks to biodiversity in Bulgaria are related to habitat loss as a result of urban development and infrastructure, unsustainable agriculture and the exploitation of species of economic importance. Bulgaria remains among the Member States with the most pollution related deaths, number of years of life lost associated with air pollution, and urban population exposure to micro-particles. There is no significant progress in ensuring compliance with the urban wastewater collection and treatment obligations. Waste management continues to be a challenge, despite municipal waste generation being below the EU average. These and many other challenges are part of Bulgaria's green policy at this stage.

In Bulgaria like everywhere the so-called green development policy (referred as environmental policy), together with economic and social policy, is aimed at achieving the goals of sustainable development. Bulgaria has substantial green growth potential and it depends upon bold and systematic actions to tap into this potential in areas like agriculture, energy efficiency, and green manufacturing.

Bulgaria became party to the vast majority of global and regional multilateral environmental agreements (MEAs) prior to its accession to the EU in 2007. After 2007 the country became party to very few agreements, including the 2003 Protocol on Pollutant Release and Transfer Registers, the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and

Equitable Sharing of Benefits Arising from their Utilization and the 2015 Paris Agreement. Bulgaria's national policy on climate change is determined, on the one hand, by the country's international commitments to the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol (KP) and the Paris Agreement, and, on the other, by obligations arising from EU membership and the existing European legislation in this field.

Institutional regulation of the implementation of the green policy in Bulgaria

The Ministry of Environment and Water is the central and main authority in the environmental sector in Bulgaria. It is responsible for drafting and implementing national environmental policy; for devising the environmental regulation system; and for coordinating and control over the protection, conservation and rational utilization of natural resources, waste management policy and water management policy. It is also responsible for coordination and management of financial resources on environmental matters, including the Operational Program for the environment.

The Executive Environmental Agency reports to the environment minister and carries out management, coordination and information tasks for environmental protection.

The 16 Regional Inspectorates of Environment and Water (RIEWs) are territorial units of the Ministry. They have regulatory, information, monitoring and control tasks. Their main activity is to enforce environment law. They have the power to impose sanctions and monitor the performance of municipalities and other players. They also provide a 24-hour 'Green Hotline' for environmental information and alerts.

There are also four basin directorates which are regional authorities of the Ministry with responsibility for water basin management. They cover the four river basin districts in Bulgaria: the Danube River, the Black Sea, the East Aegean and the West Aegean.

Together with this there are three national park directorates (NPD) — Rila, Pirin and Central Balkan which are also regional authorities of the Ministry. Their tasks include drafting and implementing the parks' management plans.

On local level municipalities are the basic administrative-territorial units of self-governance. The powers of municipalities vary from full-scale legal powers regarding waste management, to drafting policies and providing information on and support for administrative procedures.

Currently, no effective system exists to monitor the implementation of environmental policy documents (strategies, programs and plans) across the country. This significantly limits coordinated and transparent policy documents implementation.

Environmental legislation and the policy framework for environmental protection

The EU environmental legislation is an area in which the various sectors are divided. European legislation is binding for both past and future actions of member states. They have the right to approve their legislation only in cases where no European one has been adopted. The EU is actively involved in drafting international environmental conventions and implementing them in general legislation. Each Member State shall harmonize its national legislation only with regard to Community environmental law.

Bulgaria has made significant improvements to its environmental performance since its accession to the EU in 2007. Environmental legislation and the policy framework for environmental protection and sustainable development driven by the EU requirements has been strengthened. However, effective implementation of legislation and policies remains a challenge. Bulgaria has been particularly slow in implementing the environmental legislation at the subnational level in areas demanding high infrastructure investments, such as waste and water

management. Several key overarching environmental policies have not yet been adopted or have been adopted with delays.

Among the challenges that Bulgaria is facing in its environmental policy are the following:

- Air quality continues to give cause for serious concern. Still a great challenge is ensuring better protection of human health by enforcing effective and efficient solutions to reduce air pollution.
- Construction developments in Natura 2000 areas ¹, poor integration of nature and biodiversity policy into other sectorial policies, weak administration, and a lack of adequate management plans and conservation objectives are some of the main threats to nature and biodiversity in Bulgaria.
- River basin management plans indicate significant gaps, which are also reflected by the very low connection and treatment rates for urban waste water. Drinking water, however, achieves high compliance rates in Bulgaria, and over 90 % of its bathing waters are of good and excellent quality. A challenge for Bulgarian government is providing and implementing the investments required to ensure the appropriate collection and treatment of urban waste water.

¹ Natura 2000 is a network of nature protection areas in the territory of the European Union. It is made up of Special Areas of Conservation and Special Protection Areas designated under the Habitats Directive and the Birds Directive, respectively. The network includes both terrestrial and Marine Protected Areas. Bulgaria has to submit to the EC the full list of territories under the Birds and Habitats Directives before the date of the country's accession to the EU (01.01.2007) /according to the Treaty of Accession of the Republic of Bulgaria to the EU/

Actions of the Bulgarian government for the development of green policy

In September 2015, Bulgaria made a political commitment to implement the Sustainable Development Goals with the adoption of the 2030 Agenda for Sustainable Development as a comprehensive roadmap in response to global challenges.

In 2017 the Secretary-General of the Organization for Economic Cooperation and Development (OECD) Angel Gurría has confirmed Bulgaria's accession to the Declaration on Green Growth. Bulgaria declared interest in joining the environmental instrument of OECD in June 2016. The Declaration on Green Growth was adopted at an OECD ministerial on 29 June 2009. Its signatories commit to supporting green investments, sustainable use of natural resources, low-carbon infrastructure, protection of biodiversity and other green growth measures.

Bulgaria is actively cooperating with the EU Member States, the UN and other partners to achieve the UN Sustainable Development Goals. In 2018, the Government approved an institutional framework for the preparation of the draft National Development Program BULGARIA 2030, which was adopted by the end of 2020. This is a strategic framework document of the highest order in the hierarchy of national programming documents that determines the vision and the overall goals of development policies in all sectors of state governance, including their territorial dimensions.

The Integrated National Energy and Climate Plan 2021-2030 of the Republic of Bulgaria also envisages legislative initiatives in this direction, insofar as the municipal authorities are the ones obliged to issue part of the permits for the production of electricity from renewable sources, as well as in the planning of their use on the territory of the municipality.

Bulgaria started renewable energy promotion, including the establishment and implementation of the institutional and legal framework in 2007, which is far later than the other old EU member states. The state experienced the

strong RES development in two periods (2007-2012 and 2012-2016) and increased its share dramatically. Currently the installed output of RES plants in Bulgaria stands at well over 1700 MW (mostly wind and photovoltaic). Bulgaria is among the 11 EU member states that have already hit their 2020 renewable energy target. According to the National Statistical Institute the share of renewable energy in gross final energy consumption in 2018 was 20.5%. At the end of 2019 Bulgaria pledged to update its national target for renewable energy and raised the share of wind, solar and other renewables to 27% of their energy consumption respectively by 2030.

Air quality, appropriate assessment under the Habitats Directive, waste management and urban waste water treatment remain the most problematic issues.

Conclusion

The twin goals of green and digital transition are at the heart of the next EU budget-and-recovery package 2021-2027. With enhanced climate conditionality, EU spending priorities will be tightly linked to EU climate policies. Bulgaria is expected to be one of the main per capita beneficiaries of green funds from the EU's next seven-year budget and recovery fund from the coronavirus crisis.

At the end of 2020, the Bulgarian state presented a Recovery and Sustainability Plan, the main goal of which was defined as "economic and social recovery from the crisis caused by the COVID-19 pandemic, and in the long run" convergence of the economy and incomes in Europe " and laying the "foundations for a green and digital transformation of the economy, in the context of the ambitious goals of the Green Deal". According to the plan drawn up by the Bulgarian authorities, the funds will be directed to investments in circular and low-carbon economy, investments in housing, creation of a national fund for decarbonisation and development of a system for digital agriculture and modernization of hydro-ameliorative infrastructure.

CEE Countries' Green Development Policy and Actions: The Case of Croatia

Valentino Petrović

Summary

This paper will discuss the potential for green transition in Croatia as well as the challenges that the country still has to face in order to implement more sustainable and circular solutions to its economy. We shall present the understandings of some authors who claim that there is a clear discrepancy between the West and the East in appreciating the green development and the subsequent transition. Moreover, we shall discuss the role of the European Union and present some figures that reflect the country's efforts to meet the European Union's goals.

Introduction

Green development or the development of green and sustainable policies has slowly become one of the most important priorities of almost every country from Western Europe in terms of addressing the rising issues and challenges of today, especially the ones regarding climate and energy. Green development has become a focal point of the European Union as well; in almost every official document and strategy implemented by the Union, one can find the green and sustainable discourse surrounding other policies and areas which the Union decides to tackle. In this paper, we shall present the overview of green development in Croatia while taking into account the upcoming challenges and concerns for the country to truly adhere to such principles.

The Division Between the West and the East

When discussing the uprising of green parties, one can notice a clear division or discrepancy between the countries of the "old Europe", that is, from Western Europe, and those from Central and Eastern Europe. The article written by Nick Ashdown debates on the reasons for such understanding, citing the outcome of the 2019 European elections as a clear manifestation and confirmation of this thesis. If we look at the map of seats won by green and allied parties, we find that such a conclusion could be plausible¹, but the author's main interest is to answer why is this happening. He offers two arguments, one is economic, while the other is closely related to energy concerns of countries that joined the European Union in 2004 and later on: "Voters in Central and Eastern Europe tend to be focused more on bread-and-butter issues instead of what scholars call the 'post-materialist' values championed by the Greens (...) Central and Eastern European countries also tend to be more dependent on fossil fuels for their energy needs, making emission cuts more expensive and thus harder to sell to a skeptical electorate"². This explanation, according to Ashdown, is not sufficient as it would imply that the people from these countries are not concerned about the environmental issues and challenges that will showcase their true colors in the upcoming years. Furthermore, Ashdown cites Péter Ungár, a Hungarian politician and a member of the LMP (Hungary's Green Party) who said that the questions regarding climate changes and environmental degradation have to be introduced to the working-class voters as well; they must not be directed solely in the direction of the upper-middle class³. The latter is the concern that needs to

¹ Graham-Harrison, Emma. 2019. A quiet revolution sweeps Europe as Greens become a political force. *Theguardian.com*
<https://www.theguardian.com/politics/2019/jun/02/european-parliament-election-green-parties-success>.

² Ashdown, Nick. 2019. Why Europe's Green wave slows to a trickle in the east: Voters favor pocketbook issues over 'post-material' values. *Politico.eu*
<https://www.politico.eu/article/europe-green-wave-struggles-in-east/>.

³ Ashdown, Nick. 2019. Why Europe's Green wave slows to a trickle in the east: Voters favor pocketbook issues over 'post-material' values. *Politico.eu*
<https://www.politico.eu/article/europe-green-wave-struggles-in-east/>.

be addressed by the Croatian greens too; not only the green parties but the people who are sharing their ideas and values; as it appears now, it is hard to expect that an average voter would decide to support the green option only on the basis of their environmental activism. Nevertheless, the rise of the green-left platform We Can! (Možemo!), their success in the 2020 parliamentary elections, and the victory of their leader Tomislav Tomašević at the 2021 local elections in the City of Zagreb, is an indicator that even in a country where the electorate is rather traditional in their approach to voting and making decisions between the two main parties, the options that advocate innovative policies and solutions can keep up with the mainstream political actors.

The Transition Toward the Green Economy Under the Umbrella of the EU

Croatia's transition towards a green economy and sustainable development can be viewed from the perspective of what skeptics would call the "cosmetics changes" in the official narrative of the country's approach to these issues, and from the perspective of the goals achieved during the last few years, especially the recycling and recovery rates of different sorts of waste, when comparing these numbers to other EU member states. We could argue that a change from the "Ministry of Environmental Protection and Energy" to the "Ministry of Economy and Sustainable Development", that took place in mid-2020, can be perceived through the lens of a new approach that the Government wanted to highlight after the second cabinet of Prime Minister Andrej Plenković was established. The minister in charge of this particular portfolio, Tomislav Čorić, commented: "Sustainable development must be the basis for the development of every national economy in the 21st century, and that is why it should not be surprising that the sectors of economy and sustainable development were

merged”¹. As we have said in the introduction, such discourse has become predominant on the supranational level and it is not unusual that countries, especially the EU member states, are framing their national policies and sector priorities in accordance with the European Union’s goals. Furthermore, one needs to take into account the priorities of the new European Commission, and the guidelines put forward when the member states were creating their recovery and resilience plans to respond to the COVID-19 crisis. In both cases, the Commission underlined the necessity to make shift toward the green and digital economy, therefore, we could argue that member states did not have much free space for any kind of maneuvers.

The Lack of Innovation Capacities

When it comes to Croatia, there are several documents that were adopted in recent years that reflect the country’s intention to make these changes real; however, it is still debatable whether these changes are merely a tool to address the global issues of today. The documents are listed as follows: “Strategy for Sustainable Development of the Republic of Croatia, Strategic guidelines for the development of green economy – Green development of Croatia, Strategy for innovation encouragement of Croatia 2014-2020, Strategy for Smart Specialisation for the Republic of Croatia 2016-2020, Energy Development Strategy of the Republic of Croatia until 2030 with an outlook to 2050”². In their paper on the possible effects that

¹ Spasić, Vladimir. 2020. Croatia gets its first ministry of sustainable development. *balkangreenenergynews.com*

<https://balkangreenenergynews.com/croatia-gets-its-first-ministry-of-sustainable-development/>.

² Denona, Nada and Šverko Grdić, Zvonimira. 2020. Transitioning to a Green-Economy – Possible Effects on the Croatian Economy. *Sustainability* 12(22): 1-19. DOI:10.3390/su12229342

https://www.researchgate.net/publication/345770803_Transitioning_to_a_Green_Economy-Possible_Effects_on_the_Croatian_Economy.

the green transition would pose for the Croatian economy, authors Denona and Šverko Grdić say that the country is still suffering from many weaknesses, including the lack of innovation capacities, large regional inequalities, insufficient use of local and regional resources, all of which could be mitigated by applying a set of new and sustainable policies that would encompass a transition from the still-predominant linear narrative to a more innovative and comprehensive circular narrative¹.

Conclusion

The circular narrative, however, is still far from reality, especially if we look at the official statistics of Eurostat. When it comes to the recovery rates for packaging waste, we find that Croatia is among the European countries with the lowest rates. Even more concerning is a fact that the numbers from 2018 are below those from 2012². If we look at the municipal waste recycling rates, we find that the trend is rising; however, still below the EU average³. With the recent approval of the country's recovery and resilience plan, we could only hope that the green development and transition to more sustainable solutions would get an additional and genuine impetus.

¹ Denona, Nada and Šverko Grdić, Zvonimira. 2020. Transitioning to a Green-Economy – Possible Effects on the Croatian Economy. *Sustainability* 12(22): 1-19. DOI:10.3390/su12229342

https://www.researchgate.net/publication/345770803_Transitioning_to_a_Green_Economy-Possible_Effects_on_the_Croatian_Economy.

² Eurostat. Recovery Rates for Packaging Waste. *ec.europa.eu*
<https://ec.europa.eu/eurostat/databrowser/view/ten00062/default/table?lang=en>.

³ Eurostat. Recycling Rate of Municipal Waste. *ec.europa.eu*
https://ec.europa.eu/eurostat/databrowser/view/t2020_rt120/default/table?lang=en.

Green Recovery: The Czech Perspective

Ladislav Zemánek

Summary

The green development policy and actions have not been developed comprehensively in the Czech Republic yet. It relates both to the historical realities and specific context, and to discrepancies between the Czech and EU's (or Western European) perspectives. The Czech society remains to be somewhat sceptical as far as the green transformation and ambitious visions presented by the European authorities are concerned because of negative experiences with radicalism and ideologic intolerance of the leading proponents of the green agenda in the Czech Republic. Recently, nevertheless, the topic has become increasingly discussed at different levels, the discourse being more and more cultivated.

Introduction

The green agenda and policies are not unified, administrated and managed by a single state body but fragmented among individual ministries and agencies. Undoubtedly, it is partially caused by the lower emphasis put on the green agenda in the past. The present structure, therefore, does not reflect the variable circumstances characterised by climate change as well as the concept of the green transition. Even though there were some climate crises and calamities and also actions needed for prevention or removal of damages produced by improper human behaviour and economic activities, no general, synthesising, comprehensive strategy and action plan were elaborated in the past decades.

Historical context

In the 1980s, the environment and especially forests in Krušné Hory (Erzgebirge) were devastated as a result of acid rains caused by the operation of desulphurised power plants. Recently, a major part of forests on the Czech territory has been invaded by bark beetles, which has changed

the landscape beyond recognition, ruining thousands of hectares of forests. Destructive floods are another phenomenon appearing in the last decades. It applies, first and foremost, to floods in 1997 and 2002, the latter being the most massive flood in Bohemia ever. More often than in the past, people and their property are suffering from flash floods, violent rains or gales. In June 2021, southern Moravia was hit by a tornado, killing 6 people and injuring hundreds. It was the most fatal tornado in Europe since 2001 and the strongest documented one in Czech history.¹ In addition, weather and climate have been changing obviously. For a substantial part of the year, there is a shortage of groundwater, some watercourses are drying up and crops do not have sufficient nutrients. Summers become increasingly hot and, at the same time, springs and autumns gradually disappear when winters turn into summer swiftly.

These changes have a massive impact on our environment, landscape and, last but not least, on the life of people, agriculture and other economic activities. Problems connected with water (its shortage or floods, on the contrary) are partially caused by the socialist socioeconomic transformation after 1948, collectivisation, massive uniting of lands or artificial landscape interventions, alterations to riverine water bodies, and so on. All these historical realities as well as the overall industrialisation and rapid development have contributed to deep changes that not only our country experiences in the present days. It should not lead to alarmism, scepticism, denial of civilisation, development or creative interaction with nature but to adaptation to a „new normal“, rethinking of the socioeconomic and developmental patterns, adoption of strategic policies and taking of actions aimed at sustainability. Unfortunately, the Czech Republic has been lagging behind so far.

An effective mechanism lacking

It can change while implementing projects and investment plans following from the so-called Green Deal, the National Recovery Plan (NRP), the

¹ The only report about a tornado of such destructive power dates back to 1119 when Prague was damaged severely as described in the *Chronica Boemorum*.

State Environmental Policy of the Czech Republic 2030 with a view to 2050 (SEP 2030), the Climate Protection Policy of the Czech Republic, the National Energy and Climate Plan of the Czech Republic or the National Action Plan for Clean Mobility.¹ Nevertheless, the realisation process can run into problems due to rivalry among individual state bodies. Many experts, therefore, call on the Government to create a position of coordinator entitled to elaborate and push forward individual green initiatives and programmes, interconnecting relevant collectives from different ministries. Representatives of the energy-saving construction industry stress that the agenda of energy savings or renewable sources deserve to be managed on the governmental level, speaking explicitly about the need for the establishment of a position of commissioner for the Green Deal. However, the current Government does not plan to proceed in such a direction.

The situation might change after the October parliamentary election. The Pirate Party, which is the second strongest political subject at this moment, does not refuse this idea, whereas the right-wing opposition led by the Civic Democratic Party (ODS) remains rather sceptical.² It is not surprising as the Czech right-wing parties frequently consider the green agenda, green transition and the European Green Deal a part of the progressivist social engineering and leftist efforts to transform the society. As a result, the green agenda has been dominated by radical environmentalists and alarmists who have made it an utterly ideologised and politicised topic, and who marginalise the socioeconomic development and human needs in favour of the so-called protection of nature. Such one-sidedness and radicalism have also led to people's mistrust of the green transition. The green agenda will

¹ I analysed the strategic document and related context in a June briefing: Zemánek, L. (2021), *The National Recovery Plan Finished: Genesis & Priorities*, China-CEE Institute, 41(2). Available at: <https://china-cee.eu/2021/06/28/czech-republic-economy-briefing-the-national-recovery-plan-finished-genesis-priorities/>.

² Zachová, A. *Zelená agenda je rozeseta mezi vládní rezorty. Pomohl by zmocněnec pro Green Deal?* (2021, May 17), euractiv.cz. Retrieved July 18, 2021, from <https://euractiv.cz/section/klima-a-zivotni-prostredi/news/zelená-agenda-je-rozeseta-mezi-vladni-rezorty-pomohl-by-zmocnenec-pro-green-deal/>.

undoubtedly be one of the leading topics of the following decades. Hence, it is necessary to handle it rationally and moderately, making use of the European funds within the Green Deal (which is controversial and full of problematic moments) for a systematic policy and beneficial projects.¹

Discriminating against nuclear energy

In July, the European Commission approved the National Recovery Plan, elaborated by the Czech Government. It aims to revive the economy after the pandemic crisis, the green modernisation and transition being among the priorities. Not by coincidence, the biggest part of the financial means is to be allocated in the modernisation of infrastructure and green transition. In general terms, the Czech Republic's green policies have several accents: development of infrastructure; decrease in consumption of energy; transition to cleaner sources of energy; development of the clean mobility; refurbishment of buildings; climate protection; protection of the environment; adaptation to the climate change; transition to the circular economy; revitalisation of brownfields; support for biodiversity and fight against aridity.

The transition to the carbon-free economy is a very important issue as well, notwithstanding the fact that not only the Czech political representation but also an overwhelming part of the society have objections to a negative attitude towards nuclear energy adopted by the EU authorities. Whereas the European Commission and the Union's bureaucracy does not consider the nuclear energy a clean source of energy, the Czech side has pointed to the simple fact that the economic transformation and transition towards the carbon-free economy are hardly feasible without nuclear energy. Our country does not have sufficient natural conditions to base the economy only on solar, wind or hydroelectric power plants and the absolute energy dependency on external actors is neither desirable, sustainable nor

¹ Compare with Vondra, A. *Zelená politika pro českou pravici: Ignorovat životní prostředí by byla chyba* (2021, February 02), forum24.cz. Retrieved July 18, 2021, from <https://www.forum24.cz/zelena-politika-pro-ceskou-pravici-ignorovat-zivotni-prostredi-by-byla-chyba/>.

responsible.¹ Even though Prime Minister Andrej Babiš has struggled to pursue the concept of clean nuclear energy in the EU, he has not succeeded yet. The situation could, nevertheless, change as this source of energy is advocated not only by the Czech Republic but also by France, Hungary, Poland, Romania, Slovakia and Slovenia.

Conclusion

The Czech Republic supports the idea of green transition, socioeconomic transformation towards a carbon-free and emission-free model. Taking the crisis brought about by the pandemic and restrictive measures into consideration, the green agenda has to be connected with the overall post-crisis recovery. Notwithstanding all its critical observations, the Czech political representation supports the EU's long-term goal to achieve climate neutrality by 2050, even though Prague puts emphasis on the need for preventing negative economic as well as social consequences produced by the transformation and also for recognition of nuclear energy as an ecological, clean source. When speaking about the funding of the fulfilment of the Green Deal objectives, an important role should be played by the cohesion policy to make use of mutual synergy in the implementation of concrete projects. The Czech Government defines the crucial areas in this regard as follows: development of the green infrastructure and clean mobility, renovation of buildings, increase in energy efficiency, support for

¹ For instance, Berlin's decision to close all German nuclear power plants no later than 2022 is perceived as hazardous from the Czech point of view. It is worth noting that in January 2021 the European energy grid was hit by the most serious crisis since 2006. The grid was exposed to a severe power imbalance and one of the parts of the system split off completely, which led to the need for reduction of performance of factories and manufacturing facilities in different European countries. The extraordinary situation was dealt with especially thanks to nuclear power stations, including the Czech ones. It is beyond any doubt that development of the renewable sources of energy accompanied by discrimination against other sources (especially nuclear ones) contributes to instability, imbalances and vulnerability of the European continental synchronous grid. Vobořil, D. *Evropská přenosová soustava zažila v pátek nejzávažnější incident za posledních 14 let* (2021, January 11), oenergetice.cz. Retrieved July 20, 2021, from <https://oenergetice.cz/prenos-elektriny/evropska-soustava-patek-tesne-unikla-blackoutu-jednalo-se-nejzavaznejsi-incident-za-poslednich-14-let>.

those energy sources contributing to the attainment of climate neutrality no later than 2050 and promotion of circular economy.

A Green Country Turning Greener?

E-MAP Foundation MTÜ

In a different era, being called a green country would only mean that it is an area rich in forest. Evidently, it is the case for Estonia then and now, because over a half (51.4 per cent) of its mainland is currently covered by mostly semi-natural forests, while forest “grows on approximately 2.3 million hectares, of which [about] 75 per cent [...] is manageable forest”¹. Is it good enough to be acknowledged as ‘green’ in 2021? Not quite, because this era is indeed a different one, and the nice colour of grass and forest is now used in a metaphorical way when it comes to both environment and the topic-linked policymaking.

The challenging time when Estonia had just regained its independence did not give any favour to the newly reborn country. As argued in a 1995 research², which examined environmental problems and policies in the region of the Baltics and showed the outcome of a survey on the area-bound public attitude towards “environmental management”, there was then a certain level of “dissatisfaction with the state of the environment, and discontent with the way in which environmental issues are managed”. This was the point of departure for Estonia taking part in the emerging ‘environmental debate’ to allow the country’s Prime Minister to make the following statement more than a quarter of a century later:

In the transition to a green economy, we have two choices – whether to buy and use technologies that are developed by others, or to be front-runners who develop and introduce innovative technologies and services to other countries. Our government has chosen the second option. [...] We have chosen to be front-runners of GreenTech who develop and introduce

¹ ‘Forestry’ in *Estonian Ministry of the Environment*. Available from [<https://envir.ee/en/water-forest-resources/forestry>].

² Geoffrey D. Gooch, ‘The Baltic press and the environment: A study of the coverage of environmental problems in Estonian and Latvian newspapers 1992–1993’ in *Geoforum*, 26:4, 1995, p.429.

innovative technologies and services. The transition to green energy does not happen by itself. Estonia has a clear goal for this, and agile actions have begun here in both, the public and private sectors, to make Estonia the world's top GreenTech development centre and largest producer of green energy per capita in the coming years.¹

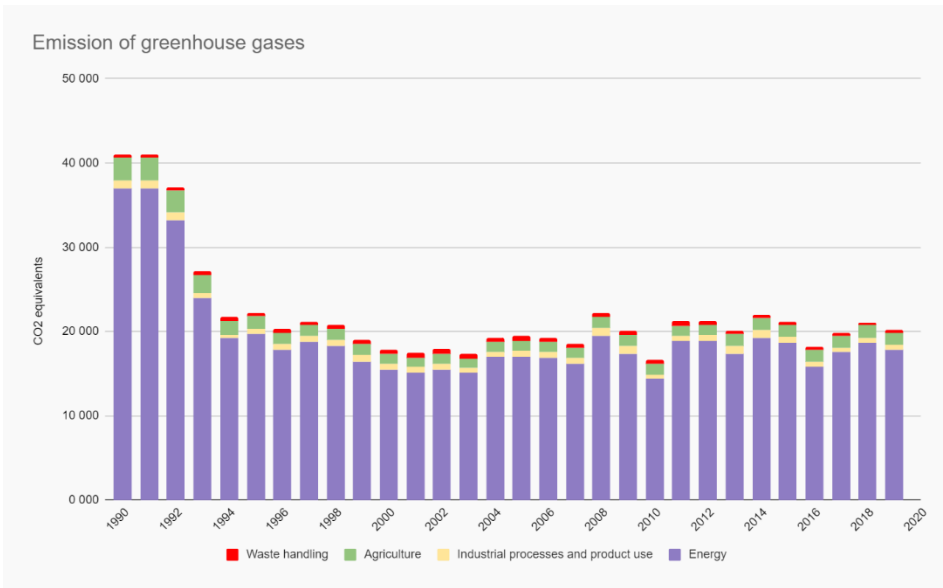
A political declaration is, of course, one thing, but the process of its implementation is another one. Is there any depth (or, in other words, functional capacity) for such a serious statement to gradually become a reflection of reality in Estonia? In order to detect it (should it exist at all), there is a common sense to observe a 'green Estonia' from institutional, policy-, and research-focused frameworks. Commencing on the *intra*-Estonia **institutional** side, the country's Ministry of the Environment provides for establishing a very important framework existing under the 'umbrella' of Estonia's Environment Agency². The latter is responsible for formulation of and activity coordination on the list of Estonian environmental indicators, which are 'waste', 'ambient air', 'wild life and forest', and 'water'³. Obviously, each of the aforementioned four indicators has its own sub-indicators. For example, the process of data-gathering on the ambient air-associated component of the whole scheme is bound around understandings on emission of greenhouse gasses (see *Table 1*), both NH₃ (see *Table 2*) and SO₂ (see *Table 3*) emissions, and some other sub-indicators.

Table 1

¹ Kaja Kallas as cited in Ronald Liive, 'Estonia to become a top GreenTech developer in the world', *Invest in Estonia*, May 2021. Available from [<https://investinestonia.com/estonia-to-become-a-top-greentech-developer-in-the-world/>].

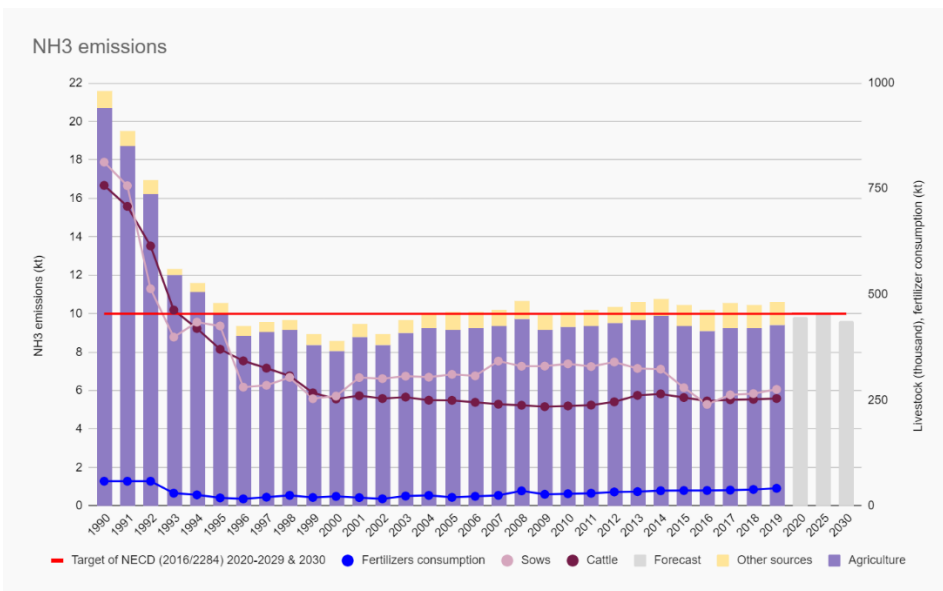
² *Ministry of the Environment*. Available from [<https://envir.ee/en>].

³ *Estonian Environmental Agency*. Available from [<https://keskkonnaagentuur.ee/en>].



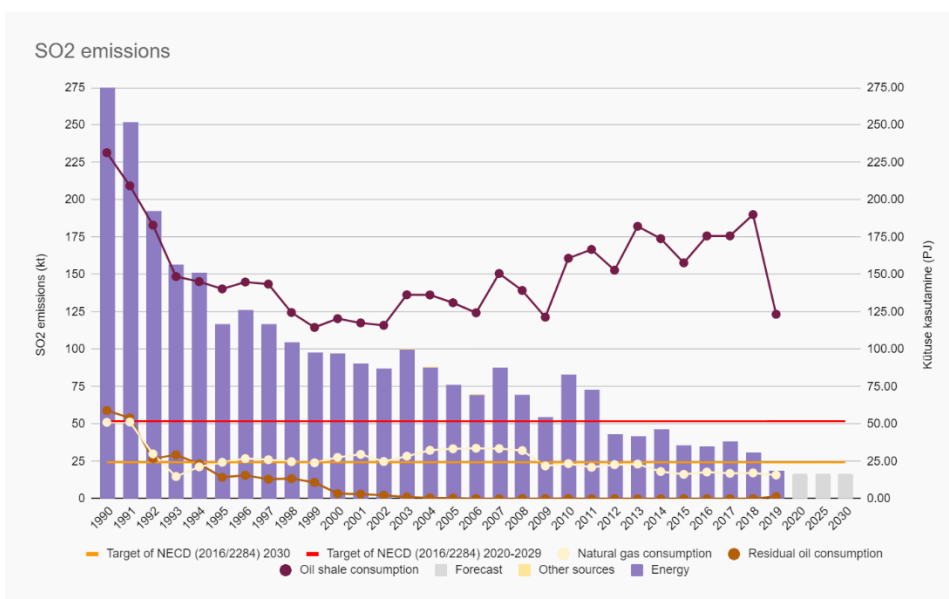
Source: Estonian Environmental Agency

Table 2



Source: Estonian Environmental Agency

Table 3



Source: Estonian Environmental Agency

In the context of the above *Tables*, Estonia correspondingly reports that **a)** the total emission of greenhouse gases has been indicated as decreased by more than 60 per cent if to be compared to the 1990-linked data, due to the undisputed fact that the country’s economy has been substantially reorganised since then; **b)** emissions of ammonia has decreased by 51 per cent, since 1990, because the usage of fertilisers has also got down “by nearly 30 per cent and the number of dairy cattle and fattening pigs has decreased by 70 per cent and 66 per cent, respectively”; **c)** keeping in mind that the main source of getting the air in the country polluted sulphur dioxide is directly linked with the Narva-based power stations, which are using oil shale, the emissions of sulphur dioxide have still decreased by 93 per cent, if compared to 1990, due to a significant decrease “in the use of

oil shale and residual oil in 1990–2019 by 47 per cent and 97.8 per cent, respectively”¹.

On the theme-associated **policy** level, there was a notable 1998-issued document that managed to complete a good survey on Estonia’s environmental policy being in place prior to the country’s EU era. The material, while having some minor factual extravaganza (for example, “[f]ollowing independence from the CIS”, which is totally wrong), was prepared by the European Parliament’s Directorate-General for Research (Division of the Environment, Energy, Research and STOA) and indicated Estonia’s legal position on ‘air’, ‘water’, ‘waste’, ‘nature conservation’, and ‘nuclear safety’². Keeping in mind that Estonia then was in the pre-accession process of harmonising its legislation with the EU’s *acquis communautaire*, the survey specified that, correspondingly in 1994 and 1998, the country “adopted a new water law which satisfies the requirements of the Helsinki Convention” and “adopted a framework directive on clean air policy which is identical to Directive 96/62/EEC (ambient air quality assessment and management)”³. These days, having already spent nearly two decades as a full Member State of the EU, Estonia’s progress in the challenging policymaking process of becoming ‘greener’ was summarised in the country-focused European Commission’s ‘Environmental Implementation Review 2019’⁴. For example, the document underlined that, firstly, “Estonia’s performance in terms of resource efficiency of SMEs as well as its low score on the Eco-Innovation Scoreboard show room for more improvement”; secondly, “[t]here is

¹ ‘Ambient air’ in *Estonian Environmental Agency*.

² Hans Hermann Kraus, in cooperation with Dirk Amtsberg, ‘Environmental policy in Estonia’, Directorate B, Division for the Environment, Energy, Research, STOA, *European Parliament*, 1998. Available from [<https://www.unep.org/resources/report/environmental-policy-estonia>].

³ Kraus and Amtsberg, pp. 9 and 7.

⁴ ‘The Environmental Implementation Review 2019, Country report - Estonia’ in *The European Commission*, Brussels, 4.4.2019 SWD (2019) 135 final. Available from [https://ec.europa.eu/environment/eir/pdf/report_ee_en.pdf].

strong public support in Estonia for increasing resource efficiency through for example Green Industry Innovation Estonia and the Environmental Investment Centre”; thirdly, in regards of resources productively, the country “remains among the worst performing in the EU”; fourthly, “[s]ome progress on waste is underway thanks to the national waste management plan for 2014-2020”; and fifthly, “[n]o progress has been made in dealing with excess incineration and mechanical biological treatment [...] capacities, as these facilities are now installed and are hard to upgrade”¹. Considering these shortcomings, the European Commission suggested on improvements to be made on the enabling framework and its implementation tools, namely on green taxation, green public procurement, and environmental funding and investments², in order to ensure that the Government of Estonia has an EU-bound roadmap on making some changes to the existing policies, which become highly multi-dimensional in the current historic period. Interestingly enough, as indicated in the review, Estonia managed to allocate “the highest EU amount of Cohesion Policy funds to direct environmental investments, with EUR 956.00 total per capita since 2000”, proving the point that the EU-issued funding represents “a key asset for protecting the environment in Estonia”³.

As for the theme-specific **research and development**, there is a particular role for the country’s Ministry of the Environment to play in terms of organising the process and cooperating with the Ministry of Education and Research, the Ministry of Economic Affairs and Communications, Estonian Research Council and a range of prominent research institutions in Estonia. Arguably, especially in the context of COVID-19 recovery, the country cannot afford to disperse its scientific and entrepreneurial

¹ ‘The Environmental Implementation Review 2019, Country report - Estonia’, p.3.

² ‘The Environmental Implementation Review 2019, Country report - Estonia’, pp. 23-25.

³ ‘The Environmental Implementation Review 2019, Country report - Estonia’, p. 25.

resources to cover every single segment of the topic-associated research, therefore the following ‘baskets’-categories are singled out to be focused on: climate mitigation measures, climate adaptation measures, cross-cutting measures, other environmental measures, and international cooperation in the field¹. As an example, climate mitigation measures do not go far without technological innovations, and Estonia is aiming at creating a comprehensive approach towards producing and deploying hydrogen in the country as well as “mapping opportunities, bottlenecks, market barriers and threats, and strategic breakthroughs for the future, including identifying and evaluating potential business models”².

In July 2021, Tartu University, Estonia’s oldest institution of higher education, held the Hydrogen and Green Energy Technology Information Day, being an integral part of the 2021 Estonian Hydrogen Days³. TalTech, another major Estonian university, being a somewhat ‘visionary’ in offering technological advancements to the world, together with Tartu University, managed to launch a joint master programme on ‘Materials and Processes of Sustainable Energetics’ back in 2009 (!). From 2017, the programme “has been fully updated and renovated taking into account new directions in sustainable energy technologies and job market needs”⁴. In its turn, Estonian University of Life Sciences, which is the only university in the country that distinctly focuses on researching the sustainable development of natural resources (let alone it is the place of work for Estonia’s most cited researcher, plant physiology professor Ülo Niinemets), is implementing the concept of a “green university with smallest possible ecological footprint, with healthy and good working and learning

¹ ‘Platform for redesign 2020’. Available from [<https://platform2020redesign.org/countries/estonia/>].

² ‘Platform for redesign 2020’.

³ ‘Hydrogen and Green Energy Technology Information Day at Chemicum’ in the *University of Tartu*, June 2021. Available from [<https://www.genomics.ut.ee/en/events/hydrogen-and-green-energy-technology-information-day-chemicum>].

⁴ ‘Materials and Processes of Sustainable Energetics’ in *TalTech*. Available from [<https://taltech.ee/en/sustainable-energetics>].

environment, university that takes into account the principles of sustainable development in all decision making processes and sets example in society”¹. This university’s Centre of Excellence, ‘EcolChange – Ecology of Global Change: natural and managed ecosystems’, focuses on incorporating “ecological knowledge into principles of adaptation to global change through sustainable ecosystem management”².

Gathering all these analytical segments into one, it is possible to conclude that Estonia is taking the ‘green debate’ seriously, having been tackling the issues from institutional, policymaking, and scientific angles. With a couple of exceptions, there is a certain level of consensus among the country’s political elites on what to do in order to ‘deliver’ a ‘greener’ Estonia for future generations. In September 2020, Estonia’s President Kersti Kaljulaid noted that “[c]urrent production-consumption models do not account for the ecosystem services provided by biodiversity” and that “[d]etrimental land-use practices, widely used in agriculture and also forestry and polluting the ocean must be halted”³. It appears to be a task of monumental difficulty and complexity to turn even a green country into a ‘greener’ habitat. The road will be mastered by the walking one.

¹ ‘Green University Initiative’ in *Estonian University of Life Sciences*. Available from [<https://www.emu.ee/en/about-the-university/green-university/>].

² ‘The Centre of Excellence, EcolChange’ in *Estonian University of Life Sciences*. Available from [<https://www.emu.ee/en/research/centre-of-excellence-ecolchange/>].

³ Kersti Kaljulaid, ‘Statement by the President of Estonia, H.E. Ms. Kersti Kaljulaid at the UN Biodiversity Summit Leaders Dialogue’ in Välisministeerium, September 2020. Available from [<https://un.mfa.ee/statement-by-the-president-of-estonia-he-ms-kersti-kaljulaid-at-the-un-biodiversity-summit-leaders-dialogue/>].

Greece's Green Development Policy and Action

Evelyn Karakatsani

Summary

EU is a global leader at the effort towards protection of the environment and against climate change. The COVID-19 pandemic has created fertile ground for creating a more green and more sustainable EU. New policies, legislation and instruments have been set in order to achieve these goals. It is expected that Greece will be largely affected by climate change. Thus, the country has prioritized reforms in green and climate development and wishes to become a role model in these sectors. Actions towards achieving this goal have been taken. Green investments are expected to have a positive impact in Greece's economy, which will help to the implementation of the necessary reforms, as well as improving the living standards of the citizens.

Introduction

On 14th July 2021 the European Commission announced the "Fit for 55" package with additional policies, which will deliver the transformational changes needed in the sector of green development (1). This in addition to the European Green Deal, the European Climate Law and the NextGenerationEU sets the main proposals, legislations, and policies in order for the EU to achieve its main long-term goal, that is to reach climate neutrality in the EU by 2050. The first step towards this goal is to reduce until 2030 the greenhouse gas emissions by 55%, compared to 1990 (2).

Greece finds itself in the 19th place in comparison to the EU28 in the sector of eco-innovation. The country ranks low in the relevant indicators. However, according to Greece's National Energy and Climate Plan, approved in 2019, Greece has set three main targets to be reached until 2030, that is to reduce greenhouse gas emissions by more than 42% in comparison to 1990; to increase the share of renewable energy sources in gross final energy consumption to a minimum of 35% share and to improve

energy efficiency by 38% (3). It is expected that at least for the next decade Greece will take a lot of actions and attract a great number of investments, which will transform the climate and energy profile of the country, as well as the economy.

Greece's current status

On 29 June 2021 the government announced the revision of Greece's National Energy and Climate Plan in order to meet the new EU targets. The Minister of Environment and Energy, Mr. Kostas Skrekas, stated that the goal of the government is for Greece to become a "reference point" country in the sectors of green and climate development and he continued by saying "In addition to the important reforms we have launched, such as the decarbonization of electricity generation faster than any European country, we will soon pass the first Climate Law in the history of the country" (4)

Greece has a long way to go in order to meet its 2030 targets. In the sector of circular economy, the country still lags behind. Only 15% of municipal solid waste are being recycled and 4.1% is being composted. Moreover, in the sectors of energy and climate change Greece is still highly depended on imports of primary energy resources and has a slow development on resources of renewable energy. It should be noted that due to the fossil fuels dependency of the energy sector, the country's greenhouse emissions per capita are 3% higher than the EU average. By 2028 the country aims to decarbonize fully its energy system. This particular goal will require major investments in lignite mining areas in Peloponnese and Western Macedonia, where it is expected that the socioeconomic impact to be high. Greenhouse emissions also generate from the transport sector in Greece, where there is a 20% increase in comparison to 1990. Hence, it is a priority by 2030 to have a share of 30% electric passenger vehicles (5).

Greece's Recovery and Resilience Plan, approved by the European Commission on 17 July 2021, is the first step towards disbursing to the country €30.5 bn over the period 2021-2026. This amount will support the implementation of reforms and key investments to support not only the country's recovery from the COVID-19 pandemic but to strengthen the

climate objectives of the country. In particular, the assessment of the Commission finds that it devotes 38% of Greece's total allocation to measures supporting climate goals and objectives. This comprises investments in strengthening the support system for producers of renewable energy, upgrading the electricity network, develop local urban plans in order to strengthen climate resilience of urban areas, support national reforestation and enhancing the disaster management and civil protection systems (6).

The way forward in green development

Even though Greece has yet a long way forward, the COVID-19 pandemic and the commitment of the EU to restart the economies of the member states and become more sustainable and greener, offer a unique opportunity for the country to make reforms and transform the environment at the sectors of green and climate development.

According to “Greece 2.0” recovery plan, approximately € 6 bn will be allocated for the green transition of the country from the Recover and Resilience Facility and € 11 bn will be Mobilized Investment Resources which will also be invested in the same sector. Some of the key investments of Greece’s recovery plan are upgrading energy efficiency of buildings, investments in electric charge points and energy storage, improving electric interconnectivity of islands and national reforestation plans (7). In the next decade it is expected that € 44 bn will be invested in the Greek energy market, which will increase the country’s GDP by 2.6 bn (8).

One of the biggest investments in Greece in the clean energy sector is the one by Terna Energy. The company has set the goal to achieve 3GW installed capacity in the next 5 years. Among the investments of the company is the large park of 330MW in Evia (Kafireas) (9). The project will be concluded by 2022. The same company has made the final investment decisions for a large hydro pumping storage project in Amfilochia. The project will have construction period of maximum 4 years, with installed capacity 680MW (production) and 730MW (pumping) and with a budget of 500 million euros (10). Moreover, Terna Energy, has

teamed up with the Ocean Winds in order to develop an offshore wind farms with a total capacity of more than 1.5GW (11).

Mytilineos has underdevelopment 20 photovoltaic parks with a total capacity of 1.48GW owned by EGNATIA GROUP. These are projects that are expected to be completed by 2023 and were subject to the strategic fast track investments with a total budget of 888.1 million euros. DEI (Public Power Corporation) has also a fast development in the sector of renewable energy. The company's portfolio is expected to reach 250 MW in the coming months, which is close to its target for 500MW by the end of 2022. One of the biggest investments of the company is the one in West Macedonia, with a capacity of 230 MW. The same company has underway a tender offer for the second largest power park in Megalopolis with capacity 50MW. It is worth noting that in areas where mines operated in the past, about 2GW of photovoltaics are expected to be installed. These projects of DEI, for which the necessary permits have been approved, constitute the largest portfolio of projects under development in Greece. Hellenic Petroleum has recently acquired the photovoltaic project of the German Juwi in Kozani, which is expected to reach 204MW. The last months the company has doubled its portfolio in renewable energy, which reached the 1,3GW. Another company that invests in clean energy is Motor Oil, which recently acquired 11 wind farms with a total capacity of 220MW and one additional with capacity 20MW under construction. Also, the company RF Energy has given the green light in order to proceed with building a 498.15 MW offshore wind farm in the northeast of Lemnos. The wind farm is planned to consist up to 36 wind turbines of approximately 15 MW each. The amount of the investment will reach 2 billion (11).

On 2 July 2021 the Memorandum of Cooperation was signed by the Minister of Environment and Energy, Kostas Skrekas, the South Aegean Region, the Municipality of Halki, DEI, Citro AKUO ENERGY GREECE, OMEXOM / Vinci Energies, Vodafone Greece and ALD Automotive. The Memorandum is also signed by the Embassy of France in Greece, which will take the role of the implementation of this pioneering project. This is the first step towards making Halki a Greco-island. The projects include

the installation of photovoltaic systems for the production of clean energy to meet the energy needs of the island, the provision of purely electric vehicles and the integration of smart public lighting systems. The project also includes the development of innovative telecommunications services, the establishment of 5G infrastructure and the implementation of smart solutions in the energy and transport networks of the island (12). On the framework of the Greco-island initiative, Astypalaia will also become a green energy hub, which will be run mostly by clean energy. This major investment has been undertaken by Volkswagen. Prime Minister Kyriakos Mitsotakis met in the island the CEO of Volkswagen Herbert Diess on the 2nd of June 2021 (13).

Another major step towards the reliance of Greece on imported fossil fuel was taken on 3rd July 2021, where the island of Crete was linked to the power grid of the Peloponnese peninsula via an undersea cable. The 380 million euros cable link will support Crete in order cover a third of its energy needs. By 2023 IPTO is planning to build 1 bn euros underwater power link that will connect Crete to the mainland. Moreover, it is a future goal of the company to interconnect the power grids of Greece, Cyprus, and Israel with the so-called Euro-Asia Interconnector (14).

The new investments in renewable energy in the following decade, according to the National Energy and Climate Plan are expected to deliver a return of domestic added value of over 12 billion euros. Moreover, it is estimated that in the following 25 years more than 37 thousand full-time jobs will be created and maintained. Hence, it is expected that the economic and social environment of the country will significantly change the next decade (3).

Conclusion

Greece is determined to become a greener country. First steps have been taken towards achieving the main goals, which is to reduce greenhouse gas emissions, increase the share of renewable energy sources and to improve energy efficiency. In the next decade it is expected that the country will attract major investments in the sectors of green development. This will

transform the social and economic environment of the country. New job opportunities will be created, which along with the more green and sustainable way of living will increase the living standards of the population. The policies taken towards this path can only be seen as positive. The implementation of the new policies and reforms, as well as the way Greece will utilize the investments will carve the future development of the country.

References

- 1) European Commission (2021) “Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality” Available at https://ec.europa.eu/info/sites/default/files/chapeau_communication.pdf
- 2) European Commission (2020) “REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL. Establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law)” Available at https://ec.europa.eu/info/sites/default/files/commission-proposal-regulation-european-climate-law-march-2020_en.pdf
- 3) Ministry of Environment and Energy (2019) “National Energy and Climate Plan” Available at https://ec.europa.eu/energy/sites/ener/files/el_final_necp_main_en.pdf
- 4) Ministry of Environment and Energy (2021) Press Release "Ξεκίνησε η διαδικασία αναθεώρησης του Εθνικού Σχεδίου για την Ενέργεια και το Κλίμα"

Available in Greek at: <https://ypen.gov.gr/xekinise-i-diadikasia-anatheorisis-tou-ethnikou-schediou-gia-tin-energeia-kai-to-klima/>

- 5) Foundation for Economic and Industrial Research – IOBE (2020) "Greece 2020 – Factsheet on Green Policies" Available at "

http://iobe.gr/EC_Conference2020/Factsheet_Green%20Policies_Greece%20July%202020.pdf

- 6) European Commission (2021) " NextGenerationEU: European Commission endorses Greece's €30.5 billion recovery and resilience plan" Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_21_30
- 7) Hellenic Republic (2021) "Greece 2.0" National Recovery Plan"" Available at <https://www.minfin.gr/documents/20182/15898696/Greece+2.0+-+May+2021+-20210514.pdf/f124a72c-a49e-47aa-a8da-7bb7d482d863>
- 8) Dianeosis (2021) "Ο Τομέας Ενέργειας στην Ελλάδα: Τάσεις, Προοπτικές και Προκλήσεις" Available in Greek at <https://www.dianeosis.org/research/i-energeia-stin-ellada/>
- 9) Terna Energy (2020) Presentation Available at https://www.terna-energy.com/wp-content/uploads/2020/07/TERNA_ENERGY_IR_Report_31-03-2020_2_EN.pdf
- 10) Terna Energy (2021) "Amfilochia Pumped storage" Available at <https://www.terna-energy.com/acivities/pumped-storage-projects/amfilochia-pumped-storage/>
- 11) Capital (2021) "Εμβληματικές πράσινες επενδύσεις από μεγάλους ενεργειακούς ομίλους" Available in Greek at <https://www.capital.gr/epixeiriseis/3543024/emblimatikes-prasines-ependuseis-apo-megalous-energeiakous-omilous>
- 12) Newmoney (2021) " Η Χάλκη γίνεται το πρώτο GR-eco island – Μπήκαν οι υπογραφές" Available in Greek at <https://www.newmoney.gr/roh/palmos-oikonomias/energeia/i-chalki-ginete-to-proto-gr-eco-island-mpikan-i-ipografes/>
- 13) Greek Reporter (2021) " Volkswagen to Transform Greek Island Astypalaia into Green Energy Hub"

<https://greekreporter.com/2021/06/02/volkswagen-to-transform-greek-island-astypalaia-into-green-energy-hub/>

- 14) Reuters (2021) " Greek undersea cable links Crete island to the Peloponnese" <https://www.reuters.com/article/greece-power-link-idUSL5N2OF06V>

Green Development Policies of Hungary: Recent Trends and Actions

Csaba Moldicz

The European Union and China have recently presented ambitious plans to limit greenhouse gas emissions. Despite the stalemate in the implementation of the EU China Investment Agreement, the cooperation in this area can be seen as a positive sign and also shows the commitment of the EU and China to climate protection. The EU European Green Deal promised to further cut emissions and impose taxes on imports from countries with high greenhouse gas emissions, while China offered to introduce an emissions trading scheme, which was launched last week. The biggest trading scheme in the world economy will definitely help lower emissions, as we can already see that the price of burning coal will skyrocket in the near future, forcing Chinese companies to switch to carbon-neutral energy sources.

Introduction

On July 14, 2021, the European Commission presented a package of proposals to make EU policies fit for the purpose of reducing greenhouse gas emission by 55 percent net by at least 2030 as compared to 1990 levels. After a brief overview, the briefing will focus on the critical issues of this package, often referred to as "Fit for 55", including the concerns expressed by the Hungarian government. At the same time, the Hungarian government's measures (circular economy) and monetary policy steps to support Hungary's climate targets will be presented. The Hungarian Central Bank (MNB) seems to be extremely active and progressive in this area and has created the "greenest" bond market in the region. The briefing begins with a brief review of Hungary's achievements in reducing greenhouse gas emissions.

Greenhouse emissions in Hungary

Hungary emitted 65 million tons of air pollutants and greenhouse gases in 2019, which accounted for 1.73 percent of all EU emissions. At this point, it should be inserted that the country's share of the EU's GDP in 2019 was 1.0 percent, which shows that the country pollutes relatively less than the EU average in this area. Another indicator that is useful to measure a country's performance is the so-called "greenhouse gas emission intensity of energy consumption", which shows how many tons of CO2 equivalent energy-related greenhouse gases are emitted per unit of energy consumed in a given economy. The indicator in Hungary is 77.3, while the EU 27 average is 88.8. Only Denmark, Malta, the Czech Republic, Greece, Finland and Sweden perform better in this respect.

At the same time, Hungary lags behind the EU average in terms of renewable energy sources, as the aforementioned indicator stood at 19.7 percent in 2019, while the share of renewable energy sources in Hungary was only 12.6 percent. The contradiction arising from the relatively good performance on in the indicator "greenhouse gas emissions intensity of energy consumption" and the relatively poor performance on the indicator "share of renewable energy sources" can be explained by Hungary's relatively high dependence on nuclear energy.

The European Commission's proposal

In early July, the European Commission presented a package of proposals aimed at accelerating the reduction of greenhouse gas emissions. The proposal has the following elements:

- the extension of the existing emissions trading scheme to internal aviation,
- the revenues from emissions trading will only be spent on climate-relevant projects
- emission reduction targets will be increased
- afforestation programs will be launched,
- the target for the share of renewable energy sources is set at 40 percent,

- a binding annual target for the reduction of greenhouse gasses will also be set,
- a ban on petrol and diesel cars will be completed by 2035,
- an increase in the share of sustainable aviation fuels will be set as a target,
- an alignment of energy product taxation with EU energy and climate policy,
- a carbon tax on imports of a targeted range of products will be introduced.

It is not only the Hungarian government that criticizes the proposal, other non-governmental organizations also criticize it. As for the Hungarian arguments, on the one hand the government stressed that it is committed to contributing to the fight against climate change, but it was also recalled that even the current targets have not been met by member states. In addition to this element, it is clear that this proposal does not adhere to the generally accepted polluter pays principle. According to this principle, those who cause pollution should bear the costs of dealing with it in order to prevent damage to human health or the environment. The European Commission's proposal focuses on the prices and taxes of cars and residential buildings. It was also added that the proposal is unfair because there are significant differences in income between members and it is unacceptable that all families would pay the same burden based on their emission regardless of their income.¹ This approach would definitely put poor families under pressure. According to the government, the proposal would also "destroy" the achievements of the government's policy to reduce household utility fees, which effort has significantly lowered energy prices in contrast to the pre-2010 period.

¹ Mandiner, 2021: Gulyás: Elfogadhatatlan az Európai Bizottság friss klímacsomagja.
https://mandiner.hu/cikk/20210715_gulyas_elfogadhatatlan_az_europai_bizottsag_friss_klimacsomagja

The Századvég Research Institute also stressed that the European Commission proposals punish households whose adaptation is constrained by a lack of financial resources, while companies have resources to change their technology in order to reduce greenhouse gas emissions. In other words, the carbon tax imposed on private buildings and cars will not significantly change greenhouse gas emissions.¹

Circular economy in Hungary

Another crucial line of green development policy is the focus on establishing the so-called circular economy. The European Commission adopted its first circular economy action plan in 2015, which was completed by the end of 2019, and the next action plan was launched in March 2020. Hungary's actions in this area are linked to the trends at the EU level. As we have shown in our previous briefings, Hungary has taken significant steps to reduce waste in order to create a circular economy. In particular, the use of plastics and the recycling model were revised when the country's waste management system was reformed. The reform of the waste management system operates with "concessions", which means that the concession company is responsible for the entire recycling process, while the government has also limited the prices that the company can charge. The transformation of waste management is one element of the reform, while the other element is the effort to reduce the total amount of plastic used in the economy. The reduction in plastic use stems from EU law. From July 4, 2021, the use of plastic plates, forks, spoons, cotton buds and drinking straws will be banned and will not be allowed into the EU's Single Market. The regulation will later also cover the use of polystyrene food and drink packaging.

Green Monetary Policy in Hungary

¹ Századvég, 2021: Állásfoglalás - Az Európai Bizottság „Fit for 55” klímavédelmi javaslatcsomagjáról.
<https://szazadveg.hu/hu/2021/07/15/allasfoglalas-az-europai-bizottsag-fit-for-55-klimavedelmi-javaslatcsomagjarol~n1927>

The MNB published a report on green monetary policy and its instruments in June 2021, summarizing the main elements of this policy. The report on green monetary policy was the first of its kind. According to the analysis, the green securities market in Hungary is now dominated by green bonds. The first green bond issuance in 2020 was the first step in Hungary towards a more sophisticated green securities market. In 2020, the bonds were nominated in Euro, however the green bonds issued this year were already nominated in HUF. In addition to this bond issue, both the "Funding for Growth Scheme" and the "Bond Funding for Growth Scheme" contain elements that pay attention to environmental issues. The first corporate bond issuance took place under the "Bond Funding for Growth Scheme" in the amount of 30 billion HUF. As a result of these programs, the green financial market has become the "greenest" bond market in the region.

The first credit-related program started in 2019, when the MNB granted a discount on capital requirements to banks that were willing to consider environmental aspects in their credit programs. Another recently launched program is MNB's "Green Mortgage Deed Purchase Program" and "Green Home Program". Both programs support the construction and maintenance of energy efficient homes and buildings. The total value of public support is 200 billion HUF each. In case the financial ceilings of the program are reached, the MNB will revise them and decide on the continuation of the programs.

Conclusions

Hungarian efforts to reduce greenhouse gas emissions are clear, but the debate with the European Commission will intensify if the EU does not change the proposals. The Hungarian reaction comes from the fact that the Hungarian economy is less developed than the EU average and the income level is lower, and for this reason it would be unfair to pay the same nominal prices for greenhouse gas emissions. We can also add that with this legislation, it would be ironic that the first industrialized countries would make countries pay for the damage they caused in the first place.

Green Policy and Activities in Latvia

Institute of Economics at the Latvian Academy of Sciences

Summary

The nature, being one of Latvia's most valuable assets, requires a reliable and concise green policy. Latvian environmental policy guidelines are based on goals and guidelines set by the European Union and on the 6 United Nations nature protection conventions. Latvia has difficulty with waste management and the situation with material reuse has been actively exacerbating since 2016. The amount of green infrastructure is of relatively high density, and will continue to rise with future eco-innovation plans. The planned measures of the European Green Deal aim to create the EU fully climate neutral by 2050. However, the planned extensive changes have received resistance from Latvian farmers given the restrictions of use of pesticides and the transition to more organic farming.

Introduction

A quality living environment and territorial development ensure the transition of the economy to a climate-neutral economy, including care for nature, environment and infrastructure, its quality and accessibility. It increases the equality of opportunity, promotes human productivity and improves the quality of life while reducing environmental pollution. Latvia's natural capital is diverse, therefore its sustainable use and reduction of environmental pollution is a guarantee for the well-being of future generations and the protection of natural values. Natural capital is a resource for employment and entrepreneurship in rural areas. Nature is one of Latvia's greatest values, and its protection requires a scrupulous and

laconic green policy, which is based on the goals and guidelines set by the European Union and the long-anticipated European Green Deal.

The current Latvian green policy

The current Latvian environmental policy guidelines from 2021 to 2027 provide for:

- achieving the 2030 greenhouse gas reduction target and achieve climate neutrality by 2050;
- improving adaptability, strengthening resilience and reducing vulnerability to climate change;
- making progress towards a renewable growth model by decoupling economic growth economic growth from resource use and environmental depletion and accelerationg the transition to a circular economy;
- aiming for zero pollution in the environment free of toxic substances, including air, water and soil, and thus also protecting the health and well-being of Europeans;
- protecting, preserving and restoring biodiversity and increasing natural capital, in particular air, water, soil, and forest, freshwater, wetland and marine ecosystems;
- promoting environmental sustainability and reducing environmental and climate pressures related to production and consumption, in particular in the fields of energy, industrial development, buildings and infrastructure, mobility and food systems.

The green policy in Latvia follows is based on the nature protection goals and settings declared by the European Union (EU). The conservation and restoration of biodiversity and the ecosystem services it provides is a priority for the EU nature protection. The implementation of the policy is based on the protection of biological diversity inside and outside protected nature areas. At the same time, Latvia has the right to set other priorities for the preservation of natural diversity. For example, in the list of protected natural monuments, in addition to territories of biological diversity, there are also territories and objects of high geological and geomorphological value, territories of cultural-historical and landscape significance. Public opinion expressed by non-governmental organizations and other interest groups is important.

Latvia has acceded to the most important nature and environmental protection conventions - six United Nations nature protection conventions, from which practical nature protection actions follow. Fulfilling the requirements of the Ramsar Convention on Wetlands of International Importance, six Ramsar sites have been established by law in Latvia: the Teiči and Pelečāre mire complex, Lake Engure, Lake Kaņieris, Lubāna wetland complex, Ziemeļu purvi and Pape wetland complex. According to the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora, more than 5,000 individuals of endangered species of fauna and flora require a permit to enter Latvia and other countries. At Riga Airport, passengers who have purchased products made from endangered species of wild fauna and flora and who do not have a CITES permit are either regularly monitored or detained. For the purposes of implementing the Convention on the Conservation of Migratory Species of Wild Animals in Latvia, compensation is granted to farmers for damage caused by specially protected non-hunting species and animals of migratory species.

The implementation of different environmental activities in Latvia

In 2017, the Environmental Policy Implementation Report identified various key challenges for the implementation of EU environmental policy and legislation in Latvia, such as the need for improvements in waste management, in particular in increasing recycling, separate collection and reducing landfilling. Latvia had to reduce the intensity of resource use, which would reduce the exposure of Latvian companies to the increase in resource costs.

Taking everything into account, there are still problems with waste management in Latvia, with the inability to divert waste from landfills. In addition, in Latvia, as visible in Figure 1., for the last 10 years, the indicators of material reuse have been much worse than the average of the 27 countries of the European Union.

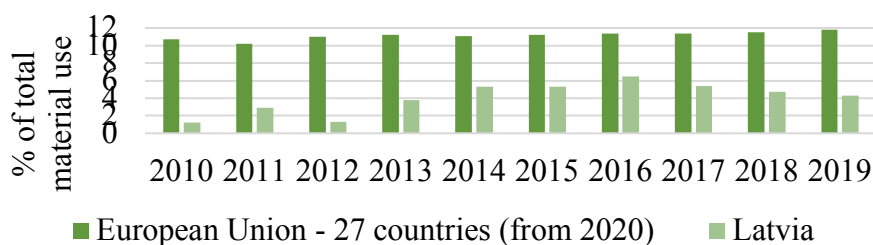


Fig. 1. Material reuse rates in Latvia and the EU from 2010 to 2019

Data: EUROSTAT

It should also be noted that the proportion of small and medium-sized enterprises (SMEs) that have taken resource efficiency measures is below the EU average, while the proportion of SMEs that have received public support for the production of organic products is well above the average. In the field of eco-innovation, Latvia ranks relatively low, although it is the

fifth fastest-growing innovator, and compared to other EU Member States, Latvia has a relatively high density of green infrastructure. Latvia is currently preparing to implement further plans and measures that are directly related to green infrastructure, such as urban flood management projects and Natura 2000 development. Latvia has been the first to implement the “Mapping and Assessment of Ecosystems and their Services in Latvia”.

Latvia aims to maintain a good level of environmental protection, especially with regard to air and water quality. The state shows good results in terms of bathing water quality - in 2017, 91.1% of these waters were of excellent quality. However, infringement proceedings remain in force against Latvia, as in the 15 largest agglomerations the collection and treatment of waste water does not take place in accordance with the directive in place.

Latvia continues to work to ensure compliance with EU regulations on urban waste water treatment. However, infringement proceedings are still in force against Latvia, as wastewater collection and treatment in the 15 largest agglomerations does not take place in accordance with the Directive.

In turn, there are also examples of good practice in Latvia. Two projects in Latvia have been highlighted as examples of best practice - the LIFE Nature project “Protection and Management of Coastal Habitats in Latvia” and “Protected Green Infrastructure and Water Bodies in Zemgale and Northern Lithuania”. In Latvia, the public, especially individuals and non-governmental organizations, have very wide opportunities to turn to court on environmental matters. The country has well-developed legislation on access to information and public participation. Good examples of how this right are implemented into practice are the Open Government Action Plan and the Environmental Advisory Council.

The EU Green Deal and Latvia

On July 14, 2021 the European Union unveiled the most ambitious plan to date to combat climate change. The planned measures aim to transform the economic life of the EU Member States so that their daily lives become more environmentally friendly in the next decade. The commitment is to reduce greenhouse gas emissions by 55% over the next 10 years and to become fully climate neutral by 2050. Achieving the 2030 target of a 55% reduction in environmentally harmful emissions will require 350 billion euro in additional investment each year, so more capital needs to be raised for green economic activity.

The European Green Deal means significant changes for Latvian farmers - mainly large, conventional farms, which will have to significantly change their usual farming. There are plans to reduce the use of plant protection products and mineral fertilizers, as well as to increase the share of organic farming to 25% of the total area used for agricultural activities.

Latvian Minister of Environmental Protection and Regional Development Artūrs Toms Plešs replied to the criticism of the agricultural sector that it is not just a question of making Latvia greener. The European Green Deal is important from the prism that we can create new added value and new ways of doing business that have not happened before. And in this way, accordingly, to make us a wealthier country.

Conclusion

In recent years, Latvia and the rest of the world have faced climate phenomena that are unusual for the regions - by implementing a strict and comprehensible environmental protection policy, integrating it into the economy and mentalities of the people, it is possible to reduce the consequences of climate change. By promoting a change in people's daily habits, the European Green Course will ensure further green development and create new, well-paid and nature-friendly jobs. Latvia's environmental policy guidelines in cooperation with the new European policy will

increase the density of green infrastructure, continue to develop eco-innovations, extend the life cycle of products produced in the country, reduce waste, and stimulate their recycling.

References

1. *Circular material use rate - Products Datasets*. (n.d.). Eurostat. Retrieved July 20, 2021, from https://ec.europa.eu/eurostat/web/products-datasets/-/cei_srm030
2. *Dabas aizsardzība Latvijā*. (2021, July 5). Nacionālā enciklopēdija. <https://enciklopedija.lv/skirklis/7295>
3. *Eiropas zaļais kurss: Komisija ierosina pārveidot ES ekonomiku un sabiedrību klimata mērķu sasniegšanai*. (2021, July 14). Latvijas Vēstnesis. <https://lvportals.lv/dienaskartiba/330512-eiropas-zalais-kurss-komisija-ierosina-parveidot-es-ekonomiku-un-sabiedribu-klimata-merku-sasniegsanai-2021>
4. Erlanger, S., & Sengupta, S. (2021, July 19). *Europe Rolls Out Ambitious Climate Change Plan, but Obstacles Loom*. The New York Times. <https://www.nytimes.com/2021/07/14/world/europe/climate-change-carbon-green-new-deal.html>
5. European Commission. (2020). *Vides politikas īstenošanas pārskats*. Europa. https://ec.europa.eu/environment/eir/pdf/report_lv_lv.pdf
6. Vides aizsardzības un reģionālās attīstības ministrija. (2021, May 5). *Vides politikas pamatnostādnes 2021–2027*. LPS. https://www.lps.lv/uploads/docs_module/2021_05_05_3_VPP2027VARAM_visparigi.pdf

7. Zvirbulis, Ģ. (2021, June 10). *Nevedas zemnieku un VARAM sarunas par Eiropas «zaļā kursa» nestajām izmaiņām*. LSM.LV. <https://www.lsm.lv/raksts/zinas/latvija/nevedas-zemnieku-un-varam-sarunas-par-eiropas-zala-kursa-destajam-izmainam.a408354/>

Lithuania's Green Economy Plan Gets the Highest Mark From Brussels

Linas Eriksonas

On 2 July, the President of the European Commission, Ursula von der Leyen, announced at a joint press conference with Lithuania's President Gitanas Nausėda and the Prime Minister Ingrida Šimonytė symbolically held at the Vilnius Transformer Substation, a vital component in the Lithuanian Energy Transmission System, the EC's approval of Lithuania's national recovery and resilience plan. According to this plan, the EU will disburse 2,225 billion euros for the projects to transform the country's economy in the post-COVID period by focusing on the public investments in the development of green and digital policy objectives. As von der Leyen emphasized in her statement in Vilnius, 38 per cent of Lithuania's national plan will support the European Green Deal. "That means a massive investment in clean energy, wind power, solar power, made and stored, as we have seen here, in Lithuania", - stated the head of the EC. In particular, she praised Lithuania's decision to couple the green transition with the investments in digitalization of public service and transport infrastructure, including a significant investment in the roll-out of 5G and high-speed networks.

Below is an overview of the green and digital transformation policy measures as part the approved national recovery and resilience plan, outlining the overall policy framework and the main drivers that defined it. Further, it considers the relevance of the approved green and digital transition plan for the reaching national targets under the Paris Agreement and targeting the specific impact areas.

Until the Paris Agreement on climate change came into effect in November 2016, the environmental policies at the EU and the national level have been primarily formulated and pursued relatively independently of the industrial

and societal policies. The economic policies were essentially the prerogative of the EU Member States and were pursued on a sector-by-sector basis, while the environmental policies remained fragmented, reflecting different functions of the national and EU regulatory bodies in charge of environment protection.

The Paris Agreement made a prerequisite for each signatory country to go through an economic and social transformation based on the best available scientific evidence to implement ambitious actions to reduce Greenhouse Gas (GHG) emissions. The aim is to limit global warming below 2, preferably 1,5 degrees Celsius, compared to pre-industrial levels. Effectively, the Paris Agreement created the impetus for bringing together cross-sectorial policies covering many socio-economic aspects related to climate-impacted societies and economies. The smaller EU Member States such as Lithuania quickly opened up individual policy areas for a coordination process closely followed by the EC and thus prepared ambitious, systemic and integrative plans.

Thus, when assessing the individual national plans, the EC gave the highest mark to the plans put forward by those EU Member States that showed prepared to be more flexible and more open to a higher integrative approach proposed by the EC. The Commission defined seven flagship areas for investment and reforms and invited the Member States to submit their national plans with the specific measures planned according to the Recovery and Resilience Facility policy framework. The proposed areas included clean technologies and renewable energy sources, the energy efficiency of buildings, sustainable transport and charging stations, the roll-out of rapid broadband services, digitalization of public administration, data cloud capacities and sustainable computing resources, education and training to support digital skills.

The EC scored each submitted national plan against eleven criteria where the A mark indicated the highest score and B and C the lowest ones. Lithuania's recovery and resilience plan, though submitted rather late in the process (17 May), was one of the few national plans that received the

A mark on each criterium. Such a high assessment of the national plan contrasts with the assessment of Lithuania's environmental policy at the outset of the process.

In April 2021, the OECD released a report assessing Lithuania's environment and environmental policy in view of reaching the international commitments and the national green policy targets, according to the Paris Agreement and the related EU and national legislation. The OECD assessment of the state of play indicated that though Lithuania's overall performance has improved over the last decade and greenhouse gas emissions declined and decoupled from economic growth, per capita emissions increased. A similar trend was observed for the emissions from the combustion of fossil fuels and biomass, which accounts for the bulk of total GHG emissions. Lithuania's GHG emissions per-capita remain amongst the lowest among OECD countries, yet the emissions have been on the increase since 2010, and especially since 2013.

The transport sector is the most significant source of the national GHG emissions, accounting for around 28 per cent of the total emissions in 2017, followed by the energy sector with 27 per cent, agriculture with 22 per cent and the manufacturing industry with 18 per cent. The emissions in the agricultural sector stands out, as it is nearly twice that of the OECD average, due to the high share of agricultural production in Lithuania's economy.

More worrying is that Lithuania has the highest mortality rate from exposure to air pollution among the OECD countries. Energy efficiency is also a concern, particularly in the housing sector. OECD noted that Lithuania does not levy a CO₂ tax and boasts some of the highest subsidies to fossil fuel in the OECD. According to OECD, a CO₂ tax could be designed to efficiently harmonise the payment by each sector in line with their contribution to environmental degradation and climate change. Lithuania sets no CO₂ tax, has one of the lowest excise duties on motor fuel, petrol and diesel among the OECD countries. Only last year, the country introduced a purchase tax for passenger vehicles which takes into account emissions.

The OECD experts concluded that significant declines in emissions are needed to meet 2030 climate mitigation targets. However, it cannot be achieved by the introduction of gradual measures. Hence, the radical transformation of the economy and the society has to take place if Lithuania is to meet those targets.

One of the barriers precluding the green transformation of the economy is a low level of circularity of the national economy. The analysts estimated that only 2,4 per cent of the materials and resources used to produce goods and services are recovered and put to further use in Lithuania's economy. In the Netherlands, the most advanced country in pursuing the circular economy in the EU, this figure stands at 24,5 per cent, and the plan is to increase it to 54 per cent by 2030. Lithuania's low performance in this respect is caused by the dominance of the high-energy intensive secondary sector in the economy and the reliance on the imports of primary materials and energy sources. The sectors with the highest material footprint in Lithuania's economy are housing and construction, the manufacturing of goods and consumables, services and mobility.

To increase the circularity of the economy and contribute to the decrease of emissions in consumption-based and production-based processes, Lithuania's government chose to use the national resilience and recovery plan for investing in the technologies and infrastructures, which would decrease the need for energy imports and improve the material footprint through the digitalization of assets and processes.

The investment in alternative renewable energy sources and the support infrastructure for energy storage and transmission is crucial in greening Lithuania's economy. Under the national recovery and resilience plan, 823 million euros are to be allocated for the development of offshore wind infrastructure, support for the construction of onshore renewable energy plants (including the solar and wind power energy plans), individual energy storage facilities and the establishment of renewable energy communities, and the installation of other electricity storage infrastructure.

Regarding the mobility sector, the main foreseen measures include the support for replacing polluting road transport vehicles used by the public sector and businesses with zero-emission and low emission vehicles. They aim to improve the quality and attractiveness of public transport services by upgrading public transport vehicles with zero or low emission vehicles, establishing charging and refilling infrastructure for the cars using alternative fuels, developing the alternative fuels sector such as biomethane, second-generation liquid biofuels and hydrogen.

Greater energy efficiency is planned to be achieved by the additional investments in building renovation packages and the increased renovation standards, municipal development plans, sustainable urban development methodologies, district renovation projects to ensure a more energy-efficient housing sector.

Altogether, 448 million euros are earmarked for investments in the digitalisation of the public sector. The digitalisation of the public sector includes measures to consolidate state information resources fully, IT infrastructure and services, to ensure the availability of reliable public sector data and the possibility to share it across sectors; and to fully digitalise government processes and expand digital public services while ensuring that all digital public services are accessible for citizens with disabilities. Further measures include developing the extensive Gigabit speed broadband to be deployed nation-wide, complimenting the 5G rollout to be completed by 2025 in the land transport corridors, across the national road and railway systems.

A preliminary comparison of the national recovery and resilience plans of the individual EU Member States have shown that the EU Member States that receive relatively smaller amounts from the Recovery and Resilience Facility as a share of their GDP prepared the national plans that concentrate spending more on green and digital transformation. In comparison, countries with more significant amounts have more diverse plans with a higher share of the spending on the areas not directly related to the green and digital policies. Lithuania's plan is one of the most focused on the

radical transformation of the economy and society by embarking on a large-scale infrastructure transformation that could impact production, consumption, and the everyday life of every member of society. It requires a leap of faith, which the government has shown.

References:

1. European Commission, “Statement by President von der Leyen on Lithuania's recovery and resilience plan”, 2 June, 2021; https://ec.europa.eu/commission/presscorner/detail/en/STATEMENT_21_3435
2. Ministry of Finance of the Republic of Lithuania, “Ekonomikos gaivinimo ir atsparumo didinimo priemonė „Naujos kartos Lietuva“ (Recovery and resilience-building measure "Next Generation Lithuania)", May 2021; https://finmin.lrv.lt/uploads/finmin/documents/files/Naujos%20kartos%20Lietuva_2021_05_14.pdf
3. European Commission, Proposal for a Council Implementing Decision on the approval of the assessment of the recovery and resilience plan of Lithuania, 2021/0196 (NLE); https://ec.europa.eu/info/sites/default/files/com-2021-386_en.pdf
4. European Commission, Commission Staff Working Document, “Analysis of the recovery and resilience plan of Lithuania”, 2 June, 2021, SWD(2021) 187 final; https://ec.europa.eu/info/files/commission-staff-working-document-analysis-recovery-and-resilience-plan-lithuania_en
5. Bruegel Foundation, “European Union countries’ recovery and resilience plans”, 29 June, 2021; <https://www.bruegel.org/publications/datasets/european-union-countries-recovery-and-resilience-plans/>

6. OECD, Hansjörg Blöchliger and Sigita Strumskyte, “Greening Lithuania’s growth”, Economics Department Working Papers no. 1667, ECO/WKP(2021)18; [https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP\(2021\)18&docLanguage=En](https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=ECO/WKP(2021)18&docLanguage=En)

Green Development Policy and Action: Montenegro

Vojin Golubovic

Summary

The paper makes a review of the major policies and actions made in the area of green development in Montenegro. For the purpose of examining the objectives and actions set at the national level, we look at the crucial strategic document on the topic – National strategy for sustainable development. One of the six priority areas of the strategy is the introduction of green economy, whose aim is to achieve the highest standards of sustainability, productivity and competitiveness of all economic sectors in the country.

Introduction.

On the development path Montenegro places the principles of sustainability at the core of its future objectives. The pivotal document that defines the priority topics and development direction in the country is the National strategy for Sustainable Development¹. By designing this strategy back in 2007, Montenegro set a clear vision for its future. To better understand its commitment to green development here is a citation from The Declaration on the Ecological State of Montenegro, adopted by the Parliament of Montenegro on September 20th, 1991, that states: *“aware of the debt to nature, the source of our health and the inspiration of our freedom and culture, we dedicate ourselves to its protection, in the name of our own survival and future of our descendants.”*

¹ Due to a limit in volume of the paper we do not look into sector-specific strategies and implementation reports related to them. However, they represent an integral part of the NSSD till 2030, thus major data has been incorporated.

Sustainable development is seen as a necessity in Montenegro

The principles of sustainability (economic, social, environmental) are an integral part all development plans, primarily because the country bases its development on sectors that directly depend on natural resources. The key strategic document in this area is *National Strategy for Sustainable Development* (NSSD). First NSSD was created in 2007, and was followed up by five implementation reports till 2014 when a revision of the original document took place.

The new *National Strategy for Sustainable Development of Montenegro until 2030* (NSSD) improves the policy of sustainable development of Montenegro. Priority topics¹, strategic goals and measures of sustainable development until 2030 represent the Montenegro's response to the challenges and obligations brought by the implementation of the UN Agenda for Sustainable Development until 2030.

The design of NSSD implies the introduction of green economy. Green economy is low-carbon, resource efficient and socially inclusive, and its implementation will foster the achievement of strategic goals in the following priority areas: climate change mitigation, resource efficiency, waste management using practices of circular economy, sustainable management of coastal resources and stimulating the blue economy, sustainable production and consumption and social responsibility, as well as the growth of competitiveness of the Montenegrin economy.

¹ Six priority topics: Improving the state of human resources and strengthening social inclusion; Support for values, norms and patterns of behavior important for the sustainability of society; Preservation of natural capital; Introduction of green economy; Management for sustainable development; Financing of sustainable development.

Climate change mitigation implies a set of measures aiming at reduction of GHGs for up 30% relative to its level from 1990. This is to be achieved through education and awareness rising among the citizens on the topic, besides, economic incentives for businesses using renewable energy sources and promoting rational use of energy. Additionally, better care for forests and advanced measures for their protection and responsible use, as well as introduction of low carbon technologies in plants in accordance with best practices, are planned.

In the area of resource efficiency there are three strategic goals set - improving resource efficiency in key economic sectors, improving waste management and encouraging sustainable valorization and conservation of marine resources. The key sectors for increasing resource efficiency are: energy, construction, agriculture, transport, and the service sector (tourism). There are several sets of measures planned in this area - economic instruments¹, regulatory instruments, research and development, human resources development, improvement of information availability and promotion of resource efficiency and evaluation of limited resources.

In the energy sector there is still a high material intensity, although a decline of 23.1% was recorded, resource productivity is one of the lowest (only € 0.07 of GDP per ton of DMC invested is achieved), while metabolic rate (reflecting the consumption of domestic natural materials per capita) in this sector increased by 19.2% (NSSD, 2016).

However, construction is the sector that has by far the largest share in domestic consumption of materials, as well as poor efficiency, which is reflected in an increase in material intensity indicators by as much as 43%, a decrease in resource productivity by 50%, as well as an increase in - DMC consumption per capita by 25.4% (NSSD, 2016). Some of the measures set in this specific sector are stimulating more resource-efficient use of construction materials, reducing the amount of construction waste,

¹ E.g., environmental taxes, user fees and charges, trade certificates, green finance, green public procurement, incentives, permits and prohibitions that can be traded etc.

constructing buildings with minimal emissions and using construction materials with less impact on the environment (NSSD, 2016).

Agriculture and its importance for the Montenegrin economy places the sustainability of the sector at the top of the strategic priorities. The indicators in this sector call for stronger measures and mechanisms in order to achieve better results. Therefore, the strategy establishes certain standards in this sector, when it comes to resource efficiency: taxes on environmentally harmful activities in the agricultural sector (use of pesticides and mineral fertilizers), greening subsidies¹, technological change and innovation.

Service sector (tourism) and its interrelations with other sectors will along its greening process encourage the progress in other areas as well. Greening tourism and improving resource efficiency in the sector implies energy consumption, waste generation and biodiversity protection. Besides, the strategy sets the measures in preserving the attractiveness of the destination in the long run with careful planning and construction of new capacities, development of types of tourism that have a favorable impact on the environment and do not endanger natural and landscape values, and efficient tourist facilities. And finally, the green innovations, which imply the application of existing, but also the introduction of new standards, that are of great importance for greening tourism.

According to the estimates given in the Waste Management Strategy of Montenegro until 2030, the amount of waste that will be generated in the coming period will still increase, despite the constant tendency to reduce the amount of waste that is generated². It is estimated that the amount of

¹ E.g., subsidies for organic production, or for farmers to change the way they feed cattle.

² The reason for such an assessment lies in the fact that Montenegro has not yet adopted living habits and models of management (linear economy versus circular economy) which in the next, relatively short period of time could lead to

waste that will be generated in the period until 2036 will constantly increase by 2% annually in local self-government units with constant population growth. Apart from the advancement in technology and mechanisms, the strategy sets specific measures for improving the implementation of punitive measures, and strengthening public awareness on the importance and benefits of sustainable waste management.

With the aim to achieve the strategic goal of the NSSD for the period until 2030 – enable sustainable management of coastal resources and encourage the blue economy – the implementation of the following measures is planned: preserve the attractiveness of the coastal area for the development of sustainable tourism, restore and preserve valuable rural area, support sustainable valorization and conservation of marine resources. In addition to the above measures, greening of coastal development implies support measures for green entrepreneurship¹.

Sustainable production and consumption are to be achieved through the combined implementation of different measures, with assured participation of decision makers and relevant policies, the business sector, science, civil society organizations and consumers. Along the way, a number of green entrepreneurship mechanisms and instruments will be available, to name a few: incubators for green entrepreneurship, and promotion of new green business models; economic and financial instruments - green banking, tax and fee reform.

To increase the level of competitiveness of the Montenegrin economy for sustainable development and green jobs the strategy foresees a set of measure to stimulate resource efficiency and investment, strengthen local entrepreneurial infrastructure and business environment, launch and implement incentive financing programs to enable better availability, accessibility and access to finance for entrepreneurs and SMEs, and

a such dynamic changes and a reduction in the amount of waste generated (NSSD, 2016).

¹ E.g., strengthening local entrepreneurial infrastructure, providing funding programs and improving product quality.

improve the quality of products and services in the context of establishing space for creating green jobs.

Limited action

However, the action of the state is quite limited due to insufficient resources and many challenges that Montenegrin society faces. In addition, there is a lack of understanding of green development concept among the wider population. However, some international institution, together with Montenegrin government are active in the implementation of projects related to green development. Apart for the strategic framework, an overview of the actions realized in this area revealed a few important projects supported or conducted by international organizations. The International Labor Organization (ILO) provided financial support for the design of the first in-depth analysis of green jobs potential in Montenegro conducted by Regional Environmental Centre REC¹ – *Developing a More Conducive Environment for Green Jobs and Enterprises in Montenegro*, in 2017. UNDP in Montenegro is conducting a project *Growing green business in Montenegro*, whose aim is to create favorable business climate and conditions for private sector investment in low-carbon and other environmentally-friendly businesses in Montenegro. The project started in 2018, and is expected to finish in December this year.

Montenegrin policymakers are aware of the necessity for green development. Also, some foundations for this exist. Having in mind the variety of natural resources, there is strong potential to adopt economic development to the sustainable green path. However, there are still many challenges recognized by the sustainable development documents, from poverty, income inequality, waste of energy and other sources, etc. These challenges require more significant action in green development.

¹ <http://montenegro.rec.org/project-detail-eng.php?id=191>)

Environmental Governance in N. Macedonia: Bridging The Gap Between Green Words and Green Actions

Gjorgjioska M. Adela

Summary

The devastation of the environment in N. Macedonia has reached alarming levels in the past decade. Failing to implement and enforce suitable environmental regulation, multiple administrations have either ignored the ecological catastrophe or have been its direct enablers. In reaction to this process, public dissatisfaction and outrage have reached new heights. In order to voice their concerns, numerous informal citizen associations have sprung up across the country in the past several years. Not only has the Government failed to channel such calls into concrete plans for actions, it has instead continued many of the destructive practices, which have resulted either from corruption, or from the absence of political will and capacity to address the environmental crisis. Recently however, the Government has started to present a more active green agenda, which has focused primarily on the energy sector. These steps can best be described as by-products of global pressures and trends, but their full realisation and effects on the health and well-being of the Macedonian people and their living environment are yet to be demonstrated.

The degradation of the environment is widespread across the Macedonian urban and rural geography. Air pollution has been an urgent ecological problem for many years. The situation is particularly alarming in urban areas in winter, when concentrations of harmful substances are several times higher than the maximum permitted.¹ According to UNECE and

¹ Among the pollutants is the combustion particle PM_{2.5}. In Skopje, its concentration is 4.5 times higher than the WHO recommendations of below 10 micrograms of particles per cubic metre of air ($\mu\text{g}/\text{m}^3$). And in Tetovo it is even

BreatheLife, air pollution in the country causes nearly 3,000 premature deaths annually while the health costs associated with pollution represent 3.2 percent of GDP.¹ The main cause of pollution is the country's dependence on coal for energy production, coupled with high energy poverty, pollution from transport and inadequate planning of the built environment.² Waste and chemicals management have also continuously been pointed out as severe pollutants to the air, the soil and the waters across the country.³ Waste collection services are provided for only 60-70 percent of the urban population and just 10 percent of the rural population. As a result, there are 1,000 illegal landfills in rural areas alone, creating significant ecological, health and safety hazards.⁴ What is more, the country is also vulnerable to natural disasters such as earthquakes and floods, with floods in recent years resulting in numerous human casualties and financial costs. Additionally, the protection of natural resources is a major cause of concern. All three natural lakes and their eco-systems have been deemed to be under severe threat in recent years. Failing to implement and enforce suitable environmental regulation, multiple administrations

8.1 times higher than the healthy threshold. Low temperatures are making the situation worse, because of the emissions resulting from the use of fossil fuels for heating houses and buildings.

¹ UNECE (2019). The Third Environmental Performance Review (EPR) of North Macedonia, Available at <https://unece.org/environment/press/north-macedonia-path-sustainable-development-must-step-efforts-air-quality-and> accessed on 20.07.2021

² CORDIS (2020). Air pollution in Skopje: how citizens spurred policymakers towards the change, Available at, <https://cordis.europa.eu/article/id/413275-air-pollution-in-skopje-how-citizens-spurred-policymakers-towards-the-change> accessed on 25.07.2021

³ UNECE (2019). The Third Environmental Performance Review (EPR) of North Macedonia, Available at <https://unece.org/environment/press/north-macedonia-path-sustainable-development-must-step-efforts-air-quality-and> accessed on 20.07.2021

⁴ UNDP Independent Country Programme Evaluation: North Macedonia (2019)., available at <https://erc.undp.org/evaluation/evaluations/detail/12279> accessed on 25.07.2021

have either ignored the ecological catastrophe or have been its direct enablers. In reaction to this process, public dissatisfaction and outrage have reached new heights. Not only has the Government failed to channel such calls into concrete plans for actions, it has instead continued many of the destructive practices, which have resulted either from corruption, or from the absence of political will and capacity to address the environmental crisis. Recently however, the Government has started to present a more active green agenda, which has focused primarily on the energy sector.

Government actions are focused on the energy sector

Several large projects have been announced or pushed forward in 2020 and 2021 with the aim of tackling the country's dependence on fossil fuels in line with the EU Green Deal and the Paris Climate Agreement. The first major development in 2020 was the adoption of the Energy Development Strategy until 2040.¹ The document adopts the framework of the European Union's National Energy and Climate Plans and covers how to 1) decarbonise the country's energy system, 2) enhance energy efficiency, 3) improve research, innovation and competitiveness, 4) enhance legal and regulatory environment, and 5) integration and security of energy markets. According to it the country will maximize energy savings up to 51.8% of primary and 27.5% of final energy by 2040. Moreover, it announces the increase in the usage of renewable energy sources in a sustainable manner by up to 45% in gross final energy consumption. It also details the national and international financing schemes available to promote renewable energy sources and energy efficiency measures.²

¹ Energy Development Strategy until 2040, North Macedonia, available at <https://www.climate-laws.org/geographies/north-macedonia-republic-of-north-macedonia/policies/energy-development-strategy-until-2040> accessed on 19.07.2021

² Ibid

In line with the Energy Strategy in September 2020 the Government promised that all state institutions will abandon obsolete and environmentally damaging heating systems by 2024.¹ Additionally, the Government announced an ambitious plan to lift the share of renewables in power generation capacity to 50% by 2024.² In order to achieve this goal, plans were announced to add solar photovoltaic (PV) power plants with an installed capacity of 400 MW, which will produce 560 GWh per year or about 10% of total domestic output. Less than a year later in April 2021, the Government announced that it had selected two companies for the construction of two solar power plants with an installed capacity of 50 MW each.³ What is more, in May 2021, the Government began the process for the installation of a 300 MW to 350 MW photovoltaic power plant, which when built would be the biggest photovoltaic facility in the country.⁴ By July 2021, the country made advancements on three solar, wind projects of 210 MW in total.⁵ Moreover, Prime Minister Zaev said that EUR 3.1 billion

¹ Green Energy News (2020). Green development in focus of new North Macedonia government, available at

<https://balkangreenenergynews.com/environment-green-development-among-six-pillars-of-new-n-macedonia-government/> accessed on 19.07.2021

² Green Energy News (2020). North Macedonia plans 50% renewables share in electricity production by 2024, available at

<https://balkangreenenergynews.com/north-macedonia-plans-50-renewables-share-in-electricity-production-by-2024/> accessed on 24.07.2021

³ Balkan Green Energy News (2021). Fortim Energy Electric, Solarpro Holding to install two PV plants at Oslomej coal mine,

<https://balkangreenenergynews.com/fortim-energy-electric-solarpro-holding-to-install-two-pv-plants-at-oslomej-coal-mine/>

⁴ Balkan Green Energy News (2021). ESM to develop solar power plant of up to 350 MW – one of the largest in Europe, available at

<https://balkangreenenergynews.com/esm-to-develop-solar-power-project-of-up-to-350-mw-one-of-the-largest-in-europe/> accessed on 15.07.2021

⁵ Balkan Green Energy News (2021). North Macedonia advances three solar, wind projects of 210 MW in total, available at

would be invested in energy through 2027, of which the overwhelming part would be directed into renewable energy and the rest is for the gas sector.

Several other key announcements were made aimed at reducing the country's dependency on coal. In June 2021 Prime Minister Zaev said the government plans to close the country's coal-fired power plants by 2028. Moreover, he added that in order to offset the impact of the move on electricity production, the country will invest in developing a total of 2,200 MW of renewable energy capacities.¹ The move follows earlier announcements in 2020 that the 210 MW thermal power plant TEC Negotino will switch from fuel oil to natural gas;² alongside the announcement that the first unit of coal-fired REK Bitola will be turned off within five years and converted to natural gas.³

Another key development took place in November 2020 when ESM suspended investments in Bulgaria's nuclear power plant Belene, and shifted its focus to the construction of a gas power plant near the planned liquefied natural gas (LNG) terminal in Alexandroupolis in Greece.⁴ In line

<https://balkangreenenergynews.com/north-macedonia-esm-preparing-three-solar-wind-projects-of-210-mw-in-total/> accessed on 10.07.2021

¹ <https://balkangreenenergynews.com/north-macedonia-first-in-region-to-set-coal-phaseout-date-thermal-power-plants-will-be-shut-down-by-2028/>

² Balkan Green Energy News (2020). North Macedonia to convert oil-fired power plant Negotino to natural gas, available at,

<https://balkangreenenergynews.com/north-macedonia-to-convert-oil-fired-power-plant-negotino-to-natural-gas/> accessed on 13.07.2021

³ Balkan Green Energy News (2020)., North Macedonia to shut REK Bitola coal plant unit, turn to gas

available at <https://balkangreenenergynews.com/north-macedonia-to-shut-rek-bitola-coal-plant-unit-turn-to-gas/> accessed on 19.07.2021

⁴ Balkan Green Energy News (2020). ESM halts investment in Belene project, turns to gas power plant near Alexandroupolis LNG terminal, available at <https://balkangreenenergynews.com/esm-pivots-from-belene-project-turns-to-gas-power-plant-near-alexandroupolis-lng-terminal/> accessed on 15.08.2021

with this strategy in April 2021 N. Macedonia signed three memoranda with Greece to secure the supply of natural gas from the planned liquefied natural gas terminal in Alexandroupolis and of electricity from a nearby gas-fired power plant in order to implement its strategy to phase out coal and switch to renewables and gas.

Most recently, the Minister of Environment and Physical Planning Naser Nuredini has announced that the Law on Climate Action will be adopted by the end of 2021. The move follows the recent adoption of the Long-Term Climate Action Strategy, in which the country has set a goal to reduce greenhouse gas emissions by 52 percent by 2030, or a net of 85 percent by 2030, compared to 1990. Nonetheless in the implementation of this ambitious green strategy, capacity of the public administration remains one of the key obstacles. The lack of capacity and clout of the Ministry of Environment and other relevant institutions have often been described as hindering the country's progress towards compliance with EU environment directives.

Since the adoption of the Energy Development Strategy until 2040 in 2020, the green agenda seems to have risen high on the Government's agenda. Major plans and pledges have been announced and some steps have been taken towards their realisation. In spite of this, it must be remembered that in the absence of a strong and competent public administration, the country has long been lagging behind its own national targets on the use of renewables and energy efficiency. It is thus imperative to distinguish the "green" plans that have been announced from the concrete "green" outcomes that are yet to come to fruition. What is more, the actions taken as part of the so-called green agenda can best be described as by-products of pressures and trends from the EU or the USA, instead of a direct response to the requests and needs of the domestic public. In view of this, the first major concern with the ambitious green agenda will be its realisation in practice. The second key challenge will be to make sure that the realisation of the green agenda will not only benefit businesses, but that it will have a

positive and demonstrable impact on the health and well-being of the Macedonian people and their living environment.

Green Transformation in Energy Sector Is A Big Challenge for Poland

Konrad Rajca

Summary

The most important assumptions and plans for green policy in Poland are included in official government document "Energy Policy of Poland until 2040" (PEP2040) from February 2021. It assumes a significant reduction of coal use in energy production in Poland. In 2040, more than half of energy production will be zero-emission sources. A special role in this process will be played by the development of offshore wind energy and the launch of a nuclear power plant, the use of gas will also increase. According to the plan, coal mines are to be closed by 2049. This is big challenge for Poland because energy production in Poland is based primarily on coal.

Introduction

PEP2040 provides a clear vision of Poland's strategy for energy transformation. It was developed in the context of the EU's New Green Deal policy, including the energy transition, and the EU's Post-Pandemic Reconstruction Plan, under which Poland will receive significant financial support. The document is also relevant to the Polish National Reconstruction Plan, which describes how the EU funds are spent on energy transformation and green policy.

The most important elements of Poland's energy policy until 2040:

- In 2030, the share of renewable energy sources (RES) in gross final energy consumption will be at least 23 percent - not less than 32 percent in electricity (mainly wind and PV), 28 percent in heating, 14 percent in transport (with a large contribution of electromobility).

- The share of coal in the energy consumption structure is to reach no more than 56 percent. in 2030, and with increased prices of CO2 emission allowances, it may drop to the level of 37.5 percent. In 2040, this share is expected to amount to 28 percent, respectively or 11 percent, depending on the prices of CO2 emission allowances.
- In the case of offshore wind energy - the installed capacity will reach approx. 5.9 GW in 2030 and up to approx. 11 GW in 2040.
- In 2033, the first block of a nuclear power plant with a capacity of approximately 1-1.6 GW will be put into operation. Subsequent blocks will be implemented every 2-3 years, and the entire nuclear program involves the construction of 6 blocks.
- By 2030, greenhouse gas (GHG) emissions will be reduced by approx. 30 percent. compared to 1990
- By 2040, the heat needs of all households will be covered by system heat and by zero- or low-emission individual sources.
- The reduction in the use of coal in the economy will take place in a manner ensuring a just transition.
- The infrastructure of natural gas, crude oil and liquid fuels will be expanded, and the supply directions will be diversified.

Currently, the electricity generation in Poland is mainly based on coal (hard coal in nearly 57 percent and lignite in over 24 percent). As far as "green energy" is concerned, the highest contribution comes from wind installations - almost 9 percent, other Renewable Energy Sources play a minor role (only 1%), natural gas constitutes 7.5% of the Polish energy mix.

Moving away from coal

According to the strategy, in 2040 more than half of energy production in Poland will be zero-emission sources. A special role in this process will be

played by the implementation of offshore wind energy into the Polish power system and the launch of a nuclear power plant. These will be two strategic new areas and industries to be built in Poland. Low-emission energy transformation is to support modernization changes throughout the Polish economy, guaranteeing energy security, taking care of fair cost distribution and protection of the most vulnerable social groups.

According to the strategy's assumptions, the role of gas in energy production will increase, and Poland will have to finally say goodbye to coal. The environmentally unfriendly coal-fired furnaces popular in Poland are to disappear by 2040. Coal mines should be closed by 2049. The strategy indicates that the total share of coal in net electricity generation will be decreasing - in 2030 it will reach no more than 56%. In the scenario of expensive emission allowances for carbon dioxide, the departure from coal will be much faster. Coal as a fuel is to be used mainly in power plants currently under construction or commissioned in recent years, as they are less carbon intensive and use fuel more efficiently. The document indicates that demand for hard coal will be met from domestic resources and the import-export relationship will be complementary.

Investment outlays for the energy transformation in Poland 2021-2040 may amount to approximately EU 355 billion - stated in the "Energy Policy of Poland until 2040". It is estimated that approx. EU 58 billion will be allocated to the national energy and climate transformation by 2030, from EU and national funds under various mechanisms.

An expensive transition

Polish government is aware of the social costs of actions taken to limit the use of coal. The strategy states that limiting or ending the exploitation of coal deposits may entail economic and social problems in the regions dependent on the mining sector. It will therefore be necessary to transform these regions. To this end, a mining restructuring plan and a National Plan for Equitable Transformation are to be developed in 2021, followed by corresponding territorial plans. The actions will be eligible for financial

support (e.g. from EU funds) to a total amount of around 13 billion euros. The document, in connection with the mining restructuring plan, also mentions a new state aid program for the mining sector, investments in clean coal technologies and the establishment of a new special purpose vehicle to deal with such technologies.

The future in nuclear and wind energy

The strategy states that natural gas-based units will gain in importance in the electricity balance. Gas is seen as a transitional fuel. It will be used, among others, for balancing Renewable Energy Sources. The advantage of gas-powered installations is also lower emissions than in the case of coal-fired power plants. The key role will be played by further diversification of gas supplies: through expansion of import capabilities and development of connections with neighbouring countries. In this way, a gas transmission and trading center is to be established in Poland for the countries of Central and Eastern Europe and the Baltic states. The strategy mentions three factors: expansion of Świnoujście gas port to 8.3 billion m³ annual capacity, construction of FSRU terminal in the Gdańsk Bay (4.5 billion m³ after 2025) and Baltic Pipe gas pipeline (import at the level of 10 billion m³ per year). It was also pointed out that an important factor will be achieving by 2030 the ability to transport through the gas networks a mixture containing about 10% of decarbonized gases, in particular biomethane and hydrogen. The strategy envisages that the first nuclear power plant unit with a capacity of about 1-1.6 GW will come online in 2033. Subsequent units will be implemented every 2-3 years, and the entire nuclear program assumes construction of 6 units.

Green policy in National Reconstruction Plan

According plans Poland will have about 58 billion Euros at its disposal from EU's Reconstruction Fund. In accordance to the Polish National Reconstruction Plan (NRP) the expenses for green policy is the most important part from this Found for Poland. Percentage of expenses for several areas: Green energy and reduction of energy intensity - **39.8** percent

of the planned spending under the NRP, Green, intelligent mobility - **20.9** percent.

Poland - moving away from coal - intends to take care of clean air and allocate additional funds for green energy and reducing energy intensity of the economy. One of the measures included in the NRP is to be the replacement of heat sources in residential buildings. The EU funds will be used for the following investments: replacement of inefficient sources of heating and hot water preparation, thermo-modernization of residential buildings, installation of renewable energy sources (including photovoltaic panels and solar collectors). One of the other objectives of the NRP is to improve conditions for the development of hydrogen technologies and other decarbonized gases.

The "Green, intelligent mobility" area includes investments in zero- and low-emission collective transport. "Support will be provided for activities in the area of purchasing modern approx. 110 rail (streetcar) rolling stock. Support will be given primarily to areas where clean transport zones have been or are planned to be introduced" - we read in NRP. Moreover, the funds will be allocated to regional passenger rolling stock. This is to contribute to the increase of transport attractiveness by increasing the accessibility and comfort of travel. As it was explained, the regional carriers are to be supported with EUR 500 million under the loan mechanism. The government also wants to change the regulations for clean transport zones. They are to be obligatory in cities with population of more than 100 thousand, where harmful substances are exceeded.

Conclusion

Poland's energy future faces a profound transformation. It is necessary in the context of the EU's New Green Deal policy, which imposes green requirements but allows the European Union to cover the costs of changes to the Polish energy sector. A new Polish energy strategy is also necessary to receive support from the EU's Covid-19 Recovery Plan. Its implementation is an extremely difficult socio-economic challenge for

Poland because energy production in country is based primarily on coal. Poland is currently the largest producer of energy from coal in Europe. But it has a comprehensive plan to change this situation, assuming a gradual reduction of coal consumption, energy transition and increasing the share of nuclear and wind power in the Polish energy mix. Poland's National Recovery Plan is a tremendous opportunity to make significant investments especially in energy transformation. The scale of benefits for the Polish green policy will depend on the final version of the National Reconstruction Plan and on the effectiveness and efficiency of the use of funds from the EU Reconstruction Fund.

Romania's Green Development Policy and Action

Oana Popovici

Summary

Romania is part of the global effort to combat climate change and has assumed the European target of achieving carbon neutrality by 2050. The support for climate improvement, sustainability and green development are granted by the Romanian Presidency and the Government. The latest actions in the direction of green development were reunited under the National Recovery and Resilience Plan, targeting six major components of reform. The measures are completed by a national strategy for green jobs, as the ecological sectors in Romania could represent 25% of total employment.

Climate and sustainability is one of the commitments of President Klaus Iohannis in his second mandate. The expressed intentions are to support public policies that ensure a clean environment, in particular measures to reduce pollution, protect biodiversity and combat climate change. Romania has assumed the European target of achieving carbon neutrality by 2050 and has set an ambitious target for reducing greenhouse gas (GHG) emissions by 2030 (at least 55% of the level in 1990). Romania aims to completely give up coal from the energy mix by 2032. Concerning the share of renewable energy, in the Integrated National Plan in the field of Energy and Climate Change 2021-2030, Romania has assumed the goal to have a share of energy from renewable sources of at least 30.7% by 2030, with intermediate targets of 25.2% (in 2022), 26.9% (in 2025) and 28.4 (in 2028), respectively. Although it is one of the highest shares in the region, the European Commission recommended a target of at least 34% of the share of energy from renewable sources in gross final energy consumption, given the abundance of renewable resources.

At present, although Romania is among the countries with the lowest GHG emissions per capita in the European Union (EU), it ranks among the first places when the same indicators is compared to the GDP size. The main sector causing air pollution remains the energy sector, generating 30% of the total GHG emissions, plus wastewater and waste generation. The agricultural sector generates 17% of total GHG emissions, and the transport sector 16.6%, under the EU average. The high value of GHG emissions in the energy sector is determined by the fact that energy production is largely based on the use of coal and that this energy is used by heavy industry and energy-intensive manufacturing. The electricity production mix in Romania in 2020 indicates that fossil fuels were responsible for 36% of total energy production, followed by hydropower with 28%, nuclear power (20%), wind power (12%) and photovoltaic solar panels (3%). In addition, there are other problems that must be tackled, such as the improvement of the waste management, the extensions of the air quality monitoring systems, opening the access to green financing, expansion of areas with forests by dealing with financial and administrative issues, increasing the administrative capacity and expertise in sustainable transport, green transition and climate change.

Romania, as a member state of the United Nations (UN) and the EU, developed a National Strategy for Sustainable Development, in order to establish the national framework for supporting the UN 2030 Agenda and implementing the set of 17 Sustainable Development Goals (SDGs). The strategy supports Romania's development on three main pillars (economic, social and environmental). For each SDG, measures for 2020 were established as well as targets for 2030. In addition, Romania has expressed its agreement with the EU Green Deal. However, officials stated that although Romania can accept the ambitious targets of the energy transition in the European Green Pact, it will do it under certain conditions, since the transition must consider the specifics and resources of each country. These conditions are related to the actual discussions at the EU level, regarding the inclusion of gas facilities among the investment targets. Romania supports the development of gas structures, given the national specific.

The latest actions in the direction of green development were reunited under the National Recovery and Resilience Plan (NRRP). The plan contains proposals of measures and reforms that will lead to increased resilience, and requests EUR 14.3 billion in grants and EUR 15 billion in loans under the Recovery and Resilience Facility for achieving the intended aims. Among the six pillars of NRRP, the first one deals with the green transition. There are six major components under this pillar, each with its own set of reforms:

- Three reforms under the first component, *Water and sewerage system management*, with a total allocation of EUR 1.88 billion. The reforms target the strengthening of the regulatory framework for the sustainable management of the water and wastewater sector and for accelerating people's access to quality services in line with European directives, as well as improving the modernization of the national water management system.
- Two reforms under the second component, *Afforestation and protection of biodiversity*, amounting to EUR 1.37 billion. The measures to be taken regard the reform of the forest management and governance system through the development of a new National Forestry Strategy and subsequent legislation and that of the management system of protected natural areas in order to implement coherently and effectively the European Biodiversity Strategy.
- The third component targets *Waste management*, with a total proposed budget of EUR 1.2 billion. This component targets the improvement of the governance in waste management to accelerate the transition to the circular economy, including legislative changes for a unitary waste management practice, development of the monitoring and control capacity and developing the air pollution monitoring equipment.
- *Sustainable transport* is the fourth component, under which there are envisaged two reform measures, with a budget of EUR 7.62 billion. The first one aims to improve the strategic, legal and procedural framework

for the transition to sustainable transport while ensuring decarbonisation and road safety, and the second one targets the increase of the institutional capacity of management and corporate governance for providing quality transportation.

- *The Fund for the Renewal Wave* is the fifth component, aiming to implement legislative changes and programs as well as a fund for the renovation of public, residential and heritage buildings. The total budget is amounted to EUR 2.2 billion and the reforms will target the achievement of a simplified and updated regulatory framework to support the implementation of investments in the transition to green and resilient buildings and the updated strategic and technical regulatory framework for the design and construction of green and resilient constructions.
- The last component is related to *Energy*, concerning six types of reforms that will require a budget of EUR 1.63 billion. Among the measures envisaged, there are:
 - The reform of the electricity market, in order to replace coal in the energy mix and develop a stimulating legislative and regulatory framework for private investment in renewable electricity generation;
 - The development of a legislative and regulatory framework conducive to future technologies, in particular hydrogen and storage solutions;
 - The improvement of the corporate governance of state-owned companies in this sector;
 - The reduction of the energy intensity of the economy through the development of a sustainable mechanism to stimulate energy efficiency in industry;

- The increase in the competitiveness and decarbonisation of the heating-cooling sector;
- The enhancement of the decarbonisation in the transport sector by investing in electric transport infrastructure and creating incentives for green transport.

The transition towards renewable energy is one of the most important issues in the next period. In order to achieve the objectives already assumed by Romania, NRRP envisages the development of additional renewable energy capacities by 2030 of approximately 6.9 GW, compared to 2015, correlated with the decommissioning of coal capacities. Achieving this target requires funding resources for the proper adaptation of electricity networks, for the installation of natural gas back-up capacities, for storage capacities and the use of intelligent electricity management techniques. The estimated needed investment for developing the low carbon technologies amounts to EUR 22 billion.

However, there are worries that an important amount of money will be distributed towards fossil fuels, more exactly for the construction of fossil gas distribution infrastructure, in gas plants or in carbon dioxide capture facilities. A Greenpeace report indicates that gas is a fossil fuel that prevents the development of green energy and slows down the energy transition. If focusing on this element, Romania will miss the already established goals and the gap from the EU's targets to significantly reduce its emissions by 2030 and achieve climate neutrality by 2050 will further increase. In addition, a legislation related to the production of electricity using hydrogen is also expected, since there is no regulatory framework in this area.

Several strategies at national level connected to sustainable environment and greening started to appear, such as the National Strategy for Green Jobs 2018 – 2025, for ensuring the transition to the green economy, as it is estimated that the ecological sectors in Romania could represent 25% of total employment. The major objectives are to stimulate entrepreneurship

and green job creation with an emphasis on sectors of increased competitiveness, to develop skills to ensure quality employment in competitive sectors generating green jobs, and to strengthen cooperation with relevant actors and dialogue with the social partners from sectors with potential for green job creation.

Serbia's' Green Development Policy and Action

Ivona Ladjevac

Summary

There are several very serious challenges that humanity is faced with. Leaving a side COVID-19, out of many, climate change, biodiversity loss, and growing inequality could be named. Each of those harshly affects the environment and therefore each country, within its capabilities, should contribute protection by designing green development policies and appropriate actions.

Serbia is on a good path towards developing a new economic model based on green growth through more intensive use of digitalization, circular economy and adoption of innovative solutions for greater de-carbonization and better utilization of renewable energy resources.

Serbia and international standards

Being a responsible member of the international community, the Republic of Serbia has ratified the United Nations Framework Convention (UNFCCC) on the 12th of March 2001.¹ Its commitment to sustainable development later has confirmed by adopting new supreme legal act – the Constitution.²

¹ “The United Nations Framework Convention on Climate Change”, the United Nations, 1992, https://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf, accessed on 07/08/2021.

² “Constitution of the Republic of Serbia”, *Official Gazette of the RS* No. 98/2006, <http://www.ustavni.sud.rs/page/view/en-GB/235-100028/constitution>, accessed on 07/08/2021.

As stated in Provision 9 of Article 97 of the Constitution of the Republic of Serbia “the Republic of Serbia regulates and ensures sustainable development; the system of protection and enhancement of the environment; protection and enhancement of flora and fauna; production, trade and transport of armaments, poisonous, flammable, explosive, radioactive and other hazardous substances“. ¹ According to the Constitution the Republic of Serbia is also obliged to ensure balanced development as stated in its Article 94: „The Republic of Serbia shall ensure balanced and sustainable regional development, in accordance with the law.“

Reforms implemented in the Republic of Serbia so far have initiated its growing into sustainability that was led by the commitment to bring to life equality of sustainable opportunities for all in all parts of Serbia. Significant new possibilities have been opened for accessible sustainable opportunities for better life choices for all and a balanced encouragement of abilities of all to enjoy the benefits of increasing social inclusion and solidarity, greater social and economic equity and for spreading pre-requisites for decent work and effective participation in community decision-making.

Additionally, the strategic overarching document of integrated management of all sectoral policies in order to achieve sustainable development was adopted on 9 May 2008. The National Strategy of Sustainable Development for the period 2009 - 2017², along with the accompanying Action Plan for its implementation adopted in 2009, clearly set out that sustainable development is a general direction and commitment of the Republic of Serbia and is an aspiration to create better living conditions by adjusting the social and economic factors with the environmental factors“.

The goal of the Strategy, for which there was a reporting obligation, was to achieve a balance: “between the three ‘pillars’ of sustainable development

¹ Ibidem.

² “National Sustainable Development Strategy”, Government of Serbia, <http://www.gs.gov.rs/english/strategije-vs.html>, accessed on 07/08/2021.

which include: knowledge-based economy, socio-economic development and the protection of the environment and natural resources.

The Strategy set out the following national priorities:

- a) membership in the European Union (EU);
- b) developing competitive market economy and balanced economic growth;
- c) developing human resources and increasing the rate of employment;
- d) developing infrastructure and balanced regional development; and
- e) protection and enhancement of the environment and improving the utilization of natural resources.”¹

Besides internal political decisions about improving environment protection, since Serbia officially opened the accession negotiations with the European Union on 21st of January 2014, there are also requirements set by the EU. Actually, one of the most requiring and the most challenging negotiation chapters is Chapter 27 on environment and climate change.²

Chapter 27 includes one-third of all European Union regulations and comprises around 700 legal documents and 200 key directives, regulations and decisions. Economic challenges in the area of environment are also significant. Based on the status of infrastructure in the Republic of Serbia, it has been estimated that total costs for implementation of all legal requirements of the European Union in the field of environmental protection will amount to approximately 10 billion Euros, out of which most funds will be needed in the area of water management, followed by waste management and industrial pollution. Environmental protection is a

¹ Ibidem.

²“Negotiating Positions”, Ministry of European Integration Government of the Republic of Serbia <https://www.mei.gov.rs/eng/documents/negotiations-with-the-eu/accession-negotiations-with-the-eu/negotiating-positions/>, accessed on 07/08/2021.

matter that concerns all, since it is an indicator of social prosperity, and conservation thereof means creation of healthy and sustainable future.

Therefore, as the EU candidate country, Serbia is making an effort to align it's with the EU policies and actions. One of them is the EU 2030 Climate and Energy Framework that set three key targets to be achieved by 2030: at least 40% cuts in GHG¹ emissions (from 1990 levels); at least 32% share for renewable energy; and at least 32,5% improvement in energy efficiency.

Assessing the contribution of Serbia to all the joint efforts of a thorough transformation as is envisaged in the sustainable development vision of the Agenda 2030, and which was jointly determined to be desirable and achievable, the Commission in 2018 stated that Serbia: “is fully committed to implementing the 2030 Agenda and the accompanying Sustainable Development Goals. Their customization to the circumstances in the country is under way. Serbian and the United Nations initiated in 2017 the Development Partnership framework for the period 2016 to 2020. The Development Partnership Framework is fully integrated within the national development priorities, as well as with the process of the accession of the Republic of Serbia to the European Union and the Sustainable Development Agenda by 2030.”²

Serbia also has ratified the Paris Agreement on 25th of July 2017 under which has commitment under to “reduce GHG emissions by 9,8%³ until 2030 compared to emissions in 1990”.

Serbian internal green regulations and policies

¹ GHG emissions - greenhouse gas emissions.

² European Commission, Annex to the Commission implementing decision amending Commission Decision C(2014)5872 of 19.8.2014 adopting the Indicative Strategy Paper for Serbia for the period 2014-2020, Brussels, 10.08.2018, <https://ec.europa.eu/neighbourhood-enlargement/sites/default/files/20180817-revised-indicative-strategy-paper-2014-2020-for-serbia.pdf>, accessed on: 07/08/2021.

Process of the EU integration, speeded up developing and adoption of the relevant legislation.

In March 2021, the Government of Serbia has adopted the set of bills on renewable energy sources, energy, energy efficiency, and mining, and sent them to the Parliament for adoption. The National Assembly of the Republic of Serbia has adopted two new laws – the Law on renewable energy sources¹ and the Law on energy efficiency and rational use of energy², as well as amendments to two laws – the Law on energy³ and the Law on mining and geological research⁴.

Given the changes it brings, such as auctions for the allocation of premiums and conditions for the development of the free electricity market of renewable energy sources, the renewable energy sources bill has attracted the most attention. However, it retains some feed-in tariffs, a supporting mechanism introduced by the Serbian Government almost a decade ago to support the first investments in renewables. In the new law, the feed-in tariffs will be applied for new power plants below 500kW and for wind power plants up to 3 MW.

¹ “The Law on renewable energy sources”, *Official Gazette of the RS* No. 40, 22/04/2021, (in Serbian: “Zakon o korišćenju obnovljivih izvora energije”, “Službeni glasnik RS”, broj 40 od 22. aprila 2021), <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2021/40/2/reg>, accessed on: 07/08/2021.

² “The Law on energy efficiency and rational use of energy”, *Official Gazette of the RS* No. 40, 22/04/2021, (in Serbian: “Zakon o energetskej efikasnosti i racionalnoj upotrebi energije”, “Službeni glasnik RS”, broj 40 od 22. aprila 2021), <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/skupstina/zakon/2021/40/4/reg>, accessed on: 07/08/2021.

³ “The Law on energy”, *Official Gazette of the RS* No. 40, 22/04/2021, (in Serbian: “Zakon o energetici”, “Službeni glasnik RS”, broj 40 od 22. aprila 2021), https://www.paragraf.rs/propisi/zakon_o_energetici.html, accessed on: 07/08/2021.

⁴ “The Law on mining and geological research”, *Official Gazette of the RS* No. 40, 22/04/2021, (in Serbian: “Zakon o rudarstvu i geološkim istraživanjima”, “Službeni glasnik RS”, broj 40 od 22. aprila 2021), accessed on: 07/08/2021.

The bill will create conditions to speed up the development of green energy projects including the construction of wind farms and solar power plants, but also the installation of solar panels on the roofs of houses and companies to enable citizens and businesses to produce electricity for self-consumption, and became prosumers.

The new legal framework enables investments and Serbia's shift towards green energy and the green economy. They will allow the country to embark on the path of climate-neutral development and green energy.

Evidently, it is too early to judge if and to what extent this new set of laws will contribute to the Serbian environment, but the existing framework is providing solid base for achieving targets set both by the European Union and the United Nations.

Conclusion

Serbia is in a position to pursue long-term sustainable 'green growth' strategies. Green growth strategies should be considered as a possible set of no regret development strategies. Society in Serbia can be mobilized around this goal, since green growth strategies are able to simultaneously deliver on GDP growth, impairment of regional disparities and employment creation, generating numerous, yet dispersed winners. Such development can be achieved only as a path that genuinely responds to the needs of Serbian citizens. Public participation in policy making, implementation, monitoring and evaluation are essential if such a policy is to be pursued. Energy and resource efficiency is the key sector in which reform should begin. Relevant international standards, both EU and non-EU, for governance in general and the energy sector in particular, should be used as tools in this endeavor.

Current Environmental Issues and their Reflection in Slovakia's Policy

Michaela Čiefová

Summary

The present text aims to illuminate the areas of environment protection and related issues that belong to the most current topics in Slovakia. The briefing focuses on two central topics, in concrete policy developments regarding the grey wolf, brown bear and chamois (mountain goat), and waste management. We conclude, raising environmental awareness is crucial when it comes to mitigating impacts of the climate change. We expect environmental topics to come to the forefront of not only academic discourse, but also debates in the political arena and the broad public.

Introduction

The objective of this social briefing is to present several crucial issues of the environment and how these are dealt with in the Slovak Republic. Problems of the environment are indeed diverse and interconnected, ranging from climate change, through the loss of biodiversity, to illegal hunting. Moreover, what may at the first sight seem to be a matter of nature is in fact linked to economic as well as social phenomena, exacerbating environmental migration or creating pressures on national budgets when trying to mitigate the impacts of environmental problems. The topics analysed within the particular sections of this text have been selected foremost based on their being the most current ones, with a broad media coverage.

The briefing is divided into two main chapters. The first one aims to shed light on selected animal species (mammals, in particular), namely brown

bear, grey wolf and chamois (mountain goat) and the contemporary policy developments concerning them. Next, we discuss the current state and challenges of waste management and recycling, predominantly some amendments to the law.

Fauna in the country – brown bear, grey wolf and chamois

The fauna in Slovakia is highly diverse, considering the size of the country. Many animal species are even protected by law, or their population is constantly monitored. Recently, wolf and bear seem to have been receiving extraordinary attention of the media and also policy makers.

The brown bear's usual territory covers a substantial part of Slovakia, mainly the mountainous areas in the northern and the central part of the country. Due to the large area they cover, it is fairly difficult to assess how many there actually are. However, according to research conducted in 2013-2014, there seemed to be 1000-1500 bears at that time,¹ and the number increased to 2760 by 2020 (spring before the cubs were born). Hence, the population of the brown bear is rising rapidly, resulting in bears being spotted in areas which are not their usual habitat.² An issue linked to bears and their movements and probably also numbers is their fancying trash cans in villages. It has happened several times that bears were seen in areas inhabited by humans, eating out of containers for communal waste. Leaving these containers unlocked or otherwise unprotected, they represent an easily available source of food for the bears, as the Ministry of the Environment points out.³ This is linked to another problem the country faces, namely waste management. Indeed, large quantities of unconsumed human food end up being thrown away in the communal waste, as

¹ Medvede u nás (2020).

² Pilz, T. (2021). Na Slovensku má byť takmer tritisíc medved'ov. Strieľať či nestrieľať?

³ Ministry of Environment of the Slovak Republic (2021). Výzva na zabezpečenie odpadu pred medved'mi.

overconsumption and inefficient composting are still a challenge that needs to be dealt with.

The brown bear has become a subject of recent media reports not only due to their eating out of people's trash containers, but also as a result of a sad event that happened several weeks ago. After approximately one hundred years, a man died after an encounter with a brown bear. It happens occasionally that a bear attacks a human, and events resulting in death are even rarer. This tragedy has re-opened debate between hunters and the activists about whether the population of the brown bear should be regulated.

Besides bears, the topic of wolves' protection made its way to the media and political arena. *Canis lupus* has officially become a protected species, and thus during the whole year, not only throughout a specific season. However, this does not mean that no wolves will be killed in the future, but the Ministry of the Environment will have to give its consent and allow a certain number of individuals to be shot down.¹ We absolutely consider this to be the right step. Based on the new legal regulation, it will be prohibited to injure, kill, transport, sell, or keep wolves. The societal value of the wolf will amount to 3000 euro. The legal regulation was signed on the Earth's Day.²

Last but not least, the counting of the chamois population resonated in the media. The "census" of this animal in Slovakia has a tradition of 70 years. The worst situation was detected in the 90's, when the population of chamois represented only around 200 pieces. The highest so far reported number was in 2018, with more than 1400 animals. However, the number fell to less than 1000 by 2020. This animal is said to be the symbol of High

¹ Kubisova, J. (2021). Vlk dravý bude celoročne chránený. Nevylučujeme však, že na jeho odlov udelíme výnimku (rozhovor).

² TASR (2021). Vlk dravý sa stal chráneným živočíchom, Budaj podpísal vyhlášku.

Tatras,¹ hence its protection and monitoring is inevitable. As for its current population, the final result of the data analysis remains unknown when completing this text. We hope, the analysis will have shown favourable population development.

Current challenges of waste management

Waste management, no or wrong recycling and massive consumption are problems that are present in many developed countries, with Slovakia being no exception. For many years, none or only limited attention has been dedicated to this, but the situation is slowly improving. In favour of this statements speaks also recent amendment to the law on waste that has made its way through the first reading in the Slovak parliament. In accordance with the law amendment, recycling and sorting of waste should be the preferred way of waste handling, not incineration as before. The legislature should forbid incineration in cases when it is possible to reuse the material. One of the materials that is recycled in exceptionally limited amounts is textile. Should the law amendment become law eventually, municipalities would be obliged to ensure that textile is sorted as of 2025.²

What we perceive as an enormous challenge is to motivate people to change their habits, as recycling – not to mention upcycling and similar methods reducing waste – is still not common in many households. On the other hand, second hand or zero-waste / no-packaging stores have been opened in several larger towns across the country. Similarly, there are people that have started composting, not only in outdoor composting containers, but also in apartments using indoor versions of composters.

¹ Vysoké Tatry – TV Markíza (2021). V Tatrách ráтали kamzíky. Ich počty v uplynulých rokoch klesali.

² Ministry of Environment of the Slovak Republic (2021). Novela zákona o odpadoch prešla prvým čítaním parlamentu.

Obviously, raising environmental awareness should become one of the priorities of the country's environmental policy in order to persuade more people about the benefits of an eco-friendly way of life. Moreover, some incentives and motivators might work as well. An example is the possibility to bring used glass or plastic bottles and cans to a store and getting some cash in return. As for glass bottles, this has been feasible for many years now. Returning PET bottles and cans, however, is a novelty. According to statistical data, approximately one billion plastic bottles are sold in Slovakia every year, it is therefore crucial to ensure they will not end up in the nature,¹ which is, unfortunately, very often the case. The problem of polluting the environment has been accentuated for years, and despite that there are individuals who do not mind leaving trash behind in forests, parks, or by lakes. One of the impacts of the pandemic is a large quantity of facemasks in the nature, which has been observed also by the author of this text. Nevertheless, one billion bottles is a huge number, considering Slovakia has only some 5.5 million inhabitants. Hence, we are absolutely in favour of this step.

We would also like to seize this opportunity to refer to our Slovakia Social Briefing published in June, 2019, the theme of which was the use of disposable plastics in Slovakia.²

Conclusion

¹ Ministry of Environment of the Slovak Republic (2021). Čo prinesie zálohovanie.

² For more information see: Ciefova, M. (2019). Slovakia social briefing: No more disposable plastics in Slovakia. In: Weekly briefings, 19(3). Available at: <https://china-cee.eu/2019/07/02/slovakia-social-briefing-no-more-disposable-plastics-in-slovakia/>.

In the present briefing we attempted to discuss two main topics concerning the environment and related policies in the Slovak Republic, namely legal regulations regarding selected mammals and waste management.

Slovakia, in spite of its being a relatively small country as for its size, is incredibly rich when it comes to its nature, including flora and fauna. Many species have been declared protected by law. However, with the increasingly visible impacts of climate change, we can expect further changes in the legislature concerning the environment, as other species will probably need more protection in order to reverse the loss of biodiversity. Furthermore, a more effective waste management will be necessary in order to facilitate recycling and thus reducing the amount of waste that ends up at dumps, very often in vain.

Sources

1. Ciefova, M. (2019). Slovakia social briefing: No more disposable plastics in Slovakia. In: Weekly briefings, 19(3). Available at: <https://china-cee.eu/2019/07/02/slovakia-social-briefing-no-more-disposable-plastics-in-slovakia/>.
2. Kubisova, J. (2021). Vlk dravý bude celoročne chránený. Nevylučujeme však, že na jeho odlov udelíme výnimku (rozhovor). In: aktuality.sk. Available at: <https://www.aktuality.sk/clanok/884295/vlk-dravy-bude-celorocne-chraneny-nevylucujeme-vsak-ze-na-jeho-odlov-neudelime-vynimku-rozhovor/>. Accessed on 13 July 2021.
3. Medvede u nás (2020). In: medvede.sk. Available at: <https://www.medvede.sk/?action=udaje>. Accessed on 13 July 2021.
4. Ministry of Environment of the Slovak Republic (2021). Výzva na zabezpečenie odpadu pred medveďmi. In: Ministry of the Environment of the Slovak Republic. Available at:

<https://www.minzp.sk/spravy/vyzva-zabezpecenie-odpadu-pred-medvedmi.html>. Accessed on 13 July 2021.

5. Ministry of Environment of the Slovak Republic (2021). Novela zákona o odpadoch prešla prvým čítaním parlamentu. In: Ministry of the Environment of the Slovak Republic. Available at: <https://www.minzp.sk/spravy/novela-zakona-odpadoch-presla-prvym-citanim-parlamentu.html>. Accessed on 13 July 2021.
6. Ministry of Environment of the Slovak Republic (2021). Čo prinesie zálohovanie. In: Ministry of Environment of the Slovak Republic. Available at: <https://www.minzp.sk/zalohovanie/>. Accessed on 13 July 2021.
7. Pilz, T. (2021). Na Slovensku má byť takmer tritisíc medved'ov. Strieľať či nestrieľať? In: Denník Štandard. Available at: <https://dennikstandard.sk/86280/takmer-3-000-medvedov-na-slovensku-strielat-ci-nestrielat/>. Accessed on 13 July 2021.
8. TASR (2021). Vlk dravý sa stal chráneným živočíchom, Budaj podpísal vyhlášku. In: SME. Available at: <https://domov.sme.sk/c/22643914/vlk-dravy-sa-stal-chranenym-zivocichom.html>. Accessed on 13 July 2021.
9. Vysoké Tatry – TV Markíza (2021). V Tatrách ráтали kamzíky. Ich počty v uplynulých rokoch klesali. In: TV Noviny. Available at: https://www.tvnoviny.sk/zaujímavosti/2033036_v-tatrach-ratali-kamziky-ich-pocty-v-uplynulych-rokoch-klesali. Accessed on 13 July 2021.

Green Development Policy and Action – Slovenia

Helena Motoh

Summary

As part of EU Slovenian green development policy is mostly marked by the overall EU strategies for sustainable development and carbon emissions reduction under the general guidelines of the European Green Deal commitments. Apart from that, during the Slovenian presidency of the Council of the EU, two other priorities are frequently addressed, biotic diversity and circular economy with waste management as one of its pillars. Two key documents, adopted in 2021 will mark these attempts most significantly, the Resolution on the Slovenian climate long-term strategy 2050 (ReDPS50), and the proposed new Environmental Protection Act (ZVO-2).

Priority topics of the Slovenian presidency of the Council of the EU

During the Slovenian presidency of the Council of the EU which takes place in the second half of 2021, between July 1 and December 31, three main environment-related topics are in the focus of Slovenian activities and initiatives: climate neutrality, biotic diversity, and circular economy.

The first priority topic follows the general guidelines of the European Green Deal, the initiatives and policies attempting to lead Europe to climate neutrality by the reduction of greenhouse gas emissions. Legislation tools and new mechanisms also announced under the title of “Fit for 55%”, were proposed by EU on July 14, establishing the structure to help Europe achieve the target of 55% reduction in net greenhouse gas emissions by 2030 (compared to the levels of 1990) and to make Europe the first climate neutral continent by 2050. The package includes a variety of new measures:

a revised EU system of trading in carbon dioxide emissions, the revised system of sharing the load, new standards on carbon dioxide emissions for vehicles, land use strategies etc. According to the same principles more than a third of the NextGenerationEU recovery funds are to be used in relation to the goals set in the European Green Deal. According to the statements of the government, Slovenian presidency period will try to focus on the debate on this legislation package and seek to find the compromises to address the open issues, also by establishing a framework to provide the member states with the funding and resources needed to implement the measures of the green transition. Slovenia is addressing this issue with the document, officially adopted on July 13 this year, the “Resolution on the Slovenian climate long-term strategy 2050”, which follows the same goals. Slovenia will also coordinate the viewpoints of the EU members at the 2021 United Nations Climate Change Conference which will take place in Glasgow in November.

The second priority topic of the Council of the EU Presidency, biotic diversity, is an important pillar of Slovenian environmental politics, especially since joining the EU and adopting the Natura 2000 guidelines. Slovenia is a good example of preserved biotic diversity in Europe with just over 37% of its territory being included in the Natura 2000 framework in 355 protected areas of biotic diversity. More than a tenth of all Natura 2000 protected species and environments are in Slovenia – 205 animal species, 27 plant species and 60 typical natural environments are included in the programme protection list. Almost all Slovenian municipalities – 204 out of 212 – include Natura 2000 protected areas. In most of these 204, Natura 2000 protected areas make between 5 % and 30 % of the territory, while in 23 the protected areas make up to 80 % or more. Slovenia is also a significant case of how the protected areas are inhabited and cohabited with. 6 % of the entire population (around 128,000 people) live in the protected areas of Natura 2000, with 70 % of the areas being covered in forests and just over 20% being used as farmland. The measures of Natura

2000 were first adopted in state owned forests, with gradual transition to their implementation also in the privately owned forest areas from 2017 onwards.

The third priority topic of the Slovenian presidency is the circular economy is focused especially on the impact of proper waste management on the implementation of the circular economy model. An example of this orientations, stressed by the Ministry of Environment, is the debate on the new proposed Sustainable Batteries Regulation. This regulation, which will replace the outdated 2006 regulation, will address the issue of the entire life cycle of a product, but also solve the double-edged issue of the batteries as being one of the key elements in the green energy transition while also producing potentially very harmful waste, both in their production and the acquisition of the rare earths as in the waste removal phase.

Slovenian policy and legislation changes

In its application for the NExtGenerationEU recovery funding, the media and the NGOs mostly warned that the initial proposal, presented in the beginning of the year, did not follow the green development priority enough. The proposal which was then confirmed by the European Commission in the beginning of July and by the Financial Ministers of the EU at the end of the same month. An estimated 42% of the 1.8 billion euros in grants and 705 million euros in loans will be directed towards the green transition goals. Apart from that, the statements of the Ministry of Environment also stress the main priorities of the national funding to be the national climate change fund, energy efficiency contribution, renewable energy contribution and resources directed at the development of transport infrastructure.

The 2021 is also marked by two important documents on the national level: Resolution on the Slovenian climate long-term strategy 2050 and the proposed new Environmental Protection Act (ZVO-2). The first was

adopted in the National Assembly on July 13 with 49 votes in favour and 17 against. The strategy is based on the Paris Climate Accords and other related documents with a planned 80-90% reduction of greenhouse gases in comparison to the 2005 net emissions and full climate neutrality by 2050. It also sets the framework for the policies of adaptation to climate change and securing the climate safety of the population. It also provides guidelines for the fields of transport, energy, industry, agriculture, waste management, land use, land use change and forestry. Despite the overall satisfaction with the ideas of the document the process of adopting the strategy, however, was controversial and widely criticized. Statements on nuclear energy which were dubbed problematic by the parliamentary environment committee, was removed from the proposed draft at first, only to be reinserted with an amendment on the very day of the National Assembly vote. As result of this move that was seen as an evident political manipulation, nuclear energy is now a key part of the adopted document, interpreted as a long-term option for achieving the transfer to climate neutrality. Apart from the debate on the nuclear energy, the ambitiousness of the resolution was also questioned by some opposition groups, who claimed that despite the 2050 goals matched those set by the international agreements, the realization of the steps necessary to achieve them is postponed too far in the future.

The second important document, which is still in the final stages of preparation at the Ministry of the Environment, is the new Environmental Protection Act (ZVO-2). Among the motivations usually listed for the adoption of the new legal regulation are the issues of waste management and the attempt to further the agenda of the circular economy. The current system of managing the waste packaging, recently analysed in detail by the Chamber of Commerce and Industry of Slovenia, is seriously deficient in reaching even basic environmental standards, while the companies responsible for packaging waste removal, do not fulfil their obligations. The standard proposed for the new Act is that the waste management becomes the responsibility of the producer and part of his extended responsibility. The proposed legislation also systematizes the entire waste

management process and the system of selecting the companies that handle the waste management phases. In more general terms the proposed Act aims to enable the transition to circular economy by stimulating production and consumption that reduce the negative load for the environment in the aspects of production, consumption, and waste, stimulating new greener technological solutions and the systematisation of compensations for environmental loads in pollution, waste, and the use of natural resources.

Conclusions

With key environmental topics being among the priorities of Slovenian presidency of the Council of the EU, the three priority topics also reflect in the creation of several key documents on the national level, most important ones being the resolution on strategies for achieving long term climate goals and the new Environmental Protection Act focusing on strategies for achieving circular economy. With the former being partly controversial due to the tactics of its adoption and the doubts in how realistically its timeline is set, the second one seems to have a more promising applicable strategies and can be hoped to also more imminent results. With the unstable political situation, however, the adoption of the latter law, as well as the concrete implementation of the former, might be left for the next government term and is therefore unnecessarily being postponed for the next year.

