

Bulgaria's
FUTURE
HISTORY
Textbook

SUMMARY

2021



2050

A publication of
Green Restart
Coalition

What can Bulgaria be like in 2050:

The project of the Green Restart Coalition, initiated by MOVE.BG shows how Bulgaria can become a green, digital, and innovative leader in 2050 if a number of emergency measures are implemented today.

A special „**Textbook on the Future History of Bulgaria**“ presents the possible positive development of our country in the next three decades, if today we start key reforms and design with an intelligent and long-term vision the National Recovery and Resilience Plan (NRRP) through which the country will receive additional 12 billion from the European Union recovery mechanism „Next Generation EU“.

The project is an initiative of the Green Restart Coalition which unites representatives of innovative business and environmental organizations: **MOVE.BG, WWF Bulgaria, Greenpeace-Bulgaria and the Institute for Circular Economy**. The union, established at the beginning of the pandemic in 2020, works to support the green recovery of Bulgaria and the green and digital transformation of the Bulgarian economy.

OUR FUTURE TODAY

In the Textbook, Bulgaria grows from a modest innovator with a high resource-intensive and carbon-intensive economy to one of the leading countries in Europe with developed innovative and green business, protected nature, and happy home of enlightened people who create projects and businesses solving global challenges.

The **“Bulgaria’s Future History Textbook”** shows the importance of long-term expert planning, beyond specific election cycles and governing configurations. Through the Textbook, the **Green Restart Coalition** insists that Bulgaria should not miss the historic window of opportunity for reforms created by the COVID-crisis, climate change, and the processes of digitalization and automation in the world.

The **“Bulgaria’s Future History Textbook”** tells the process of change by 2050, if today we start introducing specific reforms in seven areas, presented as separate lessons in the Textbook: Innovative Economy, Industry 4.0, Skills of the Future, Energy Transition, Climate Change, Circular Economy, and Biodiversity.

a Textbook on Future History Gives the Answers

The reforms are based on more than 200 expert proposals in five Coalition’s opinion papers, set up to improve Bulgaria’s National Recovery and Resilience Plan. As the Textbook is more than 100 pages, the Coalition has created English summary in less than 20 pages to disseminate the key recommendations to the international audience so that we stimulate cross-border cooperation and transfer of ideas in these critical times for the green recovery and transformation.

WHY ARE THOSE REFORMS NEEDED TODAY?

The coronavirus pandemic has shown humanity the dimensions of a global crisis. The experience of solving it with unprecedented mobilization and transnational cooperation is a lesson for successfully dealing with a potentially much more destructive climate crisis. This task, along with providing an environment for economic development in the age of automation, is set by the European Union in the ambitious program for recovery from the COVID crisis - „Next Generation EU“. It provides not only additional financial resources, but also a historic chance for the transformational development of the member states towards an innovative and green economy, catching up with the digitization of processes and skills, and paving the way for prosperity for generations to come.

With smart planning of the additional multibillion-dollar financial resources, qualitative reforms are possible in Bulgaria in the direction of education for the future, scientific research of benefit for the innovative industry and to remove our country from its role as a supporting player in other countries’ economic programs. The future we all want is possible.

However, the realization of this future depends on the decisions that are made today. It depends on the contribution and participation of each one of us. We have a role in creating this possible future together, regardless of the field in which we work - politics, business, science, and the non-governmental sector.

It is time to write our future together.

**The Green
Restart
Coalition**

THE INNOVATIVE BUSINESS



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IN BULGARIA





THE INNOVATIVE BUSINESS

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

Two of the “Next Generation EU” priorities are to support the green and digital transformation of the economy as a path for overcoming the crisis and reaching long-term prosperity. In both directions, Bulgaria is experiencing serious challenges, and especially alarming is the SMEs digitization performance as those enterprises are the backbone of our economy and the biggest employer in the country. Only 7% of Bulgarian SMEs sell online compared to an average of 18% in the EU and roughly 2% of the turnover comes from e-commerce while the average EU level is 11%, according to the DESI Index of the European Commission.



WHAT ARE

Those challenges are a serious risk for Bulgaria, because, as the pandemic has shown, businesses unprepared for the digital world can fall off the economic map in days.

But there is positive news as well - a small segment of SMEs does not lag behind technological development and creates world-class innovations. Those small and medium enterprises are the high-growth SMEs, popular as startups and scaleups. 47% of the Bulgarian startups develop global innovation and 65% of them sell in Europe, according to the National Startup Survey InnovationShip, conducted by MOVE.BG's EDIT program.

Those economic players have the potential to transform the portrait of the Bulgarian economy from heavily resource-based and carbon-intensive to one that creates value and products and services with care for nature and people's health. However, the pandemic put serious challenges for the traditional funding model of startups as the venture investment in Bulgaria crashed from USD 153 million in 2019 to USD 35.5 million in 2020, according to the European Startups Platform. Therefore, we need urgent actions in support of innovative business, and “Next Generation EU” is the tool that can be used in implementing special startup supportive programs.

THE CHALLENGES?
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THE CHALLENGES?

Based on our work with leading Bulgarian experts in the fields of innovation, greentech, and VC investment, we have proposed more than 40 ideas in support of the innovation ecosystem. During the previous 12 months, those recommendations were sent to Bulgarian authorities in charge of the preparation of the National Recovery and Resilience Plan. Among our proposed measures are:



Establishment of a **National Program in support of startup projects, created by students in the universities and specialized science center** with the aim to back young innovative business ideas as currently there is no such measure in Bulgaria. We propose also a mechanism for control and monitoring of the program to guarantee its academic and business independence;



Establishment of a **Green Investment Fund for SMEs with a focus on startups and scaleups** with the aim to support breakthrough impact business projects. The Coalition also proposes a mechanism for control and monitoring of the program as well as a strategy for long-term development and economic sustainability of the program after the “Next Generation EU”;

Introduction of **tax breaks** in support of green innovation: reducing VAT on products/services created by green businesses and introducing higher taxation for businesses and activities based on their carbon footprint;



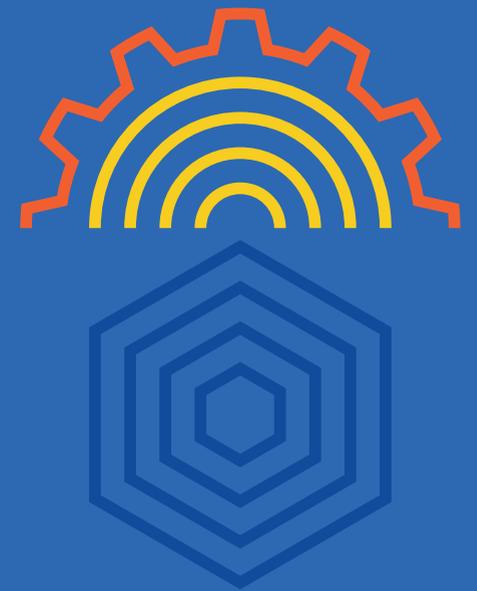
Establishment of an **Independent National Agency for Science and Innovation with ministerial status**. We propose also a special mechanism to guarantee its independence from political and economic interference and a special procedure for independent appointment of its Chairman and members of the Executive Board;



Creation of **law definition for ‘startup’** as currently there is no legal framework for those types of economic players and they are treated as grocery despite their specifics and innovation potential.



INDUSTRY 4.0



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INDUSTRY 4.0

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

14 years after joining the European Union, Bulgaria faces serious difficulties related to the competitiveness of its economy. The country ranks 49th in the World Economic Forum Report and the main problems that the analysts mention are low technological efficiency of the economy, weak cluster development, insufficient investment in innovation, and weak cross-sectoral cooperation.

“Bulgaria is the most resource, energy, and greenhouse gas emission-intensive economy in the EU, with important investment needs in the fields of energy and decarbonisation to facilitate the transition to climate neutrality,” writes the European Commission in the 2020 Spring European Semester at the beginning of the pandemic and the establishment of the “Next Generation EU”.



WHAT ARE

Modernization of the Bulgarian business and its transition to Industry 4.0 is key for tackling the problems, especially the inefficient use of resources in industrial production. Despite those challenges, the government concept for developing Industry 4.0 in the National Recovery and Resilience Plan put industrial parks as the main recipe for reforms and stimulation of economic growth after the coronavirus. The innovation centres are heavily undermined as budget, scope, and activities. There is a real risk that the “Next Generation EU” will not be used as a tool for transformation and long-term reforms in support of green and digital transition. Therefore, the Green Restart Coalition demands an urgent improvement of the NRRP before its finalization in the second half of 2021.

THE CHALLENGES?
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THE CHALLENGES?

The Coalition proposes an integral program for the development of Industry 4.0 in Bulgaria with the aim to support the transformation of the Bulgarian economy from heavily resource-based to one producing value-based products and services. The program includes several points, among them:



Conducting an **expert analysis of the innovative and export potential of Bulgarian regions**. The analysis should be made by an expert group of local representatives of the business, science community as well as state and municipal authorities;



Creation of a **five-year strategic Industry 4.0 program** with the aim to develop the business environment and to attract entrepreneurs in high value-added industries. The program should be made on the basis of the expert analyses and put on the transparent process of public consultation involving all relevant stakeholders;

Creation of **ten Innovation Hubs** in Bulgarian regions to support the twin transition of the economy and to improve the business environment for local and international investors;



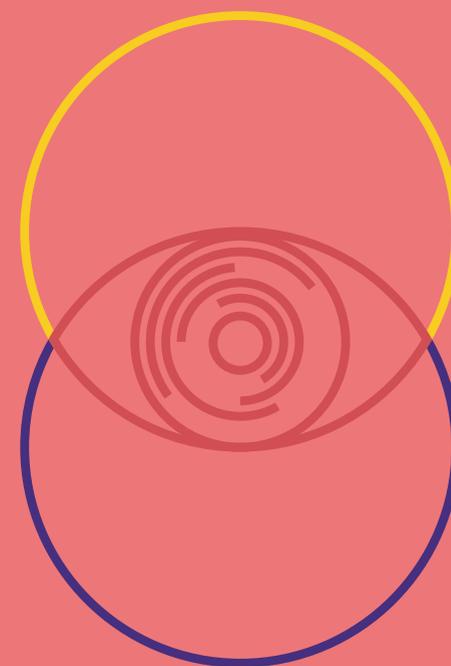
Establishment of **special SME funds for transition to Industry 4.0** in the regions of Bulgaria. The main focus of the funds, managed by the Innovation Hubs, should be reforming the industrial production from resource-based products and services to tech-based ones that implement new technologies such as artificial intelligence, big data, IoT, cloud computing, etc;



Establishment of a **Special mechanism of coordination between Innovation Hubs and Industrial Parks** with the aim to coordinate their programs and activities. This mechanism will also improve the overall business performance and environment in the regions and thus, will attract long-term investors.



SKILLS OF THE FUTURE



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SKILLS OF THE FUTURE

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

At the beginning of the second decade of the XXI century, Bulgaria continues to face serious challenges related to the digital skills of the population. In 2020, only 29% of Bulgarians have basic digital competencies compared to an EU average of over 58%, according to the DESI Index of the European Commission. Moreover, only 11% of the citizens have digital skills above the basic level, which is related to two other worrying facts - Bulgarians use the Internet only for browsing in the social networks (79% of the population), while „more sophisticated“ services remain unfamiliar - for example, only 11% of the population use online banking, compared to an EU average of 66%.



WHAT ARE

“Improving digital skills, for example through more digitally aligned degrees and curricula, could help to adapt to labour market changes produced by digitalisation and to the need for digital remote work,” writes the European Commission in the 2020 Spring European Semester.

Despite those recommendations and the problems mentioned above, measures to develop additional skills and competencies through qualification and upskilling are among the weakest in the National Recovery and Resilience Plan proposed by the Bulgarian government in April 2021.

THE CHALLENGES?
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THE CHALLENGES?

The Green Restart Coalition proposes long-term integral measures for overcoming the digital gap and developing green competencies as the two key pillars in the process of digital and green transition in the world and the European Union. Among our recommendations are:



Establishment of a **National Program for Qualification and Upskilling** in direct cooperation with the business. The program includes two subprograms: the first one targets the **improvement of digital skills** of employees and unemployed people. The Coalition proposes a mechanism for permanent analysis and improvement of the program according to the latest technology developments;



A second Subprogram for **Green Qualification and Upskilling** with the participation of experts from academic circles and NGOs. The focus areas of the program are a zero-waste way of living, circular and green economy principles, and blue economy developments and challenges;

Creation of a **Mechanism for certification of people, participating in the training sessions** - the idea will motivate more people to get new skills, on one hand, and, on the other - will engage more employers in the process. The Mechanism will improve the labor market and thus will stimulate the green and digital transition of the economy.



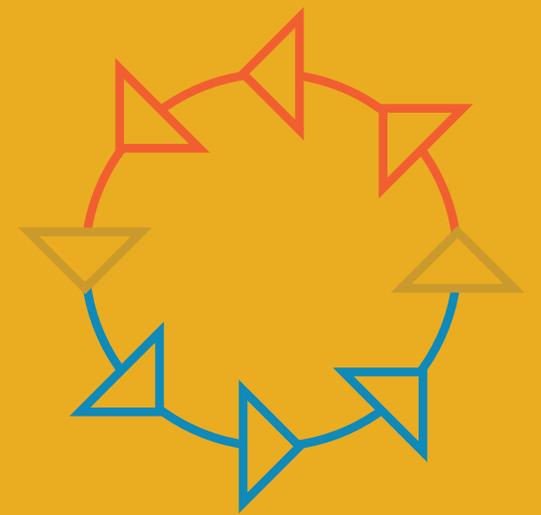
Establishment of a **National Future Skills Educational Program** - it is focused on primary and secondary schools. The program integrates formal and informal education and includes lessons about digital transformation and new working environment along with providing basic green skills and education;



Establishment of a **National STEAM Educational Program** - the project widens STEM curriculum with art. Developing creativity through art is a key element for successful learning of the skills of the future among children and for their profession and personal development.



THE CIRCULAR ECONOMY



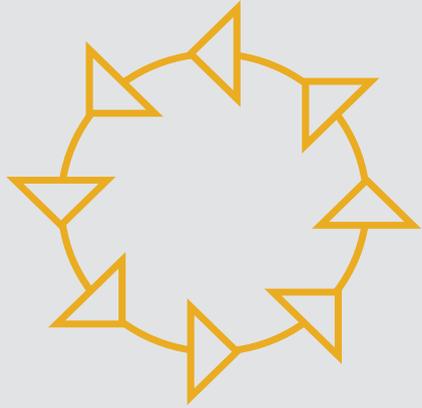
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THE CIRCULAR ECONOMY

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WHAT IS THE SITUATION IN BULGARIA?

Despite the several mentions of the term “Circular Economy” in the National Recovery and Resilience Plan (NRRP), even today in Bulgaria the topic is still unknown to the broader public and absent from the political discussions and debates. There is no in-depth and systematic study exploring the opportunities and/or national readiness allowing to figure out and suggest an appropriate and adequate pathway for circular transition and development for the most resource, energy, and greenhouse gas emission-intensive economy in the EU. The Circular Economy is one of the pillars of the EU Green deal but the NRRP does not provide any comprehensive and coherent vision on the long-term development of the country, so as to produce positive effects on the economy, environment, and society.



WHAT ARE

The Bulgarian society and economy are facing a set of complex challenges that are pivotal for the future of the country. Closely linked, these challenges refer to material, infrastructure redefinitions, and transformations but also in terms of education and behaviors, and are fundamental to ensure positive, circular, and climate-neutral transition and meet the sustainable development goals.

THE CHALLENGES?
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The Coalition proposes the following changes in the NRRP aimed at increasing the awareness and understanding among the Bulgarian society on the topics of circular economy and sustainable development, as well as stimulating and facilitating the transition to the circular economic model.

Circular Education and continuous upskilling

- Support the transition to a more circular economy and society not only in terms of infrastructure but also in terms of knowledge and competencies.
- Systematic implementation at all levels with educational and life-long training institutions of tailored and relevant pedagogical and teaching programs, content, and tools in order to overcome the skills gap and unlock the potential of circular development still untapped.
- **Ambitious national and regional awareness raising campaigns** and actions focused on promoting as widely as possible the circular economy paradigm.

Public procurement for circular economy

- identified as a powerful tool to support the circular and climate-neutral transition, the public authorities have to initiate and strongly support socio-economic transformation. The EU Circular procurement sets out an approach to green public procurement which pays special attention to „the purchase of works, goods or services that seek to contribute to the closed energy and material loops within supply chains, whilst minimizing, and in the best case avoiding, negative environmental impacts and waste creation across the whole life-cycle“.

Stimulate and improve the **collaboration between academics, businesses, and civil/citizen organizations**. The circular transition requires a wide commitment and participation. Defining a clear national strategy for technology and knowledge transfers, and enhancing the legal framework in order to allow innovation and university-industry partnerships.

Expand the scope of the fund for “Circular and low carbon economy”, part of the “Green transition fund”, to provide **increased inclusivity for all SMEs**, regardless of their current environmental footprint. The promotion of circular economy business models and practices should not be limited only to the heavy industry but promoted for all businesses. In this line of thought, it is imperative to strictly define at a national level what is regarded as a circular economy to avoid further greenwashing.

Reexamine from a circular perspective all projects in the NRRP, where building renovation or new constructions are envisaged. Addressing the circularity in the sector by minimizing construction waste, using local, recycled, natural, and low carbon materials, and planning for disassembly at the design stage, must be a priority for the Bulgarian construction sector.

CLIMATE CHANGE



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CLIMATE CHANGE

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

As a country in South-East Europe, Bulgaria will be one of the EU member states most impacted by the adverse effects of climate change. It is also the EU country with the lowest climate ambition - it is the only member state with a 0% greenhouse gas emissions reduction target by 2030 compared to a 2005 baseline. Currently, greenhouse gas emissions are primarily driven by the energy sector with lignite coal power generation being the main energy source, followed by transport, agriculture, and industrial production. Bulgaria plans fossil fuel expansion for power generation, industry, and household heating, as well as expansion of biomass with lower ambition and deployment of renewable energy sources - solar and wind. Climate change adaptation is still in its early stages and has not been mainstreamed into development planning and policy at the national, regional, and municipal levels.



WHAT ARE

The main challenge to Bulgarian decarbonization is the policy ambiguity and uncertainty - Bulgaria has not set either a net-zero decarbonization date or a coal exit date, unlike many EU member states and some of its neighbors. Energy poverty is also a rampant problem with widespread opposition to high energy costs. Private vehicles mostly include aging diesel cars, so electrification of transport and phase-out of internal combustion cars will be a big challenge. Much progress needs to be made in the AFOLU (agriculture, forestry, and other land use) sector to set targets, mechanisms, and indicators for reducing emissions, and carbon uptake. The poor state of housing and the healthcare system, and very low home and property insurance rates, leaving residents and businesses highly vulnerable to climate change-induced extreme events.

THE CHALLENGES?
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We propose setting a national priority for decarbonization, starting with focused NRRP and MFF investments and covering the main emissions sectors - energy, buildings, transport, AFOLU, and industry. Supporting business to invest in decarbonization solutions will be accompanied by policy reforms enabling energy cooperatives, carbon-free transportation solutions, nature-based solutions for carbon sequestration and adaptation for cities, communities, and ecosystems. The initial interventions to be integrated into the NRRP include:



Raising national climate ambition via a comprehensive reform, including setting appropriate decarbonization and energy transition targets, in accordance with the EU "Fit For 55" Package proposals and upcoming revisions of national legislative and strategic documents.



Broadening the ambition and role of the National Decarbonization Fund to support transformative investments in all high-carbon sectors in accordance with science-based decarbonization plans and scenarios and the needs for rapid decarbonization of energy, transport, and industry as well as climate mitigation measures in the AFOLU sector.

Addressing energy poverty and the needs to transition to decentralized energy systems by supporting decentralized renewable energy solutions for households, communities, and businesses;



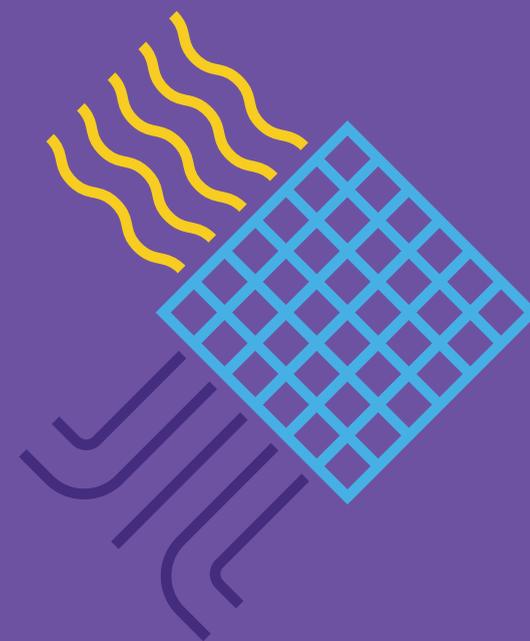
Strict compliance of all NRRP investments to the Do No Significant Harm (DNSH) safeguards, requirements, and criteria with regards to climate change mitigation and adaptation;



Nature-based solutions (NBS) for climate change adaptation, particularly with regard to the management of climate risks and impacts for cities and communities.



ENERGY TRANSITION



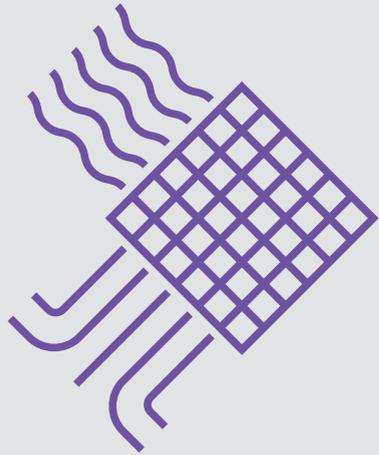
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ENERGY TRANSITION

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

The Bulgarian economy is one of the most resource-intensive in the EU. It spends on average 3,6 times more energy resources per unit of GDP than the average energy consumption in the EU. The household sector is also characterized by high energy intensity with 93% of the residential building stock not meeting the energy efficiency requirements. Energy poverty in Bulgaria is a serious issue. 30 percent of households are unable to keep their home adequately warm according to Eurostat. Every year more than 250 000 Bulgarian households get financial state help. Distributed cash money and vouchers are usually spent on coal and solid fuels. This amplifies the long-lasting and unresolved problem with air quality and undermines national climate politics.



WHAT ARE

14 years after joining the European Union, the Bulgarian authorities dare to admit that this time has been largely wasted. 14 years in which abundant European funds have been used for everything but energy transformation. Coal-fired power plants continue to operate in our country, without a coal phase-out date. In an effort to prolong their existence a little more they chaotically diversify their fuel mix with waste and biomass, and it turns out that someone is making a plan to supply them with hydrogen. Renewable sources, to which more and more EU member states orient their energy system, in our country are reduced to the required minimum, without the prospect of their proactive development.

THE CHALLENGES?
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We propose energy measures that will accelerate the energy transition from burning fossil fuels and waste to renewable sources for electricity, heating, and transport. The future belongs to a decentralized, democratic, and just energy system which increases the level of independence from third parties and stands in line with the European and global climate goals. Among our recommendations are:



A comprehensive approach to the development of the National Roadmap to improve the conditions for unleashing the potential of hydrogen technologies. Revision of the project for transmission of “low-carbon gaseous fuels” to coal-fired power plants and replacement with investments in strategic installations for production and storage of energy from renewable sources (such as sun and wind) or green hydrogen;



The costly transformation of the Electricity System Operator (ESO) doesn't meet the European targets for recovery from the pandemic. The project is for the management of the network and hardware updates. It should be a plan for the modernization and change of the structure envisaging the future of energy, based not on large single monopoly energy producers, but a large number of small decentralized producers.

The proposed program for financing small solar installations is unthinkable without changes in legislation and the introduction of the definitions of „prosumer“ and „net-metering.“ Prosumers should be assured that the production and consumption of renewable energy for their own needs will happen without disproportionate and discriminatory charges and procedures.



The planned development of a definition of „energy poverty“ for the purposes of future energy efficiency projects should be fully in line with European policies for decarbonization of the economy. Energy poverty can be tackled through solutions based on renewable sources, instead of continuing the vicious model of financing the use of fossil and solid fuels, which endanger human health and the climate;



Reconsidering of the philosophy and implementation of the renovation of buildings in Bulgaria, revision of the number of funds for renovation in the NRRP in favor of comprehensive measures, such as replacement and modernization of heating and cooling, leading to real decarbonization in the building stock, decentralized energy system, and energy independence of households;



BIODIVERSITY AND AGRICULTURE



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BIODIVERSITY AND AGRICULTURE

IN BULGARIA

WHAT IS THE SITUATION IN BULGARIA?

Bulgaria, one of the most biodiversity-rich member states in the EU has 341 sites in the Natura 2000 network, which cover nearly 35% of the country's territory. The Priority Action Framework for Natura 2000 sets out 73 necessary management, conservation and restoration measures, requiring more than 1 billion EUR of funding to implement. Most added value from Bulgarian forestry is concentrated in timber and firewood production. Agriculture value added is centered on intensive production of grain monocrops, dependent on water, and chemical inputs.



WHAT ARE

The Natura 2000 network is poorly managed, with no management bodies for individual sites established and insufficient and inefficiently used available funding for management, research, conservation and restoration work. The sites are vulnerable to further fragmentation from unsustainable agriculture and forestry practices, infrastructure and commercial development. Climate change threatens both agriculture and forestry economic value chains, as well as human communities and ecosystems. Cities are particularly at risk from heat waves, flash flooding, and storm damage. Adapting agriculture to climate change has not been implemented on any significant scale, with current planning in the NRRP, prioritizing outdated models for centralized irrigation, which further deplete surface and groundwater sources. The total budget devoted to biodiversity management in the NRRP, includes approximately 16 million EUR, mostly earmarked for purely administrative and research measures. Funding for agriculture, while significant, is focused on fixing outdated central irrigation systems, requiring more than 400 million EUR and risking potential significant harm to freshwater ecosystems.

THE CHALLENGES?
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THE CHALLENGES?

We propose an integrated strategic approach to adapting Bulgarian biodiversity, agriculture, forestry, and cities to climate change risks, focused on piloting, validating, and deploying nature-based solutions (NBS), connecting ecosystems and restoring the services they provide. To do this, we propose a 5-fold increase of the NRRP biodiversity budget, providing funding needed for management, connectivity, and restoration measures, and repurposing the budget for irrigation infrastructure toward NBS and climate-smart agriculture. Among our proposals are:



Direct the funding and reforms of the NRRP to align Bulgarian nature conservation policies with the objectives of the EU Biodiversity Strategy 2030, by focusing funding on strategic conservation priorities and reforming the Prioritized Action Framework for Natura 2000.



Revise the currently included mapping and research activities in the NRRP to include mapping of old growth forests in private lands and riparian forest restoration measures instead of the inefficient mapping of ecosystems in Natura 2000 sites.

Conservation measures linking Natura 2000 protected areas, their habitats, ecosystems and species populations, and increasing the size of areas under regimes of strict protection, while providing network benefits to people and the economy;



Applying nature-based solutions (NBS) in floodplains, protecting water resources by planting new floodplain forests, and applying wetland restoration solutions. Applying NBS also in urban contexts including natural floodplain restoration in cities, natural drainage and green roofs and other urban greening NBS, in order to reduce climate change flooding and heat wave risks, as well as mitigate air pollution.



Applying smart and nature-based practices, including NBS, for management and conservation of water, soils and carbon sequestration in agricultural land. NBS would comprise both land use management practices in agriculture and forestry, as well as innovation and smart management practices, such as drought-resistant varieties. All NRRP investments should favor a long-term shift away from intensive grain production, reliant on fossil fuels, pesticides, and other chemical use toward climate-adapted, carbon-neutral agriculture, agroforestry, and regenerative livestock management.



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This publication is an initiative of
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It promotes recommendations and reforms for the
improvement of the National Recovery and Resilience Plan.
The entire list of the Coalition's proposals are available on
move.bg