

NATIONAL REPORT ON EXISTING STRUCTURES FOR SUPPORT OF ECO-INNOVATION – BULGARIA



WP3	Strategy for eco-knowledge	
ACTIVITY 3.2	Analysing the environment for ecoinnovation in partner countries	
DELIVERABLE 3.2.3	National report on existing structures for support of Ecoinnovation	

Project number DTP1-191-1.1

Title of the project Eco-innovately connected Danube Region (EcoInn Danube)

Version Final

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Country Bulgaria

Date 2018



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1. Abstract

Despite the efforts made in recent years by the Bulgarian government to improve the legislative framework and to promote innovation and eco-innovation, Bulgaria still lags behind in these areas. The administrative procedures for launching patents are still slow and clumsy. The legislation in the field could be further improved to encourage more investment in the sector. Economic, financial, administrative and socio-cultural barriers slow the advancement of eco-innovation in the country. Important barriers include limited investment and funding opportunities, high energy prices and inefficient energy infrastructure. Nonetheless, several significant drivers were also identified; the most significant were: a rise in awareness from business, citizens and government on the benefits of green products and technologies, high skilled human resource and knowledge capital and Bulgaria's leading regional position in the information and communications technology (ICT) sector. Despite the growing demand for environmentally-friendly products and services, stakeholders remain reluctant to invest in these areas. To meet the objectives of promoting energy efficiency, renewable energy sources, waste management and green transport, local stakeholders are taking advantage of funding options set up by the National, European funded Programmes and initiatives.

To start a company does not require a big amount of money, yet it is essential to have a capital to start a business.

Under the JEREMIE initiative in the period 2007-2013, two start-up funds with a total budget of EUR 21 million (ELEVEN and LaunchHub) were supported. As of December 2013, more than 4,445 guaranteed loans under the guarantee facility were made available to the banking sector for a total amount of EUR 275 million, of which EUR 173 million were for the new SME investment. For the same period, 1 253 loans totalling approximately € 170 million were granted under the low-interest facility (risk-sharing finance).

Currently, the Fund of Funds (the Fund Manager of Financial Instruments in Bulgaria) is finalizing the selection procedure for Implementation of the Financial Instrument Acceleration and Initial Financing Fund, financed by Operational Programme "Innovation and Competitiveness 2014-2020" under which will be selected managers of

- Fund for Acceleration and Financing of Initial Stage I with a public financial resource amounting of 14 million EUR
- Fund for Acceleration and Financing Initial Stage II with Public Financial Resources Amount of 18.2 million" EUR
- Initial Stage Fund with resources amount of 19.1 million EUR

The funds will invest in start-ups and support the market realization of new businesses. The procedure will be soon finalized and the funds will start their activity in the second part of 2018.



2. Support structures and sources for facilitating ecoinnovation

- Accessibility

The access to support mechanisms for eco-innovations in Bulgaria is not easy, as there is information available on the websites of the different responsible agencies and Programme management authorities. However, a specific research needs to be done for the particular measures and mechanisms focused at supporting eco-innovations. Usually, the applicants use the services of consultancy organizations or NGOs working in the sphere, in order to obtain the information relevant to their needs. It can be concluded that there is a need of a unified portal/platform, which provides specific information for the eco-innovation financing opportunities.

- Frequency

The calls for proposals under the National and Transnational programmes are usually launched on regular basis (for example once or twice a year within the programming period). However, because of administrative delays, as well as delays in the evaluation process, very often the calls for proposals are postponed, or several programmes launch their calls simultaneously. This creates conditions for difficulties in the process of preparation due to inability for proper planning. Also, in the context of innovation, quick actions are needed, because the innovative effect easily gets old in time.

- Stability

The support structures in the current programme period are logical continuation of the initiatives from the previous programme period. Also, the trend of the financing mechanisms follows the tendencies for development of the country. There are specific measures in the programmes for motivation of projects, taking place in the most underdeveloped region in Bulgaria – the North-Western Region, thus contributing to the overall stability in the county area.

- Impact

The available supporting mechanisms follow the strategic goal of Innovation Strategy for Smart Specialisation 2014 – 2020 of Bulgaria, which is by 2020 Bulgaria to move from the group of "modest innovators" into the group of "moderate innovators". Currently, there plenty of projects in the field of eco innovations, technological modernization, energy efficiency, effective resource managements, etc. which got financing and are in a process of implementation. However still a lot needs to done, especially in the sphere of good interaction between research, education and innovation (business).

- Replicability

Adaptation and replicability of a project depends on the smooth and timely work of the support structure. Still, the procedures under some programme take a lot of time for approval, and when it comes to implementation, the innovations may not be actual any more. Another problem may arise



from the potential financial penalties that may be caused to the beneficiaries in the process of implementation. However, the public awareness measures within the projects should be broad enough, so that they reach the wide public and inform about the existing innovation.

2.1. Government support

Active or passive labour policy

Innovation policy in Bulgaria follows the division of labour model (like Germany, Norway, Finland, Chile and the Netherlands). It is designed and implemented by multiple ministries and agencies, and has the fragmentation and coordination problems characteristic of that model. The Ministry of Economy is responsible for for the industrial innovation and technology, the Ministry of Education and Science is responsible for human resources and research, the Ministry of Environment and Waters for innovations in the sphere of ecology and environment; the Ministry of Transport, Information Technology and Communications – for ICT, etc. The imperfection of this model is that it remotes education and research policies from businesses and innovation.

However, in support of innovations, including eco-innovations, the Bulgarian Government has issued the following strategic documents:

Innovation Strategy for Smart Specialisation 2014 – 2020

Its strategic goal of the Strategy is by 2020 Bulgaria to move from the group of "modest innovators" into the group of "moderate innovators" by implementing the following objectives:

Objective 1: Focus the investment for the development of innovation potential in the smart thematic areas (for creation and development of new technologies leading to competitive advantages and increase in the added value of domestic products and services).

Objective 2: Support for accelerated implementation of technologies, methods, etc. which improve resource efficiency and application of ICT in the enterprises in all industries.

National Strategy for Scientific Research 2020,

It is consistent with the objectives of the Innovation Strategy for Smart Specialisation and its implementation measures for increasing the competitiveness of Bulgarian enterprises by strengthening the scientific capacity, providing joint financial instruments for support of science and innovation, and building centers of competence in priority areas in economy.

National Roadmap for Research Infrastructure 2017-2023

The Nnational Roadmap for development of research infrastructure is the key instruments for implementing the national research strategy.

National Strategy for the Promotion of Small and Medium Enterprises 2014-2020, also known as Small Business Act (SBA)

The SBA supports the small and medium-sized enterprises (SMEs) as the engine of any economy in the European Union and worldwide.



• National Waste Management Plan 2014-2020

The Plan includes objectives to be reached for the transition from waste management to the efficient use of waste as a resource and to sustainable development by preventing waste as far as possible.

• National Energy Effectiveness Plan 2014-2020

The document is setting the targets contributing to achieving the energy effectiveness goals of Bulgaria by 2020

Public Procurement Law – in the section Green Public Procurements

The Green Public Procurements are already a part pf the Procurement Law in Bulgaria. It is a measure to stimulate businesses to develop environmentally friendly technologies which produce products and services with a beneficial effect on the environment and on the economy as a whole.

Available tax incentives

No tax incentives are in force for support of eco innovations so far in Bulgaria, yet. However, discussions on a political level are held for tax incentives for the owners of electric vehicle owners, as well as a number of privileges, such as exemption from the registration fee, local taxes and fees, purchase of a vignette, etc.

In the field of plastic manufacturing, there is a specific motivation for producers of biodegradable bags, as they are charged with no production fee, in accordance with EU standard EN13432.

Accessible trainings and seminars for skill development

There are available trainings, seminars and educational programmes for skill development in the field of eco-innovations. However, they are not a part of a specific programme on a government level but are organized as a part of different projects for eco-innovations and as a part of the portfolios of NGOs, organizations and networks, particularly engaged with development of eco-innovations.

However, the National Trust Eco Fund (being a part of national budget) organizes exchange initiatives and visits between schools in Bulgaria and EU on the theme of Climate protection and energy efficiency.

The government support is also provided by the master and bachelor degrees programmes in the field of eco-innovations which can be obtained in the state universities in Bulgaria. Some of them are listed below:

1. University of Economics Varna

- 1.1. Eco-economics, Bachelor's Degree
- 1.2. Environmental Business and Regional Security, Bachelor's Degree

2. Sofia University "St. Kliment Ohgridski"

2.1. Bio-management and Sustainable Development, Bachelor's Degree Programme



2.2. Ecological Biotechnology, Master's Degree Programme

3. University of National and World Economy

- 3.1. Eco-economics, Bachelor's Degree
- 3.2. Eco-economics, Master's Degree
- 3.3. Eco-economics and business, Master's Degree

4. Technical university of Gabrovo

Environment Protection Equipment and Technology, Bachelor's and Master's degree

5. University of chemical technology and metallurgy

Engineering ecology and environmental protection, Bachelor's Degree

6. Technical university of Sofia

"Engineering Ecology", Master's degree

7. University of architecture, Civil engineering and Geodesy

Environmental Engineering, Master's degree

8. Technical University of Varna

"Engineering Ecology", Bachelor and Master's degree

2.2. Domestic support funds

There is no specific separation of the available funds, supporting eco-innovations in Bulgaria. They are generalized as follows:

National Innovation Fund (NIF)

NIF is one of the tools for implementing the Innovation Strategy. It is administered by the Bulgarian Small and Medium Enterprises Promotion Agency (BSMEPA). The main goal of NIF is to support scientific projects, R&D projects and projects for technical feasibility with the aim of acquiring new or improved products, processes or services designed to raise the economic efficiency, improve the innovative potential and technological level of enterprises, increase private investment and enhance the dynamics of innovative processes.

The National Science Fund (NSF)

The National Science Fund (NSF) aims to support science and research projects and activities, consistent with the ratified EU Framework Programmes and with the National Strategy for Scientific Research 2020 in Bulgaria. NSF promotes research by means of:

- supporting scientific organizations and higher education institutions on the basis of project and program funding;
- funding projects, developments and demonstration projects in the scientific fields designated by the Fund;
- funding projects, developments and demonstration projects of young scientists.



• The National Trust EcoFund (NTEF)

The Fund manages assets from the state budget, including under the Debt-for-Environment and the Debt-for-Nature swaps. Funds are also generated via the Assigned Amount Units (AAUs) international trade deal(s), the sale of greenhouse gas emissions quotas for aviation activities, as well as funds, provided by other environmental protection agreements between the Republic of Bulgaria and international or local financing sources.

The NTEF has launched the following programmes:

- Investment Program Mineral Waters

It is focused at improvement the environment for development mineral waters in the Bulgarian Municipalities. Under this programme are approved the applications of 9 municipalities in Bulgaria.

Investment Climate Program (ICP) – Energy efficiency

The ICP aims to reduce the greenhouse gas emissions. The program is a continuation of the National Green Investment Scheme (NGIS).

- Investment Climate Program - Electric vehicles

The programme is focused at promotion the use of electric vehicles. In 2017 were approved 15 projects of Bulgarian Municipalities and Administrations, promoting the use of electric vehicles.

- Educational programs

The NTEF organizes exchange initiatives and visits between schools in Bulgaria and EU on the theme Climate protection and energy efficiency.

The recent and ongoing initiatives of the NTEF are:

- Project in the area of waste management and within the concept of an integrated project "Towards efficient use of resources and a circular economy" under the LIFE Program of the European Commission. The main objective is to contribute to the implementation of the measures of the National Plan of the Republic of Bulgaria for waste management till 2020, as well as to the development, adoption and optimization of the implementation of the next plan. The project will make a direct contribution to the implementation of the concept of a circular economy.
 - The project will be prepared by the NTEF and the Waste Management and Soil Protection Directorate of the Ministry of Environment and Water. The deadline for submission is set for 19 April 2018.
- New Climate Micro Projects program. The source of project funding under this program is the
 revenue from the Agreement on the transfer of annual emission allocations between the
 Republic of Bulgaria and the Republic of Malta. The program will finance small projects worth
 up to BGN 50 000, contributing to mitigation and adaptation to climate change. The projects
 are nominated by the members of the Management Board of the NTEF.



2.3. Transnational support funds

The support by EU through the Operational programmes and Transnational Programmes provide the opportunity for financing eco-innovations. Among all Operational programmes in Bulgaria, the ones described below, provide specific measures, focused at eco-innovations:

N	Programme	Priorities/Measures
1.	OP "Innovations and Competitiveness" 2014 - 2020	Priorites/Measures Priority Axes 2: Entrepreneurship and Growth Capacity for SMEs: - Provision of institutional support to the Ministry of Tourism for activities related to increasing the capacity of SMEs in the field of tourism - "Improving the Business Environment for Bulgarian Producers and Creating Testing Conditions for Facilities by Supporting the Activities of the Bulgarian Institute of Metrology (BIM)" - LAG - Maritsa Municipality M08 "Improvement of Production Capacity in SMEs in the LAG" - Support for Small and Medium Enterprises (SMEs) growth through the pilot implementation of voucher schemes by the Small and Medium Enterprises Promotion Agency (BSMEPA) - LAG Isperih OPIC 1 Growth capacity of SMEs - Stimulating the Implementation of Innovations in Enterprises - Development of innovation cluster in Bulgaria - "Promoting Entrepreneurship (in areas related to European and Regional Challenges and the specified sectors in the NSSME)"
2.	OP "Environment" 2014 - 2020	Priority Axes: 3 – Energy and resource efficiency - "Sustainable Energy Development of Bulgarian Enterprises by Supporting the Activities of the Agency for Sustainable Energy Development" - Support for Pilot and Demonstration Initiatives for Effective Use of Resource Priority Axis 1: Waters: Measures for
		 Construction of plumbing infrastructure in agglomerations with over 10,000 equivalent inhabitants; Completing and / or optimizing water monitoring networks; Equipping of laboratories of the EEA and the state health authorities for the purpose of monitoring; Priority Axis 2: Waste:



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		 Measures for: Design and construction of anaerobic plants for separately collected biodegradable waste Design and construction of composting plants for separately collected green and / or biodegradable waste Priority Axis 3 Natura 2000 and Biodiversity: Measures and activities under the National Priority Framework for action under Natura 2000 network Priority Axis 4: Prevention and management of flood and landslide risks Measures for: Establishment of a real time National Water Management System Risk prevention and management solutions for floods, incl. ecosystem-based solutions; Establishing 6 centres for increasing the readiness of the population for adequate response to floods; Prevention and management the risk of landslides; Demonstration /pilot projects and information campaigns related to the prevention and management of flood and landslides risks. Priority Axis 5: Improving the quality of air Assisting the competent authorities in the preparation /processing, implementation and control of municipal programs and development and optimization of monitoring systems; Reducing the quantities of PM10 and oxides of nitrogen from the main sources of pollution.
3.	OP "Regions in Growth" 2014 - 2020	Priority axis 6 "Regional Tourism" (together with the use of financial instruments) Measures for support of the conservation, protection, promotion and development of the cultural heritage in Bulgaria regions. Its main focus is to valorise the unexplored potential of the cultural tourism in the regions.
4.	OP "Transport and transport infrastructure" 2014 - 2020	Measures for: 1. Increasing railway traffic of passenger and freight through improving the quality of the TEN-T railway infrastructure 2. Removal of bottlenecks in the TEN-T road network" 3. Increasing intermodal transport 4. Increasing the use of metro. 5. Improvement of transport management through introduction of innovative systems 6. Improvement of management of the railway network 7. Establishment of necessary conditions for successful completion of OPT 2007-2013 and implementation of OPTTI 2014-2020, strengthening the administrative capacity and public awareness.



5.	OP "Science and Education for Smart Growth" 2014-2020	Priority axis 1 Research and technological development Measures for - enhancing research and innovation (R&I) infrastructure and capacities to develop R&I excellence, and promoting centres of competence, in particular those of European interest
6.	Programme "Rural development" 2014-2020	Measures: Sub-measure 4.2 "Investment in processing / marketing of agricultural products Sub-measure 4.1.2. "Investments in agricultural farms under thematic sub-program for development of small farms Sub-measure 6.1 "Setting up farms of Young Farmers" Sub-measure 7.6 "Studies and investments related to the maintenance, restoration and the cultural and natural heritage of the villages" Sub-measure 8.3 "Prevention of forest fires, natural disasters and catastrophic events" Sub-measure 8.4 "Recovering forest damage from forest fires, natural disasters and catastrophic events" Sub-measure 8.6 "Investments in technologies for forestry and in the processing, mobilization and marketing of forest products
7.	Programme "Maritime and Fishers" 2014-2020	Priority 1: Promoting environmentally sustainable, innovative, competitive and knowledge-based fisheries characterized by resource efficiency. Measure 1.3. Final cessation of fishing activities Measure 1.5. Innovations related to the conservation of marine biological resources Measure 1.6. Conservation and restoration of marine biodiversity and ecosystems and compensation regimes within sustainable fisheries Measure 1.7. Added value, product quality and use of unwanted catches Measure 1.8. Fishing ports, landing docks, fish fairs and shelters Priority 2: Promoting environmentally sustainable, innovative, competitive and knowledge-based aquaculture characterized by resource efficiency. Measure 2.1. Innovations Measure 2.2. Productive investments in aquaculture Measure 2.3. Promoting new aquaculture producers developing sustainable aquaculture
		Measure 2.4. Transition to environmental management and audit schemes and organic aquaculture Measure 2.5. Aquaculture providing environmental services.



CROSS-BORDER COOPERATION PROGRAMMES:

N	Programme	Priorities/Measures	
1.	INTERREG-IPA CBC Bulgaria – Serbia Programme 2014- 2020	The programme is aiming at improving the living conditions in the CBC region Bulgaria-Serbia. It finances projects related to development of sustainable tourism, youth and environment in the CB area. Eco-innovations are supported under the three priority axes 1 Sustainable tourism and 2 Environment	
2.	INTERREG-IPA CBC Bulgaria – Turkey Programme 2014- 2020	The overall objective of the Programme is to strengthen the Bulgaria-Turkey cross-border cooperation capacity in the field of nature protection and sustainable tourism, leading to enhancement of European territorial cohesion. Eco-innovations are supported under priority axes Environment and Sustainable tourism.	
3.	INTERREG-IPA CBC Bulgaria – the former Yugoslav Republic of Macedonia Programme 2014- 2020	The overall objective of the Programme is to intensify cross-border cooperation between people and institutions in the region to jointly address common challenges and exploit the untapped potential. Eco-innovations are supported under priority axes Environment, Tourism and Competitiveness.	
4.	INTERREG V-A Romania – Bulgaria Programme 2014- 2020	The programme goal is to develop the border area between the two countries by financing joint projects. Eco-innovations are supported under priorities: "A green region", "A safe region"	
5.	INTERREG V-A Greece – Bulgaria Programme 2014-2020	The INTERREG V-A Greece – Bulgaria Programme contributes to smart, sustainable and inclusive growth, as well as for economic social and territorial cohesion. Eco-innovations are supported under priorities: "A competitive and Innovative Cross-Border area" and "A Sustainable and climate adaptable Cross-Border area"	
6.	"Danube" 2014-2020 transnational cooperation programme	"Danube" 2014-2020 Transnational Cooperation Programme is a financial instrument to promote and initiate project ideas related to overcoming common challenges and needs in specific areas to achieve real benefit for the people and build effective relationships between authorities and organizations in the Danube region. Eco-innovations can be supported under the following priority axes: PA 1 "Innovative and socially responsible Danube region", PA 2 "Environment and culture responsible Danube region", PA 3 "Better connected and energy responsible Danube region" and	
7.	"Balkan – Mediterranean" 2014- 2020 Transnational	"INTERREG Balkan-Mediterranean 2014-2020" is a new cooperation Programme, deriving from both the strong will of the "BalkanMed" participating countries to promote cooperation in the area and the split of the "South East Europe	



	Carl Colonia September 1		
	Cooperation Programme	2007-2013". The Programme is focused on addressing two key challenges: territorial competitiveness and environment. Accordingly, the Programme is built upon the following two Priority Axes: - Priority Axis 1: "Entrepreneurship & Innovation" - Priority Axis 2: "Environment"	
8.	"Interreg Europe" 2014 – 2020 Interregional Cooperation Programme	The programme helps regional and local governments across Europe to develop and deliver better policy. The programme provides support for investments, innovation leading to integrated and sustainable impact for the people. The project can be in the following spheres: Research and innovation SME competitiveness Low-carbon economy Environment and resource efficiency	
9.	ESPON 2020 Cooperation Programme	The ESPON 2020 Programme aims at promoting and fostering a European territorial dimension in development and cooperation by providing evidence, knowledge transfer and policy learning to public authorities and other policy actors at all levels. It is targeting the policymakers, national and regional authorities, as well as universities, research institutes and private sector. The programme is supporting research, analyses and knowledge transfer.	
10.	Joint Operational Programme Black Sea Basin 2014-2020	The Programme is focused at - improvement the welfare of the people in the Black Sea Basin regions through sustainable growth and joint protection promotion of business and entrepreneurship within the Black Sea basin - promote coordination and environment protection and joint reduction of marine litter	

FRAMEWORK PROGRMMES:

HORISON 2020

During the past EU Framework Programme for Research (FP7) and more and more in the current one (Horizon 2020) eco-innovation research has been adopting a systemic approach, looking at innovative technologies for water and waste management but also at new business models and new patterns of production and consumption.

COSME

Europe's programme for small and medium-sized enterprises.

SME's INSTRUMENT



The Bulgarian Operational Programme **SME Initiative** is supported by the European Regional Development Fund (ERDF) under the Investment for growth and jobs goal in Bulgaria. The Programme's budget was taken from the Operational Programme Innovation and Competitiveness that had originally earmarked EUR 102 million for bank guarantees.

Thanks to the SME Initiative, the ERDF has allocated those EUR 102 million for an uncapped loan guarantee instrument. The latter would support implementation of appropriate financial instruments to provide Bulgarian economy players with an easier access to finance and to pave the way for economic prosperity, environmental sustainability, and social development.

FOREIGN AID

Bulgarian-Swiss Cooperation Program

Through the Bulgarian-Swiss cooperation program, Switzerland provides assistance to Bulgaria at the rate of CHF 76 million in priority areas for the country in which Switzerland can provide expertise and experience. The program supports a total of 93 projects and 22 doctoral students and researchers. All projects must be completed by the end of 2019.

Five interlinked priorities were identified in the development of the program: support for economic growth and improvement of working conditions; improving social stability; improving public security; environmental protection; strengthening civil society and supporting project development.

Financial Mechanism for the European Economic Area Norwegian Financial Mechanism EEA Grants

The mechanism provides support in the sectors:

- Environment and Ecosystems
- Renewable Energy, Energy Efficiency, Energy Security with areas of support
 - >>Energy efficiency in production, distribution and/or end use
 - >>Renewable energy production and/or distribution
 - >>Recovery of energy from waste or hazardous waste
 - >>Energy security
 - >>Renewable energy policies in all relevant sectors
 - >>Energy markets
- Climate Change Mitigation and Adaptation

European Institute for Innovation and Technology

The European Institute for Innovation and Technology (EIT) coordinates and manages different instruments for innovation support activities in the following thematic fields: Energy, Climate, Digital, Raw Materials, Health and Food. Different calls for proposal are launched every year by the KICs (Knowledge and Innovation Communities) based on their geographical coverage. The EIT Community operates through core and local partners. Starting from 2015 two of the KICs - Climate KIC and InnoEnergy are represented in Bulgaria by Cleantech Bulgaria. In 2018 Bulgaria was chosen for piloting the EIT Community Hub — the first Cross-KIC dissemination and outreach facility combining all six KICs in "one stop shop".



2.4. Business incubators

Under Operational Programme Competitiveness 2017 – 2013 were supported the following incubators:

- High technology incubator "Green High Tech", Pernik
- Business incubator, Razgrad
- Centres for support of start-ups in Kyustendil and Dupnitsa
- Regional business incubator, Vratsa
- Business incubator, Plovdiv
- Business incubator, Targovishte
- Business incubator "Sirma", Sofia
- Business incubator, Burgas
- Business incubator Varna
- Business incubator, Dimitrovgrad
- "Eurobuilding incubator", Gorna Oryahovitsa
- Business incubator, Montana
- Business incubator, Vidin
- Business incubator, Lovech
- Business incubator, Smolyan
- Business incubator, Kazanlak
- Business incubator, Kardzhali
- Sofia Tech Park Technology and Innovation Network (T+IN) or "Sofia Tech Park" is the first science and technology park in Bulgaria designed and created to act as a platform for the exchange of knowledge and ideas between academia, business, government and society.

National incubator network

Established in 2003 under the JOBS project, with the support of the Ministry of Labour and Social Policy, the United Nations Development Program (UNDP), the National Business Development Network (NBDN) is an association of 42 business centres and 10 business incubators working in small and medium size municipalities all over Bulgaria. The mission of NBDN is to create new entrepreneurial culture, to improve the standard of living through various forms of support for the development of smalls and medium businesses and insuring greater employment opportunities. NBDN supports its members in the design and management of international projects in the areas of employment encouragement, increasing of the competitiveness of the Small and Medium Enterprises, professional training and re-qualification, tourism, handicrafts, etc.

At the end of 2016 the Government of Bulgaria approved a change to the Action Plan "Entrepreneurship 2020". It included the measure "National Network of Local Centres and Business Development Incubators" in the field of "Development of a favourable environment for growth and enterprise development". The measure will be implemented through the support of the operational programs in the country in the period 2017-2020.

Mentorship programmes

In the recent years, the Bulgarian government has made a priority to promote entrepreneurship and growth in economic sectors with innovation potential through the implementation of various



instruments, inc. mentoring, funded by public institutions through national and operational programs, as well as in support of international foundations working in the country.

A number of leading organizations from the business supporting ecosystem have successfully implemented their mentoring programmes for the development of start-up companies in the country such as:

Cleantech Bulgaria operates as business network to promote sustainable economic development through clean technologies and green innovation in Bulgaria. The organization has a focus on enabling collaboration, professional matchmaking, mentors and innovation and support commercial and strategic partnerships among different clusters, associations and companies that work in the field of greening business, the environment and education and social innovations, connecting these elements into a single pivoting goal – enabling sustainable change towards an eco-conscious culture, business and life.

Cleantech Bulgaria is representing two Regional Innovation Hubs of Climate KIC and InnoEnergy, and since 2018 the organization was appointed to manage the first EIT Community Hub in Europe. Cleantech Bulgaria connects all the tips of the Knowledge Triangle through continuous interaction of the business, higher education, academia and technology, and the entrepreneurial world in the field of innovation. Cleantech Bulgaria operates an array of entrepreneurial formats and pre-incubation and acceleration programmes in partnership with Climate-KIC and InnoEnergy such as the Climate LaunchPad green business idea competition, PowerUp sustainable energy start-up competition, InnoEnergy Primer Pre-Accelerator, GreenHouse Pre-Incubation Programme and the Climate-KIC RIS Accelerator Programme. In the last three years they have accelerated over 20 new ventures that enable the local economy transition towards circular models applying successful mentorship by leading professionals and entrepreneurs in the country.

Junior Achievement offers contemporary programs and courses in business, economics, and entrepreneurial spirit development through educational and practical activities in economic and financial literacy, business skills, leadership, and success strategies and implement their knowledge in Bulgaria since 1997. By providing innovative experience-based training in the thematic areas financial literacy, readiness to work and entrepreneurship, JA improves the preparedness of young people and creates opportunities for work.

Every year, a network of around 470,000 volunteers serves more than 10 million students in about 100 countries. The result is the creation of an empowered generation of young people on a global level who are ready to compete for highly skilled jobs, manage their savings and start-up companies in their communities.

Co-working initiatives, "fab-labs"

Over the past 10 years, a number of successful shared workspaces and entrepreneurship laboratories have been set up in the big and small cities in the country to boost entrepreneurship.

As of 31 December 2017, the spaces where you can meet and work with entrepreneurs and freelancers are 33 - presented on the map below.

The largest concentration of co-working spaces and laboratories is in Sofia. Their number is 17, and the variety of technological, artistic, social. Here are some of them:





Betahaus is the first shared workspace in Sofia and Bulgaria, created in 2012 on the model of the German Betahaus. The company assists start-up entrepreneurs at an early stage by creating a favourable infrastructure and environment for turning ideas into real products with potential for commercialization. Betahaus functions as a shared workspace that attracts people sharing common goals, interests and ambitions - managing business as an expression of personal freedom and responsibility, sharing knowledge and know-how, mutual support in ventures, and achieving success by creating real value with great products..

Puzl CoWorking

This is the largest shared workspace in the country, around it gravitates mainly digital and IT companies - about 300 the LauncHub and Eleven investment funds. Currently with size of 2500 square meters, up to eight months space on Cherni Vrah Blvd. will add another 2700 square meters of space, and the long-term vision is for 50,000 sq. m. Puzl has open spaces with desks and smaller offices, conference and event rooms. At the moment the floors are two: The Space - a combination of open work area and detached offices, appropriate for start-up companies at a more advanced stage of development, and The Factory - a fully open shared work area for younger companies.

Incubator, Sofia Tech Park

Is a part of the first a technology park in Bulgaria. Currently there are 23 start-up companies selected for incubation and receiving government support in the form of affordable rentals and consultancy services. The Incubator is in close proximity to the complex with 11 high-tech laboratories and a large event center in Sofia Tech Park. It is expected soon to be discovered a classical co-working space.

Cleantech Bulgaria Booster



Shared workspace for the Cleantech Bulgaria Accelerator, here start-up companies with a focus in the green business can find support in n early stage of development. Located in the building of the Business Incubator of Sofia Tech Park and has about 200 sq.m. area. There are jobs for teams of 2 to 4 people with the option of adapting to larger teams. CleanTech also has 80 square meters event hall.

Smart Fab Lab (SFL)

It is the first fab lab in Sofia, Bulgaria. It is hosted at the Laboratory for Urban Design, which is a working space at the backyard of the University of Architecture, Civil Engineering and Geodesy in Sofia. SFL was founded in the summer of 2013 by Transformatori Association (http://transformatori.net/en/), Digital Spaces Living Lab (http://www.digitalspaces.info/) and private investors.

ZaraLabs has created the first shared workspace in the center of Stara Zagora, which offers a place for events, meetings and work for young entrepreneurs interested in the synergy that comes with working with like-minded and talented professionals in the same space.

Innovator Creative Spaces starts in Varna in 2017 and provides companies with high-tech workshops to develop their ideas. The idea of Innovator Creative Spaces is to create an interactive workspace network across the country, focusing on providing high technology hardware and software development workshops, as well as developments in various fields of technology, science, lifestyle, culture and human life.

Startup Hambar is JA Bulgaria social-innovation project in favour of the entrepreneurial ecosystem in the country. This is a shared work, training and mentoring space for young entrepreneurs between the ages of 14 and 26 and their start-up companies. The barn is located in the first technological park in Bulgaria - Technology + Innovation Network.

BizLabs - This is the oldest cooperative in Plovdiv. The inhabitants are most often companies from abroad or Sofia, freelancers, digital nomads and expatriates in Plovdiv, and the spheres in which they work software development, graphic design, user experience and research, architecture, human resources, marketing, PR and communications, diverse people with consulting professions, R & D of new ones technologies.

Business Incubator Burgas - The area is a good example for shared space created with municipal support. Business Incubator Burgas is a social space as well as a physical space virtually designed for the development of small and medium-sized businesses. There can be found offices, meeting rooms, conference hall, recreational space, training hall, presentation hall or part of an interactive exhibition space and others.

2.5. Support by companies (internal and external)

Apprenticeship Programmes and Scholarships in the field of eco-innovations are still underdeveloped in Bulgaria. Yet, there are specialized NGO, which provide Programmes for university students, as well as pre-acceleration and acceleration programmes for start-ups in the field of eco-innovation.

Such company is Cleantech Bulgaria, which is an official and exclusive partner of KIC InnoEnergy in Bulgaria and National Lead of a series of start up support programmes.



Cleantech Bulgaria cooperates closely with European Institute for Innovation and Technology (EIT) and the KICs offering official road to their acceleration, business creation and innovation programs, as well access to education and scholarships for PhD and Master Programs in leading European universities

However, private companies in Bulgaria have a great potential for development of scholarship programmes and initiatives in the field of eco-innovation, especially the so called "Green Companies", distinguished in the **Contest of B2 Media "Green Oscars".** The 2017 year, winners in the selected fields are listed below:

- Green Bank: "Postbank"
- Telecommunications: "Telenor"
- Field Technology: "Konica Minolta"
- Industry: "Solvay Sodi"
- Recycling Industry: "Ecopack" and Municipality of Stara Zagora
- Construction: "Selena Bulgaria"
- Tourism: "Kamchiya Sanitation Complex"
- Financial Services and special Paperless Paper Award: "Créditomo"
- Food industry: "Zagorka" AD and "Good Mills Bulgaria"
- Bio Industry, Green Business, Business Industry: "EMD Experts EOOD Bioactive"
- Trade and Agriculture: "Lidl Bulgaria"
- The Green Innovation Award: Management Agency with its European Mobility Week campaign.
- Education: Dentsu Ids Network Bulgaria
- Startups: "National Association of Bicycling Association"

"Coca-Cola HBC Bulgaria", "Metropolitan Electric Transport" as well as the construction company Arteks Engineering were also distinguished.

Some of the companies are engaged in supporting eco-innovation activities by means of sponsorships of different green instantiates.

In 2017, Zagorka AD was a sponsor of Climate KIC Acceleration Programme, organized in Bulgaria by Cleantech Bulgaria and Coca-Cola HBC Bulgaria was sponsoring the entrepreneurship Programmes of Junior Achievement.

Organization of Hackathons

Hackathons are organized by different companies to provoke ideas in the field of innovations. Below are listed the hackathons in the field of eco-innovation, organized in Bulgaria:

N	Name	Place	Period
1	Ideas for a Better Sofia: Sofia Innovation Hackathon 2017	Sofia	30,31 May 2017
2	Climathon Burgas (Hackathon in the sphere of climate)	Burgas	27 October, 2017



3	Climathon Stara Zagora (Hackathon in the sphere of climate)	Stara Zagora	21 Octover, 2016
4	Bulgaria Innovation Hackathon	Sofia	1,2 June 2018

2.6. Crowdfunding

Describe the accessibility and status of:

Crowdfunding is a relatively new and not yet widely used instrument for fundraising in Bulgaria. However, more and more entrepreneurs from the country, especially those in the technological field, take advantage of the international outreach of large crowdfunding platforms.

There are currently around 30 projects that aim at collecting funds for companies, activities and social causes in Bulgaria, but they are all hosted on non-Bulgarian platforms (**Indiegogo and Kickstarter**)

National crowdfunding platforms

Name	Link
Crowdfunding Centre	http://www.thecrowdfundingcenter.com/?pag
	e=projects&location=BG
GoGetFunding	https://gogetfunding.com/campaigns/?country
	=bg
Kickstarter Clone Bulgarian	https://crowdphp.com/kickstarter-clone-
	bulgarian.html

Available international crowdfunding platforms

Name	Link
Kickstarter	https://www.kickstarter.com/
Indiegogo	https://www.indiegogo.com/
Crowdfunder	https://www.crowdfunder.co.uk/map/Sofia,+B
	ulgaria

2.7. Events and networking

Local workshops

As the main representative of the entrepreneurial eco-system aimed at introducing eco-innovation in the country, throughout the years of its activity **Cleantech Bulgaria** managed to influence the development of the local innovation eco-system by:

- Providing Education campaigns to more than 22 000 employees on green office practices;



- Executing dedicated formats for sustainable business for 200 C-Level professionals and 700 entrepreneurs and students as:

Start-up Universiade

Start-Up Universiade is a unique entrepreneurial format targeting university students from Bulgaria with the purpose to evoke and focus their entrepreneurial vigour and skills on business ideas that can combat climate change. It provides the opportunity to find and support promising ideas in the very beginning of their development, while tapping on students' potential, enthusiasm and creative minds. Innovative ideas that can contribute to reducing GHG emissions, reduce air, water and even noise pollution and raise the quality of life of people via bringing positive effects to the environment are looked for.

• Green Business Network Bulgaria

The business representatives within Cleantech Bulgaria are engaged in a Business club for sustainable business growth, the Green Business Network Bulgaria that provides provide regular meetings for networking and partnership to its members. The topics and activities of the Club are related to innovation management, certification and sustainability reporting mechanisms, transition to new business models and approaches for green business (incl. circular economy, waste management and raw materials reuse, application of energy efficient technologies and green buildings etc.).

Cleantech Ambassadors

The young professionals are engaged within Cleantech Bulgaria through the Cleantech Ambassadors which enables young people to develop their interest in "green" issues in the platform and will offer them opportunities to participate in partnerships and projects and interact with business professionals to boost their career development in the sustainability field.

Climathon

Climathon (hosted in Bulgaria by Cleantech Bulgaria) is a global 24-hour climate change event organised by Climate-KIC which will take place simultaneously in major cities around the world on 27 October 2017. Climathon brings together the challenges of the world's cities with the people who have the passion and ability to solve them. City citizens around the world get to take direct climate action in their own cities by coming up with innovative solutions to local climate change problems. Cities all around the world will participate.

• Entrepreneurship for Circular Economy solutions

Cleantech Bulgaria operates an array of entrepreneurial formats and pre-incubation and acceleration programmes in partnership with Climate-KIC and InnoEnergy such as the Climate LaunchPad green business idea competition, PowerUp sustainable energy start-up competition, InnoEnergy Primer Pre-Accelerator, GreenHouse Pre-Incubation Programme and The Climate-KIC RIS Accelerator Programme. IN the last three years we have accelerated over 20 new ventures that enable the local economy transition towards circular models.

Higher education to enable circular economy transition

Building awareness and knowledge are the first steps to helping individuals and sectors to act on climate change, but empowering people through developing new competencies and skills is when they can really make a difference.



In 2017 we designed and launched the Circular Economy and Sustainable Management Master Programme in partnership with the University of Finance, Business and Entrepreneurship.

The programme aims to equip the active managers and professionals with up-to-date knowledge and skills to adopt circular economy principles and approaches in their work and organisations. Kicking-off in October'2018, the master program offers highly individualized curriculum, practical cases and unique complementing opportunities.

International seminars

The **21st European Eco-Innovation Forum** has been held in Sofia, Bulgaria, on 5-6 February 2018. The Forum addressed the environmental innovation solutions to improve air quality. It brought together companies and public authorities that have already been able to develop and implement effective new technologies or innovative business and management models with those seeking such solutions and practices.

Fostering Stakeholder's dialogue, in 2018 Cleantech Bulgaria Foundation mobilises the recognised agents of change, local and European stakeholders in the CIRCULAR ECONOMY AND CLEAN TECHNOLOGIES Forum — a high level international event, taking place on 18th of May 2018, part of the official agenda of the Bulgarian Presidency of the Council of the EU in 2018 under the patronage of the Ministry of Environment and Water. The event is focused on introducing sustainable economic models through the principles of the circular economy and cleantech integration. Ultimately shifting away from the extractive industrial model will be encouraged by looking closely into best practices which will support EU stakeholders in shaping the sustainable innovative future of Europe. The format provides a series of specialized events, starting from the institutional perspective, moving to best practices coming from the business and key examples from the biggest innovation drivers in the EU — The 6 Knowledge and Innovation Communities (KICs), complemented with round tables and open discussions.

2.8. Promotion and marketing

Innovations create sustainable competitive advantages and as a result of their stimulation the Bulgarian economy will be able to move up the value chain. To promote and market eco-innovation in the different sectors of the economy, different tools to support the start-up initiatives, competitions or even commercial programs are implemented (reality TV shows that test business ideas under the guidance of experienced entrepreneurs and investors), some of them are:

Broadcasters in the country like bTV: Four Steps to Own Small Business; How to start a small business? etc.

The annual national competition "The Greenest Companies in Bulgaria" of B2B media has been attended by municipalities, large, small and medium-sized enterprises, NGOs and start-up companies for seven years now. Prizes are awarded in 16 major categories, as well as special prizes such as Green Innovation, Green Investment, Paperless, Green Media and Green Feathers.

The Association of the Bulgarian Leaders and Entrepreneurs (ABLE) is an active community of entrepreneurial young people, who contribute to the development of the environment around them,



wherever they are. The **Central European Startup Awards (CESA)** is a unique series of events which aims to connect businesses with entrepreneurs' ideas in Poland, the Czech Republic, Serbia, Slovenia, Croatia, Romania, Hungary, and Bulgaria. The initiative in Bulgaria is organized by ABLE annually since 2014. The project was convened in 2014 and it seeks to bring together the cream of the crop of the start-up community in this part of the continent. CESA strives to reward, encourage and inspire entrepreneurs, while at the same time unite companies, investors, and all other stakeholders of the ecosystem. CESA is one of the four regional events, which are a part of the Global Startup Awards.

Sofia Startup Expo 2018 (SSE) is a showcase for start-ups and new entrepreneurs who present their innovative products, technologies and services for production and everyday life related to creating convenience, efficiency and higher quality of life for people. As a platform to support innovation, SSE aims to cover all the components needed to start and maintain a start-up innovative business. Exhibitors and participants have start-ups, representatives of leading corporations, government agencies, incubators, investors, venture capital funds, banks, students and technology companies from the EU and the region. The organizers' ambition is for SSE to become the meeting place for technology developers, innovation managers and investors to build partnerships and shape the future.

Various exhibitions in the country focusing on eco-innovation in 2018, such as:

March March			
7.03 - 29.03	WASTE MANAGEMENT & RECYCLING EXHIBITION	Sofia	
27.03 - 29.03	ENERGY EFFICIENCY & RENEWABLE ENERGY	Sofia	
27.03 - 29.03	SMART CITIES	Sofia	
27.03 - 29.03	WATER SOFIA	Sofia	
28.03 - 31.03	HEALTH AND BEAUTY WITH NATURAL AND ORGANIC PRODUCTS	Sofia	
	September		
24.09 - 29.09	AQUATECH	Plovdiv	
24.09 - 29.09	AUTOTECH	Plovdiv	
24.09 - 29.09	ELTECH	Plovdiv	
24.09 - 29.09	ENECO	Plovdiv	
24.09 - 29.09	CHEMICAL INDUSTRY	Plovdiv	
24.09 - 29.09	ROBOHITECH	Plovdiv	
24.09 - 29.09	AUTOWORLD PLOVDIV	Plovdiv	
October			
31.10 - 03.11	HEALTH AND BEAUTY WITH NATURAL AND ORGANIC PRODUCTS	Sofia	



3. Support structures and sources for energy efficiency, renewable energy and environment conservation

The existing instruments for support of energy efficiency, renewable energy and environment conservation in Bulgaria are as follows:

Energy Efficiency and Renewable Sources Fund FEEVI

The Fund operates as a financing institution by providing loans or loan guarantees, and as a free consultation centre. FEEVI provides assistance to Bulgarian companies, municipalities and private entities in the implementation of energy efficiency investment projects,

Operational Programme 'Innovation and Competitiveness 2014-2020' (OPIC)

Investment Priority 3.1 'Energy Technologies and Energy Efficiency' under Priority Axis 3: 'Energy and Resource Efficiency'

Operational programme 'Regional Development' 2014-2020

Activities for supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings and in the housing sector' under the following priority axes: 1 Sustainable and integrated urban development; and 2 Support for energy efficiency in supporting centres in outlying areas.

National programme for energy efficiency of multi-family buildings

The programme finances efficiency measures generally aimed at providing better living conditions to occupants of multi-family buildings, heat comfort, and higher quality of living environment.

National Trust Ecofund - Investment programme for climate

The resources from the Fund are spent on environmental projects and activities in accordance with the conditions of the donors and the priorities of the national environmental strategies and programmes.

Rural Development Programme 2014-2020

Energy efficiency measures are financed under Focus Area 5B 'Increasing efficiency in energy use in agriculture and food processing'

Energy efficiency credit programme for households

On 1 September 2016, the European Bank for Reconstruction and Development opened the third programming period of the Residential energy efficiency credit line (REECL III) for energy efficiency improvement measures in the housing sector in Bulgaria.

Operational programme 'Transport and Transport Infrastructure' 2014-2020

The implementation of energy efficiency projects fall under Investment Priority 4E 'Promoting low-carbon strategies for all types of territories, in particular for urban areas, including the promotion of sustainable multimodal urban mobility and mitigation relevant adaptation measures' within Priority Axis 3: 'Improvement of intermodal transport services for passengers and freights and development of sustainable urban transport',



Financial mechanism of the European Economic Area 2014-2021

It offers support for Energy efficiency improvement in production, Production of energy from renewable sources, Energy recovery from waste in industrial processes, Security of energy supply through diversification, Policies for the use of energy from renewable sources in all sectors of the economy, Development of energy markets and improvement of gas and electricity infrastructure.

■ Operational Programme Environment 2014 – 2020

The programme provides support for smart waste management

4. Summary

The country continues to be categorised in the modest innovator group, although a key objective is to reach the moderate innovators group by 2020. The main challenges for eco-innovation in Bulgaria are related increasing domestic and foreign investment opportunities in eco-innovation and circular economy, promoting efficient use of resources by achieving high energy efficiency (especially in homes and building infrastructure), further developing renewable energy sources, and improving sustainability practices within the transport sector. Increased national investments from government and industry would significantly encourage more support for eco-innovation and circular economy initiatives. Furthermore, the legislative framework could be further improved to encourage more investment in the sector. Economic, financial, administrative and socio-cultural barriers were identified that slow the advancement of eco-innovation in the country.

The most efficient support mechanisms for achieving the above are the European funded Operational Programmes, National Programmes and the foreign aid initiatives. The most essential structures, providing support to eco-innovations in Bulgaria, are the measures under Operational Programme 'Innovation and Competitiveness 2014-2020' (OPIC), the SME's INSTRUMENT, the initiatives under the National Innovation Fund and the National Science Fund, as well as the opportunities under Horizon 2020 and COSME. There are also open calls for financing eco-innovations by the KICs through the Bulgarian representative Cleantech Bulgaria.

However, the most effective financing mechanisms are the ones of Climate KIC and InnoEnergy, as they provide financial support to start ups depending on the needs and the stage of development of the company. The implementation process and the approval takes less time than the one needed under the Operational and National Programmes.