



EUROPEAN CLUSTER
COLLABORATION PLATFORM

Country factsheet

Bulgaria

An initiative of the European Union





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01

Introduction and economic policy context



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1. Introduction and economic policy context



This document presents an overview of the cluster policy in Bulgaria. Given the importance to contextualise the cluster policies (and related) analysed in the factsheets, a comprehensive outlook of the country in socioeconomic terms can be consulted in the [European Semester Country Report 2023 for Bulgaria](#).

The European Semester was an instrument introduced to coordinate the EU Member States economic policies and address the economic challenges faced by the EU. Its goals are “to ensure sound public finances, to prevent excessive macroeconomic imbalances in the EU, to support structural reforms to create more jobs and growth, and to boost investment”. Thus, it focuses on the following areas: business environment; financial and fiscal stability; green economy; public administration; labour market and skills; and, social protection and cohesion. Chapter 4.2 provides an overview on how Bulgaria’s cluster policy can help to tackle the economic policy challenges identified in the European Semester country recommendations.

As a consequence of the COVID-19 pandemic, European as well as global economies have been subject to severe output losses. In response, policymakers at EU and national level have acted decisively and at short notice to make available very significant financial resources, notably through the Recovery and Resilience Facility, to tackle the threat of a prolonged downturn. [National recovery and resilience plans](#) have been drafted in each Member State to ensure a recovery that addresses the challenges identified in the European Semester. In Bulgaria, Clusters are considered important for their ability to effectively address global challenges. That is why their establishment together with Centres of Excellence and educational ecosystem are spurred in the [National recovery and resilience plan of Bulgaria](#). In addition to the COVID-19 pandemic, the ongoing Russian military aggression against Ukraine has also taken its toll on EU companies and industrial ecosystems, highlighting the significance of policy efforts in supporting SMEs and clusters.

The [ERDF Partnership Agreement 2021-2027](#) for Bulgaria makes a clear reference to clusters. Based on the agreement, full participation of innovation clusters in the research and innovation ecosystem supports regional economy, enterprise growth and smart specialisation.

Operational programmes for the the period 2021 - 2027 for the Cohesion policy funds vary significantly and reference to clusters is made in one out of 8 programmes. Clusters are mentioned in the Programme “Competitiveness and Innovation in Enterprises”. The programme provides opportunities for the creation of clusters as a tool for collaboration between businesses with similar and diverse activities. The programme also supports the cooperation of scientists with clusters.

In the following, a succinct overview of the cluster policy in Bulgaria will be provided. The structure of this factsheet generally encompasses:

- 1) an overview of the industrial ecosystems and cluster landscape in Bulgaria
- 2) an overview of the Bulgarian broad policies which provide policy interventions for the development of clusters in Bulgaria,
- 3) an assessment of the state of play of the national cluster policy and its capacity to tackle wider economic policy challenges mentioned in the European Semester Report.



02

Industrial ecosystems and cluster landscape



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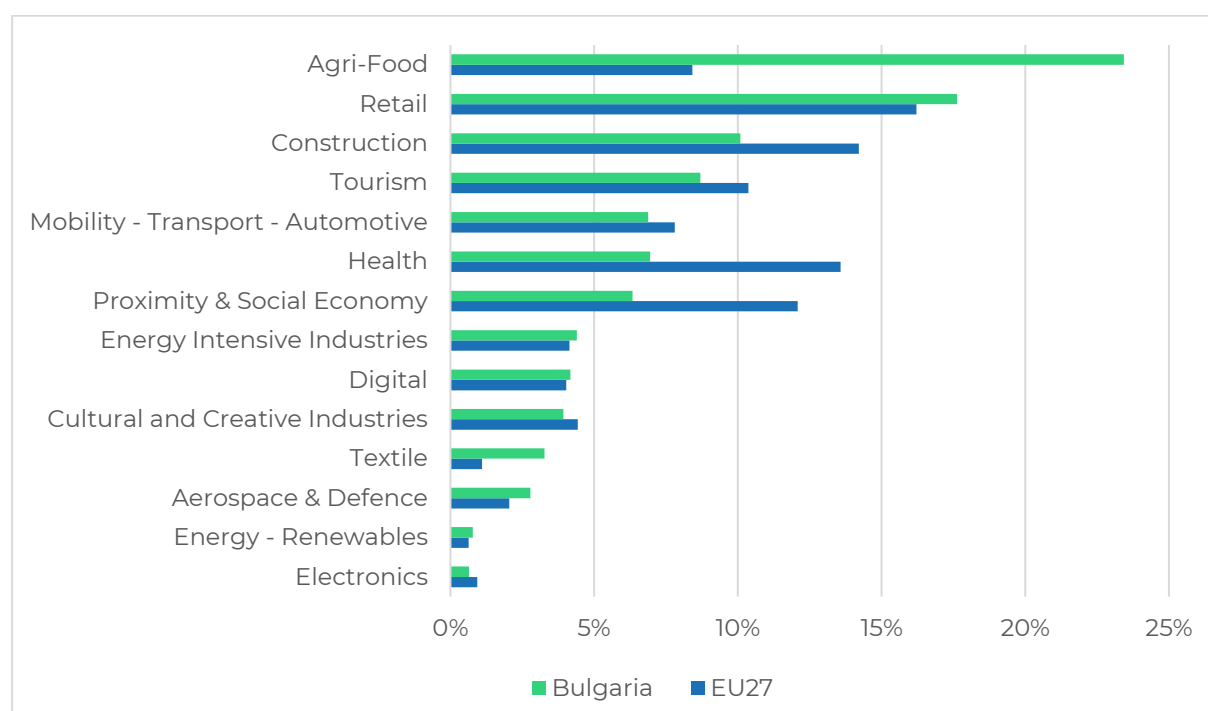


2. Industrial ecosystems and cluster landscape

2.1 Employment in the 14 industrial ecosystems

As part of its Industrial Strategy (March 2020), the European Commission has identified 14 industrial ecosystems that encompass all players operating in a value chain.¹ The classification of the 14 industrial ecosystems have been calculated by aggregating NACE 2 -digit activities, following the methodology established in the European Commission.² This means that the data provided below can differ from other publications by the European Commission that do not consider the industrial ecosystem classification.

Figure 1: Employment across the ecosystems



Source: ECCP (2023), own elaboration based on data from Eurostat.

In Figure 1, the employment share of Bulgaria and the EU27 in each industrial ecosystem is shown relative to the number of employed persons in the 14 industrial ecosystems. The ecosystems are ordered, from top to bottom, according to the amount of employment in the country. When the bar for the country is higher than that of the EU27, it indicates that the country exhibits a higher specialisation in that ecosystem. The figure shows that the main ecosystems by employment for Bulgaria are "Agri-Food", accounting for 23% of employment, and "Retail", accounting for 18%. It's evident that Bulgaria has a strong presence in the "Agri-Food" ecosystem, as demonstrated by its share far exceeding the EU27 average of 8%. Additionally, other ecosystems with notably higher employment shares than the EU27 average include "Textile" and "Aerospace and Defence". The

¹ see here for more information <https://clustercollaboration.eu/in-focus/industrial-ecosystems> (last access 09.01.2024).

² see European Commission (2022): Annual Single Market Report, SWD(2022).



regional significance of these industries is apparent in the sectoral and ecosystem agglomerations prevalent across Bulgaria's six NUTS 2 regions, as discussed in the section below.

2.2 Regional agglomerations

Economic activity is not equally distributed across regions in the EU but tends to agglomerate in certain places. In this context, an Agglomeration is defined as the concentration of a certain industry, sector or ecosystem in a certain geographical area. The following section provides an analysis of, first, the sectoral agglomerations and, second, the ecosystem agglomerations in the regions. Agglomerations are operationalised through the employment-based Location Quotients (LQ), measuring the relative specialisation of one region compared to the EU level, as well as the employment size.

If the LQ for a given activity-region combination is above 1.5, it is considered an agglomeration, and if the activity accounts for at least 1 % of total employment in the region, it is considered a regionally relevant agglomeration.³ The following tables show the total number of regionally relevant specialisation agglomerations in each region in the country and identifies the top five most specialised of these agglomerations. The first table focuses on the 88 NACE 2-digit activities or sectors, totalling 47 in the country in 20 unique sectors. On the other hand, the second table is based on the 14 ecosystems, which total 13 in the country in 4 unique ecosystems.

Table 1: Number of regionally relevant sectoral agglomerations and Top 5 agglomerations by region (NACE)

Region	Number of agglomerations	Agglomeration 1	Agglomeration 2	Agglomeration 3	Agglomeration 4	Agglomeration 5
BG31: North-West (Bulgaria)	7	A02 - Forestry & logging	C14 - Manuf. of wearing apparel	A01 - Crop & animal production	D35 - Electricity, gas, steam & air conditioning	N80 - Security & investigation activities
BG32: North-Central (Bulgaria)	9	A02 - Forestry & logging	C14 - Manuf. of wearing apparel	A01 - Crop & animal production	C31 - Manuf. of furniture	C22 - Manuf. of rubber & plastic products
BG33: North-East (Bulgaria)	8	A02 - Forestry & logging	A01 - Crop & animal production	C23 - Manuf. of other non-metal mineral products	C14 - Manuf. of wearing apparel	F42 - Civil engineering
BG34: South-East (Bulgaria)	9	A02 - Forestry & logging	A01 - Crop & animal production	D35 - Electricity, gas, steam & air conditioning	C14 - Manuf. of wearing apparel	I55 - Accommodation
BG41: South-West (Bulgaria)	8	C14 - Manuf. of wearing apparel	N80 - Security & investigation activities	J61 - Telecommunications	J62 - Computer programming & consultancy	M74 - Other prof., scientific & technical activities
BG42: South-Central (Bulgaria)	6	A02 - Forestry & logging	C14 - Manuf. of wearing apparel	A01 - Crop & animal production	C22 - Manuf. of rubber and plastic products	C27 - Manuf. of electrical equipment

Source: ECCP (2023), own elaboration based on data from Eurostat.

As mentioned at the beginning of this Chapter, the NACE 2-digit activities have been aggregated to the 14 EU industrial ecosystems following the methodology established by the European Commission. Table 2 provides an overview of the regional distribution of industrial ecosystem agglomerations. Overall, there are fewer numbers of ecosystem agglomerations compared to the regionally relevant sectoral agglomerations by NACE sectors. This more concentrated agglomeration can at least partially be linked to the methodology of measurement of the 14 industrial ecosystems. Additionally,

³ for more information on the methodology please see the methodology note: <https://clustercollaboration.eu/in-focus/policy-acceleration/country-factsheets-on-cluster-policies-and-programmes> (last access 09.01.2024).



particularly the ecosystem agglomerations shown in Table 2 are skewed towards small regions with a less diversified economy due to the methodology used.

The ecosystem “Agri-Food” accounts for ecosystem agglomerations in five out of the six Bulgarian regions (i.e. BG31: North-West, BG32: North-Central, BG33: North-East, BG34: South-East, BG42: South Central). In these regions, the sectors “crop and animal production (A01)” and “forestry and logging (A02)” are always in the top 3 of sectoral agglomerations. This is also reflected in the employment numbers in figure 1, which shows the country’s overall strength in the industrial ecosystem “Agri-Food”. The region of South-West Bulgaria, which also includes the country’s capital Sofia, is the exception. Here, sectors like “security, investigation activities (N80)”, “telecommunications (J61)” and “computer programming, consultancy and related activities (J62)” make up most of the region’s sectoral agglomeration, which is reflected in the regions ecosystem agglomerations “Digital” and “Aerospace and Defence”. Additionally, the sector “manufacturing of wearing apparel (C14)” is included in every region’s most relevant sectoral agglomerations (NACE), even being ranked number one in South-West Bulgaria. This is also evident by the frequency of the ecosystem “Textile”, which accounts for a regionally relevant ecosystem agglomeration in every Bulgarian region.

Table 2: Regionally relevant ecosystem agglomerations

Region	Number of ecosystem agglomerations	Agglomeration 1	Agglomeration 2	Agglomeration 3
BG31: North-West (Bulgaria)	2	Textile	Agri-Food	-
BG32: North-Central (Bulgaria)	2	Textile	Agri-Food	-
BG33: North-East (Bulgaria)	2	Agri-Food	Textile	-
BG34: South-East (Bulgaria)	2	Agri-Food	Textile	-
BG41: South-West (Bulgaria)	3	Textile	Digital	Aerospace & Defence
BG42: South-Central (Bulgaria)	2	Textile	Agri-Food	

Source: ECCP (2023), own elaboration based on data from Eurostat.

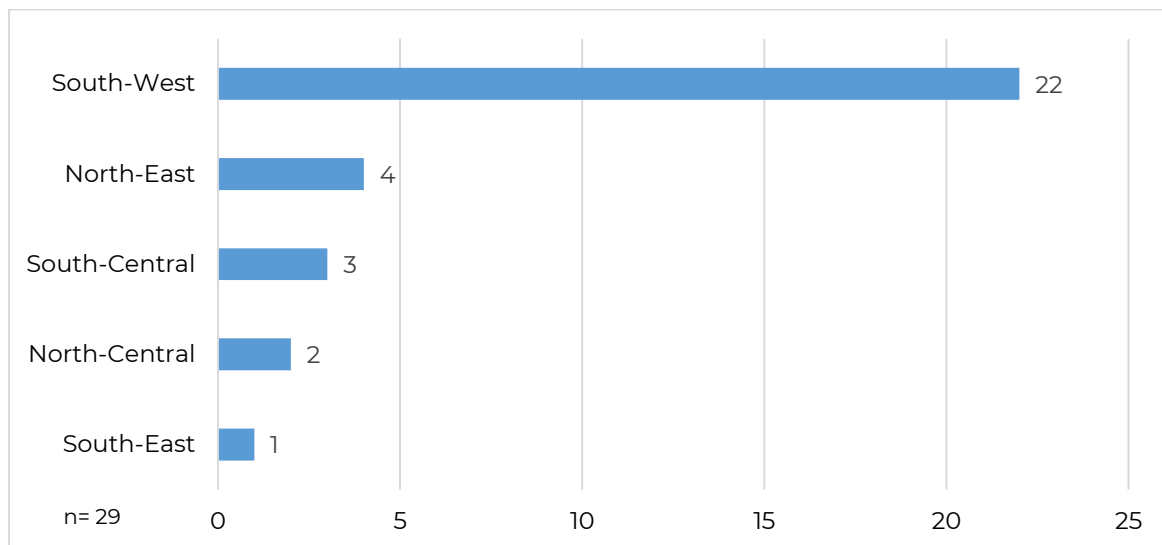
2.3 Cluster organisations & interregional cooperation

Cluster organisations in the regions

There are 32 cluster organisations registered on the ECCP coming from Bulgaria. With 22 cluster organisations, the majority of them are located in the region South-West followed by 4 organisations in North-East and 3 organisations in South-Central. The following figure shows the presence of cluster organisations in the different regions.



Figure 2: Cluster organisations profiled on the ECCP



Source: ECCP (2023). Note: The data for the analysis was extracted on 21/12/2023.

SMEs (79%, EU: 83%) followed by large enterprises (11%, EU: 9%) and research organisations (10%, EU: 8%) constitute the majority of member organisations of Bulgarian cluster organisations with profiles on the ECCP. From a thematic perspective, these Bulgarian cluster organisations are operating in the following industrial ecosystems. Since not all cluster organisations on the ECCP provided this information, the number of cluster organisations with an allocated industrial ecosystem is lower than the overall number of cluster organisations in the country. The following list shows that the cluster organisations profiled on the ECCP cover 11 of the 14 industrial ecosystems. However, there is a discrepancy between the ecosystems most frequently covered by Bulgarian cluster organisations and those with a high ecosystem share, namely Agri-Food, Retail and Construction. Instead, Bulgarian cluster organisations are predominantly active in the Digital, Renewable Energy and Creative & Cultural Industries ecosystems.

- Digital (11 cluster organisations)
- Renewable Energy (4 cluster organisations)
- Creative & Cultural Industries (4 cluster organisations)
- Mobility-Transport-Automotive (2 cluster organisations)
- Health (2 cluster organisations)
- Aerospace & Defence (1 cluster organisation)
- Agri-Food (1 cluster organisation)
- Electronics (1 cluster organisation)
- Proximity & Social Economy (1 cluster organisation)
- Retail (1 cluster organisation)
- Textile (1 cluster organisation)



Interregional cooperation

In the 2014-2020 funding period⁴, the European Cluster Partnerships and the INNOSUP-1 initiative have been launched by the European Commission to encourage clusters from Europe to intensify collaboration across regions and sectors. Bulgarian cluster organisations have been involved in eighteen consortia of the European Strategic Cluster Partnerships out of which ten partnerships were focusing on internationalisation (ESCP-4i), six partnerships were on cluster management excellence (ESCP-4x) and three partnerships were on smart specialisation (ESCP-S3). Consortia partners came from 19 different states (ES, FR, DE, PL, LT, PT, RO, IT, HU, RS, DK, EL, CZ, AL, MK, LV, BE, SE, SI). One Bulgarian cluster organisation participated in the INNOSUP-1 initiative with partner organisations coming from 8 countries (DE, ES, FI, IE, IT, RO, TR, UK).

In the 2021-2027 funding period, the Single Market Programme supports clusters as part of the Joint Clusters Initiatives (Euroclusters) for Europe's recovery. From Bulgaria, three cluster organisations are part of three Euroclusters with partners from ten countries (SK, AT, IT, ES, RO, FR, NL, SE, DE, PT). These Euroclusters, namely AEC Eurocluster, RE-CENTRE, and Silicon Eurocluster, collectively cover four industrial ecosystems. RE-Centre is covered by two ecosystems, namely "Digital" and "Cultural & Creative Industries", while the other two are covered by one ecosystem each. Specifically, AEC Eurocluster is covered by "Construction", while Silicon Eurocluster is covered by "Electronics".

⁴ Many of the programmes of the 2014-2020 funding period have been terminated by December 2023. However, the collaborative projects that were funded may continue to operate.

03

National cluster policy, programmes and initiatives



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3. National cluster policy, programmes and initiatives

In this section we provide an overview of the existing Bulgarian cluster policies on a national level.

The breakdown is presented in the form of a table, with the first column showcasing information on the aspects which constitute the policy (beginning with 'Policy Objectives', following with 'Policy Focus', etc.). The second and third column represent the case of a Bulgarian broad policy. This factsheet showcases Bulgarian broad policy, namely the National Development Programme Bulgaria 2030 and the Innovation Strategy for Smart Specialisation 2021-2027, which among other things, support cluster development.

Within the table the text presented in bold (black) depicts standardised categories across country factsheets (56 in total for 2023), which are applied for comparative purposes. This is followed by a complementary descriptive text to provide more insights about the cluster policy in Bulgaria.

Table 3: Overview of Bulgarian cluster policy


Policy type:	Broad policy	Broad policy
Policy name:	National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
POLICY OBJECTIVES 	Strengthening cooperation between companies or industry and RTDI actors Increasing competitiveness and boosting scale up of SMEs Supporting internationalisation activities Fostering R&D activities, technology development and implementation Fostering innovation and strengthening innovation ecosystems Supporting the creation of new cluster organisations	Increasing competitiveness and boosting scale up of SMEs Supporting internationalisation activities Fostering R&D activities, technology development and implementation Fostering innovation and strengthening innovation ecosystems Supporting the creation of new cluster organisations Promoting entrepreneurship, start-ups and spin-offs



Policy type:	Broad policy	Broad policy
Policy name:	National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
	Promoting entrepreneurship, start-ups and spin-offs Promoting resilience and sustainable economy and other solidarity-based initiatives Promoting employment and upgrading skills and competences	Promoting resilience and sustainable economy and other solidarity-based initiatives Promoting employment and upgrading skills and competences Enhancing territorial cohesion (through RIS3) Strengthening the network of cluster organisations/cross-clustering
	<p>The policy focuses on three strategic goals: accelerated economic development, demographic upswing and reduction of inequalities as a response and need for adaptation to the transforming world through its highly educated, creative, supportive and healthy society⁵.</p>	<p>The Innovation Strategy for Smart Specialisation (ISIS) 2021-2027 has the following strategic objectives:</p> <ul style="list-style-type: none"> • To develop and position Bulgaria as a centre of medium- and high-tech innovation in strategic areas where the country has established capacity and market positions, as well as recognised competences to compete in the global market, enhancing the country's national and regional innovation performance. • To support the development and establishment of a sustainable, modern, dynamic, inclusive, data-driven and globally connected research, innovation and entrepreneurship ecosystem in Bulgaria. <p>Furthermore, there are 3 operational objectives:</p> <ul style="list-style-type: none"> • Improve the research system and innovation performance of enterprises.

⁵ National Development Programme Bulgaria 2030. Available at: <https://www.minfin.bg/en/1394> (last accessed 28.11.2022).



Policy type:	Broad policy	Broad policy
Policy name:	National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
		<ul style="list-style-type: none"> • Increase the technological capacity of enterprises, increase the environmental friendliness and internationalisation of Bulgarian products and services. • Improve human resource capacity in the field of new technologies and innovation.
POLICY FOCUS 	Cross-sectoral	Cross-sectoral
	<p>The programme focuses on development and implementation of innovations in every sector of the economy. Strategy addresses 13 priorities in various sectors:</p> <ul style="list-style-type: none"> • Education and skills, • Science and scientific infrastructure, • Smart industry, • Circular and low-carbon economy, • Clean air and biodiversity, Sustainable agriculture, • Transport connectivity, • Digital connectivity, • Local development, • Institutional framework, • Social inclusion, • Health and sport, 	<p>ISIS 2021 - 2027 is a continuation and update of ISIS 2014-2020. It takes into account the lessons learned from the implementation of ISIS 2014-2020, recommendations from analyses, evaluations and international research on identified barriers to the development of the innovation environment, adapting the scope and mechanisms for implementation and governance in line with the changing socio-economic environment, the emerging challenges facing the EU and Bulgaria, and the large-scale economic consequences of the COVID-19 pandemic.</p> <p>ISIS defines five thematic areas where Bulgaria has a competitive advantage and capacity for smart specialisation and should focus its efforts on their accelerated development. For the period 2021-2027, the thematic priority areas for smart specialisation are as follows:</p> <ul style="list-style-type: none"> • Informatics and ICT (Information and Communication Technologies) • Mechatronics and microelectronics • Industry for healthy living, bioeconomy and biotechnology



Policy type:	Broad policy	Broad policy
Policy name:	National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
	<ul style="list-style-type: none"> Culture, heritage and tourism⁶. 	<ul style="list-style-type: none"> New technologies in creative and recreational industries Clean technologies, circular and low-carbon economy
RESPONSIBLE AUTHORITIES 	Both drafting and implementation Provides funding Oversees the implementation <p>The Development Council of the Council of Ministers is the responsible authority for monitoring, controlling and reporting the implementation of BULGARIA 2030.</p>	Both drafting and implementation Provides funding Oversees the implementation <p>At national level, the Innovation Strategy for Smart Specialisation is adopted and updated, if necessary, by the Council of Ministers. The development and implementation of the policy have been assigned to the Ministry of Innovation and Growth.</p>
BENEFICIARIES 	SMEs Cluster organisation Research organisations Academic institutions Start-ups Technology centres General population	SMEs Large firms Cluster organisation Research organisations Academic institutions Start-ups Business associations Technology centres NGOs

⁶ Vision, Goals and Priorities of the National Development Programme BULGARIA 2030. Available at: <https://www.minfin.bg/en/1394> (last accessed 25.01.2023).



Policy type:		Broad policy	Broad policy
Policy name:		National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
		The policy focuses on enterprise financing, particularly on small and medium-sized enterprises, as well as innovative start-ups, targeting the development, production and sustainable marketing of innovations through start-up funds, as well as venture capital funds for the subsequent stages of enterprise development. Also funding for R&D-performing public research organisations will be provided under the programme, for stimulation and acceleration of the process of development and implementation of innovations in different sectors of the economy.	The ISIS seeks to improve human capital and entrepreneurship, promotes R&D and innovation activities with institutions, and focuses on developing firms of all sizes through existing strong clusters and their organisations.
INSTRUMENTS 	Financial	Funding collaboration initiatives Financing network events Financing start-ups Innovation: voucher, support to hire PhDs, cooperation with R&I actors	Funding collaboration initiatives Support to R&D projects, SMEs becoming cluster members, etc. Subsidies to hire personnel Supporting market entry (e.g. testing, proof-of concept, prototyping, demonstration projects) Innovation: voucher, support to hire PhDs, cooperation with R&I actors
	Technical assistance	Infrastructure: coworking spaces, offices, incubation and accelerator spaces, research centres, technology parks etc. Support for hard skill development: knowledge transfer, intellectual property, entrepreneurship, export advice, market intelligence Support for networking and partnership building (at national and/or international level)	Infrastructure: coworking spaces, offices, incubation and accelerator spaces, research centres, technology parks etc. Support for hard skill development: knowledge transfer, intellectual property, entrepreneurship, export advice, market intelligence Support for soft skills development: coaching, management training, upskilling/reskilling





Policy type:		Broad policy	Broad policy
Policy name:		National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
			Support for networking and partnership building (at national and/or international level)
	Explanation	A set of measures is aimed at organisations providing research and innovation activities, small and medium-sized enterprises, collaboration initiatives, general population, internationalisation of enterprises and country, etc.	The ISIS 2021-2027 sets the directions for the implementation of a comprehensive and coherent set of measures and instruments for financing innovation and ensures that the responsible government structures will coordinate and align the relevant policies, both in terms of content and their deployment over time. In terms of the impact of the adoption of the smart specialisation approach on the governance of research and innovation policy systems, the implementation of the Strategy is expected to strengthen the networks of actors in the ecosystem as well as to make the governance of innovation policy more inclusive. In addition, ISIS 2021-2027 is expected to support governance processes by region to help build regional innovation systems.
HISTORY 	Period	Limited period	Limited period
	Ending year <i>(for policies with limited period)</i>	2030	2027
	Starting year	2020	2021
	Explanation	National Development Programme BULGARIA 2030 builds on the vision, goals and priorities for the socio-economic development of Bulgaria in the period 2021- 2030, approved by Decision of the Council of Ministers No. 33 of 20.01.2020.	The Innovation Strategy for Smart Specialisation 2021-2027 has been developed for the new programming period, building on the achievements and experience gained from the implementation of the ISIS 2014-2020.



Policy type:		Broad policy	Broad policy
Policy name:		National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
BUDGET 	Overall	No information available	EUR 3.54 billion, allocated under the three operational objectives: <ul style="list-style-type: none"> • EUR 2.4 billion for operational objective 1: Improve the research system and innovation performance of enterprises. • EUR 953 million for operational objective 2: Increase the technological capacity of enterprises, increase the environmental friendliness and internationalisation of Bulgarian products and services • EUR 153 million for operational objective 3: Improve human resource capacity in the field of new technologies and innovation.
	Annual	No information available	No information available
	Source of funding	State budget, European funds and instruments, International Funds and Investments from the businesses, including budget of BSA, SAA and higher education institutions.	The ISIS 2021-2027 budget is drawn from national and European sources. The national sources include the funds that the State allocates to research and innovation, charged to the State budget (National Scientific Programmes - NSP, National Roadmap for Scientific Infrastructure - NSRF, Scientific Research Fund - SRF and National Innovation Fund - NIF). The European sources are the funds linked to the programmes providing for the channelling of funds for R&D and innovation.
	Availability	ex-ante	not available



Policy type:		Broad policy	Broad policy
Policy name:		National Development Programme Bulgaria 2030	Innovation Strategy for Smart Specialisation (ISIS)
POLICY EVALUATION 	Results	<p>The macroeconomic model Simulation of Bulgaria's Investment in Long-Term Advance 2.0 (SIBILA 2.0) was used to quantify the macroeconomic effects of the full implementation of the policies set out in BULGARIA 2030. The overall effect of the measures and policies set out in the National Development Programme BULGARIA 2030 is expected to be strongly positive. The positive effects in the long term will be linked both to an increase in the extensive characteristics of production and to an improvement in the quality component of the inputs. Increasing the intensive characteristics of growth throughout the country will be based on the new technologies deployed and the increased skills and employability of the employed labour resource. As a result, the economy will position itself on a higher trajectory of economic growth. For the simulated time horizon 2021-2030, the calculated effects give reason to expect a significant expansion of the country's production, with results indicating an additional GDP growth of 33.4% by the end of 2030 compared to the baseline scenario. This will allow the Bulgarian economy to achieve accelerated convergence of living standards as measured by the GDP per capita indicator and in particular to reach 75% of the average GDP level in the Union.</p>	<p>In 2025, the Policy and Analysis Directorate will produce an Interim Progress Report (Monitoring Report) including an assessment of the implementation of the ISIS in terms of the priority thematic areas, the extent to which the objectives have been achieved and the governance process for the period 2021-2024.</p> <p>A final monitoring report with an external evaluation of the implementation of the ISIS will be developed two years after the end of the policy.</p>
	POLICY ALIGNMENT WITH THE EU PRIORITIES 	Green economy Digitalisation	Green economy Digitalisation Resilience

Source: ECCP (2023).

04

State of cluster policy and its role in broader economic policy challenges



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4. State of cluster policy and its role in broader economic policy challenges

4.1 The state of cluster policy

This section presents an overview on the state of play of Bulgarian cluster policy in the form of a qualitative assessment across four categories of analysis – policy scope, continuity of cluster policies, evidence of performance, and the range of cluster support instruments. Please refer to the **Annex** for the detailed overview of the categories and the scoring system. The table below presents an overview of the **state of play of Bulgarian cluster policy** for 2023.

Table 4: State of play

Bulgaria	State of play
POLICY SCOPE	Absence of cluster policy
	Broad policy
	Sectoral policy
	National and/or regional cluster policy
CONTINUITY	No cluster-specific policy available
	Cluster policy established recently
	Cluster policy established between over 2 and 10 years
	Cluster policy established over 10 years ago
EVIDENCE OF PERFORMANCE	No evaluation and / or monitoring available
	Existence of evaluations of past policies
	Existence of monitoring or an ongoing / interim evaluation
	Existence of monitoring and ex-ante or ongoing / interim evaluation
CLUSTER SUPPORT INSTRUMENTS	No instruments for cluster development
	Financial support for cluster development in the broader and / or sectoral policy
	Financial or technical support for cluster development in dedicated cluster policy
	Financial and technical support for cluster development in dedicated cluster policy

Source: ECCP (2023).

The text below provides a **qualitative description** of the state of play of the cluster policy in Bulgaria.

Policy scope

In Bulgaria no dedicated national cluster policy is in place. There are only broad policies addressing also objectives in area of cooperation and networking. Such broad policies are Innovation Strategy for Smart Specialisation (which support development and creation of cluster organisation, cooperation of SMEs and networking etc.) and National Development Programme Bulgaria 2030 (supporting creation and development of clusters and innovation ecosystems, cooperation between SMEs and RTDI organisations etc.).



Continuity

Bulgarian broad policies that support cluster development began officially in 2004 and have since continued. However, the support has been provided through broader policies. With the support of the Bulgarian government, the first cluster organisation was registered as a non-profit in 2004. Since then, Bulgaria has developed the following broad policies: National Innovation Strategy (2004); National Strategy for Investments (2005-2010); OP Regional Development (2007-2013); National Strategy for the Promotion of SMEs (2007-2013), the Innovation Strategy for Smart Specialisation of the Republic of Bulgaria for the Period 2014-2020 and most recently adopted National Development Programme Bulgaria 2030. The Innovation Strategy for Smart Specialisation 2021-2027 and National Development Programme Bulgaria 2030 have not yet been implemented.

Recently, development and creation of clusters in the country are supported only through broad policies: Innovation Strategy for Smart Specialisation (2014-2020) and National Development Programme Bulgaria 2030 (2020-2030), which support cluster development.

Evidence of performance

The National Strategy for Regional Development (2005-2015) was evaluated in 2010. The interim evaluation report (no final evaluation was publicly released) found that the part of the Strategy related to clusters, Priority 1 (Increasing the regional competitiveness on the basis of the knowledge economy) was not progressing well. The projects under the Regional Development Operational Programme were not confirmed while 40 projects valued at over EUR 21 million were under the Human Resources Development Operational Program. As a result, the programmes did not fully cover the objectives outlined in Priority 1 and only 6% of the budgeted amounts were paid out in project funding.

The macroeconomic model Simulation of Bulgaria's Investment in Long-Term Advance 2.0 (SIBILA 2.0) was used to quantify the macroeconomic effects of the full implementation of the policies set out in BULGARIA 2030. The overall effect of the measures and policies set out in the National Development Programme BULGARIA 2030 is expected to be strongly positive. The positive effects in the long term will be linked both to an increase in the extensive output of production and to an improvement in the quality component of the inputs. Increasing the intensive characteristics of growth throughout the country will be based on the new technologies deployed and the increased skills and employability of the employed labour resource. As a result, the economy will position itself on a higher trajectory of economic growth. For the simulated time horizon 2021-2030, the calculated effects give reason to expect a significant expansion of the country's production, with results indicating an additional GDP growth of 33.4% by the end of 2030 compared to the baseline scenario. This will allow the Bulgarian economy to achieve accelerated convergence of living standards as measured by the GDP per capita indicator in the SPS and in particular to reach 75% of the average GDP level in the Union.

Cluster support instruments

Among Bulgaria's broad policies support instruments are also instruments for creation and further development of clusters, e.g. support for cooperation and collaboration activities, networking of actors engaged in economic activities in the same or related industries, development of innovations, etc.




4.2 Cluster policy's potential impact on challenges identified in the European Semester Report

Cluster policy can provide important support to broader economic policy efforts. This section shows how Bulgarian clusters (can) play a role in addressing the challenges identified in the European Semester Report for the country. To this end, the European Semester 2023 country report for Bulgaria⁷ has been analysed across policy areas relevant to cluster policy. The results point to a series of issues where cluster policy can play an important role in tackling the country's economic challenges.

The table below also outlines how Bulgarian cluster organisations are already contributing to the challenges outlined in the European Semester Reports in the absence of a dedicated cluster policy. Developing a dedicated cluster policy could further strengthen and focus the activities of Bulgarian cluster organisations towards broader economic policy challenges.

Table 5: Contribution of Bulgarian clusters to the challenges identified in the European Semester Report

Policy area	Challenges	Cluster activity
SKILLS 	<ul style="list-style-type: none"> Green skills needed for the green transition should be promoted more 	<p>Research underlines the role of clusters in developing the skills of the workforce and attracting skilled workers to a region.⁸ For example, the Green Synergies Cluster focused on green innovations surrounding the green transition can be pointed out. The cluster participates in the strategic partnership ETV4INNOVATION, aiming to design and develop Joint Curricula for filling gaps in relation with Environmental Technology Verification (ETV) for current and future managers and workers in technological sectors such as materials wastes and resources as well as energy technologies.⁹</p> <p>More generally, as cluster organisations act as intermediaries between companies and research and educational institutions, they can also be seen as part of the training and educational infrastructure in the innovation ecosystem.¹⁰</p>
GREEN  TRANSITION	<ul style="list-style-type: none"> Reducing overall reliance on fossil fuels Deploying a much larger capacity of renewable energy sources and increasing investments in electricity infrastructure and 	<p>As facilitators of technology transfer, clusters are assigned an important role in supporting the green transition. Clusters in Bulgaria are addressing the recommendations mentioned by the European Semester Report. For instance, the Electric Vehicles Industrial Cluster EVIC aims to develop the "Electrical Mobility" sector in Bulgaria by creating a national charging infrastructure for electric vehicles and supporting and maintaining cooperation and competitiveness among their members.¹¹</p>

⁷ https://economy-finance.ec.europa.eu/document/download/9f9f4e76-83da-451e-9dd0-4298913d693a_en?filename=BG_SWD_2023_602_en.pdf (last access 30.04.2024).

⁸ Hsu, M.-S et al. (2014).

⁹ see <https://greensynergycluster.eu/pf/etv4innovation/?lang=en> (last access 30.04.2024).

¹⁰ European Expert Group on Clusters (2020).

¹¹ see <http://www.emic-bg.org/content/item/1> (last access 30.04.2024).



Policy area	Challenges	Cluster activity
	<p>storage</p> <ul style="list-style-type: none"> Stepping up energy efficiency renovations and deploying renewable solutions for space heating 	<p>Studies also show that clusters can play a vital role in the green transition of the economy¹² and it can be underlined that cluster organisations have a positive influence on the green transition, not least because they facilitate exchange between different actors, disseminate relevant knowledge and practices and deepen environmental awareness among stakeholders.¹³</p>

Source: ECCP (2023).

¹² Lis, A. & Mackiewicz, M. (2023); ECCP (2021).

¹³ Hatch et al. (2017).

References



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References

- ECCP (2021): Cluster driving the Green and Digital transition. Available online: <https://clustercollaboration.eu/sites/default/files/document-store/Clusters%20driving%20the%20green%20and%20digital%20transitions%20event%20-%20Input%20paper.pdf> (last access 21.12.2023).
- European Expert Group on Clusters (2020): Recommendation Report. Available online https://clustercollaboration.eu/sites/default/files/news_attachment/European%20Expert%20Group%20on%20Clusters%20-%20Recommendation%20Report.pdf (last access 21.12.2023).
- Hatch et al. (2017): The Role of Social Actors in Advancing a Green Transition: The case of Québec's Cleantech Cluster. In Journal of Innovation Economics & Management. Available online: <https://www.cairn.info/revue-journal-of-innovation-economics-2017-3-page-63.htm> (last access 21.12.2023).
- Hsu, M.-S et al. (2014): The impact of industrial clusters on human resource and firms' performance. Journal of Modelling in Management 9:2. Available online: <https://www.emerald.com/insight/content/doi/10.1108/JM2-11-2012-0038/full/html> (last access 21.12.2023).
- Ivanov, C. (2019). Internationalization of Bulgarian Clusters. Management of Organizations: Systematic Research, 82:1, 25-35. Available at : https://www.researchgate.net/publication/340796407_Internationalization_of_Bulgarian_Clusters (Accessed 25.01.2023.)
- Lis, A. & Mackiewicz, M. (2023): The implementation of green transformation through clusters. Ecological Economics 209. Available online: <https://www.sciencedirect.com/science/article/abs/pii/S0921800923001052> (last access 18.01.2024).
- Ministry of Innovation and Growth (2023). Operational Programme Competitiveness and Innovation in Enterprises 2021-2027. Available at: <https://www.mig.government.bg/politiki-i-strategii/inovaczii/>
- Republic of Bulgaria, Ministry of Economy (2015). Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020 (IS3). Available at : www.mi.government.bg/files/useruploads/files/innovations/ris3_26.10.2015_en.pdf. (Accessed 25.01.2023.)
- Republic of Bulgaria, Ministry of Economy (2017). Innovation strategy for smart specialization of the Republic of Bulgaria 2014-2020 (IS3). Available at : https://mi.government.bg/files/useruploads/files/innovations/ris3_final_27062017_eng.pdf (Accessed 25.01.2023.)
- Republic of Bulgaria, Ministry of Finance (2020). National Development Programme BULGARIA 2030. Available at: <https://www.minfin.bg/upload/46720/National%2BDevelopment%2BProgramme%2BBULGARIA%2B2030.pdf> (Accessed 25.01.2023.)
- Republic of Bulgaria, Ministry of Finance (2020). Vision, Goals and Priorities of the National Development Programme BULGARIA 2030. Available at: https://www.minfin.bg/upload/43546/Bulgaria+2030_EN.pdf (Accessed 25.01.2023.)
- Republic of Bulgaria, Ministry of Innovation and Growth (2021). Innovation Strategy for Smart Specialisation Bulgaria 2021-2027. Available at: <https://www.mig.government.bg/wp-content/uploads/2022/12/isis-2021-2027.pdf> (Accessed 11.07.2024).
- Republic of Bulgaria, Ministry of Regional Development and Public Works (2012). National Regional Development Strategy (NRDS) of the Republic of Bulgaria for the period 2012-2022. Available at :



<https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.mrrb.bg%2Fstatic%2Fmedia%2Fups%2Farticles%2Fattachments%2F1476622bc52eb77de80df124a0203604.doc&wdOrigin=BROWSELINK> (Accessed 25.01.2023.)

Slavova, I. and Bankova, Y. (2016). National cluster policy in Bulgaria: Nature and main characteristics. *Izvestiya*, 60:2, 185-200. Available at :

<https://ideas.repec.org/a/vrn/journal/y2016i2p185-200.html> (Accessed 25.01.2023.)

Strategma Agency Ltd. and Republic of Bulgaria, Ministry of Economy (2016) Technology roadmaps for the thematic areas, defined in the innovation strategy for smart specialization of the republic of Bulgaria 2014-2020. Available at :

https://www.mi.government.bg/files/useruploads/files/innovations/trms_3rev_final_en.pdf (Accessed 25.01.2023.)

Strategma Agency Ltd. and Republic of Bulgaria, Ministry of Regional Development and Public Works (2010). Interim evaluation and report on the implementation of the National Regional Development Strategy for the period 2005-2015.

UK Science & Innovation Network (2021). Country Snapshot: Bulgaria. Available at :

<https://www.gov.uk/government/publications/uk-science-and-innovation-network-country-snapshot-bulgaria> (Accessed 25.01.2023.)



Annex

Table 6: Analytical framework for the state of cluster policy

Criterion	Description	Categorical variables
Policy scope	assessment whether the country has a dedicated cluster policy, or cluster creation and/or development is targeted through broader policies, e.g. foreign trade policies, labour and social policies or specific sectoral policies, e.g. industrial policy tourism policies, agriculture policies	absence of cluster policy existence of broader policies existence of specific sectoral policies existence of targeted cluster policies
Continuity of cluster policies	assessment of the duration and experience of the country in carrying out cluster policies. This criterion assesses only existence of targeted cluster policies and not broader policies or sectoral policies	absence of policies supporting cluster development cluster policy established recently (within the last 2 years) cluster policy established between over 2 and 10 years cluster policy established over 10 years ago
Evidence of performance	assessment whether there are evaluations of past and ongoing policies and a monitoring system in place. The existence of monitoring and evaluation mechanisms determines the degree of policy development in the country	no evaluation and / or monitoring available existence of evaluations of past policies, e.g. ex-ante existence of monitoring or an ongoing / interim evaluation existence of monitoring and ex-ante or ongoing / interim evaluation
Cluster Support Instruments	assessment whether the policies provide any instruments to support the policy implementation, being these financial and/or technical support	no instruments for cluster development financial support for cluster development in the broader and / or sectoral policy financial or technical support for cluster development in dedicated cluster policy financial and technical support for cluster development in dedicated cluster policy

Source: ECCP (2023).