

## **ANALYSIS OF THE ACCESSION OF EUROPEAN FUNDS FOR THE ENVIRONMENTAL POLICY FROM 2014 - 2020**

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### **Abstract**

Economic growth and development have direct impact on environment. In this matter, the concerns about the protection of the environment of the European Union have increased over time. The paper represents an analysis regarding the accessing of European non-reimbursable funds allocated for environmental policy in the period 2014-2020. European non-reimbursable funds represented the main instrument for financing environmental policies, and accessing them is important for meeting environmental objectives of our country. The paper analyzes the accesses of European funds by counties, being important, especially as Romania is in the period of transition to the new policy for the period 2021 - 2027 and to meet the objectives of the Strategy for smart, sustainable growth. and favorable to inclusion in the European Union.

### **Keywords**

European funds, environmental policy, objectives

### **JEL Classification**

Q56, Q58

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### **Introduction**

Structural Funds are implemented in Member States by the provisions of the National Development Plan, a strategic planning document for multiannual financial programming, developed by the Government in partnership with the European Commission, to be correlated with the development policy of the European Union (Lucian P., 2014). The growing awareness among governments of the central role of climate change in public policy has led a number of administrations to develop mechanisms for better understanding how the public finance system prioritises climate policy outcomes (Nesbit et.all, 2021).

Romania, as a former communist country of the Eastern European bloc, joined the large European family in 2007, committing itself to a series of structural reforms to harmonize its internal development policies with the EU law (Bostan I. et. all, 2019). Thus, through

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the Structural Funds that it benefited from as a member state between 2007 and 2013 and also through foreign direct investments (Bostan I. et. all, 2019, Anton, 2017), Romania acted in order to eliminate the economic and social disparities between the regions, in order to achieve economic and social cohesion (Bostan I. et. all, 2019, Pes and Porretta, 2016).

In order to align to the legal and institutional European framework, Romania had access to European Funds even before the accession to EU. For the next period, it is important for Romania to develop a sustainable strategy based on the achievements from the past and objectives for the future. A sustainable development strategy at national level can provide the necessary framework for analyzing and debating the complex problems of economic development, identifying the important problems that have arisen in the development-environment relationship and establishing the actions meant to lead to their solution (Popescu C., 2004). The objective of the paper is to analyse the accession of the European funds for the environmental policy by Romania.

### **1. Literature review**

Environmental policy represents the totality of actions, measures and all regulations aimed at maintaining, protecting, and improving natural environmental conditions, as well as reducing the effects of pollution and sources of pollution. The main legal basis for environmental policy is Articles 11 and 191-193 of the Treaty on the Functioning of the European Union, which states that the European Union has the power to act in all areas of environmental policy: air and water pollution, waste management and climate change. The Treaty on European Union introduces the principle of subsidiarity, which protects the decision-making and action capacity of the Member States, giving the European Union the opportunity to intervene "due to the scale and effects of the planned action". According to this principle, as well as the requirement of unanimity in the Council, environmental policy has competences of fiscal nature, land use planning, land use, quantitative management of water resources, choice of energy sources and energy supply structure (European Parliament, 2020). The European Union's environmental policy continues to adapt to meet evolving environmental challenges, which do not respect national borders and have an increasingly global coverage.

Environmental pollution is a negative externality (Ke Wang et al., 2020). In order to internalize this externality and reduce polluting emissions from citizens, businesses and governments, it is undoubtedly inevitable that authorities formulate appropriate environmental policies and laws (Zheng et al., 2014). The EU is increasingly affected by high price volatility and the availability of primary resources and materials in the globalized economy. These developments underline the importance of green growth and a resource-efficient low-carbon economy, which can generate new sources of growth and high employment levels. More efficient use of resources in the production stage and more sustainable consumption are key aspects of the transition to a circular economy. This will also be based on innovation and raising consumer awareness.

Regardless of how people, businesses and organizations address the limitation of pollutant discharges, the development of renewable energy technology or the protection

of clean water sources and arable land, such measures to improve the environment cannot be separated from the effective participation of government (Kalkuhl et al., 2013; Bose, 2014; Feng et al., 2019). Many environmental problems are cross-border (eg air, marine and freshwater pollution, hazardous waste, industrial accidents, biodiversity) and require solutions at EU level to be truly effective.

An environmental policy is one of the main ways in which any government can participate in environmental governance (Chen et al., 2019; Chang et al., 2019).

## **2. Research methodology**

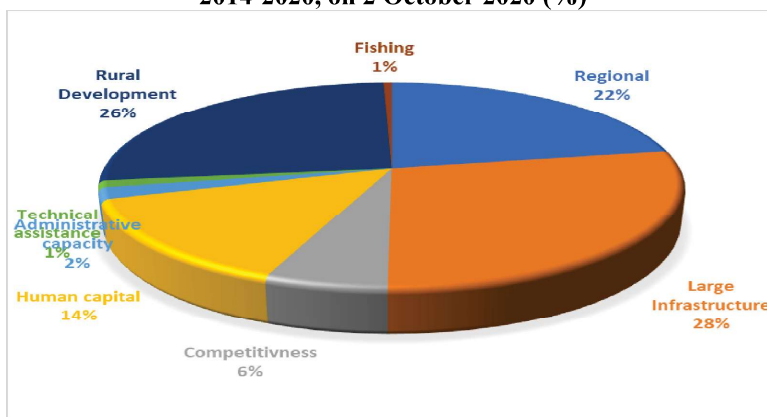
The main objective of the paper is to determine the degree of access to European non-reimbursable funds allocated to Romania, in the period 2014 - 2020, for the environmental policy, from the Large Infrastructure Operational Program (POIM). The paper represents an analysis of the list of contracted environmental projects, through the Large Infrastructure Operational Program (POIM), from 2014 to 2020. The list of contracted projects was processed, the value of projects was transformed into Euro by calculating an average course of the period 2014 - 2020. The data were collected from the database of the Ministry of European Funds and were processed at county level.

## **3. Results and discussion**

In the 2014-2020 programming period, Romania benefited from non-reimbursable European funds amounting to about 30.1 billion Euros. The largest amounts were allocated to the Large Infrastructure Operational Program (POIM) (8.6 billion Euros) and the National Rural Development Program (8.1 billion Euros).

POIM has as main objective the development of transport and environment infrastructure, representing a continuation of Transport and Environment Operational Programs from the programming period 2007 - 2013. The implementation period of the projects financed through this program is December 31, 2023.

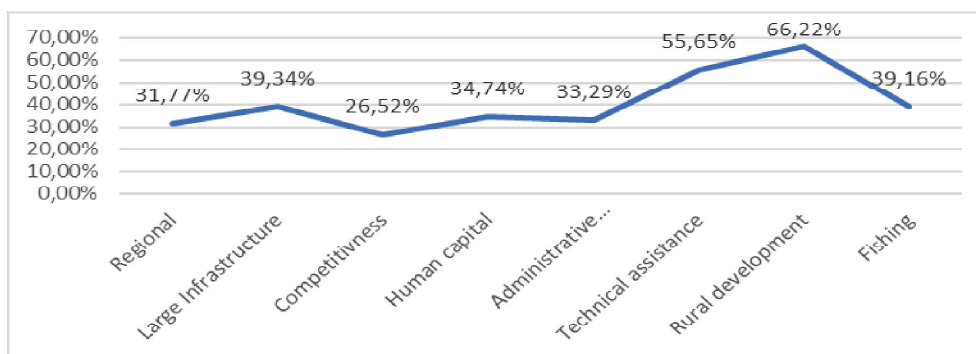
**Graph no.1. Financial allocations by operational program, programming period 2014-2020, on 2 October 2020 (%)**



Source: data processing Ministry of European Funds

In the 2014-2020 programming period, Romania implements 8 operational programs, with total financial allocations of about 30.1 billion Euros. Depending on the identified needs and priority areas of Romania, it is found that the largest allocations are for transport and environment infrastructure (called Large Infrastructure) (28% of total funds), followed by allocations for agriculture and rural development (26% of total funds) and allocations to reduce the development gaps of the regions (22% of total funds).

**Graph no. 2. Degree of access to European non-reimbursable funds, programming period 2014 - 2020, on October 2, 2020 (%)**



Source: data processing Ministry of European Funds

According to European Union Regulation 1303/2013, the Union Strategy for Smart, Sustainable and Inclusive Growth contains 11 thematic objectives. Through the investments proposed under the POIM, for environmental protection, climate change

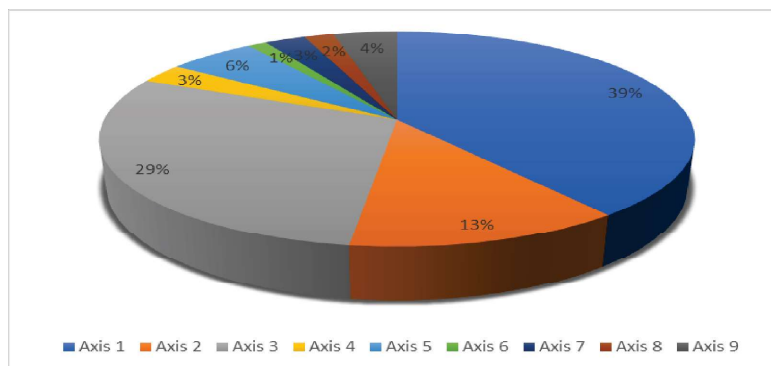
mitigation and transport infrastructure, the program contributes to the achievement of 4 objectives of the European Union Strategy, namely:

- Objective 4, by supporting the production of energy from renewable sources, energy efficiency measures, and the introduction of SMART technologies,
- Objective 5, by financing measures to prevent and protect against natural risks, aimed at mitigating and combating the effects of climate change and strengthening the capacity to intervene in the field.
- Objective 6, by promoting investments in water and wastewater systems, integrated waste management, biodiversity protection and water quality monitoring.
- Objective 7, by supporting investments in infrastructure for all modes of transport, as well as energy transport.

In 2020, in order to respond to the health needs caused by the Covid-19 crisis, according to the provisions of GEO no. 43/2020 for the approval of some support measures settled from European funds, within the POIM was included the Priority Axis 9, with financial allocations of 350 million Euros (245 million Euros for the less developed regions and 105 million for the developed ones ). This axis benefits from an allocation of 4.05% of the total funds for POIM, is financed by the European Regional Development Fund and aims to make investments in health and social infrastructure and increase the capacity to manage the health crisis caused by the Covid-19 crisis.

For Romania, the environmental policy has benefited from funding from several operational programs, but the main program is the Large Infrastructure Operational Program (POIM). The paper will focus to analyze the measures from Large Infrastructure Operational Program (POIM), that finance only the environmental policy. The total financing of the POIM, for the period 2014 - 2020, is 10.17 billion Euros, of which 8.6 billion Euros (representing 85%) represent European funds and 1.5 billion (representing 15%) represent the national contribution. European funding comes from two funds, namely the European Regional Development Fund (€ 2.1 billion, representing 25%) and the Cohesion Fund (€ 6.5 billion, representing 75%).

**Graph no. 3.** Distribution of POIM financial allocations by Priority Axes (%)



Source: data processing from POIM, pag. 257

The program is divided into 9 priority axis, as follows:

Number of Axis	Name of the Axis
Priority axis 1:	Improving mobility by developing the TEN-T network and the metro
Priority axis 2:	Development of a multimodal, quality, sustainable and efficient transport system
Priority axis 3:	Development of environmental infrastructure in conditions of efficient resource management
Priority axis 4:	Environmental protection through biodiversity conservation measures, air quality monitoring and decontamination of historically polluted sites
Priority axis 5:	Promoting climate change adaptation, prevention and risk management
Priority axis 6:	Promoting clean energy and energy efficiency in order to support a low carbon economy
Priority axis 7:	Increasing energy efficiency at the level of the central heating system in the selected cities
Priority axis 8:	Intelligent and sustainable electricity and natural gas transmission systems
Priority axis 9:	Protecting the health of the population in the context of the pandemic caused by COVID-19

*Source:* Large Infrastructure Operational Program (POIM), 2014 - 2020

The financial allocations are evenly distributed between the two major areas of the program. Transport infrastructure benefits from about 52% of total allocations (representing 5.3 billion Euros, the amount for Axis 1 and Axis 2), environmental infrastructure benefits from about 44% (representing about 4.4 billion Euros, the amount between Axis 3, Axis 4, Axis 5, Axis 6, Axis 7 and Axis 8), and the measures for managing the Covind-19 measures, represent about 4%. The financial allocations are evenly distributed between the two major areas of the program. Transport infrastructure benefits from about 52% of total allocations (representing 5.3 billion Euros, the amount between Axis 1 and Axis 2), environmental infrastructure benefits from about 44% (representing about 4.4 billion Euros, the amount between Axis 3, Axis 4, Axis 5, Axis 6, Axis 7 and Axis 8), and the measures for managing the Covind-19 measures, represent about 4%.

**Table no. 1. The value of environmental projects financed through the Large Infrastructure Operational Program, on 30 June 2020**

- thousands lei-

Priority Axis	EU funds	National contribution	Total value of the projects	Number of projects	Average value of the projects
<b>Total PA3</b>	18072483	2769069	27457243	107	256610
<b>Total PA4</b>	736840	100026	891597	80	11145
<b>Total PA5</b>	6336470	0	8063383	11	733035
<b>Total PA6</b>	121405	21424	245909	23	10692
<b>Total PA7</b>	476155	72824	664778	6	110796
<b>Total PA8</b>	311665	55000	1151822	2	575911
<b>TOTAL</b>	26055017	3018343	38474731	229	168012

Source: data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

For the comparability of the data, an average exchange rate Euro / leu of the period 2014 - 2020 was calculated, using data from the National Bank of Romania. All values expressed in lei were transformed into Euro, using the average exchange rate of the period 2014 - 2020, of 1 Euro = 4.5978 lei.

**Table no. 2. The value of environmental projects financed through the Large Infrastructure Operational Program, on 30 June 2020**

-thousands euro-

Priority Axis	EU funds	National contribution	Total value of the projects	Number of projects	Average value of the projects
<b>Total PA3</b>	3930717	602265	5971878	107	55812
<b>Total PA4</b>	160261	21755	193920	80	2424
<b>Total PA5</b>	1378165	0	1753764	11	159433
<b>Total PA6</b>	26405	4660	53484	23	2325
<b>Total PA7</b>	103562	15839	144587	6	24098
<b>Total PA8</b>	67786	11962	250518	2	125259
<b>Total</b>	5666897	656482	8368152	229	36542

Source: data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

**Table no. 3. Degree of access to European funds under the Large Infrastructure Operational Program, for the Environment section, on 30 June 2020**

-%-

Axis	EU funds	National contribution	Total value of the projects
Axis 3	154,60	134,23	199,65
Axis 4	63,41	48,78	65,22
Axis 5	282,24	0,00	305,28
Axis 6	25,03	25,03	43,10
Axis 7	45,30	39,26	53,76
Axis 8	41,35	41,35	129,89
<b>Total</b>	65,60	42,85	82,28

*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

The deadline for the implementation of projects financed by POIM is December 31, 2023, which means that many projects are still in the implementation period. Given the value of the completed projects, as well as the one in the implementation period, there is a total degree of access of 65.60% of the total of 8.6 billion Euros (EU allocation), without taking into account the accesses for Transport section. This high level of access demonstrates the high interest of beneficiaries in environmental projects, as well as the experience gained in the previous programming period. Below is an analysis of the degree of access on each priority axis related to the Environment section.

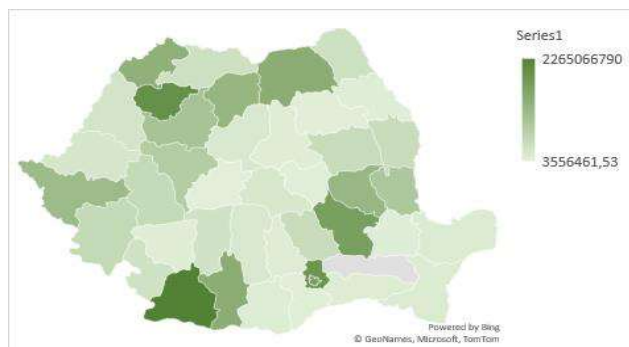
### **Analysis of Priority Axis 3**

According to the POIM, this priority axis has 2 specific objectives related to reducing the number of non-compliant landfills and increasing their recycling rate, as well as making investments in wastewater collection infrastructure. The actions also aimed at strengthening the institutional capacity of the actors in the field, raising public awareness, as well as implementing an integrated waste management system in Bucharest, etc.



**Graph no. 4. Distribution by counties of the total value of projects accessed through Axis 3, on 30 June 2020**

-lei-



*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

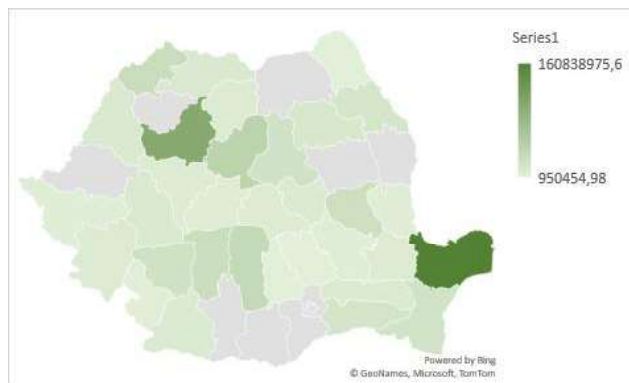
On June 30, 2020, out of the total EU allocations related to Axis 3 (amounting to 2,542,443,785 Euros, which come from the Cohesion Fund), Romania accessed the amount of 18,072,483,123,413 lei (representing 3,930,717,209 Euros), which represents 154.60% of the total. Regarding the access of the amounts coming from the state budget for Axis 3, amounting to 448,666,551 Euros, Romania attracted 2,769,069,473 lei (representing 602,265,275.8 Euros), which represents a degree of use of 134.23% of the total. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 3, is 85%. A total of 107 projects were implemented and the highest value accessed by counties is the following: Dolj, Sălaj, Ilfov, Bucharest and the lowest value is registered in the counties of Covasna, Iași, Giurgiu and Sibiu. The average value of the projects was 256,609,751.2 lei (representing 55,811,941.2 Euro).

#### **Analysis of Priority Axis 4**

According to POIM, this axis has defined 3 specific objectives regarding the restoration of degraded ecosystems and the increase of the degree of protection and conservation of biodiversity, the development of tools meant to contribute to the increase of air quality monitoring and the reduction of those polluted areas. The actions aimed at making investments in developing management plans for protected areas, maintaining and restoring ecosystems, projects to raise awareness of the importance of biodiversity, inventory of greenhouse gas emissions to reduce them, decontamination of polluted areas, etc.

**Graph no. 5. Distribution by counties of the total value of projects accessed through Axis 4, on 30 June 2020**

-lei-



*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

\* except 15 projects implemented at national level

On June 30, 2020, out of the total EU allocations related to Axis 4 (amounting to 252,744,681 Euros, which come from the European Regional Development Fund), Romania accessed the amount of 736,839,750.2 lei (representing 160,260,693, 9 Euro), which represents 63.41% of the total. Regarding the access of the amounts coming from the state budget for Axis 4, amounting to 44,602,003 Euro, Romania attracted 100,026,234.6 lei (representing 21,755,441.07 Euro), which represents a degree of use of 48.78% of the total. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 4, is 85%. A total of 80 projects were implemented and the highest value accessed by counties is as follows: Tulcea, Cluj, Mureș and Argeș and the lowest value is recorded in the counties of Mehedinți, Botoșani, Dâmbovița and Prahova. The average value of the projects was 11,144,962.7 lei (representing 2,424,000 Euros).

#### **Analysis of Priority Axis 5**

According to POIM, priority axis 5 has 2 specific objectives aimed at reducing the effects caused by natural risk factors (floods, in particular) on the population and increasing the level of training of personnel involved in risk situations.

The actions that were financed aimed at making investments for the elaboration of studies, methodologies for dam management, development of infrastructure for risk prevention, endowment of intervention crews, etc.

**Graph no. 6. Distribution by counties of the total value of projects accessed through Axis 5, on 30 June 2020 (-lei-)**



*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

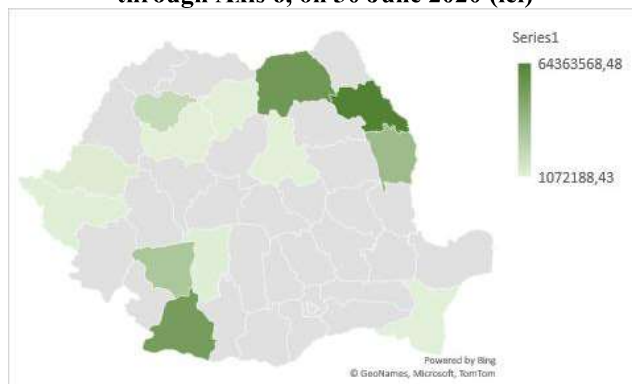
\* except 8 projects implemented at national level

On June 30, 2020, out of the total EU allocations related to Axis 5 (amounting to 488,297,872 Euros, which come from the Cohesion Fund), Romania accessed the amount of 6,336,469,514 lei (representing 1,378,165,335 Euros), which represents 282.24% of the total. Regarding the access of the amounts coming from the state budget for Axis 5, amounting to 86,170,213 Euro, Romania did not attract funds. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 5, is 85%. In total, 11 projects were implemented, only 3 counties implemented projects on this axis, respectively Constanța, Ilfov and Vaslui, except for the 8 projects that were implemented at national level.

#### **Analysis of Priority Axis 6**

According to POIM, axis 6 comprises 4 specific objectives regarding the increase of electricity production from alternative sources and the reduction of electricity consumption.

**Graph no. 7. Distribution by counties of the total value of projects accessed through Axis 6, on 30 June 2020 (lei)**



*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

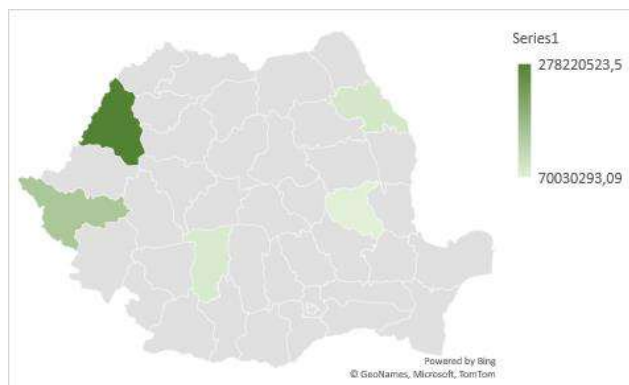
On June 30, 2020, out of the total EU allocations related to Axis 6 (amounting to 105,490,000 Euro, which come from the European Regional Development Fund), Romania accessed the amount of 121404850.5 lei (representing 26,405,233.41 Euro), which represents 25.03% of the total. Regarding the access of the amounts coming from the state budget for Axis 6, amounting to 18,615,883 Euro, Romania attracted 21,424,385.4 lei (representing 4659747,075 Euro), which represents a degree of use of 25.03% of the total. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 6, is 85%. A total of 23 projects were implemented and the highest value accessed by counties is as follows: Iași, Suceava, Dolj and Vaslui and the lowest value is recorded in the counties of Cluj, Harghita, Constanța and Bistrița-Năsăud. The average value of the projects was 10,691,674.04 lei (representing 2,325,411 Euros).

#### **Analysis of Priority Axis 7**

According to POIM, axis 7 comprises 2 specific objectives regarding the increase of energy efficiency. Energy is a strategic sector for socio-economic development and identifying the best solutions to increase energy efficiency will contribute to the goals for sustainability and competitiveness in the European Union. In December 2018, the European Union revised the Renewable Energy Directive, which requires Member States to meet at least 32% of total renewable energy consumption by 2030.

**Graph no. 8. Distribution by counties of the total value of projects accessed through Axis 7, on 30 June 2020**

-lei-



*Source:* data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development

On June 30, 2020, out of the total EU allocations related to Axis 7 (amounting to 228,612,872 Euro, which come from the Cohesion Fund), Romania accessed the amount of 476,154,914.4 lei (representing 103,562,432.6 Euro), which represents 45.30% of the total.

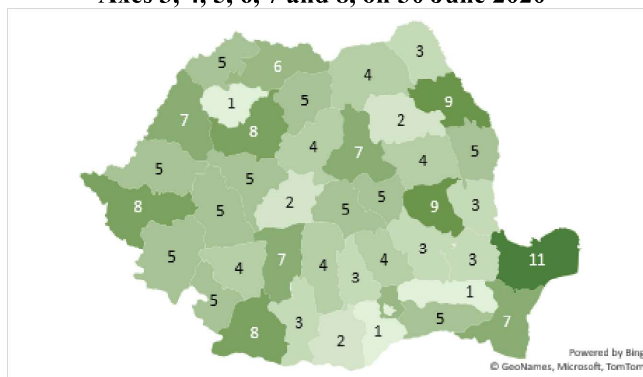
Regarding the access of the amounts coming from the state budget for Axis 7, amounting to 40,343,450 Euro, Romania attracted 72,823,692.87 lei (representing 15,838,960.3 Euro), which represents a degree of use of 39.26% of the total. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 7, is 85%. A total of 6 projects were implemented in the following counties: Bihor, Iași, Timiș, Vâlcea and Vrancea. The average value of the projects was 110,796,297.8 lei (representing 24,097,901.3 Euro).

#### **Analysis of accesses related to Priority Axis 8**

According to POIM, axis 8 comprises 2 specific objectives regarding the increase of the capacity to take over the energy produced from renewable sources. On June 30, 2020, out of the total EU allocations related to Axis 8 (amounting to 163,944,999 Euro, which come from the European Regional Development Fund), Romania accessed the amount of 311664754.2 lei (representing 67,786,258.5 Euro), which represents 41.35% of the total. Regarding the access of the amounts coming from the state budget for Axis 8, amounting to 28,931,471 Euro, Romania attracted 54,999,662.5 lei (representing 11,962,280.91 Euro), which represents a degree of use of 41.35% of the total. The co-financing rate, representing the share of funds coming from the European Union in the total funds allocated to Axis 8, is 85%. Through this axis, only 2 projects were implemented and those at national level, with an average project value of 575,910,943.2 lei (representing 125,259,105 Euro).

Analysis of accesses related to Axes 3, 4, 5, 6, 7 and 8 (consolidated)

**Graph no. 9. Distribution by counties of the number of projects accessed through Axes 3, 4, 5, 6, 7 and 8, on 30 June 2020 \***

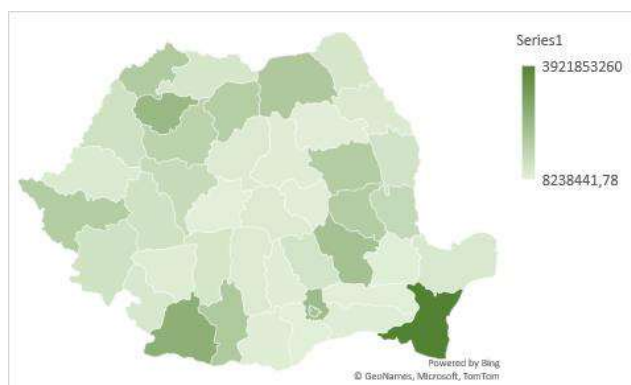


Source: data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development  
 \* except 26 projects implemented at national level

All the counties of Romania (to which is added the city of Bucharest) have benefited from European funds through Axes 3, 4, 5, 6, 7 and 8. To the total of 159 projects are added 5 projects that have been implemented at national level. , ie the beneficiaries represented a consortium of counties. On average, each county has implemented 3 projects, most of them being implemented by Tulcea (11), Iași (9), Vrancea (9).

**Graph no. 10. Distribution by counties of the total value of projects accessed through Axes 3, 4, 5, 6, 7 and 8, on 30 June 2020**

-lei-



Source: data processing Ministry of European Funds, European Structural and Investment Funds / Project co-financed by the European Regional Development  
 \* except 26 projects implemented at national level

The counties that have accessed the highest total value of the projects implemented under Axes 3, 4, 5, 6, 7, and 8 are the following: Constanța (852,992,695.8 Euro), Dolj (505,170,568.8 Euro), Sălaj (427,778,335.5 Euro), Ilfov (403,753,270.5 Euro) and Bucharest (378,053,556.6 Euro). At the opposite pole, there are the following counties: Giurgiu (3,611,228,915 Euro), Ialomița (1,818,245.51 Euro), Sibiu (1,791,839,265 Euro).

### Conclusions

For the period 2014-2020, POIM benefits of 8.6 billion Euros, representing non-reimbursable European funds, to which is added the Romania contribution of 1.5 billion Euros. The degree of access of the measures that finance environmental protection from POIM, at June 30, 2020, is about 65%, compared to contracted projects, some of which are completed and others in the implementation period.

The targets of POIM are in the field of transport as well as in the field of environmental protection and sustainable development.

In terms of environmental protection and sustainable development, the targets are to reduce the amount of biodegradable waste, increase the recycling rate of waste, improve public access to the public water network, increase the production and consumption of energy from renewable sources, restore degraded ecosystems, etc. In order to determine the efficiency of the use of European non-reimbursable funds, the degree of achievement of the proposed targets must be analyzed, as well as the possibilities of achieving the objectives proposed in the Europe 2030 Strategy.

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