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ADEQUATE ASSESSMENT STUDY

for the objective

Updated Integrated National Energy and Climate Plan of Romania 2021-2030

BENEFICIARY:

MINISTRY OF ENERGY

DEVELOPER:

DANUBE DELTA NATIONAL INSTITUTE FOR RESEARCH AND DEVELOPMENT

May
2025

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2025

CONTENT

Ia). Description and analysis of the plan submitted for approval

a).1. Presentation of the updated NECP 2021-2030

a).1.1 General information on the plan

The updated Integrated National Energy and Climate Plan of Romania 2021-2030 (October 2024 version) subject to the evaluation and approval procedure, hereinafter referred to as the updated NECP 2021-2030, is a strategic document that aligns national energy and climate priorities with EU objectives, confirming Romania's firm contribution to achieving EU objectives and targets, while addressing specific national challenges. The updated NECP 2021-2030 is promoted by the Ministry of Energy, as the owner of the plan, and was developed to meet Romania's development needs both in a national and international context. The updated NECP 2021-2030, together with the Romania's Energy Strategy (under approval), outlines the trajectory for the development of the energy sector by 2030, with a view to 2050.

At the European Union level, energy and climate objectives have been set for 2030, as follows:

- The objective of reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990;
- The objective of increasing the share of energy from RES in gross final energy consumption to at least 42.5% by 2030;
- The objective of improving energy efficiency by 38% in 2030;
- The objective of interconnecting the electricity market up to 15% by 2030.

Consequently, to achieve these objectives in accordance with the provisions of Regulation (EU) 2018/1999 on the governance of the energy union and climate action, each Member State has to draft an NECP for the period 2021-2030, in accordance with the pre-established calendar.

The goal of the updated NECP 2021-2030 reflects Romania's commitment to aligning with EU objectives for a sustainable, low-carbon energy future.

The updated NECP 2021-2030 addresses not only the technical aspects of developing and integrating RES and reducing GHG emissions, but also the social and economic dimensions, ensuring that the energy transition will be beneficial for both the environment and citizens. Romania's energy system and the context of policies in force are components of the general European system.

The national targets assumed for the year 2030 for the energy sector are:

- The overall share of energy from renewable sources in gross final energy consumption will be 38.3%;
- The share of RES in the electricity sector will increase to 57.8%;
- The share of RES in the transport sector will reach 29.4%;
- The share of RES in the heating and cooling sector will increase to 41.4%.

Objectives The national priorities of the updated NECP 2021-2030 were established in accordance with the following five main dimensions:

1. **Dimension decarbonization**

- *GHG emissions and removals*

Romania aims to reduce net GHG emissions (including the Land Use, Land-Use Change and Forestry - LULUCF) by 85% in 2030, compared to the 1990 level. The long-term objective is to achieve a 96% reduction in GHG emissions by 2040, complete net GHG emissions reduction by 2050 and a 105% reduction in net GHG emissions in 2050 compared to 1990 levels.

- Energy sector: an 87% reduction in GHG emissions is targeted in 2030 compared to 1990, achieved primarily by decommissioning coal and lignite production capacities and by expanding production capacities based on renewable energy sources.
- Transport Sector: the sectoral target is to have an increase in GHG emissions limited to no more than 40% in 2030 compared to 1990, the limitation being possible primarily by supporting the development of the road transport by promoting hybrid and electric vehicles, the development of the railway transport by expanding the electrification and modernization of the railway infrastructure, the development of the public transport subway network and, last but not least, the development of the multimodal transport in Romania, especially through the development of RO-LA (Rolling Landstrassen / rolling road) type of services.
- Buildings sector: a 19% reduction in GHG emissions is targeted in 2030 compared to 1990, achieved by improving the energy performance of buildings and increasing the use of heat pumps and solar thermal collectors.
- Industry Sector: the sectoral target aims to reduce GHG emissions by 77% in 2030 compared to 1990, which will be achieved mainly by replacing fossil fuels with electricity from RES and by increasing the efficiency of the technologies used.
- Agriculture Sector: GHG emissions are planned to decrease by 44% in 2030 compared to 1990, by adopting appropriate livestock diet and feed management.
- LULUCF sector: an 87% increase in GHG absorptions is targeted in 2030 compared to 1990, which will be achieved mainly by improving forest fire management.
- Waste Sector: GHG emissions are targeted to be reduced by 25% in 2030 compared to 1990 through appropriate waste reduction, reuse and recycling.

Source: Updated NECP 2021-2030, October 2024 version.

- *Renewable energy*

Romania's target for the share of energy from RES in gross final energy consumption for 2030 is 38.3%. According to the estimated trajectory, the share will reach 31.0% in 2025. The targets will be met mainly by increasing the installed capacity of energy production from wind and solar sources and using heat pump-based technologies for the heating and cooling process.

2. Dimension Energy Efficiency

Energy consumption projections for 2050 are based on the principle of prioritizing energy efficiency.

The primary energy consumption target in Romania for 2030 was set at 30.2 Mtoe, according to the Energy Efficiency Directive (recast). The forecasts assumed by the Updated NECP 2021-2030 regarding primary energy consumption indicate the achievement of a target of 28.7 Mtoe in 2030, below the target set by the Energy Efficiency Directive (recast) adopted in 2023. The target of 28.7 Mtoe will mark a 9% decrease in primary energy consumption compared to 2022. Also, gross final energy consumption is expected to register a slight decrease, of 6%, in 2030 compared to 2022, without affecting productivity, also complementary to measures regarding the increase in the share of energy produced from renewable sources, reaching an absolute value of 22.5 Mtoe in 2030. This means that Romania will also meet its target regarding gross final energy consumption set by the Energy Efficiency Directive (recast) of 2023, which is 22.47 Mtoe in 2030.

Compared to the 2030 baseline projections set by the Primes model, Romania's energy efficiency targets for 2030 are to achieve a 51% reduction in primary energy consumption and a 47% reduction in gross final energy consumption, without affecting productivity, a complementary target to taking measures to increase the share of energy produced from RES in gross final energy consumption. By 2050, Romania aims to reduce primary energy consumption by 22% and gross final energy consumption by 28% compared to 2022 levels. These targets reflect Romania's strong commitment to a green and sustainable future.

3. Dimension energy security

Key areas include increasing domestic energy production and diversifying import sources for various fuels.

Electricity generation: The objective for 2030 is to reach an installed electricity production capacity of 32.3 GW, 68.2% increase compared to 2022. Of this capacity projected for 2030, approximately 75% will come from RES, thus ensuring the use of domestic resources for electricity production. It is also planned to build new electricity production capacities from nuclear and natural gas sources, as well as to complete investments in hydroelectric power plants, which will transform Romania into an electricity exporting country, with an annual export level of approximately 4.4 TWh.

Natural gas supply: Romania is continuously improving its natural gas transmission network, including interconnections with neighboring countries, to diversify its natural gas supply sources and reduce its dependence on Russia. This involves Romania's participation in various cross-border projects, ongoing or planned, such as: Development on Natural Gas Transport System on Romania as part of the Bulgaria-Romania-Hungary-Austria Corridor (BRUA - phase I, II and III), Development on the natural gas pipeline on Romanian territory for taking over natural gas from the Black Sea coast (Black Sea – Podișor), as well as the activity carried out within the Central and South Eastern Europe Energy Connectivity (CESEC) initiative – Vertical Corridor.

Romania aims to reduce its dependence on imports of crude oil, solid fossil fuels and natural gas by 2030 by intensifying electrification processes, decommissioning coal-fired power plants

and diversifying supply sources, which will allow achieving the objectives of achieving a lower share of imports. All these measures underline the importance of diversifying import sources, especially in the field of natural gas.
Romania identifies and eliminates barriers regarding the implementation of demand response consumption to address energy demand fluctuations effectively to benefit from the flexibility of consumption and to achieve the objectives of adequacy and flexibility of the system. In addition, Romania aims to implement battery energy storage solutions, by developing battery storage, planning to put into operation a total electricity storage capacity of 1,200 MW or 2,400 MWh by 2030 and 2,000 MW by 2035. The use of batteries and hydrogen storage technologies, as well as the construction of pumped storage hydroelectric plants (PSH) with a total capacity of approximately 800 MW by 2030, are expected to increase grid stability and support the integration of RES.

4. Dimension internal energy market

Romania's approach to its internal energy market, in the context of the Energy Union Strategy, emphasizes interconnection, aiming to exceed the 15% interconnection target in 2030 by expanding cross-border transmission capacity and increasing installed production capacity, but also by taking steps to resolve issues related to price differentials.
Cross-border transfer capacity is one of the factors used to calculate the level of interconnection. Another essential factor is the total installed electricity generation capacity in Romania. Based on the analyses performed and the forecasts presented in the previous sections, the anticipated electricity generation capacity for 2030 is estimated at approximately 31.3 GW. Calculating the ratio between cross-border capacity and the total installed capacity projected for 2030, a value of 21% is obtained for the level of interconnection, higher than the established target of 15%. Therefore, the increase in installed capacity must be carried out in parallel with the increase in cross-border capacity.
At the same time, Romania also focuses on the flexibility of its energy system, with an emphasis on energy storage, especially battery-based, and aims to increase the competitiveness of its retail energy sector, protect energy consumers, stimulate prosumers, and solve energy poverty issues.
The production of electricity for own consumption has registered a notable increase in recent times, especially in 2022 and 2023. The total installed capacity of prosumers at the end of 2023 was 1.4 GW, with the number of prosumers being approximately 107,000. This remarkable growth marks the commitment of residential consumers and commercial companies to control their energy consumption and reduce their carbon footprint.
The main objective is to further stimulate the development of this trend by encouraging the adoption of prosumer technologies and increasing the installed capacity of decentralized energy production. The ambitious goal is to reach a target of 2.5 GW of total installed prosumer capacity by 2030. This transition to a distributed energy system will allow consumers to reduce their energy costs and produce clean and sustainable energy.
The main objective is to create a resilient, sustainable and highly interconnected energy system in Romania.

5. Dimension: Research, innovation and competitiveness

The National Strategy for Research, Innovation and Smart Specialization 2022-2027 (SNCISI 2022-2027) implements Romania's Vision 2030, built on four (interconnected) pillars, each with its own indicators and targets, which correspond to the four general objectives (GOs) of the strategy:

GO1. Development of the research, development and innovation system;
GO2. Supporting innovation ecosystems associated with smart specializations;
GO3. Mobilization towards innovation;
GO4. Increasing European and international collaboration.

When considering the overall innovation performance (as reflected in the European Innovation Scoreboard - EIS), Romania's objective is to become a moderate innovation (i.e. to have an innovation performance between 70% and 100% of the EU average).

To increase the level of innovation and increase the competitiveness of the Romanian economy, the Government adopted, in 2022, SNCISI 2022-2027, developed by the Ministry of Research, Innovation and Digitalization (MCID). Among other things, MCID has responsibilities regarding:

- Developing policies related to research, innovation and smart specialization in Romania;
- Coordination of the national RDI funding programs;
- Developing the legal framework regarding RDI activities;
- Intermediary body for the implementation of the Program for Smart Growth, Digitalization and Financial Instruments (PCIDIF) 2022-2027.

a). 1.2 Geographical and administrative scope

The projects proposed through the updated NECP 2021-2030 include several counties, spread throughout Romania.

The updated NECP 2021-2030 proposes a series of projects regarding the development of the energy sector, waste, livestock farming, transport and residential sector in the period 2025-2050. Of these, the present study analyzed the projects that can be identified at the time of the study by geographical coordinates. Table 1 presents the new energy production capacities, identified by Stereo 1970 coordinates provided by the Beneficiary and the policies and measures associated with them.

Table 1. Estimated implementation schedule of policies and measures in the energy production sector and their associated projects

Policies and Measures (PAM)	Time interval	Implementation status
PAM4 Development of new CCGT capacities	2022 – 2050	Planned
PAM5 Promotion of high-efficiency cogeneration capacities	2022 – 2050	Under implementation
PAM24 Building small hydro power plants	2022 – 2050	Under implementation
PAM60 Increased use of nuclear energy	2022 – 2050	Under implementation

Table 2 briefly presents the new electricity production capacities and their administrative scope.

Table 2. New energy production capacities (other than solar, wind, hydrogen, biogas or biomass)

Time horizon		2024	2025	2026	2027	2028	2029	2030	2031	2032
CCGT type power plants	Iernut		430 MW							
	Mintia (overall 860, split in two years by 430)			860 MW						
	Işalnița & Turceni			1325 MW						
Natural gas cogeneration plants	Rompetrol Năvodari	80 MW								
	CTE Constanța		52 MW							
	CTE Craiova			295 MW						
	Other			70 MW						
	CTE Progresu					50 MW				
	CTE Grozăvești						34 MW			
	CTE Sud Vitan							300 MW		
Nuclear	SMR							462 MW		
	U3 (CANDU)								700 MW	
	U4 (CANDU)									700 MW
Small hydropower plants	AHE Bumbești Livezeni Hydro Power Plant (AHE)			65 MW						
	AHE Pașcani, on the Siret River			9.4 MW						
	AHE Cornetu – Avrig (Câineni and Lotrioara)						40.5 MW			
	AHE Surduc-Siriu			55 MW						
	AHE Cosmești – Movileni, on the Siret River			38 MW						
	AHE Răstolița			35 MW						
	AHE Cerna Belareca						15 MW			
	AHE Izbiceni Danube, Islaz							29 MW		
	AHE Cerna Motru-Tismana Stage II						13 MW			

a).1.3 Justification of the need for the plan

The updated NECP 2021-2030 represents Romania's commitment to contribute to the achievement of the European objectives set for 2030 in the field of energy and climate, by establishing (i) national targets for reducing domestic greenhouse gas emissions, increasing the share of energy from renewable sources in final energy consumption, improving energy efficiency in all economic sectors and increasing the degree of interconnection of the domestic electricity market to the European energy market, as well as (ii) policies and measures to achieve those targets.
The policies and measures necessary to achieve the targets and objectives set in the NECP were established, during the period 2018-2020, within an inter-institutional working group consisting of 17 public authorities and institutions, coordinated by the Ministry of Energy and the Ministry of Environment, Waters and Forests, based on the public policy documents related to each economic sector.

a).1.4 Description of the life cycle of the plan (construction, operation, decommissioning) and the interventions and activities associated with each stage, as well as the duration of the construction, operation, decommissioning of the plan and the scheduling of the plan implementation period

At this stage, detailed information regarding the life cycle of the projects (construction, operation, decommissioning) and the interventions and activities associated with each stage, as well as the duration of the construction, operation, and decommissioning of the projects, is not known, but the estimated timetable proposed for the implementation of these projects is known.

Within the updated NECP 2021-2030, a series of measures are proposed to increase energy production from renewable sources, but only for some of these measures the location of the projects associated with the policies and measures is known at this time. For the policies and measures regarding the energy production sector, an estimated implementation calendar has been established, including the new energy production capacities for which the locations are not provided.

The policies and measures in the energy production sector, as well as their associated projects, identifiable by Stereo 1970 coordinates provided by the Beneficiary, are briefly presented in Table 3.

Table 3. Estimated implementation schedule of policies and measures in the energy production sector and their associated projects

Policies and Measures (PAM)	Main objective	Time interval	Assumptions	Implementation status
PAM3 Hydrogen production	Increasing the share of RES	2022 – 2050	Not available	Planned
PAM4 Development of new CCGT capacities	Developing technologies used for energy production, thus reducing GHG emissions	2022 – 2050	By 2040, the following CCGT power plants will be built and put into operation:	Planned

Policies and Measures (PAM)	Main objective	Time interval	Assumptions	Implementation status
			• 430 MW (Iernut) starting from 01.01.2025 • At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW • 1,325 MW (Işalnița & Turceni) starting from 01.07.2026.	
PAM5 Promotion of high-efficiency cogeneration capacities	Promoting high-efficiency cogeneration capacities with the installation of new CHP plants	2022 – 2050	By 2040, the following CHP plants will be built and put into operation: • 80 MW (Rompetrol Năvodari) starting in 2024 • 52 MW (CTE Constanța) starting from 2025 • 295 MW (CTE Craiova) starting from 2026 • 70 MW (other) starting in 2026 • 50 MW (CTE Progresu) starting in 2028 • 34 MW (CTE Grozăvești) starting from 2029 • 300 MW (CTE Sud Vitan) starting in 2030	Under implementation
PAM22 Increase of the domestic generation capacity from PV power plants	Increasing national energy production capacity in photovoltaic power plants	2022 – 2050	It is planned to install and put into operation, by 2050, an additional capacity for producing electricity from solar sources of: • 700 MW each year from 2023 to 2030	Under implementation
PAM23 Increase of the domestic generation capacity from wind	Increasing national energy production capacity in wind power plants	2022 – 2050	It is planned to install and put into operation, by 2050, an additional capacity for producing electricity from wind sources, onshore and offshore, of: • 750 MW each year from 2025 to 2026	Under implementation

Policies and Measures (PAM)	Main objective	Time interval	Assumptions	Implementation status
			• 800 MW each year from 2027 to 2030 • 675 MW each year from 2031 to 2040 • 750 MW each year from 2041 to 2050 Additionally, the following self-sufficient wind capacities will be built (electricity production capacities from wind energy owned by entities whose main activity is not electricity production and which can use, partially or fully, the electricity production for self-consumption): • 75 MW each year from 2023 to 2025 • 60 MW each year from 2031 to 2040 • 100 MW each year from 2041 to 2050	
PAM24 Building small hydro power plants	Increasing the national capacity for producing energy from RES	2022 – 2050	It is planned to install and put into operation, by 2050, an additional capacity for producing electricity from hydroelectric sources of: • 65 MW (AHE Livezeni-Bumbești) starting with 2026 • 9.4 MW (AHE Pașcani, on the Siret river) starting with 2026 • 40.5 MW (AHE Cornetu – Avrig, on the Olt river) starting from 2029 • 55 MW (AHE Surduc-Siriu) starting in 2026 • 38 MW (AHE Cosmesti – Movileni, on the Siret river) starting with 2026	Under implementation

Policies and Measures (PAM)	Main objective	Time interval	Assumptions	Implementation status
			• 35 MW (AHE Răstolița) starting with 2026 • 15 MW (AHE Cerna-Belareca) starting with 2029 • 29 MW (AHE Izbiceni-Dunăre, Islaz) starting with 2030 • 13 MW (AHE Cerna Motru-Tismana Stage II) starting with 2029	
PAM29 Increase of the domestic generation capacity from biomass and biogas CHP and PP	Increasing the national capacity for energy production from biomass and biogas through CHP and CCGT power plants	2022 – 2050	It is planned to install and put into operation, by 2050, an additional electricity production capacity of: • New biomass cogeneration (CHP) capacities – 10 MW installed each year by 2050 • New biogas cogeneration (CHP) capacities – 5 MW installed each year by 2050 • New biogas CCGT capacities – 5 MW installed each year by 2050	Under implementation
PAM60 Increased use of nuclear energy	Increased use of nuclear energy by building additional capacity (in CANDU and SMR technology) and retrofitting existing CANDU units	2022 – 2050	The following additional nuclear power generation capacities are planned to be built by 2050: • U3 (CANDU) – 700 MW in 2031 • U4 (CANDU) – 700 MW in 2032 • SMR - 462 MW in 2030 In addition, it is considered that: • U1 in the period 2027-2029 • U2 in the period 2036-2038 will be refurbished	Under implementation

a).1.5 Natural resources necessary for the implementation of the plan (water abstraction, renewable resources, non-renewable resources, others) highlighting those that will be exploited within protected natural areas of community interest

The implementation of the projects within the updated NECP 2021-2030 will involve the use of natural resources depending on each type of project. At this stage of the Plan, the natural resources necessary for the implementation of the projects and their quantities cannot be estimated, but considering the type of projects proposed for implementation we can estimate the use of water, gas, stone, sand, soil, etc.

For each project, the types of resources and the quantities necessary for their implementation will be listed as part of the environmental impact assessment procedure, as these may vary from one type of project to another.

We note that within the updated NECP 2021-2030 there will also be projects aimed at protecting natural resources, including resources within protected natural areas, as well as restoring ecosystems in the vicinity of protected natural areas.

a).1.6 Information on the production being carried out, information on the raw materials, substances or chemical preparations used

The implementation of projects under the updated NECP 2021-2030 will involve the use of raw materials, substances or chemical preparations depending on each type of project. At this stage of the Plan, the type and quantities required cannot be estimated, but the efficient use of raw materials and the use of environmentally friendly chemicals will be considered.

For each project, the raw materials, substances or chemical preparations necessary for their implementation will be listed as part of the environmental impact assessment procedure, as these may vary from one type of project to another.

The estimated production of new energy production capacities identifiable by Stereo 1970 coordinates are briefly presented in Table 4.

Table 4. New production capacities proposed through the updated NECP 2021-2030

Policies and Measures	Name/characteristics of proposed project and production capacity	Type of energy produced
PAM4 Development of new CCGT capacities	• 430 MW (Iernut) starting from 01.01.2025 • At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW • 1,325 MW (Iș alnița & Turceni) starting from 01.07.2026	Electrical and thermal energy
PAM5 Promotion of high-efficiency cogeneration capacities	• 80 MW (Rompetrol Năvodari) starting in 2024 • 52 MW (CTE Constanța) starting from 2025 • 295 MW (CTE Craiova) starting from 2026 • 70 MW (other) starting in 2026 • 50 MW (CTE Progresu) starting in 2028 • 34 MW (CTE Grozăvești) starting from 2029 • 300 MW (CTE Sud Vitan) starting in 2030	Electrical and thermal energy

Policies and Measures	Name/characteristics of proposed project and production capacity	Type of energy produced
PAM24 Building small hydro power plants	• 65 MW (AHE Livezeni-Bumbești) starting with 2026 • 9.4 MW (AHE Pașcani, on the Siret river) starting with 2026 • 40.5 MW (AHE Cornetu – Avrig, on the Olt river) starting from 2029 • 55 MW (AHE Surduc-Siriu) starting in 2026 • 38 MW (AHE Cosmești – Movileni, on the Siret river) starting with 2026 • 35 MW (AHE Răstolița) starting with 2026 • 15 MW (AHE Cerna-Belareca) starting with 2029 • 29 MW (AHE Izbiceni-Danube HPP, Islaz) starting with 2030 • 13 MW (AHE Cerna Motru-Tismana Stage II) starting with 2029	Electricity
PAM60 Increased use of nuclear energy	• U3 (CANDU) – 700 MW in 2031 • U4 (CANDU) – 700 MW in 2032 • SMR - 462 MW in 2030 In addition, it is considered that: • U1 in the period 2027-2029 • U2 in the period 2036-2038 will be refurbished	Electricity

a).1.7 Emissions of physical, chemical and biological pollutants generated by the interventions and activities of the plan (atmospheric pollutants, noise, artificial lighting, pollutants entering the aquatic environment, other emissions)

The main types of emissions that could be generated because of the implementation of projects under the updated NECP 2021-2030 are:

- Emissions into bodies of water;
- Emissions into the atmosphere;
- Emissions into the soil.

Emissions into bodies of water

Emissions into bodies of water are the result of domestic and industrial human activity. The main sources of emissions are represented by discharges of insufficiently treated or untreated water and/or accidental discharges of chemical substances from various sectors of activity.

Wastewater, depending on its source, is classified as follows (Report on the State of the Environment in Romania, 2023):

- Domestic wastewater is that which is discharged after being used for household needs in homes and public use units;
- Urban wastewater, defined as domestic wastewater or a mixture of domestic wastewater with industrial wastewater and/or stormwater;
- Industrial wastewater, those that are discharged because of their use in technological processes to obtain finished industrial or agro-industrial products.

According to the Annual Report on the State of the Environment in Romania, 2023, the main source of wastewater are urban agglomerations, followed by the chemical and food production sectors.

Pollution with hazardous chemicals can significantly deteriorate the chemical status of water bodies and indirectly affect human health. According to the provisions of the European Water Directives, there are 3 types of hazardous chemicals, namely:

- hazardous substances: substances or groups of substances that are toxic, persistent and tend to bioaccumulate and other substances or groups of substances that give rise to an equivalently high level of concern;
- priority substances – substances or groups of substances that pose a significant risk to the aquatic environment and, through it, to humans and water uses;
- priority hazardous substances – substances or groups of substances that are toxic, persistent and tend to bioaccumulate and other substances or groups of substances that create a similar level of risk;
- River basin-specific pollutants - pollutants or groups of pollutants specific to a particular river basin. Hazardous substances include artificial chemicals, metals, polycyclic aromatic hydrocarbons, phenols, endocrine disruptors and pesticides, etc.

The number of priority substances monitored in bodies of water for the assessment of the chemical status of surface water from the WATER investigation environment and the BIOTA investigation environment are presented in Table 5.

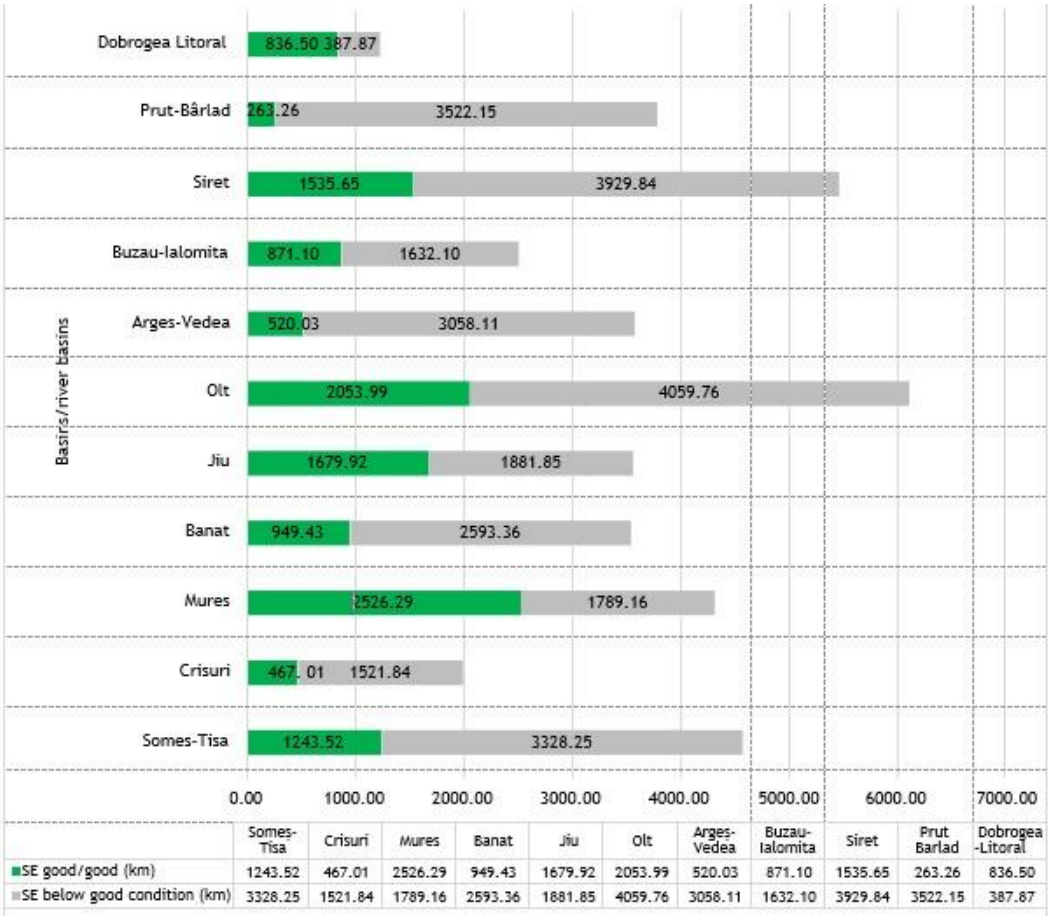
Table 5. Priority substances monitored in watercourses by areas / river basins in 2023 (no.) – WATER investigation environment and BIOTA investigation environment

Space / Pool hydrographic	Length monitored (Km)	section monitored (no.)	substance APA priority		Priority substances BIOTA	
			Metals priority (no.)	micropollutants organic (no.)	Metals priority (no.)	micropollutants organic (no.)
Somes-Tisa	4450,889	132	3	37	1	3
Cris	1648,464	76	3	37	1	6
Mures	3075,185	88	3	38	1	5
grief	2391,323	62	3	37	1	5
Jiu	2848,300	79	3	40	1	5
Olt	2613,233	75	3	36	1	3
Arges-See	814,275	32	3	40	1	5
Buzau-Ialomita	1104,000	47	3	40	0	0
lace	1852,275	28	3	40	1	5
Prut-Bârlad	2182,915	46	3	40	1	7
Dobrogea - Coastal	1064,002	56	3	40	0	0
Total	**24044,861**	**721**	**3**	**40**	**1**	**7**

Source: National Administration "Romanian Waters", Synthesis of water quality in Romania in 2023

The ecological status/ecological potential of natural, heavily modified and artificial bodies of water monitored at national level shows that in the Prut-Bârlad river basin the ecological status of watercourses is below good status in over 90% of the river basin. Also, in the Argeș-Vedea river basin the ecological status of watercourses is below good status in over 80% of the length of the river basin.

The assessment of the ecological status/ecological potential of monitored watercourses (natural, heavily modified, artificial bodies of water - rivers) by areas/river basins in 2023 (km) is presented in Figure 1.



	Somes-Tisa	Crisuri	Mures	Banat	Jiu	Olt	Arges-Vedea	Buzau-Ialomita	Siret	Prut Barlad	Dobrogea-Litoral
SE good/good (km)	1243.52	467.01	2526.29	949.43	1679.92	2053.99	520.03	871.10	1535.65	263.26	836.50
SE below good condition (km)	3328.25	1521.84	1789.16	2593.36	1881.85	4059.76	3058.11	1632.10	3929.84	3522.15	387.87

***SE - ecological status / ecological potential**

Figure 1. Ecological status/ecological potential of monitored watercourses (natural bodies of water, heavily modified, artificial - rivers) by areas / river basins in 2023 (km) Source: National Administration "Romanian Waters", Synthesis of water quality in Romania in 2023

Monitoring results show a decline in the good ecological status of monitored water bodies in recent years. In 2021, 38% of the bodies of water monitored at national level had good ecological status, compared to 32% in 2023. (Figure 2).

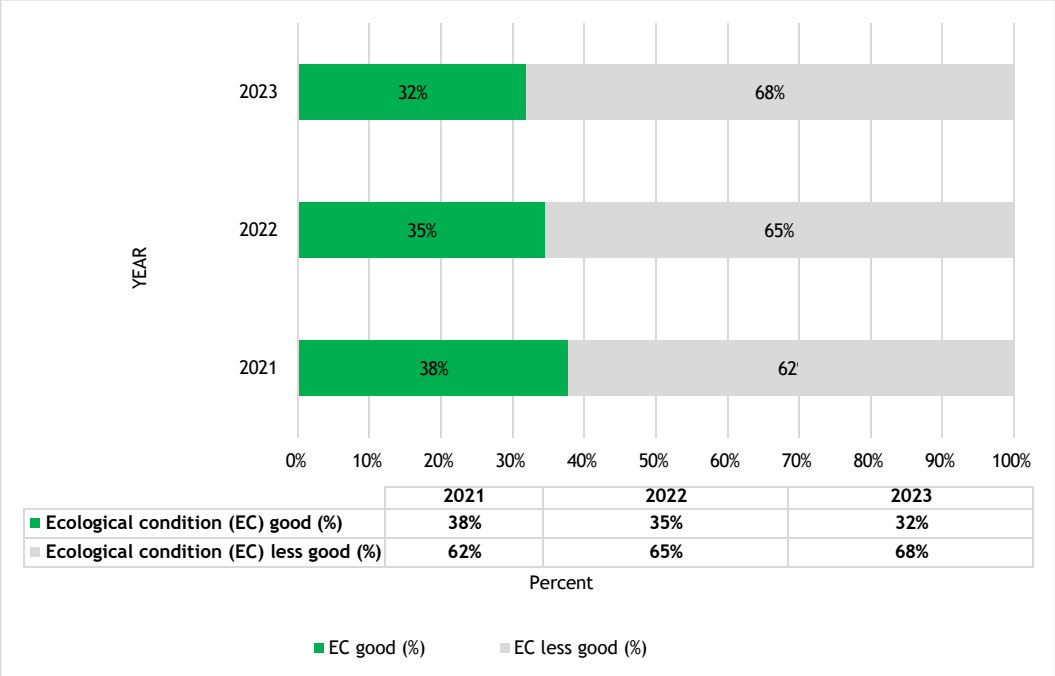


Figure 2. Evolution of ecological status / ecological potential of monitored watercourses (natural bodies of water, heavily modified, artificial - rivers) by areas / river basins in the years 2021-2023 (%) Source: National Administration "Romanian Waters"

The projects proposed by the updated NECP 2021-2030 represent electricity production capacities that will use water for own consumption purposes: for the needs of employees and for technological purposes as cooling water. These projects will not use chemicals in the energy production process.

Nuclear facilities are equipped with protection systems that allow the safe operation of units in this sector.

CCGT power plants can affect water quality through domestic effluents resulting from water use during the operation of the power plants.

For each project, the quantities of water used and the quantities of emissions into bodies of water will be estimated as part of the environmental impact assessment procedure, as these may vary from one type of project to another.

Emissions into the atmosphere

Air quality is mainly affected by emissions from urban agglomerations and the industrial sector.

The energy sector, through greenhouse gas emissions and emissions from the extraction of raw materials used, represents one of the main industrial contributors to lowering air quality.

Energy production contributes to over 50% of the methane and carbon monoxide emissions, to approximately 70% of the sulfur dioxide emissions, to approximately 50% of the nitrogen oxide emissions, to approximately 80% of the amount of suspended particulate matter emitted into the atmosphere, and to approximately 80% of the carbon dioxide emissions.

According to the Annual Report on the State of the Environment in Romania, 2023, the main emissions due to the combustion of fossil fuels are represented by SO_2, NOX, particulate matter, heavy metals and persistent organic pollutants.

Emissions of SO_2, NO_x and NH_3 are generically called emissions of acidifying substances, because in combination with water vapor they form acid rain.

Sulfur oxides (especially SO_2 – sulfur dioxide) emissions come from stationary and mobile sources, through the burning of fossil fuels. Sulfur dioxide is a colorless gas with a suffocating and pungent odor, which can be transported over long distances because it easily attaches to dust particles, and in reaction with water vapor forms sulfuric or sulfurous acid, which leads to the appearance of acid rain.

Nitrogen oxides (NO_x) originate mainly from fuel combustion processes in stationary and mobile sources or from biological processes. The main sources of NO_x emissions are the energy industry and transport.

According to the Annual Report on the State of the Environment in Romania, 2023, compared to the national total, the share of emissions from the energy sector are 36.3% for NOx, 97.9% for SO_x and 5.97% for NH_3.

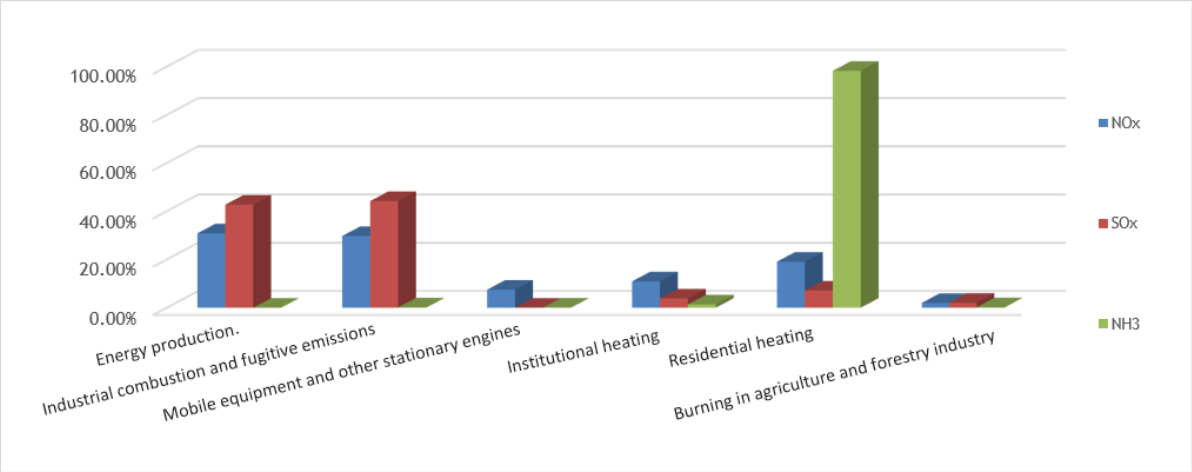


Figure 3. Contributions of activity subsectors to emissions of polluting substances with an acidifying effect (%, NO_x, SO_x and NH_3) from the Energy sector, in 2022, (%) (Source: Romania's Informative Inventory Report 2024)

Sources of pollutants such as nitrogen oxides (NO_x), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), $PM_{2.5}$ and PM_{10} particles, volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs) are combustion of solid (coal, biodegradable waste or biomass) and liquid (fuel oil) or gaseous (natural gas) fossil fuels.

The economic activities which are sources for pollutants are: industrial activity, residential heating based on wood and fossil fuels, thermoelectric power plants, road traffic that generates emissions both by incomplete combustion in vehicle engines and by the wear of tires and road surfaces through rolling or braking. Other sources of pollutants are represented by industrial activities, energy production activities, the chemical industry etc. (Figure 3).

By analyzing Figure 3, an increased trend of ammonia emission of 98.26% is observed, following the use of solid biofuels as source to produce energy and heat. The fuel used in the production of solid biofuels is highly diverse and has a dominant influence on the quality of the finished product. Higher concentrations of N can be caused by the presence of additives and other synthetic constituents.

The Energy sector also emits compounds considered ozone precursors. The Annual State of the Environment in Romania Report, 2023, shows that the share of NMVOC emissions due the Energy sector is 41.6% of the total NMVOC emissions at national level, while for the CO emissions the share of the Energy sector is 84.1% (Fig. 4).

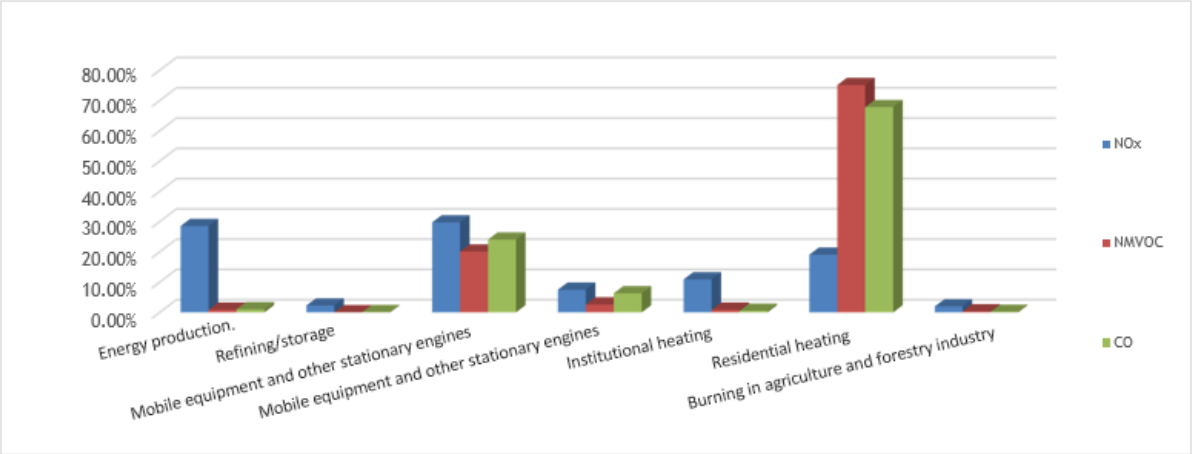


Figure 4. Contributions of activity subsectors to emissions of pollutants discharged into the atmosphere and considered ozone precursors, from the Energy sector, in 2022, (%) (Source: Romania's Informative Inventory Report 2024)

Figure 4 shows that the share of NMVOC and CO pollutants (75.12%, 67.81%) due to residential heating and the share of NO_x pollutant (29.73%) due to industrial combustion activities and fugitive emissions.

Another type of emissions from the Energy sector are anthropogenic emissions of primary particles with a diameter smaller than 2.5µm ($PM_{2.5}$) and 10µm (PM_{10}), respectively (Fig. 5).

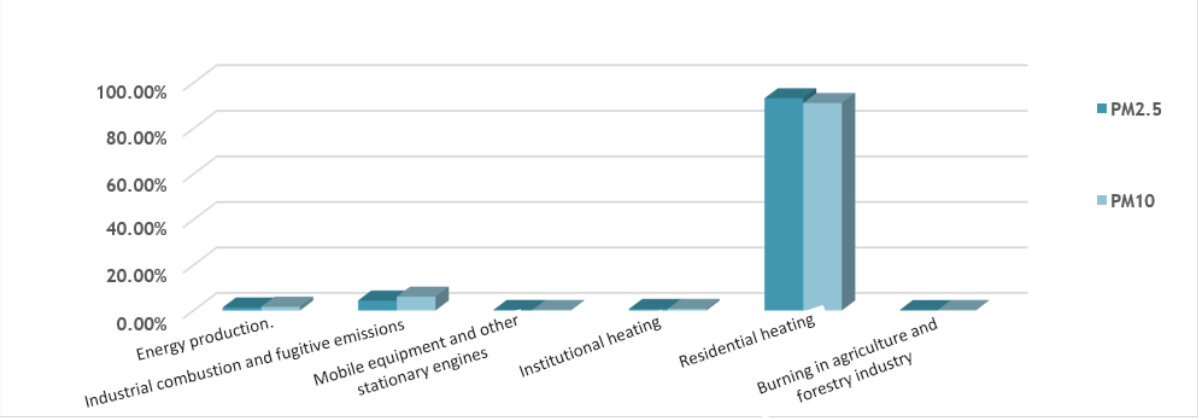


Figure 5. Contributions of activity subsectors to emissions of primary suspended particles $PM_{2.5}$ and PM_{10}, in 2022, (%) within the Energy sector (Source: Romania's Informative Inventory Report 2024)

From the analysis of Figure 5, it can be found that the maximum share of primary particulate matter emissions in the energy sector $PM_{2.5}$ and PM_{10} is due to the residential heating, which account for over 90% of the total. Compared to the PM emission at national level, the share of $PM_{2.5}$ emissions from the energy sector is 90.6%, and of PM_{10} emissions is 71.4%.

Heavy metals (mercury, lead, cadmium, etc.) are compounds that cannot be degraded naturally, have a long retention time in the environment, and on the long term are dangerous because they can accumulate in the food chain. Heavy metals can come from stationary and mobile sources: fuel and waste combustion processes, technological processes in heavy non-ferrous metal metallurgy and road traffic. The largest share of emissions comes from combustion in the energy, metallurgy and non-metallic minerals industries. Other sectors responsible for emissions of heavy metals are production processes, waste treatment and storage and, to a very small extent, other activities, namely: non-industrial combustion installations and road transport.

The contribution of different subsectors in the Energy sector to heavy metal emissions is presented in Figure 6.

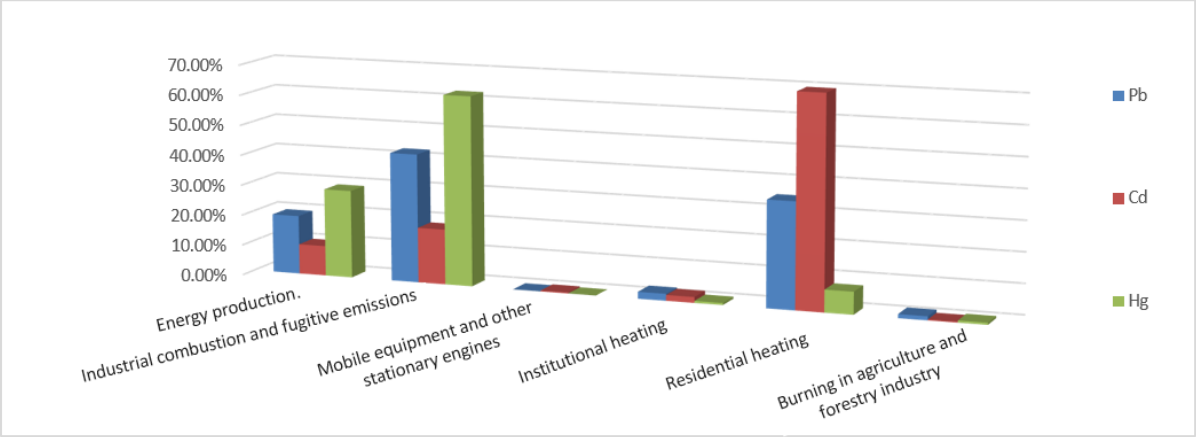


Figure 6. Contributions of activity subsectors to heavy metal emissions in the Energy sector, in 2022, (Source: Romania's Informative Inventory Report 2024)

From the analysis of the situation regarding the contribution of activity subsectors to heavy metal emissions, a significant share of lead and mercury emissions from industrial activities and energy production is noted. Compared to the national total, the shares of emissions due to the Energy sector are 26.3% for Pb, 81.2% for Cd and 83.6% for Hg (Fig. 4).

The projects proposed by the updated NECP 2021-2030 represent new electricity production capacities with reduced emissions of pollutants into the air. Reducing emissions from the energy sector, respectively reducing carbon emissions at the national level, is a major objective of the NECP.

For each individual project, air pollutant emissions will be estimated as part of the environmental impact assessment procedure, as they may vary from one type of project to another.

Emissions into the soil

Soil quality is negatively impacted by varying degrees by pollution produced by various industrial activities. In the area of soil protection, pollution is understood as any disturbance that affects their quality from a qualitative and/or quantitative point of view.

According to the Annual Report on the State of the Environment in Romania, 2023, the main economic sectors with significant impact on soil are mining and metallurgical industry, chemical industry, petroleum industry and non-compliant landfills.

The projects proposed through the updated NECP 2021-2030 are new energy capacities with reduced emissions of pollutants to the soil.

For each project, pollutant emissions to the soil will be estimated as part of the environmental impact assessment procedure, as they may vary from one type of project to another.

Noise

By implementing the projects within the updated NECP 2021-2030, noise is generated both in the construction and operation phases. The noise level for each type of proposed project cannot be estimated, because at the time of preparing this study detailed information about each individual project is not known. The noise level will be determined within the environmental impact assessment procedure for each individual project. Potential noise sources associated with each type of project located near or inside protected natural areas or human settlements may generate a negative impact on fauna species and the human population. Specific protection measures will be proposed and detailed within the environmental impact assessment procedure for each project within the updated NECP 2021-2030.

Noise from power generation facilities is intermittent during construction, being generated mainly during the day and/or permanently during operation. Protection measures may include soundproofing of noise-producing facilities or construction and operation of production facilities at distances of more than 500 meters from protected natural areas and/or human settlements.

a).1.8 Waste generated by the plan and how to manage it

At national level, the largest quantities of non-hazardous waste result mainly from the manufacturing industry, the production, transmission and distribution electricity and heat, natural gas and water.
Table 6 shows that during the period 2017-2022 the amount of waste generated from the energy sector decreased, because of the implementation of national policies for selective collection and reduction of waste quantities and new investments in the energy production subsector. Starting with 2021, a trend of increasing the amount of waste generated from the energy sector is observed, requiring new investments in the modernization of this sector.

Table 6. Non-hazardous waste generated by the main economic activities excluding the extractive industry in the period 2017 – 2022 (thousand tons)

Economic activity	2017	2018	2019	2020	2021	2022
Manufacturing industry (NAEC Sections: C10-C33)	6,303.41	6,767.62	6,560.92	5496.67	5388.69	6339.19
Production, transport and distribution of electricity, heat, gas and water (NACE: D)	7,638.69	6,820.78	5,948.65	4278.36	5285.02	5503.62
Water collection, treatment and distribution (NACE Sections: E36, E37, E39), except urban wastewater treatment plants	41.02	54.31	66.54	47,214	36.83	49,576
Other activities (NACE Sections: E38, F, GU)	774.77	940.43	1,718.09	1433.66	806.88	1306.58

Source: National Environmental Protection Agency

Unlike non-hazardous waste, the energy sector generates small amounts of hazardous waste, being one of the smallest contributors at national level.
Table 7 shows a reduction in the quantities of hazardous waste in 2020, followed by an increase in the quantity generated in 2022. This increase is also caused by the decommissioning/modernization of some thermal power plants, replacing coal with natural gas.

Table 7. Hazardous waste generated by the main economic activities excluding the extractive industry in the period 2017 – 2022 (thousand tons)

Economic activity	2017	2018	2019	2020	2021	2022
Manufacturing industry (NAEC Sections: C10-C33)	213.16	197.92	206.42	168.70	183.61	253.23
Production, transport and distribution of electricity, heat, gas and water (NACE D)	4.08	1.95	2.57	0.995	2.29	1.85
Water collection, treatment and distribution (NACE E36, E37, E39), except urban wastewater treatment plants	2.88	5.34	4.37	1.10	0.7	1.87
Other activities (CAEN Sections: E38, F, GU and G4677)	28.33	112.95	52.76	184,054	242.24	271.99

Source: National Environmental Protection Agency

EU waste management policies aim to reduce the impact of waste on the environment and health and to improve the EU's energy efficiency. The long-term objective of EU policies is to reduce the amount of waste generated and, where waste generation cannot be avoided, to promote its use as a resource and to achieve higher levels of recycling and safe disposal.

European waste legislation has already set the main directions, considering extended producer responsibility and life cycle of products. Member States are encouraged to adopt legislative and non-legislative measures to strengthen reuse and prevention, recycling and other waste recovery operations.

At national level, efficient waste management, promoting waste prevention and reduction, and increasing the degree of selective waste collection are the main objectives of policies and strategies in the field. In Romania, the responsibility for waste management lies with the waste

generator. In the industrial sector, waste management has been done mainly through recovery (recycling and co-incineration) and secondarily through disposal (landfilling and incineration).

In Romania, there are 265 waste co-incineration plants in operation, of which 258 are thermal power plants where wood waste is co-incinerated and seven are industrial waste co-incinerators (cement factories). There are also 22 incinerators for hazardous and non-hazardous industrial waste.

According to the Annual State of the Environment in Romania Report, 2023, the currently operating hazardous and non-hazardous waste landfills are compliant. Non-compliant industrial waste landfills have ceased storing waste in accordance with the legal provisions in force.

The types of waste that will come from the implementation of the projects in the updated NECP 2021-2030 are buildings waste, municipal and industrial waste in the exploitation phase and demolition waste in the decommissioning phase. These projects will benefit from the best techniques available at that time, one of the main objectives being the efficient use of resources and the reduction of the amount of waste generated and disposed of in landfills.

For each project, the types and quantities of waste generated will be estimated, as well as how to manage them as part of the environmental impact assessment procedure.

a).1.9 Land use requirements necessary for the execution of the plan (land use category, land areas that will be temporarily/permanently occupied by the plan, e.g. access roads, technological roads, road width, ditches and retaining walls, drainage effects, others)

The updated NECP 2021-2030 aims to implement projects in the energy production sector proposed to be carried out in 6 development regions (South-East, South, South-West, West, North-West and Center Development Region) and surrounding areas, with the role of addressing, managing and solving the problems identified at the level of several energy subsectors.

To identify the land use categories targeted by the updated NECP 2021-2030, the approximate limits of the new production capacities proposed within the Plan for which a geographical identification can be made were analyzed. Based on these, projects that overlap with protected natural areas were identified.

For each individual project, land use requirements will be established for each use category within the environmental impact assessment procedure.

a).1.10 Additional services required for the implementation of the plan (decommissioning/relocation of pipelines, high voltage lines, necessary construction means), respectively the way in which accessing these additional services may affect the integrity of protected natural areas of community interest

The implementation of projects within the updated NECP 2021-2030 may involve the provision of additional services such as decommissioning/relocation of objectives, constructions, additional occupation of land areas in the vicinity of the objectives, which requires the

identification of ways in which these additional services could affect areas within the area of protected natural areas of community interest, if they overlap or are in their immediate vicinity.

We note that, at the time of preparing this study, it is difficult to estimate the type and/or quantity of additional services, taking into account both the diversity of the projects and the degree of detail of the projects included in the updated NECP 2021-2030. These services could concern projects that involve the construction of new energy capacities, setting-up water accumulations for hydropower developments, setting-up new underground gas storage facilities, the construction of new overhead or underground power lines, etc. These aspects will be analyzed at the project level, within the environmental impact assessment procedure to obtain the environmental agreement.

The potential impact on protected natural areas determined by the implementation of these new capacities and related facilities will be analyzed for each project separately within the framework of the appropriate assessment procedure and the environmental impact assessment procedure.

a).1.11 Activities generated as a result of the implementation of the plan

The types of activities that will be generated because of the implementation of the projects proposed by the updated NECP 2021-2030 may be different, depending on the energy subsector. Table 8 presents the main types of activities that may be generated because of the implementation of new energy production capacities, other than solar, wind, hydrogen, biogas or biomass.

Table 8. Types of activities that can be generated as a result of the implementation of the projects proposed within the updated NECP 2021-2030

Project type	Possible activities determined by project implementation
PAM4 Development of new CCGT capacities	
• 430 MW (Iernut) • At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW • 1,325 MW (Ișalnita & Turceni)	Construction activities – structure, access roads, etc.; Equipment installation and maintenance activities; Electricity production activities, grid connection, distribution and transmission; Waste prevention, collection and management activities during the construction, operation and decommissioning phases; Activities to reduce emissions of pollutants into the atmosphere resulting from heating, transportation of materials and employees, etc.
PAM5 Promotion of high-efficiency cogeneration capacities	
• 80 MW (Rompetrol Năvodari) • 52 MW (CTE Constanța) • 295 MW (CTE Craiova) • 70 MW (other) • 50 MW (CTE Progresu) • 34 MW (CTE Grozăvești) • 300 MW (CTE Sud Vitan)	Construction activities – structure, access roads, etc.; Equipment installation and maintenance activities; Electricity production activities, grid connection, distribution and transmission; Waste prevention, collection and management activities during the construction, operation and decommissioning phases;

Project type	Possible activities determined by project implementation
	Activities to reduce emissions of pollutants into the atmosphere resulting from heating, transportation of materials and employees, etc.
PAM24 Building small hydro power plants	
• 65 MW (AHE Livezeni-Bumbești) • 9.4 MW (AHE Pașcani, on the Siret River) • 40.5 MW (AHE Cornetu – Avrig on the Olt River) starting from 2029 • 55 MW (AHE Surduc-Siriu) • 38 MW (AHE Cosmești – Movileni HPP, on the Siret River) • 35 MW (AHE Răstolița HPP) • 15 MW (AHE Cerna-Belareca) • 29 MW (AHE Izbiceni-Danube, Islaz) • 13 MW (AHE Cerna Motru – Tismana, Stage) II	Construction activities – structure, access roads, etc.; Equipment installation and maintenance activities; Electricity production activities, grid connection, distribution and transmission; Waste prevention, collection and management activities during the construction, operation and decommissioning phases; Water resources protection and management activities; Activities to reduce emissions of pollutants into the atmosphere resulting from the transport of materials, employees, etc.
PAM60 Increased use of nuclear energy	
• U3 (CANDU) – 700 MW • U4 (CANDU) – 700 MW • SMR - 462 MW In addition, the re-engineering of: • U1 • U2	Construction activities – structure, access roads, etc.; Equipment installation and maintenance activities; Electricity production activities, grid connection, distribution and transmission; Activities for the prevention, collection and management of hazardous and non-hazardous waste during the construction, operation and decommissioning phases; Activities to reduce emissions of pollutants into the atmosphere resulting from the transport of materials and employees, etc.

a).1.12 Description of the technological processes of the plan

Within the updated NECP 2021-2030, a series of investments are proposed for increasing energy transmission efficiency and increasing the share of RES in national energy production. These investments are in different stages of implementation. The construction phase of these projects includes land preparation works, installation of site organization, construction of designed platforms and constructions, etc.

In the technological process of producing electricity and heat in CCGT, CHP and from nuclear and hydro sources, there are no secondary processes that involve the use of hazardous chemicals and the generation of hazardous waste.

The projects regarding hydropower developments in PAM24 Building small hydro power plants include works to complete these developments that are in various stages of execution.

AHE Livezeni-Bumbești will have an installed capacity of 65 MW and is located on the Jiu River. Through the energy intake of the Livezeni dam (a polder with a total volume of 132,000

cubic meters), a quantity of water is diverted, an average flow of 36 cubic meters, to the first stage of the development – CHE (Hydro Electric Plant) Dumitra, equipped with 3 synchronous hydro-generating groups, equipped with Francis type hydraulic turbines, FVM 10.1 - 93, with vertical axis.
The servitude flow related to the Livezeni Dam, according to water management approval no. 410/2005, of 2.7 cubic meters/s, was planned to be processed through a Micro hydropower plant, located in the body of the Dam, and then discharged downstream. At the level of the three aggregates, the amount of water transported is processed through the Livezeni Dumitra underground adduct gallery, with has a length of approximately 7 km and an internal diameter of 3.80 m.

After water treatment in the CHE Dumitra, the water is returned, through an underground polder, to the Dumitra Bumbești intake gallery, which has a length of about 12.5m and an internal diameter of 4m, and then it is processed in the second stage of the fall - the CHE Bumbești, equipped with 3 synchronous hydro generator groups, equipped with vertical-axis Francis type hydraulic turbines, FVM 16.3 - 150, with vertical axis.

At the level of the second stage of the fall, an additional supply of water is brought from the secondary catchments Jiu, Dumitra and Bratcu through the Dumitra Bumbești intake gallery. The water resulting from the turbine treatment in the CHE Bumbești is returned, through a runoff channel, to the Jiu riverbed.

The technological principle of generating electricity is a typical one of producing electricity in hydroelectric power plants, based on the potential difference between two basins and the transported water flow. Thus, the potential energy accumulated in the head of the fall - the Livezeni dam, is transformed, at the level of the turbines of the CHE Dumitra and Bumbești, into kinetic energy and mechanical work. The turbines transfer this mechanical work to the vertical synchronous hydro generators; the electrical energy being generated at their level (transformation of mechanical work into electrical energy).

AHE Surduc-Siriu hydroelectric power plant will have an installed capacity of 55 MW and is located on the Buzău River. According to the Feasibility Study for Updating the technical-economic indicators of the AHE Surduc-Siriu developed by the Design Department within SPEEH Hidroelectrica, the recommended optimal scenario is Version 1: completion of the Surduc-Nehoiașu stage with 1 group of 55 MW at CHE Nehoiașu 2 and drop-off the Cireșu – Surduc step. The Surduc – Nehoiașu step includes the following components:
• Surduc Dam, weir type (on the Bâsca Mare River), which generates the Surduc accumulation (Vtotal= 400,000 m³; Vuseful= 280,000 m³; NNR= 873.0 mdM). Current progress of construction works: 75%;
• The main Surduc – Nehoiașu pipeline, located in a location on the left bank of the Bâsca Mare River with the following sub-objects: energy intake equipped with a self-cleaning vertical grate, wet well intake valve house equipped with two closing devices (VP 1.70 x 2.40 m), underground pipeline gallery (L= 16635 m; Di= 4.00 m). Current progress of construction works: 99%;

• Pressure node with the following sub-objects: underground forced gallery (L= 2.20 km, Di=3.50 m) fully armored, forced pipeline (L=284.0 m; Di=3.50 m), balance tower equipped with vertical shaft (H= 73 m, Di=4.0 m), lower chamber (L=170.0 m, variable Di (5.0 m÷ 4.0 m), upper above-ground chamber (H= 14.0 m; Di= 16.0 m) and underground butterfly valve house, equipped with a Ø3.20 m butterfly valve;
• CHE Nehoiașu 2 hydroelectric power plant, semi-buried type, planned to be equipped with 1 vertical Francis turbine (FVM- 88- 455) with Pi = 55 MW; Qi = 13 m3/s; Em = 152 GWh/year. Current progress of construction works: 85%;
• Escape gallery – reinforced concrete structure with a section of (5.00 x 4.00 m) and a length of 195.78 m. Current progress of construction works: 100%;
• Fish ladder, part of the dam. Current progress of construction works: 50%.

AHE Pașcani will have an installed capacity of 9.4 MW and is located on the Siret River. The project envisages the completion of construction works at the Pașcani hydropower development. AHE Pașcani will have an average electricity production of 25.3 GWh/year.

The current progress of the construction works for AHE Pașcani is 70%, split on components as following:
• reservoir – 70%;
• the dam – 70%;
• hydroelectric power plant – 80%;
• downstream regulation – 45%;
• connection to the national energy system (SEN) – 30%.
Work began in 1985 at AHE Pașcani and in 1989 at CHE Pașcani. AHE Pașcani is built in the minor and major bed of the Siret River, 2.5 km upstream from the town of Pașcani, the retention being ensured by the dam and the contour dikes. AHE Pașcani has an estimated length of about 14 km, and the body of water is 24 km long.
The gross volume of the lake at the normal retention level is 68.70 million cubic meters, the useful volume is 57.30 million cubic meters, and the lake surface is about 1,700 ha at NNR, but it can reach 2,232 ha out of the total 2,317.46 ha of expropriated land surface.
At the same time, the requirements regarding ecological flows on the Siret River, downstream of the Pașcani Dam, have increased significantly.

Technological parameters in the optimized version	**Stock**
The raw fall	12.6 m
Installed flow	100 m3/s
Installed power	9.4 MW
Average electricity production	25.3 GWh/year

AHE Cornetu – Avrig will have an installed capacity of 40.5 MW and is located on the Olt River. AHE Cornetu-Avrig comprises 5 stages, each including a power plant, a dam and a reservoir. The 5 stages are CHE Cornetu (completed), CHE Robești (completed), CHE

Racovița (95% completion), CHE Câineni (24% completion) and CHE Lotrioara (1% completion).

AHE Cosmești-Movileni project, on the Siret River, consists of putting into operation a new electricity production capacity with an installed power of 37.8 MW and an average annual energy production of 132.5 GWh/year.

AHE Cosmești – Movileni It comprises 2 distinct facilities – CHE Cosmesti and CHE Movileni, each with a central component, a dam and dikes. CHE Cosmesti – Movileni was built and has been in operation since 2008-2009.

AHE Rastolița will have an installed power of 35 MW, is located on the Răstolița River and was approved by Decree no. 95/1989, while by GD no. 332/1996 the project was declared a public utility work of national interest.
The entire facility was designed before 1989 with certain operating parameters. In 1996, an optimization study was carried out from a new perspective, which led to the reduction of the installed flow from 25 to 17 m3/s and the modification of the secondary supply route correlated with a new, more restrictive environmental agreement.
The reservoir is located on the Răstoliţa river valley downstream of the confluence of the Seaca, Mijlociu and Tihu streams and about 4.5 km upstream of the Răstoliţa town. The power plant is located on the banks of the Mureş River, opposite Borzia.
The definitive removal of an area of 171.4409 ha from the forest fund and then the deforestation of an area of 138.3091 ha in order to complete AHE Răstolița project aims to complete the works related to the dam objectives, fill the basin of Răstolița Lake, create secondary catchments related to the AHE, the contour road and the overhead power line.

AHE Cerna-Belareca will have an installed capacity of 15 MW and is located on the Cerna and Belareca rivers. AHE Cerna-Belareca was approved by Decree No. 158/13.05.1980 as an AHE with two reservoirs, Herculane and Cornereva, a single power plant, Herculane, common to the two falls, equipped with three turbines. This AHE is composed of two waterfalls, Cerna and Belareca, located on the rivers with the same name:

- Cerna Falls – located on the lower course of the Cerna River, about 5 km upstream from the Băile Herculane resort;
- Belareca Falls – located in the Cerna-Mehadia depression area on the Belareca River, downstream from the village of Cornereva, near the village of Bogâltin.

The scheme is under execution, with the entire Cerna fall being executed to date, including the Herculane power plant and some works in the Belareca fall.
The AHE Cerna – Belareca project includes, according to the approved development scheme, the following objects:
Cerna Falls (fully implemented) – capitalizes on the hydropower potential of the Cerna River on the difference in basin between Valea lui Iovan dam and Herculane dam.
The resulting energy parameters for the AHE Cerna - Belareca at the final profile are:
Installed flow rate - Qi total = 27.0 m3/s;
Installed power - Total Pi = 21.7 MW;

Average annual energy - Em total = 53.5 GWh/year.
The completion of the Belareca fall would bring an average annual energy production of 40.2 GWh/year, of which: 33.1 GWh/year on the Belareca fall (HA3) and an extra of 7.1 GWh/year on the Cerna fall (HA1+HA2) due to the flows derived from Belareca into Cerna.
After a period of stagnation and conservation (between 1989-2005), construction works were resumed in May 2006. During the non-activity, pronounced landslide phenomena were recorded on the right slope of the Cornereva dam. In 2011, due to the landslide on the right slope, the spillway was redesigned (and subsequently almost completely executed) with the lateral spillway solution. In 2014, works on the Belareca Falls were stopped.

For the project "AHE of the Olt River on the Izbiceni - Danube sector. CHE Islaz", the request for issuing the Environmental Agreement was rejected because the documentation requested by the environmental authority were not submitted by the beneficiary within 2 years of the date of the request.

AHE Cerna - Motru – Tismana, Stage II will have an installed capacity of 13 MW and is located on the Cerna, Motru, and Tismana rivers.

The Cerna - Motru - Tismana hydrotechnical and energy complex is a set of works primarily aimed at increasing water flow in the Jiu River to meet water needs especially for the Rovinari, Turceni, and Craiova - Işalnița thermal power plants, and secondly, it aims to harness the hydroenergetic potential of the managed waters by generating electricity. Additionally, the hydrotechnical complex ensures minimum flow rates downstream of the dams and some riverbed regularizations.

The hydrotechnical complex mainly consists of the following four groups of developments:

1. Cerna Reservoir (Valea lui Iovan), which regulates the flow of the Cerna River, the Motru River diverted to Cerna, and other Cerna tributaries diverted into the reservoir, as well as the Cerna – Motru diversion, utilizing a gross head of 205 m through the CHE Motru;
2. Buffer reservoirs Valea Mare on the Motru River and Clocotiș on the Bistrița River, and the underground derivations Motru – Tismana and Bistrița – Tismana, utilizing a gross head of 263 m through the CHE Tismana; the diversions also receive secondary intakes from the Pocruia, Tismana, Cioclovina, Tismănița, and Bistricioara streams;
3. Tismana downstream buffer reservoir on the Tismana River and the Tismana downstream dam power plant with a gross head of 9.5 m;
4. Vâja Reservoir on the Bistrița River and CHE Clocotiș on the diversion, utilizing a gross head of 120 m.

The implementation of these developments was planned in two stages:

- **Stage I** includes the completion of the first group of developments and, from the second group, the Valea Mare reservoir and the upstream section of the Motru – Tismana diversion, which allows the discharge of diverted flows from the Cerna and Motru rivers into the Pocruia stream and further into the Tismana and Jiu rivers, upstream of the Rovinari thermal power plant;

- **Stage II** includes the completion of the other three groups of developments in the Cerna - Motru – Tismana hydrotechnical complex.

Groups 2 and 3 of developments, part of Stage II, are inseparably linked to the development completed in Stage I.

Thus, the development scheme of the AHE Cerna - Motru - Tismana was approved in two stages, as described below:

- The investment objective "Cerna - Motru – Tismana Hydrotechnical and Energy Complex Stage I," according to approval document – HCM 207/28.02.1972, consists of the Motru drop stage.
- The investment objective "Cerna - Motru – Tismana Hydrotechnical and Energy Complex Stage II," according to the approval document – HCM 1611/20.12.1974

The "Cerna-Motru-Tismana Hydrotechnical and Energy Complex Stage II" project includes three drop stages:

- Clocotiș Drop (unfinished);
- Tismana Underground Drop (completed);
- Tismana Downstream Drop (unfinished).

Clocotiș Drop Stage

The Clocotiș Drop Stage consists of:

- **Vâja Reservoir**, created by a rockfill dam with a concrete face, located just downstream of the confluence of the Bistrița River with Valea Largă, primarily intended for supplying industrial water to facilities downstream of Rovinari and secondarily, for energy use;
- **Vâja Dam**: a rockfill dam with a concrete face, equipped with a lateral spillway on the left bank, with a height **H = 92 m**, reservoir volume **Vlac = 29.4 million m³**, **crest elevation of 604.00 m AS**, **normal retention level (NRL) = 600.00 m above sea level (masl)**

Tismana Downstream Drop Stage

The Tismana Downstream Drop Stage, located on the Tismana River, consists of:

- **Tismana Downstream Reservoir**, operational since 1985, with a concrete sluice dam with one gate opening, ballast retention dikes with concrete facing, energy dissipator, **NRL = 217 masl**, **gross head (Hbr) = 10 m**, reservoir volume **Vlac = 0.75 million m³**;
- **Tismana Downstream Power Plant**, with an installed capacity of 3 MW, operational since 1985;
- **Tismana River Regulation downstream of the CHE Tismana** over a length of **16.8 km**.

a).1.13 Characteristics of existing, proposed or approved plans/projects that may generate cumulative impact with the plan that is in the evaluation procedure and that may affect the protected natural area of community interest

The updated NECP 2021-2030 includes policies and measures designed to align with the national decarbonization targets and objectives and the use of renewable energy sources assumed by our country (Table 9). These policies and measures will be applied through a series of projects implemented throughout the country.

Table 9. Policies and measures within the updated NECP 2021-2030

PAM1 Phasing out coal TPP
PAM2 Introduction of renewable hydrogen into the energy system
PAM3 Hydrogen production
PAM4 Development of new CCGT capacities
PAM5 Promotion of high-efficiency cogeneration capacities
PAM6 Employing carbon capture, utilization and storage (CCUS) technologies
PAM7 Implementation of the Kigali amendment in the Product uses as substitutes of ODS
PAM8 Improvement and efficiency in the industrial processes
PAM9 Setting a national obligation for CO2 injecting and storing for the oil & gas industry
PAM10 Reduction of emissions from enteric fermentation
PAM11 Improving agricultural residues management
PAM12 Reduction of methane emission level from manure management and biogas production
PAM13 Increasing the agrisolar production
PAM14 Establishing integrated management of forest fires
PAM 15 PV systems in agriculture for irrigation
PAM16 Renewal of the agricultural machinery and equipment
PAM17 Reduction of municipal waste per capita
PAM18 Increased recycling and biodegradable waste selection for composting
PAM19 Optimization of incineration/co-incineration processes
PAM20 Landfill gas flaring
PAM21 Improved wastewater treatment
PAM22 Increase of the domestic generation capacity from PV power plants
PAM23 Increase of the domestic generation capacity from wind
PAM24 Building small hydro power plants
PAM25 Pump storage
PAM26 Rooftop PV
PAM27 Installation of solar thermal collectors in the residential sector
PAM28 Facilitate the establishment of energy communities
PAM29 Increase of the domestic generation capacity from biomass and biogas CHP and PP
PAM30 Biogas and biomethane
PAM31 Development of the advanced biofuels market
PAM32 Biofuels in aviation and marine transport
PAM33 RFNBO

PAM34 Development of the use of biomass, bioliquids and biogas within the EU-ETS installations based on energy-intensive thermal processes
PAM35 Improve energy performance of public buildings at central level
PAM36 Improve energy performance of public buildings at local level
PAM37 Renovation of residential buildings
PAM38 Renovation of commercial buildings
PAM39 Rehabilitation of public lighting
PAM40 Development of energy services/market, ESCO
PAM41 Green procurement
PAM42 Energy audit and energy management
PAM43 Increased share of heat pumps
PAM44 Increased use of efficient technologies in the residential sector
PAM45 Replacement of conventional fuels with RES in manufacturing industries
PAM46 Increase technology efficiency in the industrial sector
PAM47 Increased share of alternative fueled cars
PAM48 Increased share of alternative fueled buses
PAM49 Modernization of urban public transport
PAM50 Development of the underground transport infrastructure
PAM51 Increased share of alternative fueled trucks
PAM52 Modernization of naval transport
PAM53 Modernization of air transport
PAM54 Modernization and renewal of railway transport
PAM55 Railway rolling stock
PAM56 Alternative mobility
PAM57 Increasing the energy efficiency for the buildings in the transport sector
PAM58 Modernization of road transport infrastructure
PAM59 Support for the expansion and modernization of the electricity distribution network
PAM60 Increased use of nuclear energy
PAM61 Black Sea Corridor (ENTSO-E TYNDP ID 138)
PAM62 Mid-Continental East corridor (ENTSO-E TYNDP ID 144)
PAM63 HU-RO (ENTSO-E TYNDP ID 259)
PAM64 North CSE Corridor (ENTSO-E TYNDP ID 341)
PAM65 Georgia-Romania Black Sea interconnection cable project (ENTSO-E TYNDP ID 1105)
PAM66 Increasing the interconnectivity between the Eastern regions of Romania and the rest of SEN
PAM67 Integrating the output generated by powerplants in the South and the South-West of Romania
PAM68 400kV Suceava-Bălți OHL
PAM69 Refurbishment and modernization of the existing substations
PAM70 Refurbishment and development of the underground natural gas storage depot Depomureș - Târgu Mureș
PAM71 Increasing the daily extraction capacity in the underground gas storage system (SISG) Bilciurești
PAM72 Modernization of the natural gas storage system infrastructure — Bălăceanca
PAM73 Increasing the underground natural gas storage capacity of the Ghercești deposit
PAM74 Increasing the underground natural gas storage capacity at the Sărmășel deposit (Transylvania)
PAM75 New underground natural gas storage facility Fălticeni (Moldova)
PAM76 Modernization of natural gas infrastructure for enabling the transport of hydrogen

PAM77 Creation of new infrastructure for the transport of hydrogen
PAM78 Increasing the transmission capacity of SNT and security in natural gas supply
PAM79 Increasing the transmission capacity of SNT and ensuring the security of natural gas supply throughout the region
PAM80 LNG terminal located on the shores of the Black Sea, interconnection of the SNT to the LNG terminal and the development of the natural gas transport pipeline on Romanian territory for taking over natural gas from the Black Sea shore
PAM81 Development on the Romanian territory of SNT on the Bulgaria-Romania-Hungary-Austria Corridor (BRUA) – Phase II and Phase III
PAM82 Development/Modernization of the natural gas transmission infrastructure and interconnections
PAM83 Development of SMG in order to achieve bidirectional flow on the T2 and T3 pipelines
PAM84 Rehabilitation, modernization and expansion of SNT
PAM85 Electric energy storage capacities
PAM86 Creating an enabling environment for production and trading of green gases
PAM87 Development and use of a fully-fledged national social assistance IT system
PAM88 Ensuring the implementation of the just transition process
PAM89 Ensure the access of energy consumers to diversified, sustainable and accessible sources of energy for lighting, heating and cooling
PAM90 Develop one-stop shops
PAM91 Coordinated interministerial committee regarding protecting vulnerable consumers and addressing energy poverty

The types of projects that will be developed will cover several subsectors of the energy sector and may generate a potential cumulative impact with other existing, proposed or approved projects, and which may affect protected natural areas of community interest.

At this stage, it is difficult to quantify the potential cumulative impact of the projects proposed by the updated NECP 2021-2030, with other proposed/approved/existing plans or projects, due to the extended implementation period of the projects proposed in the NECP.

All projects proposed by the updated NECP 2021-2030 will include measures to reduce the potential negative impact on biodiversity, thus reducing the cumulative effects with other proposed/approved/existing projects.

a).1.14 Other information requested by the competent authority for environmental protection

That's not the case.

a).1.15 Summary of the effects generated by the implementation of the plan

The effects that will be generated because of the implementation of the projects proposed by the updated NECP 2021-2030 may be different, depending on the energy subsector. Table 10 presents the positive and potentially negative effects that may be generated because of the implementation of new energy production capacities, other than solar, wind, hydrogen, biogas or biomass.

Table 10. Positive and potentially negative effects that may be generated as a result of the implementation of the projects proposed within the updated NECP 2021-2030

Project type	Positive effects	Potentially negative effects

PAM4 Development of new CCGT capacities		
• 430 MW (Iernut) • At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW • 1,325 MW (Iṣalnita & Turceni)	Significant reduction of CO_2 emissions; Increasing the share of renewable energy sources in energy production and consumption.	Noise pollution; Air pollution.
PAM5 Promotion of high-efficiency cogeneration capacities		
• 80 MW (Rompetrol Năvodari) • 52 MW (CTE Constanța) • 295 MW (CTE Craiova) • 70 MW (other) • 50 MW (CTE Progresu) • 34 MW (CTE Grozăveṣti) • 300 MW (CTE Sud Vitan)	Significant reduction in CO_2 emissions.	Noise pollution; Air pollution.
PAM24 Building small hydro power plants		
• 65 MW (AHE Livezeni-Bumbeṣti) • 9.4 MW (AHE Paṣcani, on the Siret River) • 40.5 MW (AHE Cornetu – Avrig on the Olt River) starting from 2029 • 55 MW (AHE Surduc-Siriu) • 38 MW (AHE Cosmeṣti – Movileni HPP, on the Siret River) • 35 MW (AHE Răstolița HPP) • 15 MW (AHE Cerna-Belareca) • 29 MW (AHE Izbiceni-Danube, Islaz) • 13 MW (AHE Cerna Motru-Tismana, Stage II)	Significant reduction of CO_2 emissions; Increasing the share of renewable energy sources in energy production and consumption.	Noise pollution; Air pollution; Habitat degradation and/or fragmentation; Landscape alteration; Increasing human presence Affecting the ecological status/ecological potential of water bodies.
PAM60 Increased use of nuclear energy		
• U3 (CANDU) – 700 MW • U4 (CANDU) – 700 MW • SMR - 462 MW In addition, the re-engineering of: • U1 • U2	Significant reduction of CO_2 emissions; Increasing the share of clean energy in energy production and consumption.	Generation of hazardous waste; Affecting the quantitative status of the water body, by capturing a larger volume of water from the Danube; Affecting the qualitative status of the water body; Permanent change of land use.

a).1.16 Summary maps of all interventions that have the potential to affect the protected natural area of community interest

Maps of the new energy production capacity projects within the updated NECP 2021-2030 and the protected natural areas potentially affected (Figures 7-10). The maps were produced at national level based on the Stereo 1970 coordinates of each project. The protected natural areas potentially affected were identified considering the maximum limit of the area of influence of 20 km for each project.

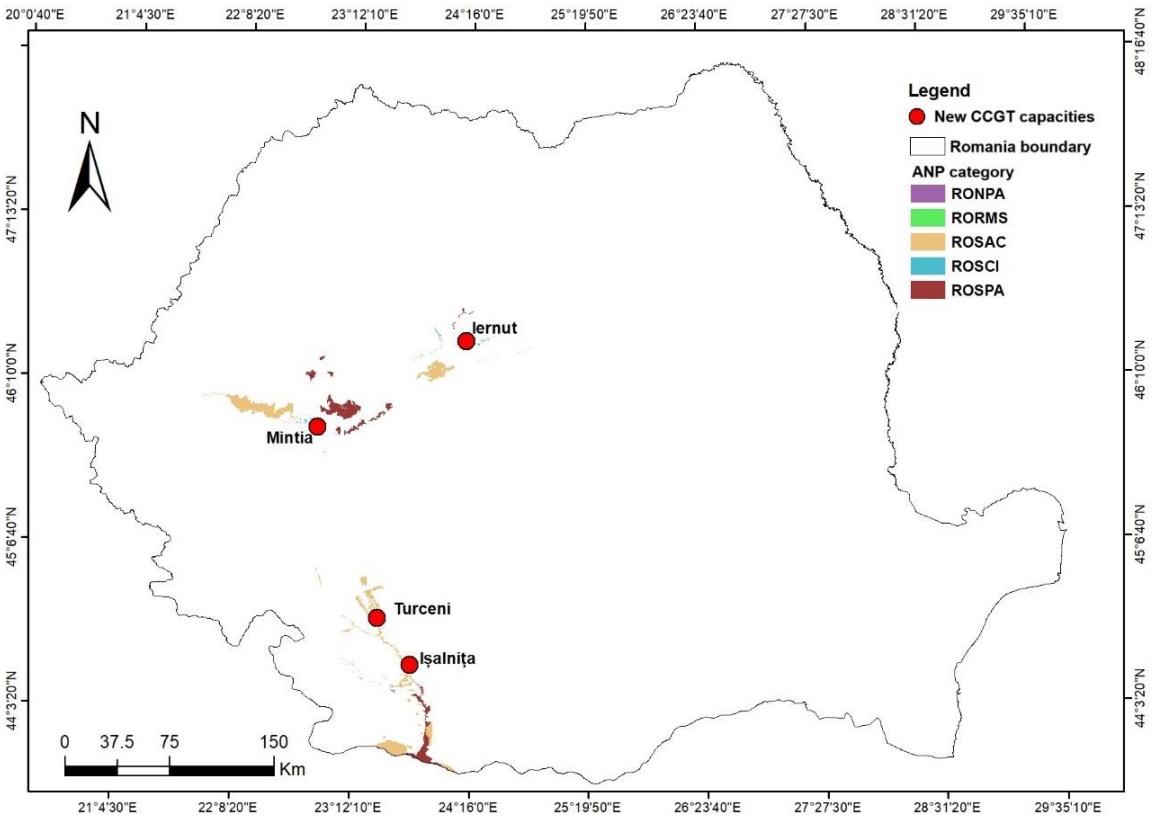


Figure 7. Location of new CCGT power generation capacities

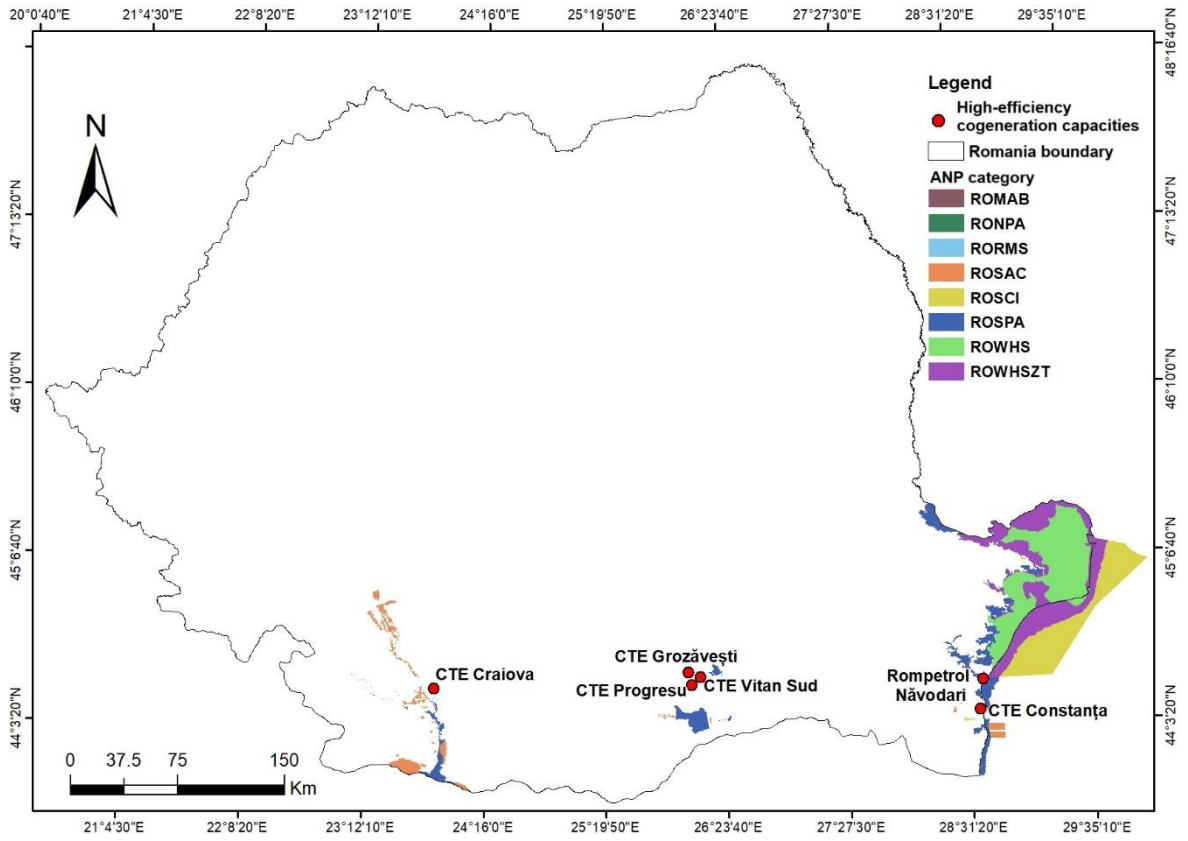


Figure 8. Location of high-efficiency cogeneration capacities

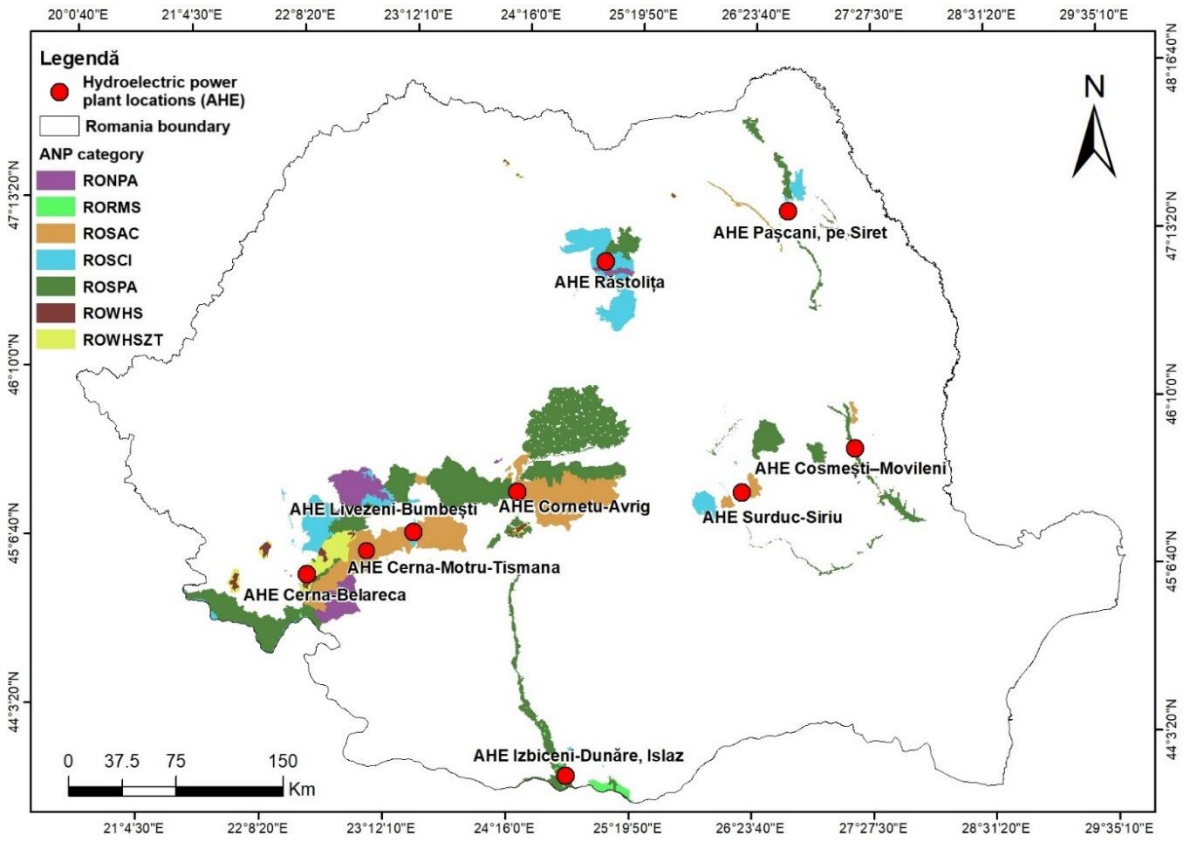


Figure 9. Location of electricity production capacities from hydro sources

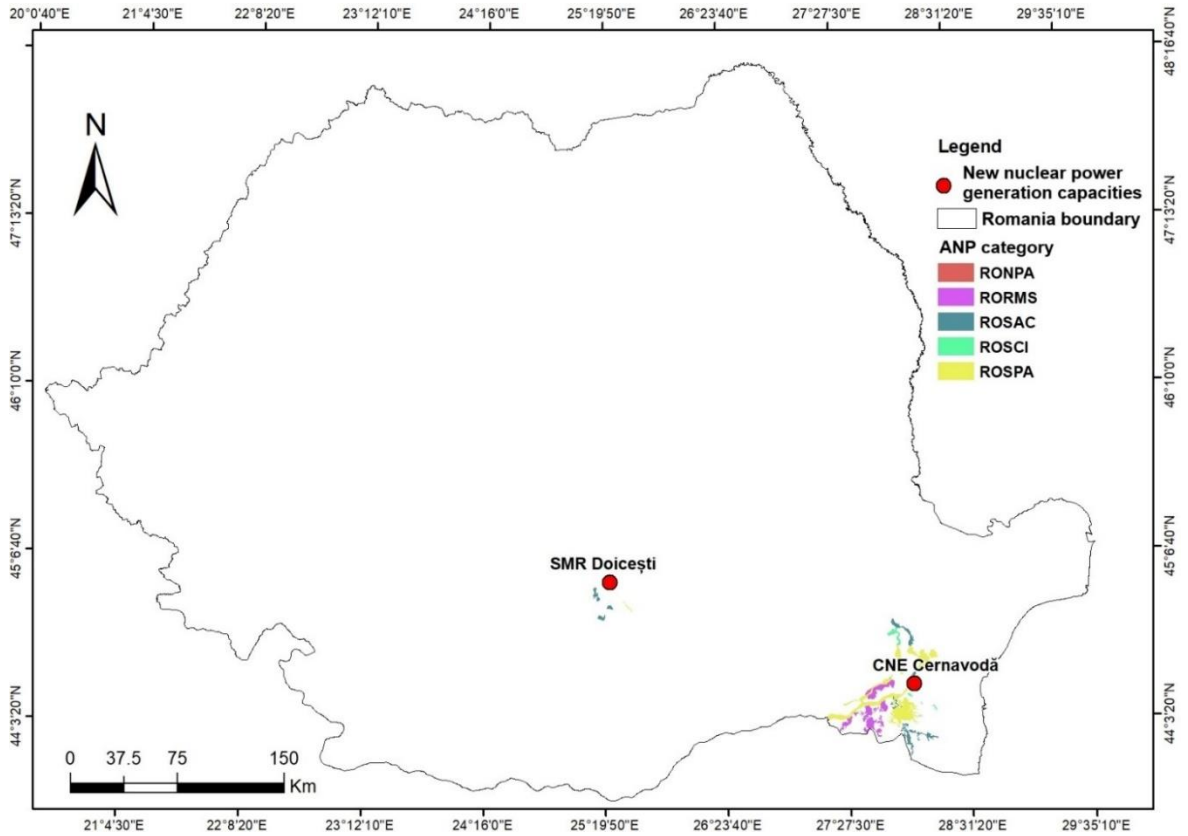


Figure 10. Location of nuclear power generation capacities

a).2 Effects generated by the plan's interventions

The effects that will be generated because of the implementation of the projects proposed by the updated NECP 2021-2030 may be different, depending on the energy subsector and the type of project implemented.

At this stage, it is difficult to quantify the effects generated by the project interventions proposed by the updated NECP 2021-2030, due to the extended implementation period. and may cause changes in technology and project characteristics.

All proposed projects will include measures to reduce potentially negative effects, thus reducing their potential impact.

The quantification of the potential effects determined by the implementation of new electricity generation capacities and related facilities will be analyzed for each project separately within the framework of the appropriate assessment procedure and the environmental impact assessment procedure.

a).3 Other plans/projects with which the analyzed plan may generate cumulative impact

The projects proposed by the updated NECP 2021-2030 cover several subsectors in the energy sector (solar, wind, hydrogen, nuclear, hydropower, gas, modernization and expansion of electricity and gas transmission networks, new gas and electricity storage capacities, geological carbon deposits-CCUS, stimulating the renewal of the car fleet with electric cars, rail transport - purchase of new rolling stock, naval transport - modernization of the naval fleet, renewal of Tarom's aircraft fleet, etc.), and may generate a potential cumulative impact with other existing, proposed or approved projects, and which may affect protected natural areas of community interest.

At this stage it is difficult to quantify the potential cumulative effects of the projects proposed by the updated NECP 2021-2030, with other proposed/approved/existing plans or projects, due to the extended implementation period. of the projects proposed in the Plan.

All proposed projects will include measures to reduce the potential negative impact, thus reducing the cumulative effects with other proposed/approved/existing projects.

The potential cumulative impact determined by the implementation of new electricity generation capacities and related facilities will be analyzed for each project separately within the appropriate assessment procedure and the environmental impact assessment procedure.

Ib). Information on the protected natural area of community interest affected by the implementation of the plan

b).1. Data on protected natural areas of community interest that may be affected by the plan

The identification of Natura 2000 sites potentially affected by the implementation of the projects provided for in the updated NECP 2021-2030 was carried out by conducting an analysis in which the following data were used:

- The projects proposed within the updated NECP 2021-2030, namely the projects in PAM4 Development of new CCGT capacities, PAM5 Promotion of high-efficiency

cogeneration capacities, PAM24 Building small hydro power plants. Their location was achieved using vectorized geospatial information by the Provider at the Beneficiary's instructions;

- The boundaries of protected natural areas, respectively Natura 2000 sites in Romania in shp format, available on the website of the Ministry of Environment, Waters and Forests;
- Standard Forms of Natura 2000 sites in Romania, available on the website of the Ministry of Environment, Waters and Forests. The analysis was carried out through two approaches:
  - Identification of specific elements of the updated NECP 2021-2030 objectives that intersect Natura 2000 sites;
  - Identification of objectives from the updated NECP 2021-2030 that do not intersect Natura 2000 sites and the distances to protected natural areas in the area of the objectives.

At the same time, the Plan proposes a series of investments that are still in an early stage of implementation. Detailed information, such as location, size, capacity, is not available for these projects.

Based on information about the location of the projects, they were classified as follows:

- Projects targeting existing sites and which will be carried out within them, spatial location based on the Stereo 1970 coordinates sent by the Beneficiary;
- Projects with new locations for which the spatial location was carried out based on the Stereo 1970 coordinates sent by the Beneficiary;
- Projects targeting existing and new sites for which locations are identifiable without coordinates proposed projects for PAM60 Increased use of nuclear energy.

The proposed projects, as well as the policies and measures they are part of, are presented in Table 11.

Table 11. New production capacities proposed in the updated NECP 2021-2030

Policies and Measures (PAM)	**Proposed project name and production capacity**
PAM4 Development of new CCGT capacities	• 430 MW (IERNUT) starting from 01.01.2025 • At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW • 1,325 MW (Ișalnița & Turceni) starting from 01.07.2026.
PAM5 Promotion of high-efficiency cogeneration capacities	• 80 MW (Rompetrol Năvodari) starting with 2024 • 52 MW (CTE Constanța) starting with 2025 • 295 MW (CTE Craiova) starting with 2026 • 70 MW (other) starting in 2026 • 50 MW (CTE Progresu) starting with 2028 • 34 MW (CTE Grozăvești) starting from 2029 • 300 MW (CTE Sud Vitan) starting with 2030

PAM24 Building small hydro power plants	It is planned to install and put into operation, by 2050, an additional capacity for producing electricity from hydroelectric sources of: • 65 MW (AHE Livezeni-Bumbești) starting with 2026 • 9.4 MW (AHE Pașcani, on the Siret River) starting with 2026 • 40.5 MW (AHE Cornetu – Avrig, on the Olt River) starting from 2029 • 55 MW (AHE Surduc-Siriu) starting in 2026 • 38 MW (AHE Cosmești – Movileni, on the Siret River) starting in 2026 • 35 MW (AHE Răstolița HPP) starting with 2026 • 15 MW (AHE Cerna-Belareca) starting with 2029 • 29 MW (AHE Izbiceni-Danube, Islaz) starting with 2030 • 13 MW (AHE Cerna Motru-Tismana, Stage II) starting in 2029
PAM60 Increased use of nuclear energy	• U3 (CANDU) – 700 MW in 2031 • U4 (CANDU) – 700 MW in 2032 • SMR - 462 MW in 2030 • U1 refurbishment in the period 2027-2029 and U2 in the period 2036-2038

In order to identify the potentially affected ANPIC, the coordinates of the projects provided by the Beneficiary were superimposed in the GIS with the boundaries of the protected natural areas within the maximum indirect influence zone of 20 km of the proposed projects (Figures 10-28). Thus, the projects were marked on the maps in relation to the protected natural areas located within the indirect influence zone of 20 km (established according to Order no. 1679/2023 for the approval of the specific methodological Guide on the adequate assessment of the potential effects of plans/projects in the areas of interest).

The closest natural areas protected by the projects proposed by the updated NECP 2021-2030 are those areas located at a distance of 6 km from the location of the proposed projects. This distance was established taking into account the lower limit of the area of influence established according to Order 1679/2023, for projects in the energy production sector in relation to ANPIC that include flying invertebrates, birds, bats and large carnivores. This lower limit increases to 20 km in the case of wind farms, this being considered in Order 1679/2023 the precautionary distance in case the ANPIC includes bird species of community interest, such as raptors or geese. The identification of ANPIC in the case of wind and solar projects was not possible, because the Stereo 1970 coordinates of the potential projects under measures PAM22 Increase the domestic generation capacity from PV power plants and PAM23 Increase the domestic generation capacity from wind are not known.

PAM4 Development of new CCGT capacities

- 430 MW (Iernut) starting from 01.01.2025

The protected natural areas potentially affected were identified taking into account that the location of the Iernut objective and concerns the already existing site. The closest protected natural areas to the Iernut site are ROSCI0210 Râpa Lechința and ROSPA0041 Elești Iernut, approximately 1 km away from the Iernut objective (Fig. 11).

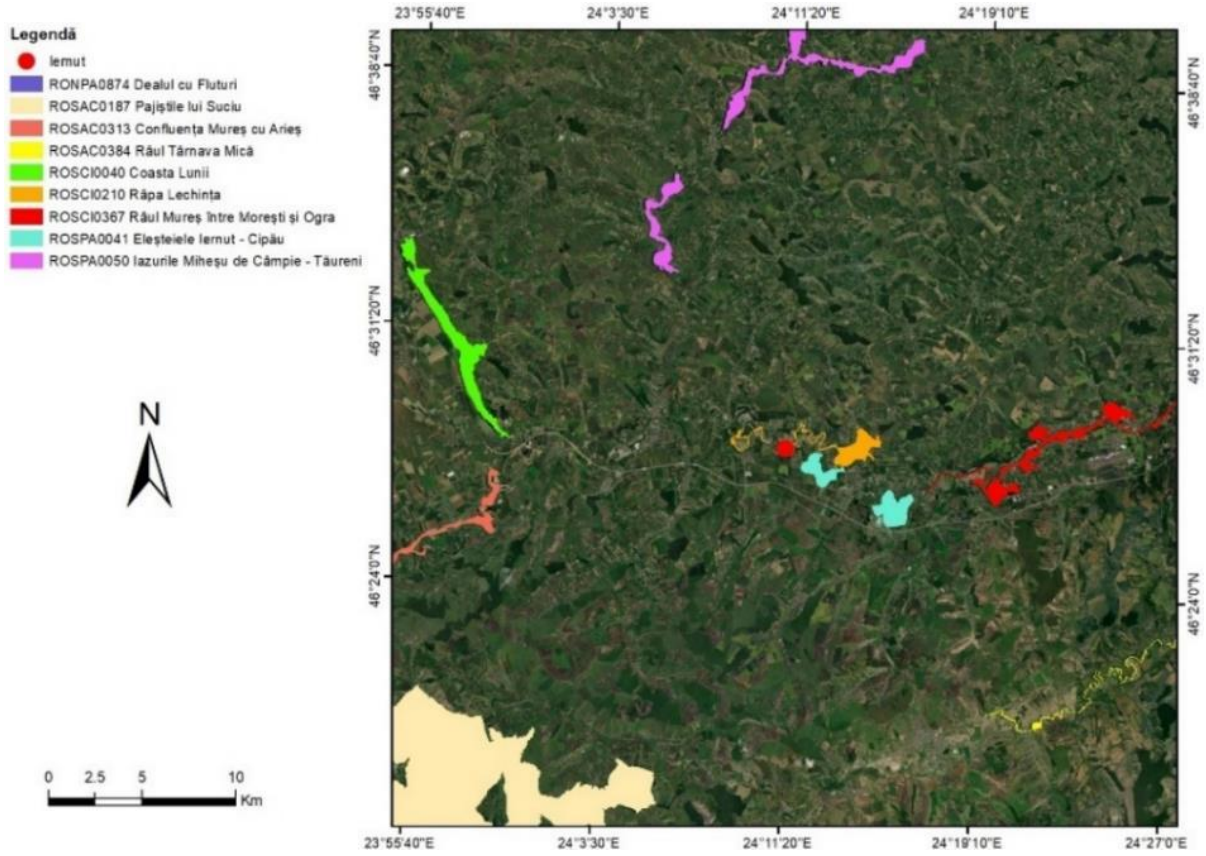


Figure 11. Location of Iernut in relation to protected natural areas

- At least 860 MW (Mintia) starting from 01.01.2026, with the possibility of expansion up to 1,700 MW

The Mintia objective targets the existing site and the transition of the two functional groups from coal to gas. The closest protected natural area is ROSCI0373 Mureș River between Brănișca and Ilia at a distance of less than 1 km. The protected natural areas RONPA0521 Dealul Colț and Dealul Zănoaga, ROSCI0054 Dealul Cetății Deva are located at a distance of approximately 3 km, and RONPA0535 Dealul Cetății Deva is at a distance of approximately 5 km from the Mintia objective (Fig. 12).

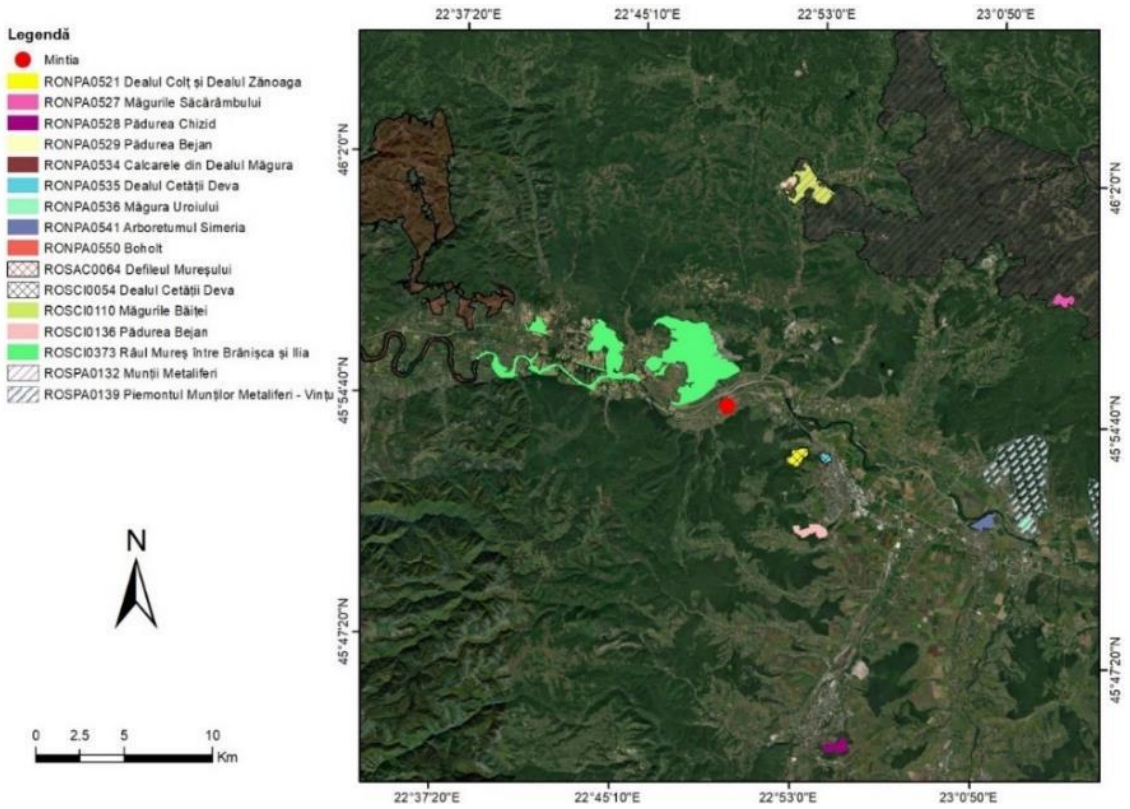


Figure 12. Location of Mintia in relation to protected natural areas

- 1,325 MW (Ișalnița & Turceni) starting from 01.07.2026

The location of the Ișalnița and Turceni objectives was identified considering the fact that they target already existing sites. The closest protected natural area to the 2 objectives is ROSAC0045 Jiu Corridor located less than 1 km from Turceni and about 2 km from Ișalnița (Fig. 13).

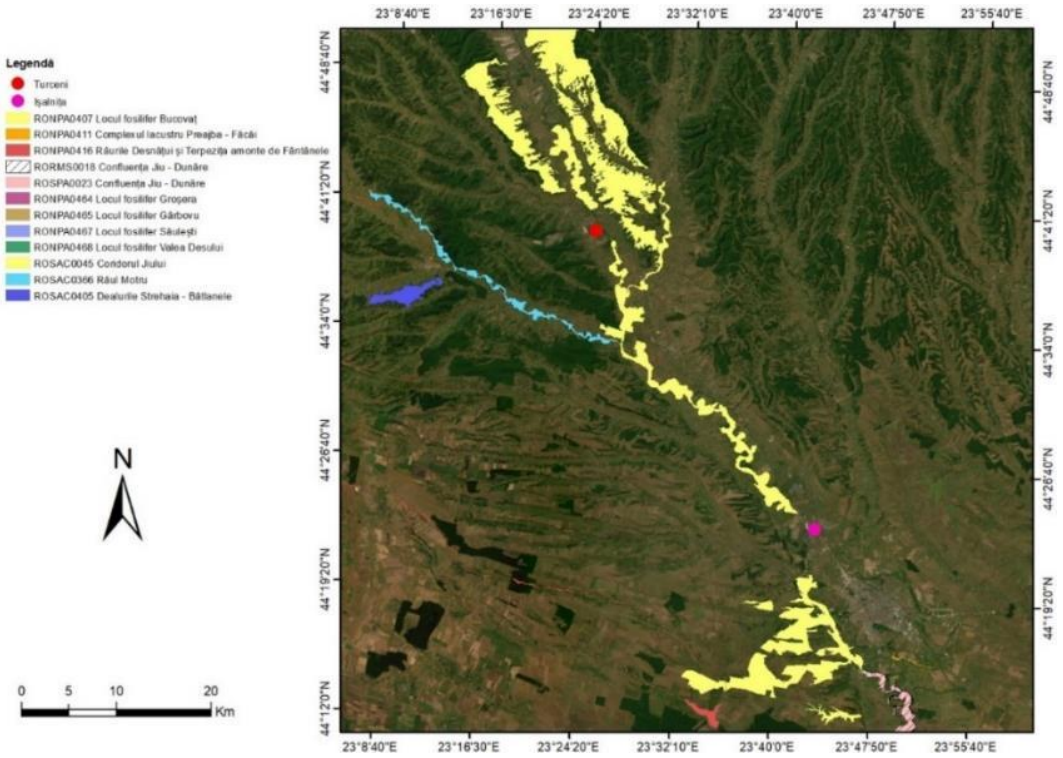


Figure 13. Location of Işalnița & Turceni in relation to protected natural areas

PAM5 Promotion of high-efficiency cogeneration capacities

- 80 MW (Rompetrol Năvodari) starting from 2024

The Rompetrol Năvodari location was identified considering the fact that it concerns the already existing site. Its location is located at a distance of less than 1 km from the site ROSPA0060 Tașaul – Corbu Lakes and RONPA0365 Corbu - Nuntași – Histria and at a distance of approx. 2 km from the site ROSPA0076 Black Sea. At a distance of approximately 3 km from the objective are ROWHS0001 Danube Delta World Heritage Site, ROWHSZT01 Danube Delta - Buffer Zone, ROSPA0031 Danube Delta and Razim – Sinoie Complex, ROSCI0065 Danube Delta site, ROSCI0066 Danube Delta - Marine Area, RORMS0001 Danube Delta and ROMAB0003 Danube Delta Biosphere Reserve (Fig. 14).

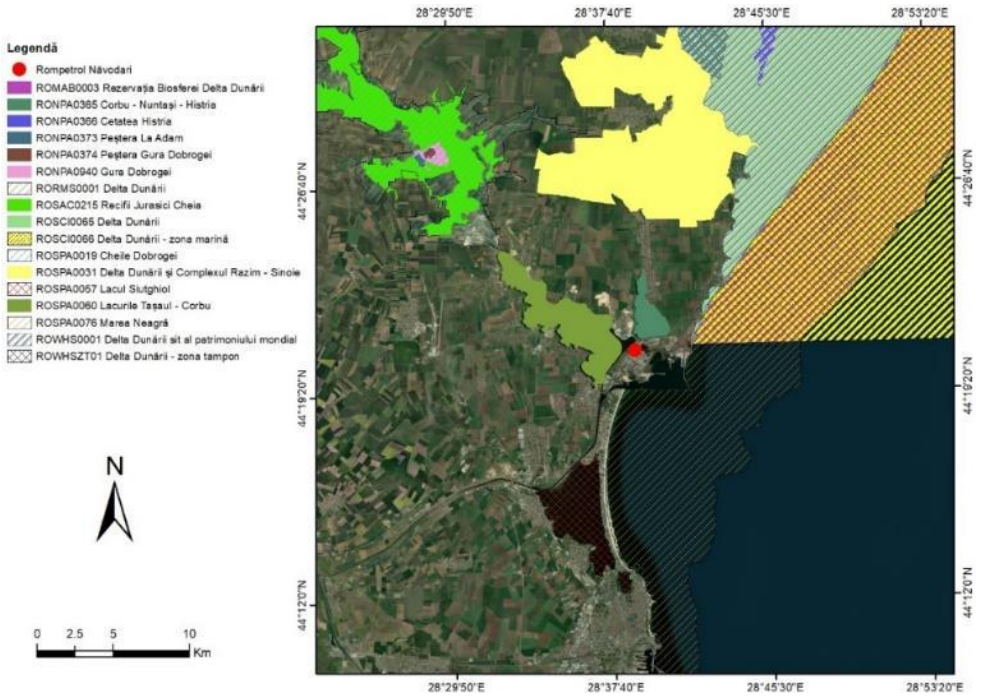


Figure 14. Rompetrol Năvodari location in relation to protected natural areas

- 52 MW (CTE Constanța) starting from 2025

The location of the Constanta CTE was identified considering the fact that it concerns the already existing site. The nearest protected natural area RONPA0376 Valu lui Traian is located about 3 km away and the protected natural areas ROSPA0076 Marea Neagră and ROSPA0057 Lacul Siutghiol are located about 5 km from the Constanta CTE objective (Fig. 15).

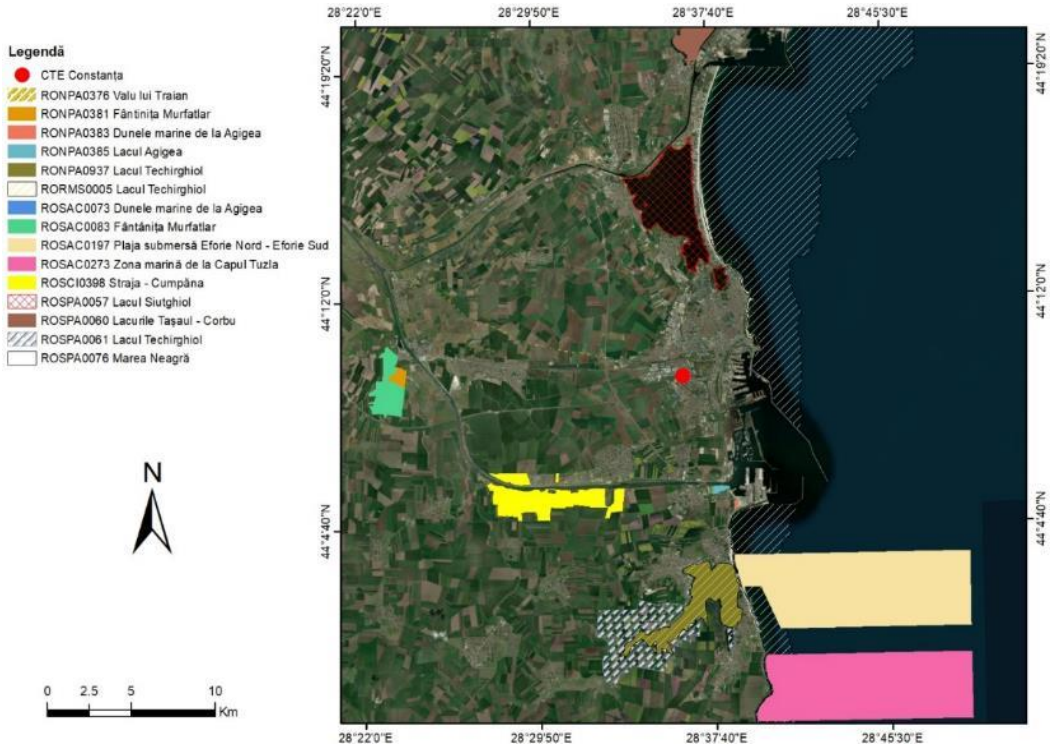


Figure 15. Location of the Constanța CTE in relation to protected natural areas

- 295 MW (CTE Craiova) starting from 2026

The location of the Craiova CTE was identified considering the fact that it targets the already existing site. The closest protected natural area ROSAC0045 Jiu Corridor is located at a distance of about 7 km from the Craiova CTE objective (Fig. 16).

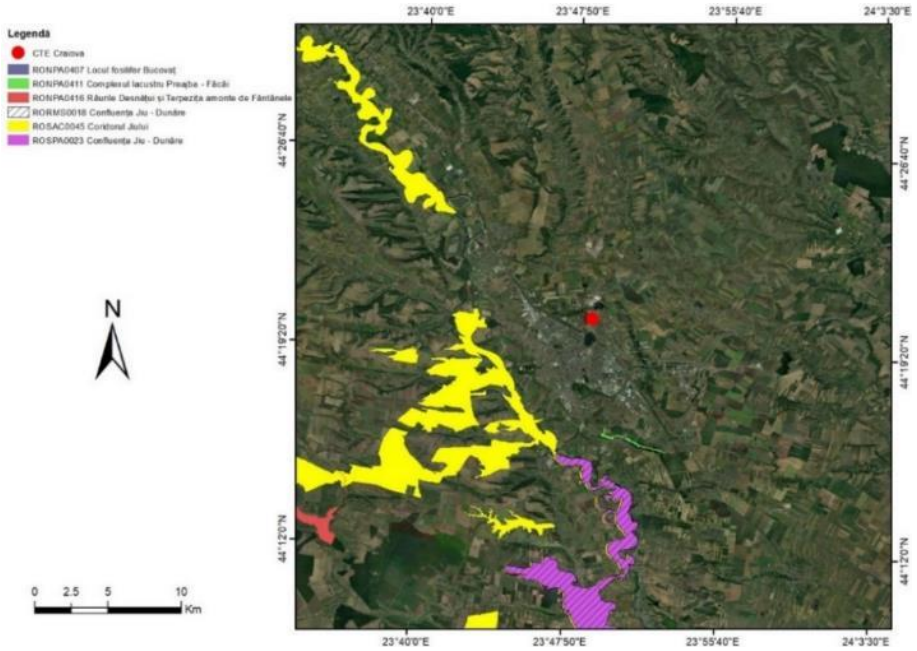


Figure 16. Location of the Craiova CTE in relation to protected natural areas

- 50 MW (CTE Progresu) starting from 2028

The location of the CTE Progresu was identified considering the fact that it concerns the already existing site. Its location is located at a distance of approx. 3 km from the natural reserve RONPA0954 Văcărești Natural Park (Fig. 17).

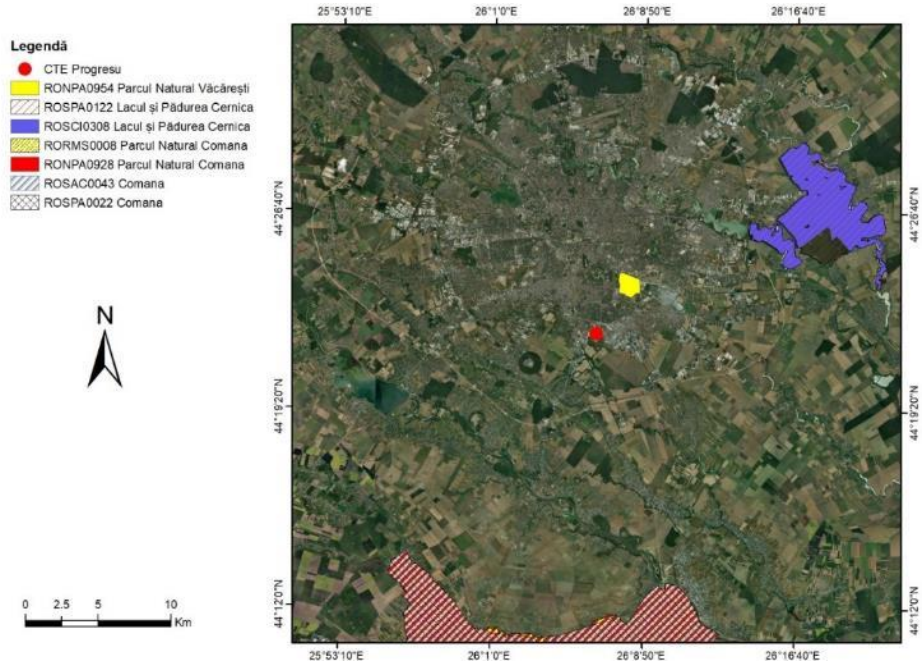


Figure 17. Location of CTE Progresu in relation to protected natural areas

- 34 MW (Grozăvești CHP) starting from 2029

The location of the Grozăvești CTE was identified considering the fact that it targets the already existing site. The closest protected natural area RONPA0954 Văcărești Natural Park is located at a distance of about 6 km from the objective (Fig. 18).

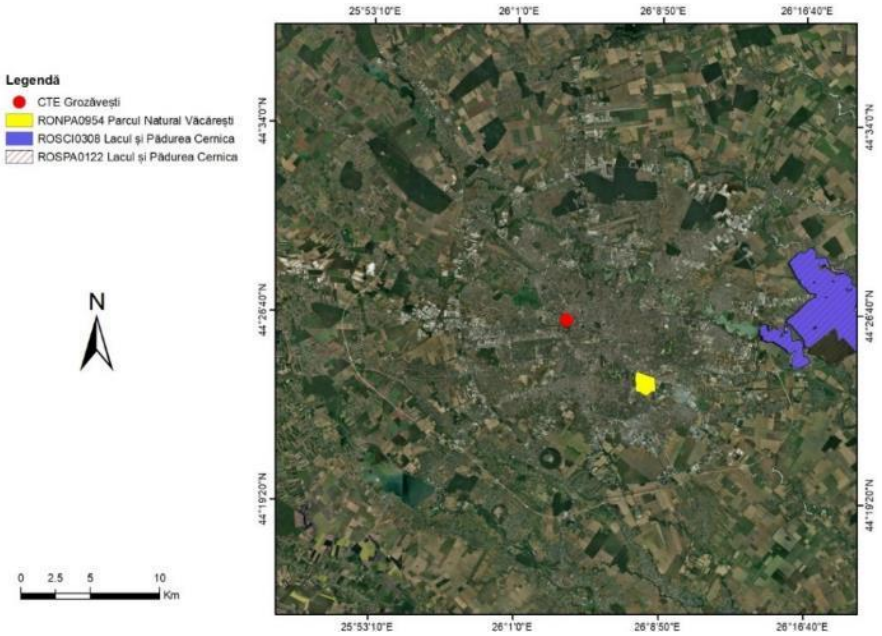


Figure 18. Location of Grozăvești TPP in relation to protected natural areas

- 300 MW (CTE Sud Vitan) starting from 2030

The location of the CTE Sud Vitan was identified taking into account the fact that it concerns the already existing site. Its site is located at a distance of less than 1 km from the natural reserve RONPA0954 Văcărești Natural Park. The sites ROSCI0308 Cernica Lake and Forest and ROSPA0122 Cernica Lake and Forest are located at approximately 6 km from the CTE Sud Vitan objective, (Fig. 19).

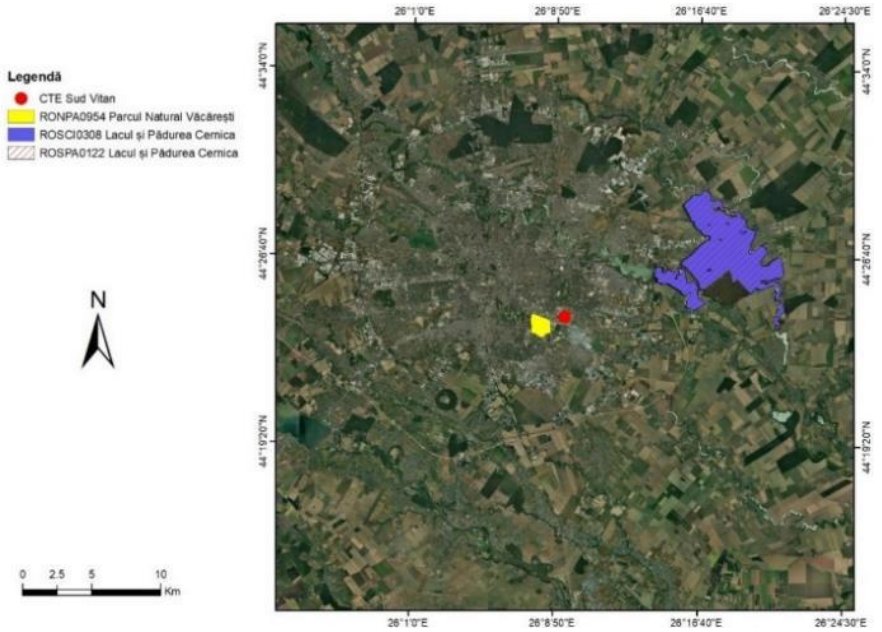


Figure 19. Location of CTE Sud Vitan in relation to protected natural areas

PAM23 Increasing the Installed Capacity for Electricity Generation from Wind Sources

The potential for developing of wind energy sources in Romania was analyzed in the project titled **"Study on the wind power potential in Bulgaria, Hungary, and Romania"**, conducted by **AIT Austrian Institute of Technology GmbH** and the **Regional Centre for Energy Policy Research (REKK)** of Hungary in 2023 for the **European Climate Foundation (ECF)**. This study performed a detailed GIS-based analysis of wind energy development potential, using comprehensive meteorological datasets (time series of wind speeds for previous meteorological years) at high geographical resolution and incorporating spatial constraints related to land use (e.g., protected natural areas, urban environments, agriculture, forestry, other wind farms).

As a result of this assessment, detailed maps were created showing the areas available for wind farm development. Additionally, the evaluation established the appropriate site qualities and a comprehensive dataset listing the identified wind energy potential at the regional level for each of the three countries.

For Romania, wind maps were developed under this study, showing the country's wind development potential. The areas with the highest development potential for wind energy sources were identified in **eastern Romania**, particularly in **Tulcea** and **Constanța counties**, as well as in the area where the **Danube River meets the Black Sea**. In addition to these, the counties of **Brăila, Galați, and Ialomița** were also identified as having significant wind energy development potential.

Therefore, the analysis of the potential impact of wind energy source development on **Sites of Community Importance for Nature Protection (ANPIC)** focused on the eastern Romania, as this is the area with the highest potential to develop wind farm projects proposed in the **updated NECP 2021–2030**.

The development of wind farms generally involves the implementation of complex projects that include various types of interventions which may generate both local and remote effects (during both the construction and operation phases). Thus, the implementation of electricity generation projects from wind sources requires a comprehensive analysis of the potential impact these projects may have on conservation objective for habitats and species of community interest. This analysis must also include the remote effects on highly mobile speciescaused by the development of wind farms that affect ANPIC areas forming part of **ecological corridors**.

In Romania, due to its geographical position and varied terrain, there are four main **migration corridors** crossing the country: **Sarmatic, Pontic, East Elbic, and Panono-Bulgar**. The **Dobrogea region** brings together the **East Elbic, Pontic, and Sarmatic corridors** during migration periods under the generic name **VIA PONTICA**.

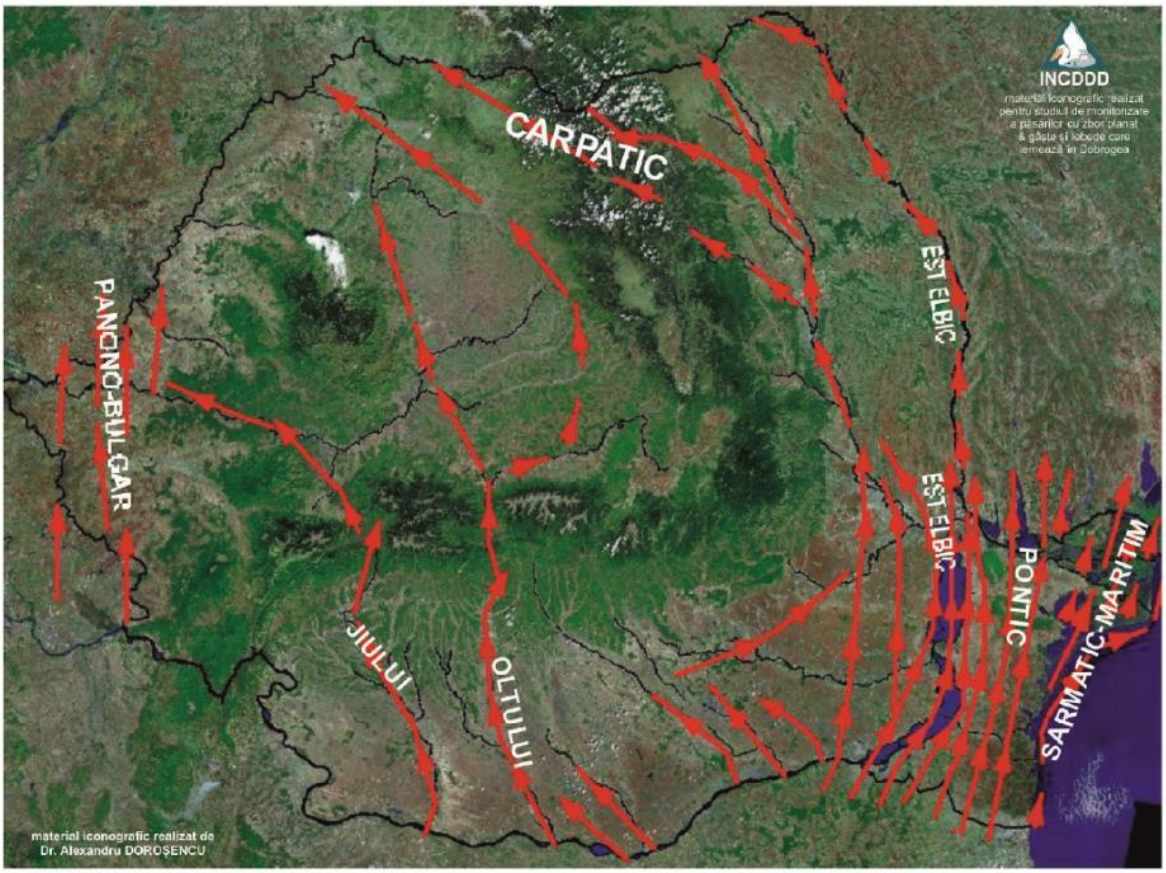


Figure 20. Main migration routes in Romania during the spring period (Source: DDNI, 2012)

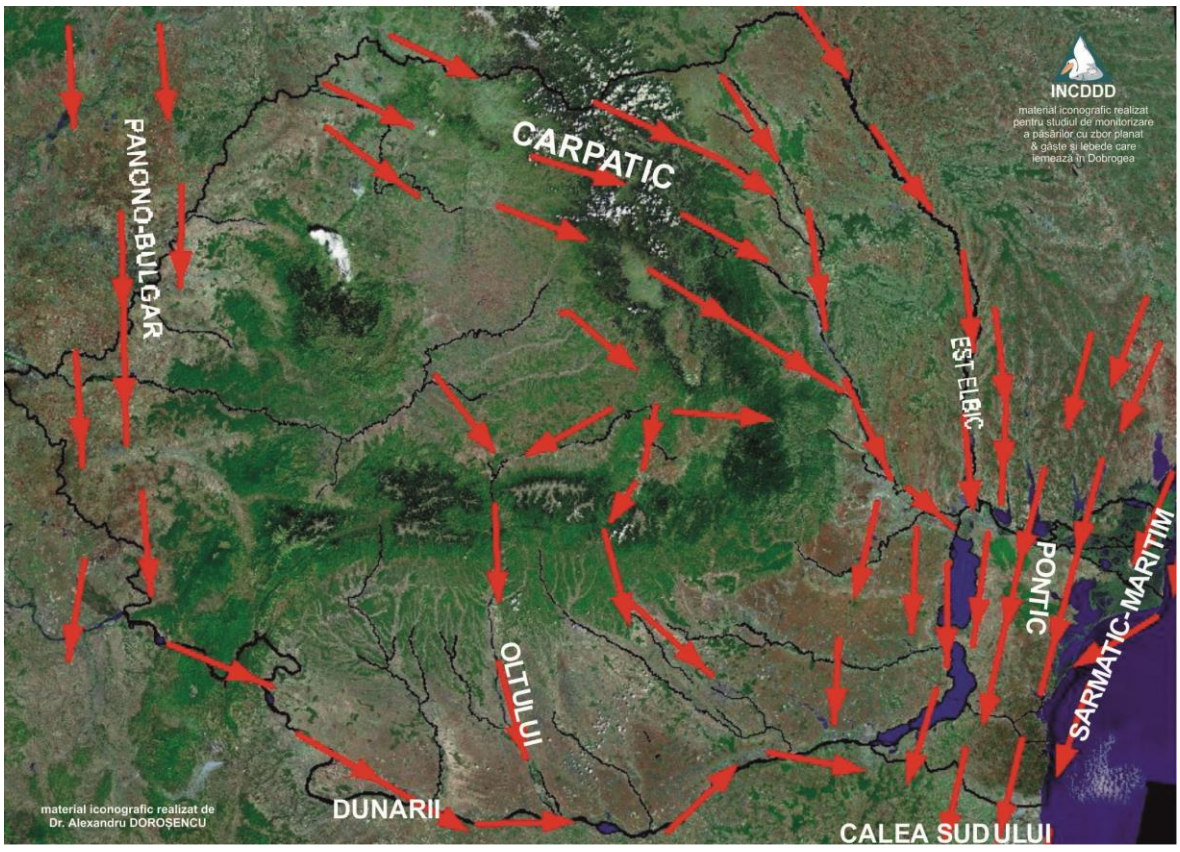


Figure 21. Main migration routes in Romania during the autumn period (Source: DDNI, 2012)

Outside the main migration routes, there are also numerous secondary migration paths, and in general more local or regional corridors become evident during the autumn.

In the Dobrogea region and the Danube Delta, large bird concentrations occur due to the convergence here of the East-Elbic, Pontic, and Sarmatic routes, from which the migration paths fan (Figures 20 and 21): i) East-Elbic running NW–SE, mainly following the Danube Valley between Călărași and Brăila, and to the north, the Prut Valley; ii) Carpathian (a secondary route of the East-Elbic path) following the Siret River and its main tributaries, thus crossing the Eastern Carpathians; iii) Pontic, running NNE–SSW, following the longitudinal axis of Central Dobrogea; iv) Sarmatic and Maritime Sarmatic, following the Black Sea coast.

By overlaying the migration corridor maps with the community-importance protected natural areas in continental Dobrogea (excluding marine territorial waters), a map was produced showing the protected areas where wind turbine construction is recommended to be prohibited.

The map does not include areas represented by settlements, public road networks, etc., which are already zones where wind turbine placement is not permitted (Fig. 22).

The protected areas for the conservation of species and habitats of European (including birds) and national conservation interest in Dobrogea cover a total area of 784,642 hectares, which represents 50.4% of the region.

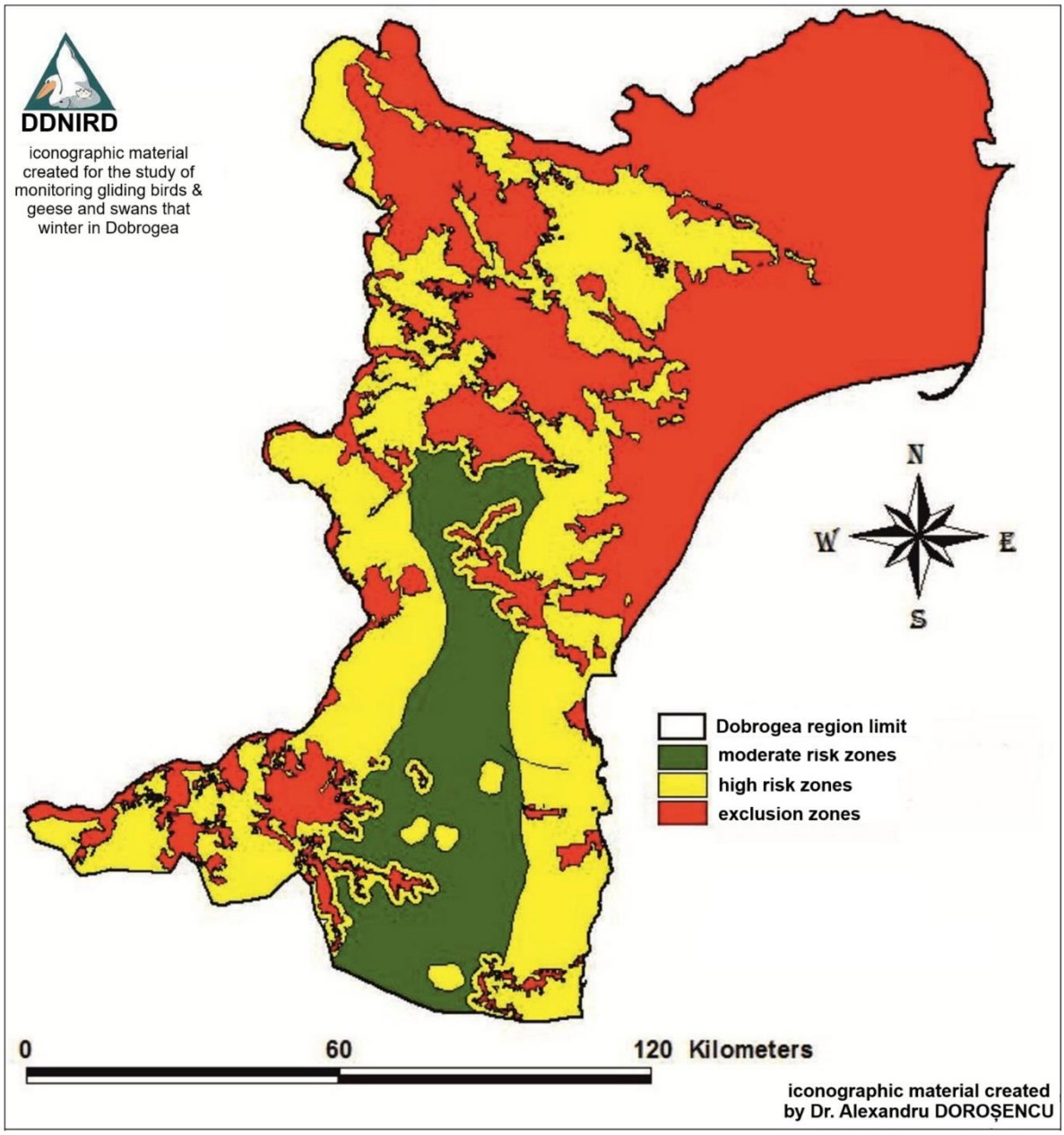


Figure 22. Map of exclusion zones and zones where wind turbine construction is permitted, but construction or operation must be restricted due to the migration of soaring birds and/or wintering populations of geese and swans (Source: DDNI, 2012)

The areas where the construction or operation of wind power plants must be restricted do not present the same level of risk, and therefore, they must be differentiated into two categories:

1. High-risk areas, where a series of restrictions on the placement and operation of wind power plants are necessary to minimize the risk of bird collisions. Long-term monitoring (at least 10 years) of soaring bird species and/or wintering populations of geese and swans is also required. In these areas it is recommended to conduct monitoring at night or in difficult weather conditions (fog, storms, etc.) using radar technology. All wind power plants in high-risk areas must be equipped with built-in microphones to monitor collision rates. In parallel with these monitoring actions, the collection and monitoring of bird carcasses in these areas is necessary. Depending on the specific characteristics of each area, other complementary monitoring

methods may also be used, such as thermal detection systems (TADS) and aerial surveys to improve data quality.

2. Moderate-risk areas, where long-term monitoring of soaring bird species and/or wintering populations of geese and swans is required.

High-risk areas cover approximately 566,947 hectares, representing 36.4% of the Dobrogea region. Moderate-risk areas cover approximately 206,100 hectares, representing 13.2% of the surface area of Dobrogea (Source: DDNI, 2012).

High-risk areas include open habitats and forest or silvo-steppe habitats used by birds for feeding, resting, and nesting. These habitat types are mainly represented by extensive open grasslands, agricultural habitats, mosaic grasslands with tree vegetation, pastures with solitary trees, tall grass habitats (over 50 cm), forest habitats with shrub vegetation including forest edges, grasslands with old trees, orchards, pastures and grasslands near forests, and mature deciduous or mixed forests with semi-open understory.

PAM24 Building small hydro power plants

- 65 MW (AHE Livezeni-Bumbești) starting from 2026

The AHE Livezeni-Bumbești site overlaps 86% with the Natura 2000 site ROSCI0063 Jiu Gorge and 88% with the Jiu Gorge National Park. The protected natural areas ROSAC0129 Nordul Gorjului de Vest and RONPA0444 Sfinxul Lainicilor are located less than 1 km from the site, while the ROSAC0128 Nordul Gorjului de Est site, the RONPA0472 Stâncile Rafailă nature reserve and the ROSAC0188 Parâng site are located approximately 2 km from the AHE Livezeni-Bumbești site. The RONPA0474 Dealul Gornăcelu nature reserve is located approximately 3 km from the site (Fig. 23).

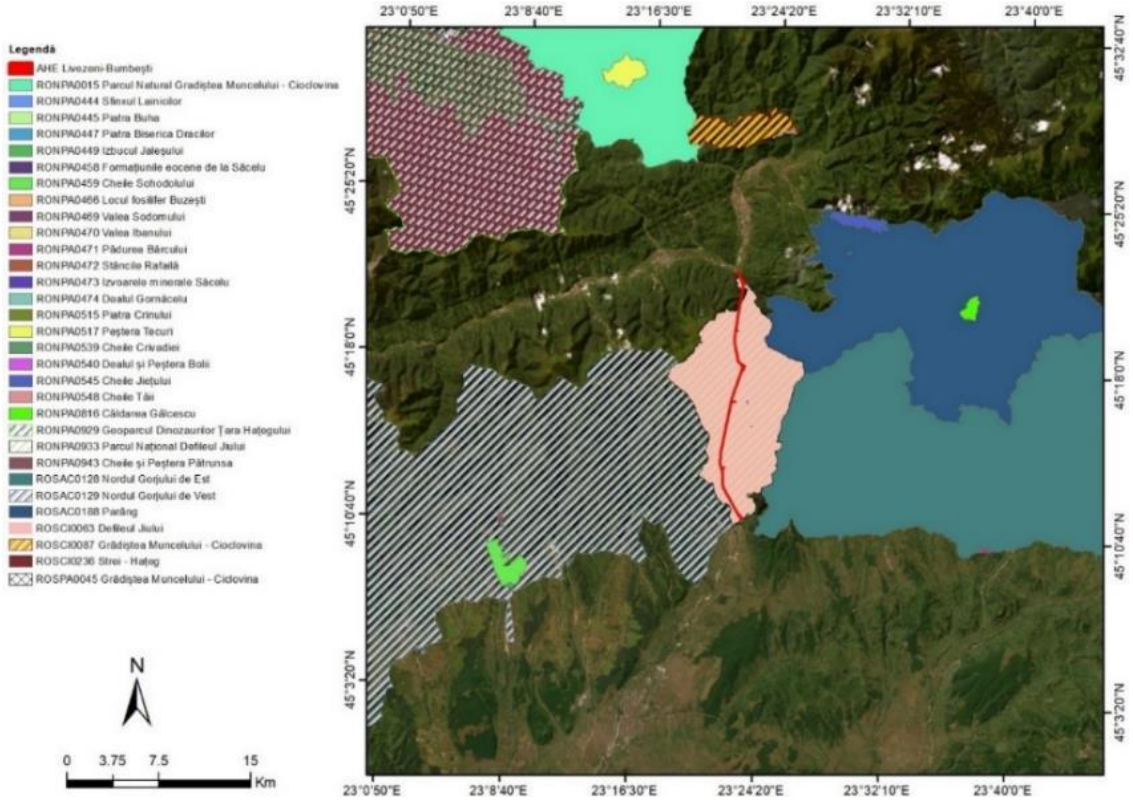


Figure 23. Location of the AHE Livezeni-Bumbești in relation to protected natural areas

- 9.4 MW (AHE Pașcani, on the Siret River) starting from 2026

The AHE Pașcani site is located less than 1 km from ROSCI0076 Dealul Mare - Hârlău. Also, in the vicinity of the site, at a distance of approximately 2 km, there is the protected natural area ROSPA0116 Dorohoi - Șaua Bucecei and at approximately 6 km there are the sites ROSAC0176 Pădurea Tătărușii, which overlaps with the natural reserve RONPA0563 Pădurea Tătărușii, and the site ROSCI0378 Siret River, between Pașcani and Roman (Fig. 24).

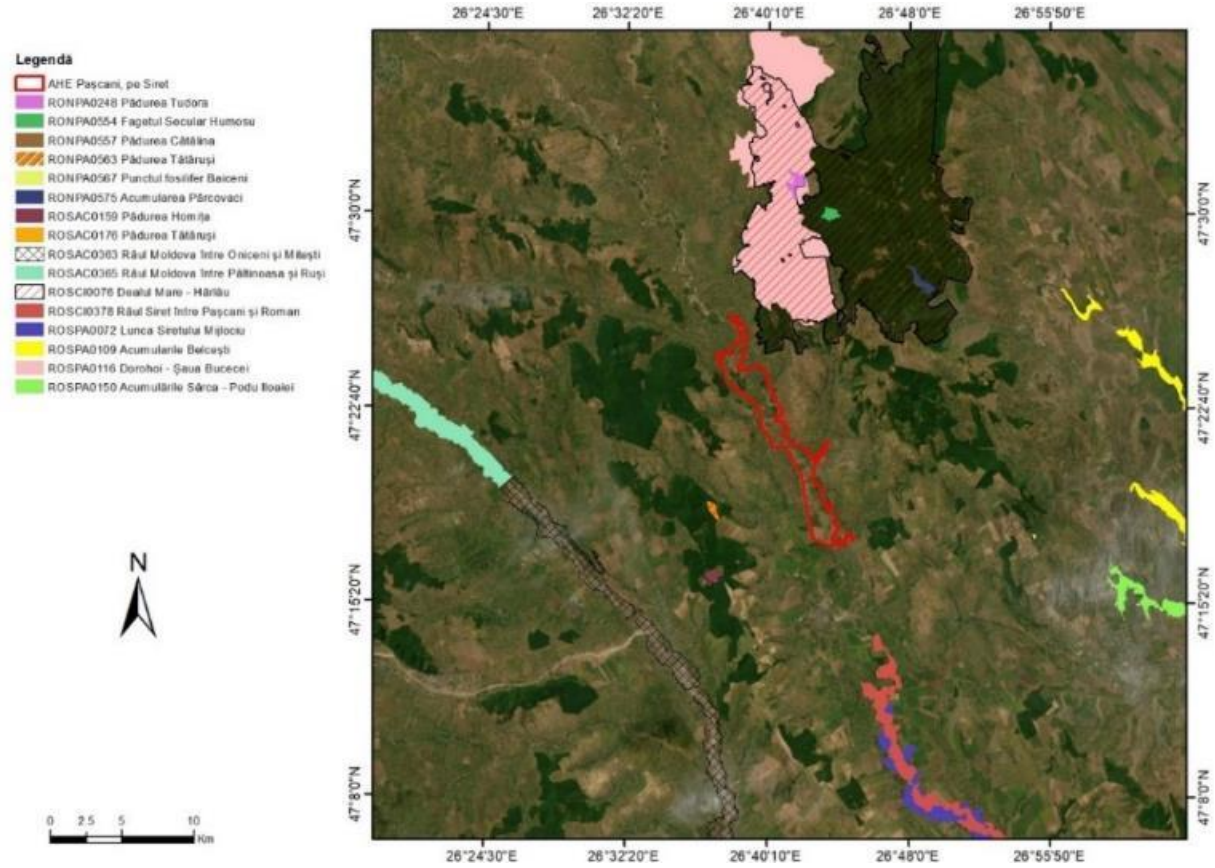


Figure 24. Location of the AHE Pașcani, on the Siret River in relation to protected natural areas

- 40.5 MW (AHE Cornetu – Avrig, on the Olt River) starting from 2029

The AHE Cornetu – Avrig on the Olt River overlaps in different percentages with several protected natural areas, as follows: 72% with the ROSAC0132 Oltul Mijlociu - Cibin – Hârtibaciu site, 9.43% with the ROSAC0122 Făgăraș Mountains site, 2.24% with the ROSAC0085 Frumoasa site, 2.04% with the ROSPA0043 Frumoasa site. At the same time, the AHE Cornetu – Avrig on the Olt River objective is located at a distance of about 2 km from the ROSPA0098 Făgăraș Piedmont site. Also, the objective is located at about 3 km from the RONPA0713 Eocene Limestones nature reserve in Turnu Roșu – Porcești and at about 5 km from the RONPA0716 Șuvara Sașilor nature reserve (Fig. 25).

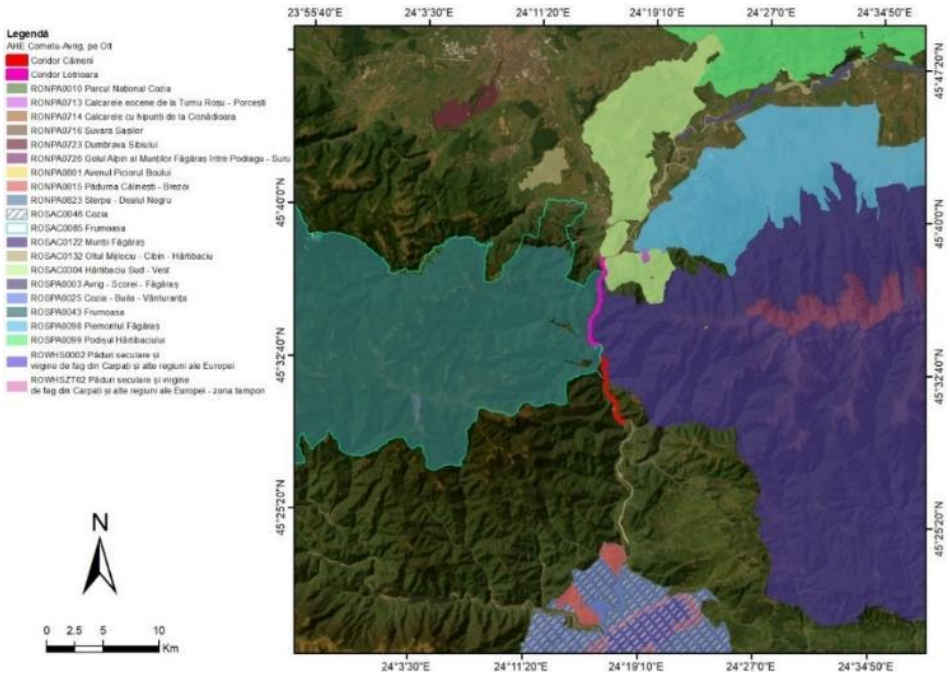


Figure 25. Location of the AHE Cornetu – Avrig, on the Olt River in relation to protected natural areas

- 55 MW (AHE Surduc-Siriu) starting from 2026

The AHE Surduc-Siriu overlaps by about 11% with the ROSAC0229 Siriu site and it is located less than 1 km from the ROSAC0103 Lunca Buzăului and ROSPA0160 Lunca Buzăului sites. Also, in the vicinity of the AHE Surduc-Siriu objective, at a distance of about 3 km, are the protected natural areas ROSAC0190 Penteleu, ROSCI0280 Buzăul Superior, and ROSCI0256 Turbăria Ruginosu Zagon, and the RONPA0941 Turbăria Ruginosu nature reserve. At the same time, the AHE Surduc-Siriu project site is located about 6 km from the RONPA0287 Pădurea cu tisă natural reserve (Fig. 26).

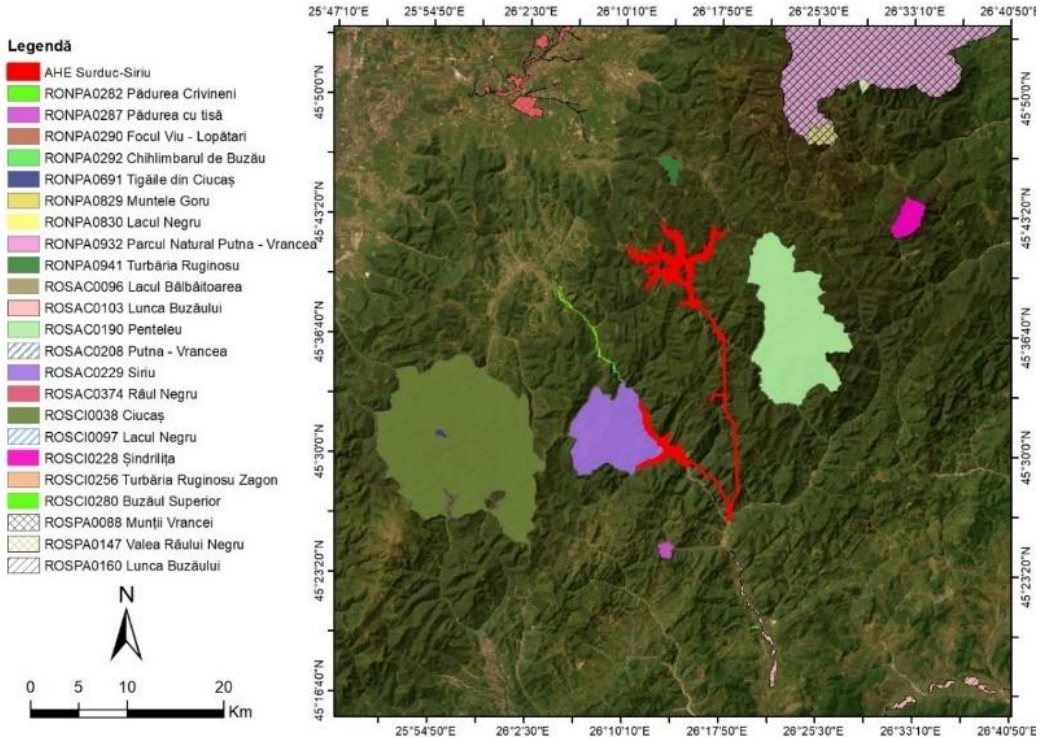


Figure 26. Location of AHE Surduc-Siriu in relation to protected natural areas

- 38 MW (AHE Cosmești – Movileni, on the Siret River) starting from 2026

The AHE Cosmești – Movileni, on the Siret River, overlaps 99.75% with the sites ROSPA0071 Lunca Siretului Inferior and ROSAC0162 Lunca Siretului Inferior and it is located at a distance of approximately 1.5 km from the RONPA0844 Lunca Siretului nature reserve (Fig. 27).

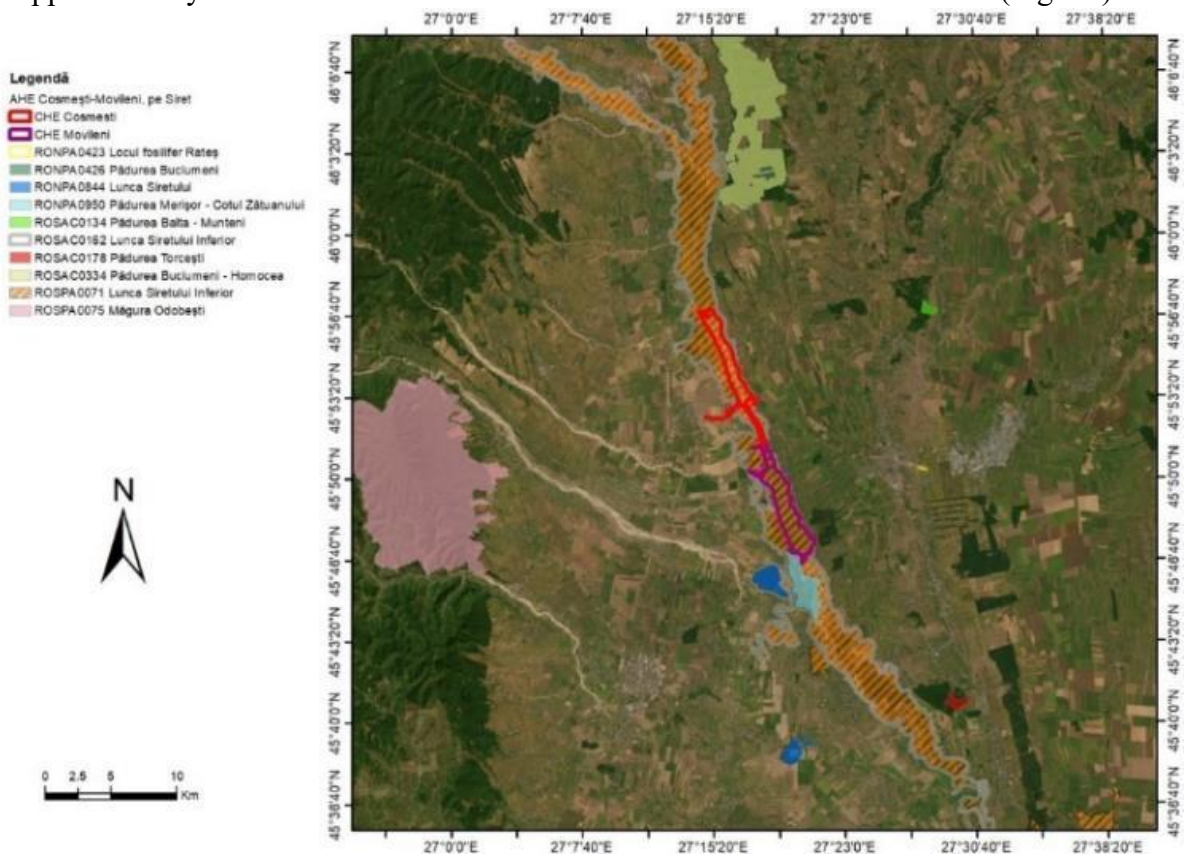


Figure 27. Location of the AHE Cosmești – Movileni, on the Siret River in relation to protected natural areas

- 35 MW (AHE Răstolița) starting from 2026

The AHE Răstolița accumulation completely overlaps with the ROSCI0019 Călimani-Gurghiu site and it is located at the boundary of ROSPA0133 Călimani Mountains, overlapping RONPA0009 Călimani National Park. The site is also located approximately 3.5 km from the RONPA0938 Defileul Mureșului Superior Natural Park, ROSPA0030 Defileul Mureșului Superior and the RONPA0955 Defileul Deda-Toplița nature reserve (Fig. 28).

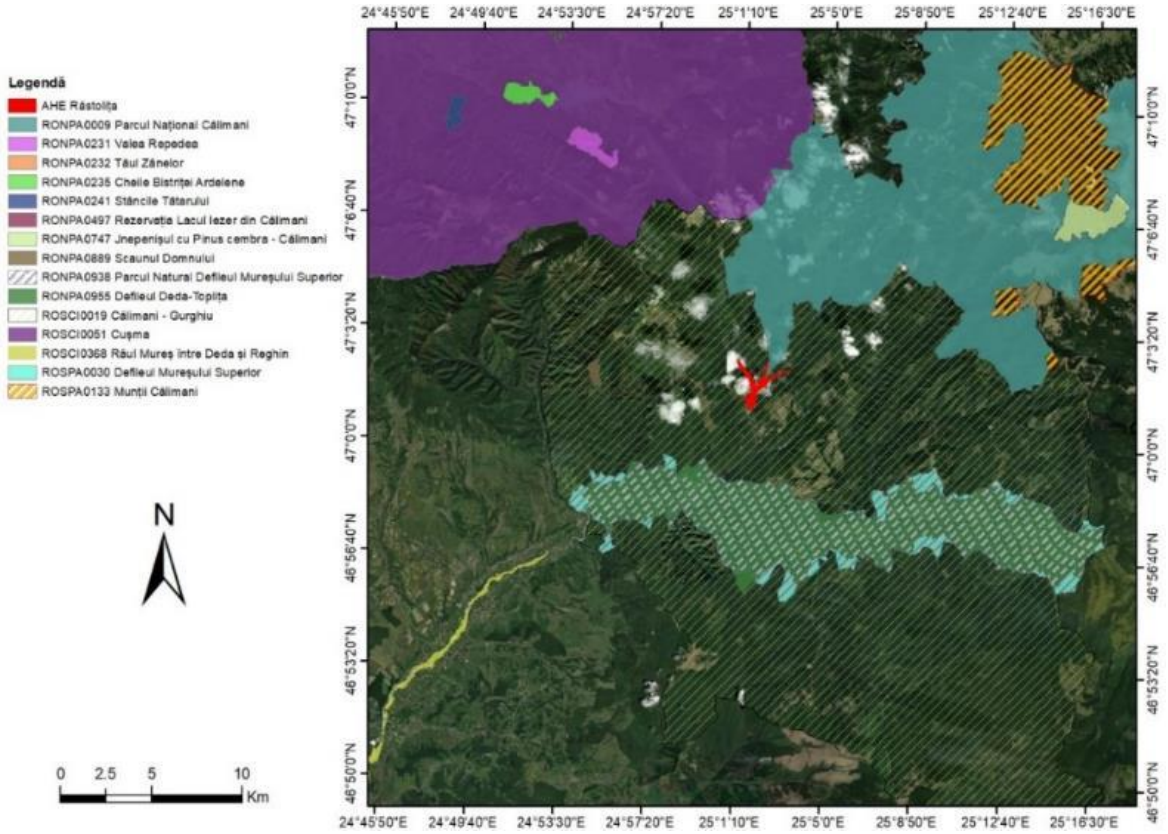


Figure 28. Location of the AHE Răstolița in relation to protected natural areas

- 15 MW (AHE Cerna-Belareca) starting from 2029

The AHE Cerna-Belareca overlaps by 11.71% with the sites ROSPA0035 Domogled - Valea Cernei and ROSAC0069 Domogled - Valea Cernei, RONPA0001 Domogled National Park - Valea Cernei, by 6.44% with the ROWHSZT02 Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe - buffer zone and by 5.25% with the ROWHS0002 Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe and it is located at a distance of approximately 1 km from the nature reserves RONPA0309 Domogled and RONPA0620 Valea Țesna. Also, in the vicinity of the objective, at a distance of more than 1 km, it is the nature reserve RONPA0313 Belareca. The nature reserves RONPA0326 Valea Greața, RONPA0613 Izvorul și cămana, RONPA0931 Mehedinți Plateau Geopark, and the site ROSAC0198 Mehedinți Plateau are located at a distance of approximately 3 km from the AHE Cerna-Belareca objective, while the nature reserve RONPA0631 Pereții calcaroși de la Izvoarele Coșuștei and the site ROSCI0126 Munții Țarcu are located at distances of approximately 4 and 6 km respectively (Fig. 29).

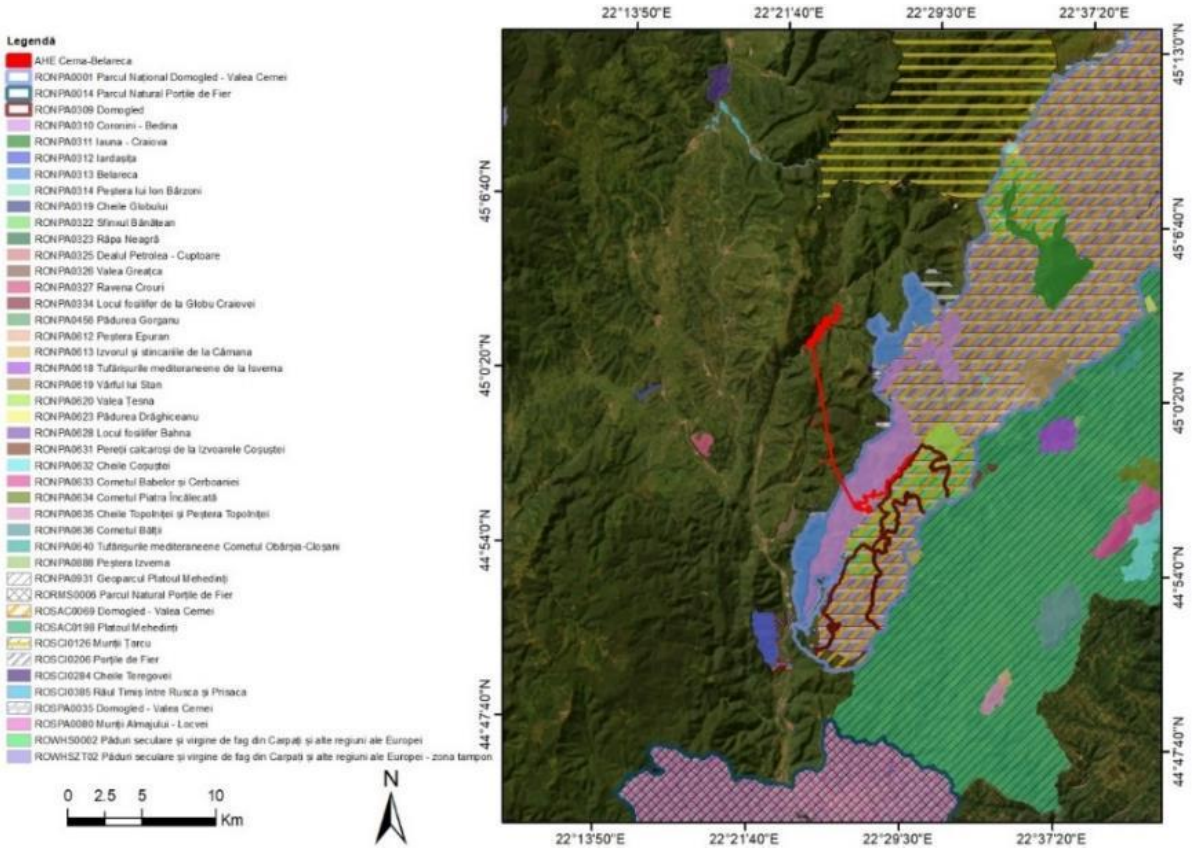


Figure 29. Location of the AHE Cerna-Belareca in relation to protected natural areas

- 29 MW (AHE Izbiceni-Danube, Islaz) starting from2030

The AHE Izbiceni-Danube, Islaz partially overlaps the sites ROSPA0024 Olt-Danube Confluence, ROSAC0376 Olt River between Mărunței and Turnu Măgurele and ROSCI0044 Corabia - Turnu Măgurele. Also, the AHE Izbiceni-Dunăre, Islaz is located less than 1 km from the ROSPA0106 Lower Olt Valley site and the RONPA0948 Ostrovul Mare nature reserve. Wetland of international importance RORMS0012 Suhaia is located approximately 3 km from the AHE Izbiceni-Danube, Islaz objective (Fig. 28).

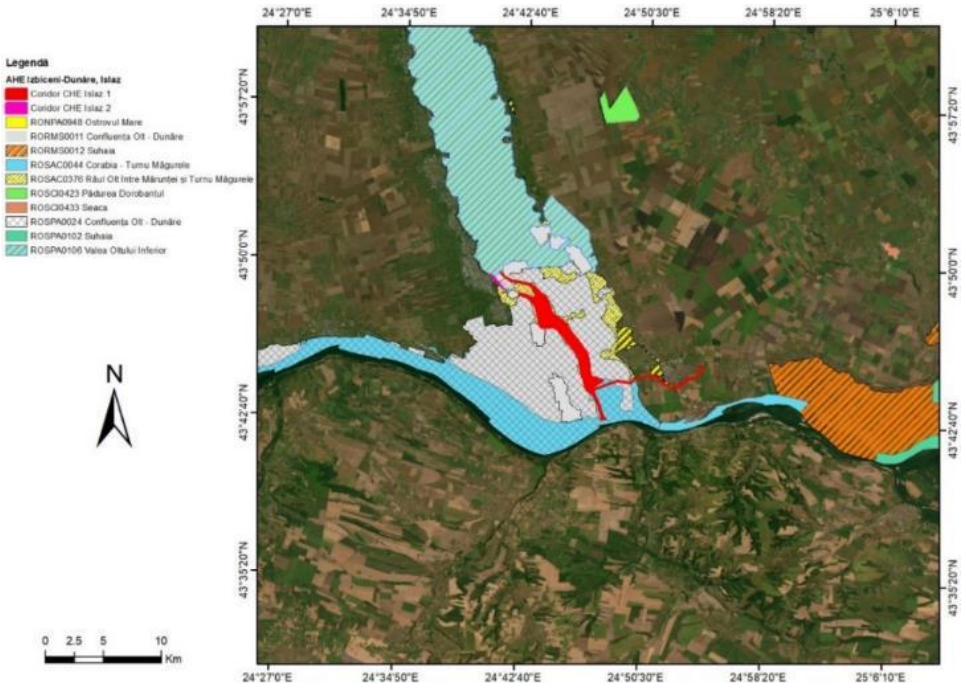


Figure 30. Location of the AHE Izbiceni-Danube, Islaz in relation to protected natural areas

• 13 MW (AHE Cerna-Motru-Tismana Stage II) starting with 2029

AHE Cerna-Motru-Tismana, Stage II completely overlaps with the ROSAC0129 Nordul Gorjului de Vest site through the Vâja dam and reservoir. Additionally, the nearest protected natural area to AHE Cerna-Motru-Tismana Stage II is RONPA0463 Piatra Boroștenilor, located at a distance of 2.69 km (see Figure 31).

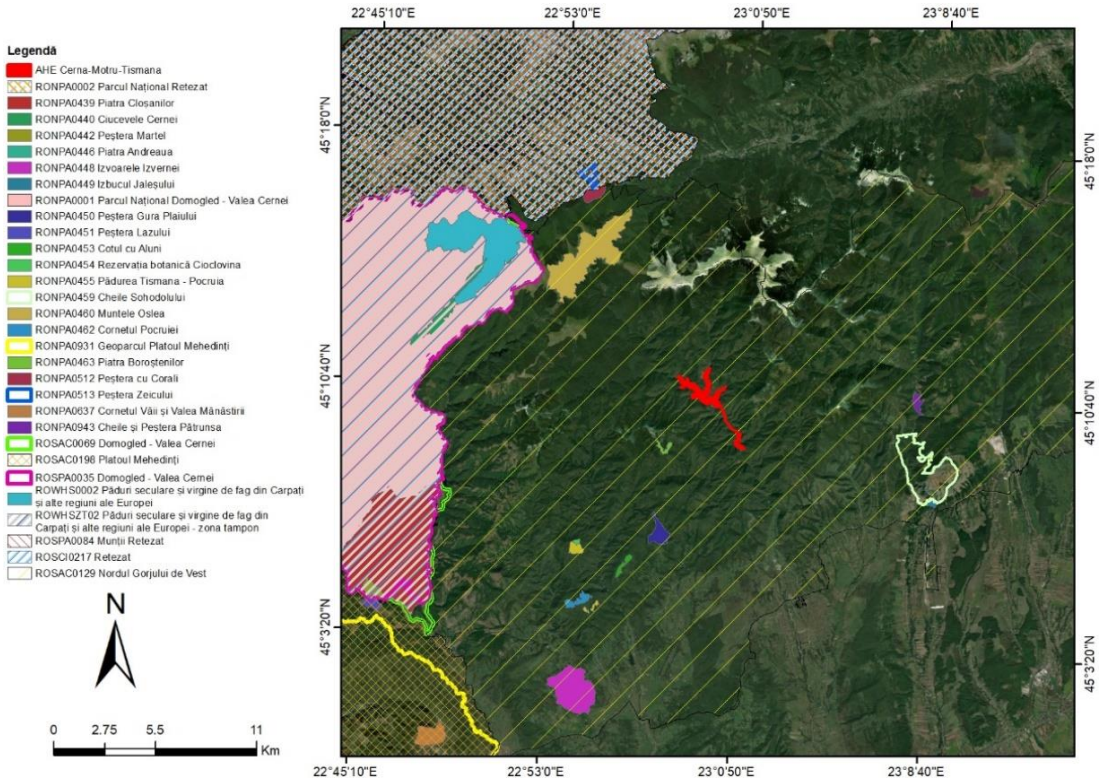


Figure 31. Location of the AHE Cerna-Motru-Tismana Stage II project in relation to protected natural areas

PAM60 Increased use of nuclear energy

- U3 (CANDU) – 700 MW in 2030 and U4 (CANDU) – 700 MW in 2033

Objectives U3 (CANDU) and U4 (CANDU) target the existing CNE (nuclear power plant) Cernavodă site which does not intersect Natura 2000 sites. The closest protected natural areas are RORMS0017 Ostroavele Dunării - Bucgeac – Iortmac and the site ROSPA0039 Dunăre – Ostroave, placed approximately 1 km away. Site ROSAC0022 Canaralele Dunării and nature reserve RONPA0371 Fossil site Cernavodă are located approximately 2 km away from the CNE Cernavodă site (Fig. 31).

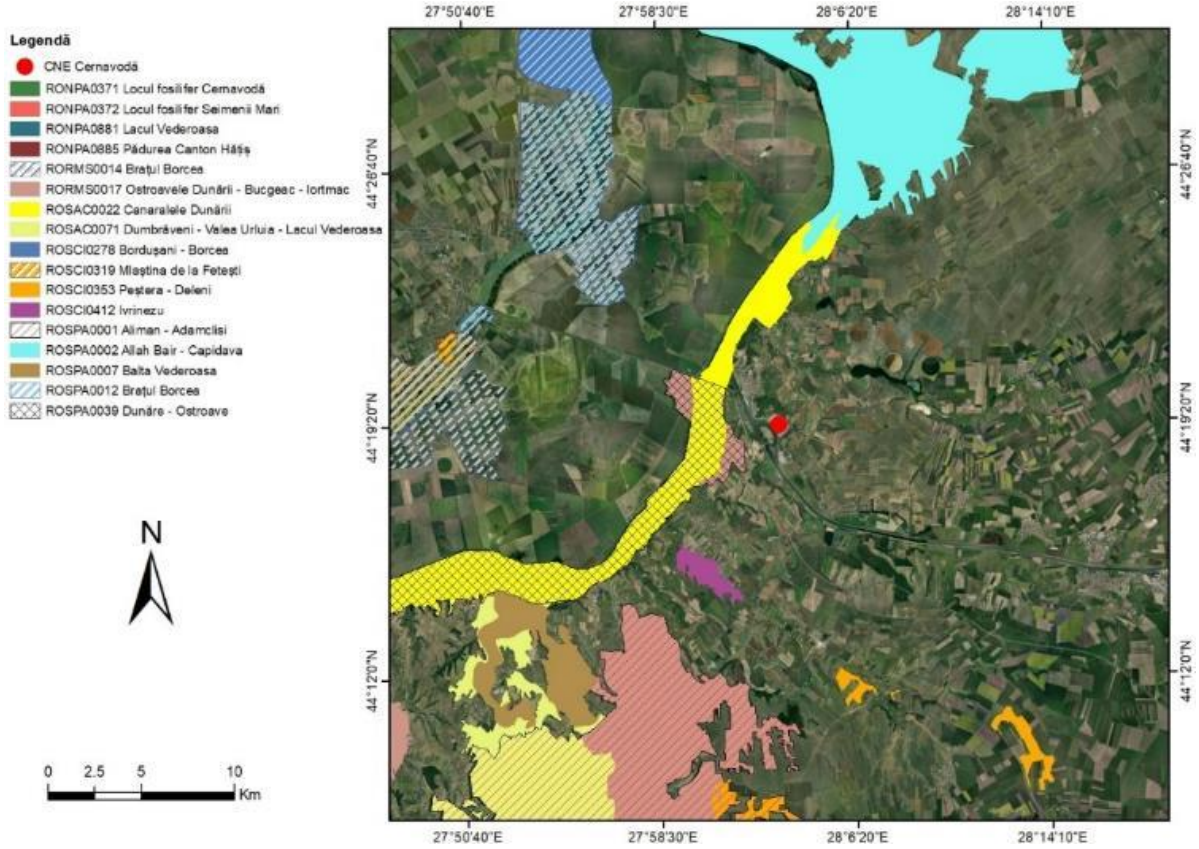


Figure 32. Location of CNE Cernavodă in relation to protected natural areas

- SMR - 462 MW in 2030

The SMR objective does not intersect with Natura 2000 sites and there are no Natura 2000 sites within 6 km of this objective. The closest protected natural area is ROSAC0344 Forests from the Southern Piedmont of Cândești, located approximately 11.7 km away (Fig. 32).

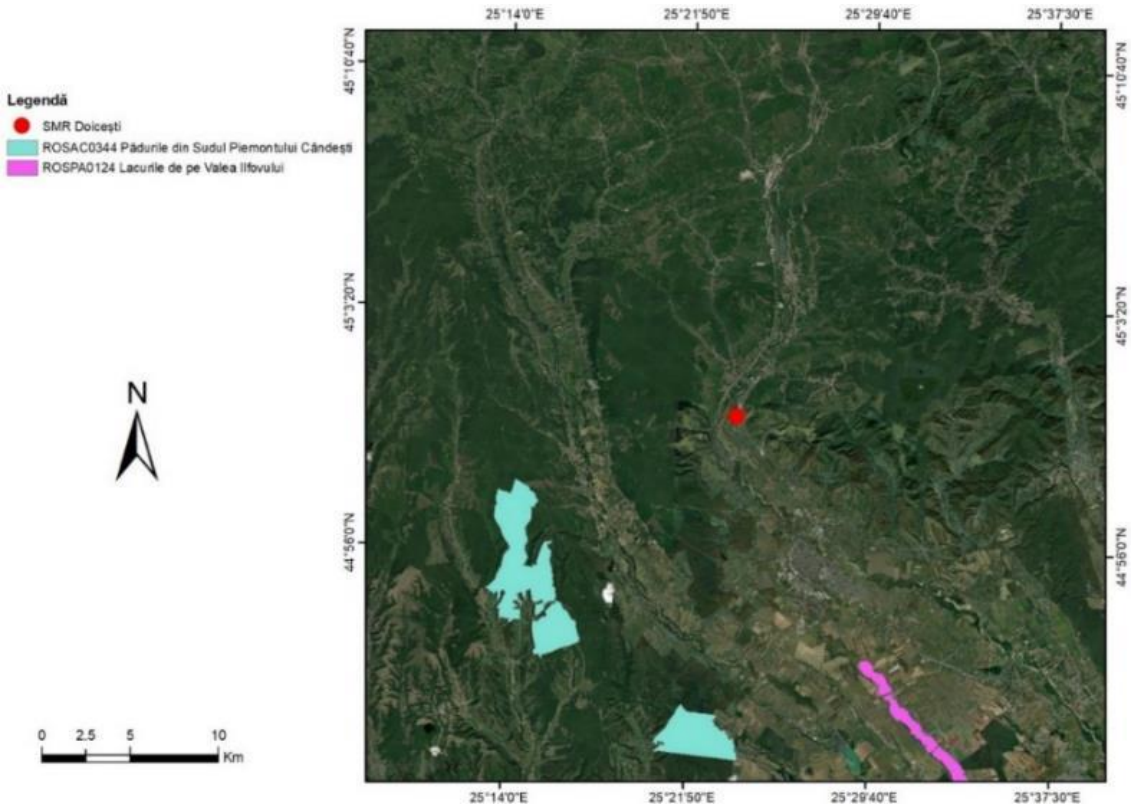


Figure 33. Location of SMR in relation to protected natural areas

Table 12 presents a summary of projects that overlap with protected natural areas and Table 12 presents the distances of projects from protected natural areas within the maximum influence zone of 20 km.

Table 12. Projects within the updated NECP 2021-2030 that overlap with protected natural areas

PAM24 Building small hydro power plants	Code	Name	Category	Overlap percentage (%)
• 65 MW (AHE Livezeni-Bumbești)	ROSCI0063	Jiu Gorge	Site of Community Importance	86.08
	RONPA0933	Jiu Gorge National Park	National Park	88.51
• 40.5 MW (AHE Cornetu – Avrig, on the Olt River)	ROSPA0043	Frumoasa	Special avifaunal protection area	2.04
	ROSAC0122	Făgăraș Mountains	Special protection area	9.43
	ROSAC0132	Oltul Mijlociu - Cibin - Hârtibaciu	Special protection area	71.75
	ROSAC0304	Hârtibaciu South - West	Special protection area	0.01
	ROSAC0085	Frumoasa	Special protection area	2.24
• 55 MW (AHE Surduc-Siriu)	ROSAC0229	Siriu	Special protection area	11.24
• 38 MW (AHE Cosmești – Movileni HPP, on the Siret River)	ROSPA0071	Lower Siret Meadow	Special avifaunal protection area	99.75
	ROSAC0162	Lower Siret Meadow	Special protection area	99.75
	RONPA0950	The Merișor Forest – Cotul Zătuanului	Nature reserve	0.11

PAM24 Building small hydro power plants	Code	Name	Category	Overlap percentage (%)
• 35 MW (AHE Răstolița)	ROSCI0019	Călimani - Gurghiu	Site of Community Importance	100
	ROSPA0133	Călimani Mountains	Special avifaunal protection area	3.75
	RONPA0009	Călimani National Park	National Park	3.75
• 15 MW (AHE Cerna-Belareca)	ROSPA0035	Domogled - Cerna Valley	Special avifaunal protection area	11.71
	RONPA0001	Domogled National Park - Cerna Valley	National Park	11.71
	RONPA0310	Coronini - Bedina	Nature reserve	6.67
	ROSAC0069	Domogled - Cerna Valley	Special protection area	11.71
	ROWHSZT02	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe - buffer zone	Natural World Heritage Site	6.44
	ROWHS0002	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe	Natural World Heritage Site	5.25
• 29 MW (AHE Izbiceni-Danube, Islaz)	ROSPA0024	Olt - Danube confluence	Special avifaunal protection area	97.21
	RORMS0011	Olt - Danube confluence	Wetland of international importance	98.87
	ROSCI0044	Corabia - Turnu Magurele	Site of Community Importance	12.95
	ROSAC0376	Olt River between Mărunței and Turnu Măgurele	Special protection area	76.76
13 MW (AHE Cerna Motru-Tismana Stage II)	ROSAC0129	Nordul Gorjului de Vest	Special Protection Area	100

Table 13. Projects within the updated NECP 2021-2030 and distance from protected natural areas

Project	Code	Name	Category	Distance (km)
• 9.4 MW (AHE Pașcani, on the Siret River)	ROSCI0076	Dealul Mare – Hârlau	Site of Community Importance	0.79
	ROSPA0116	Dorohoi – Șaua Bucecei	Special avifaunal protection area	2.32
	RONPA0563	TătărușI Forest	Nature reserve	5.75
	ROSAC0176	TătărușI Forest	Special protection area	6.12
	ROSCI0378	Siret River between Pașcani and Roman	Site of Community Importance	6.82
	ROSAC0159	Homița Forest	Special protection area	7.12

Project	Code	Name	Category	Distance (km)
	RONPA0554	Humusu Secular Beech Tree Forrest	Scientific reserve, natural monument and nature reserve	9.12
	RONPA0248	Tudora Forest	Scientific reserve, natural monument and nature reserve	9.18
	ROSPA0072	Middle Siret Meadow	Special avifaunal protection area	11.69
	RONPA0575	Pârcovaci accumulation	Scientific reserve, natural monument and nature reserve	12.27
	RONPA0567	Fossil site Baiceni	Scientific reserve, natural monument and nature reserve	12.57
	ROSAC0363	Moldova River between Oniceni and Mitești	Special protection area	12.62
	RONPA0557	Cătălina Forest	Scientific reserve, natural monument and nature reserve	14.26
	ROSAC0365	Moldova River between Păltinoasa and Ruși	Special protection area	16.07
	ROSPA0150	The accumulations Sârca - Podu Iloaiei	Special avifaunal protection area	18.21
	ROSPA0109	Belcești accumulations	Special avifaunal protection area	19.76
• 65 MW (AHE Livezeni-Bumbești)	ROSAC0129	North of the West Gorj	Special protection area	0.27
	RONPA0444	Sfinxul Lainicilor	Scientific reserve, natural monument and nature reserve	0.93
	ROSAC0128	North of the East Gorj	Special protection area	1.37
	RONPA0472	Stâncile Rafailă	Scientific reserve, natural monument and nature reserve	2.11
	ROSAC0188	Parâng	Special protection area	2.49
	RONPA0474	Gornăcelu Hill	Natural monument	3.77
	RONPA0515	Piatra Crinului	Natural monument	8.57
	RONPA0545	Jieț Gorges	Nature reserve	9.18
	RONPA0015	Grădiștea Muncelului Natural Park - Cioclovina	Nature Park	9.56
	ROSCI0087	Grădiștea Muncelului - Cioclovina	Site of Community Importance	9.88
	ROSPA0045	Grădiștea Muncelului - Cioclovina - Ciclovina	Special avifaunal protection area	9.88
	RONPA0540	Dealul și Peștera Bolii	Scientific reserve, natural monument and nature reserve	10.46
	RONPA0548	Cheile Tăii	Scientific reserve, natural monument and nature reserve	11.51
	RONPA0466	Fossil site Buzești	Scientific reserve, natural monument and nature reserve	11.91

Project	Code	Name	Category	Distance (km)
	ROSCI0236	Strei – Haţeg	Site of Community Importance	14.4
	RONPA0929	The Dinosaurs Geopark of Ţara Haţegului	Nature Park	14.62
	RONPA0473	Săcelu mineral springs	Scientific reserve, natural monument and nature reserve	15.37
	RONPA0447	Piatra Biserica Dracilor	Scientific reserve, natural monument and nature reserve	14.53
	RONPA0539	The Crivadia Gorge	Scientific reserve, natural monument and nature reserve	15.55
	RONPA0458	Eocene limstones from Săcelu	Scientific reserve, natural monument and nature reserve	15.63
	RONPA0445	The Buha Stone	Scientific reserve, natural monument and nature reserve	15.78
	RONPA0469	Sodom River Valley	Scientific reserve, natural monument and nature reserve	16.71
	RONPA0459	Sohodol Gorge	Nature reserve	17.34
	RONPA0517	Tecuri Cave	Scientific reserve, natural monument and nature reserve	18.06
	RONPA0816	Căldarea Gâlcescu	Nature reserve	18.23
	RONPA0943	Pătrunsa Gorges and Cave	Nature reserve	18.43
	RONPA0449	Izbucul Jaleşului	Natural monument	18.88
	RONPA0470	Iban River Valley	Scientific reserve, natural monument and nature reserve	19.21
	RONPA0471	Bârcului Forest	Nature reserve	19.95
• 29 MW (AHE Izbiceni-Danube, Islaz)	ROSPA0106	Lower Olt Valley	Special avifaunal protection area	0.64
	RONPA0948	Ostrovul Mare	Nature reserve	0.72
	RORMS0012	Suhaia	Wetland of international importance	3.25
	ROSCI0423	Dorobantul Forest	Site of Community Importance	15.37
	ROSPA0102	Suhaia	Special avifaunal protection area	17.12
	ROSCI0433	Seaca	Site of Community Importance	18.99
• 15 MW (AHE Cerna-Belareca)	RONPA0309	Domogled	Nature reserve	0.13
	RONPA0620	Ţesna Valley	Nature reserve	1.02
	RONPA0313	Belareca	Nature reserve	2.12
	RONPA0613	The spring and the rocks at Câmana	Nature reserve	3.47
	RONPA0326	Greaţca Valley	Scientific reserve, natural monument and nature reserve	3.63

Project	Code	Name	Category	Distance (km)
	RONPA0931	Mehedinți Plateau Geopark	Nature Park	3.85
	ROSAC0198	Mehedinti Plateau	Special protection area	3.85
	RONPA0631	Pereții calcaroși de la Izvoarele Coșuștei	Nature reserve	4.44
	ROSCI0126	Țarcu Mountains	Site of Community Importance	5.99
	RONPA0325	Dealul Petrolea Cuptoare	Scientific reserve, natural monument and nature reserve	6.28
	RONPA0314	Ion Bârzoni's Cave	Nature reserve	6.83
	RONPA0327	Ravena Crouri	Scientific reserve, natural monument and nature reserve	6.83
	RONPA0323	Râpa Neagră	Scientific reserve, natural monument and nature reserve	6.93
	RONPA0312	Iardașița	Nature reserve	8.34
	RONPA0618	Tufărișurile Mediteraneene de la Isverna	Nature reserve	8.46
	RONPA0619	Stan's Peak	Nature reserve	8.59
	RONPA0334	Fossil site de la Globu Craiovei	Scientific reserve, natural monument and nature reserve	9.74
	ROSCI0385	Timiș River between Rusca and Prisaca	Site of Community Importance	9.85
	RONPA0888	Izverna Cave	Nature reserve	10.11
	RONPA0319	Globu River Gorges	Scientific reserve, natural monument and nature reserve	10.41
	RONPA0322	Sfinxul Bănățean	Scientific reserve, natural monument and nature reserve	11.05
	RONPA0636	Cornetul Bălții	Nature reserve	12.99
	RONPA0311	Iauna - Craiova	Nature reserve	13.61
	RONPA0612	Epuran Cave	Natural monument	13.94
	RONPA0634	Cornetul Piatra Încălecată	Nature reserve	14.06
	RONPA0633	Cornetul Babelor și Cerboaniei	Nature reserve	14.15
	RONPA0014	Iron Gates Natural Park	Nature park	14.3
	ROSCI0206	The Iron Gates	Site of Community Importance	14.41
	ROSPA0080	Almajului – Locvei Mountains	Special avifaunal protection area	14.41
	RORMS0006	Iron Gates Natural Park	Wetland of international importance	14.41
	RONPA0635	Topolnița River Gorges and Topolnița Cave	Natural monument	14.44
	RONPA0640	Tufărișurile Mediteraneene Cornetul Obârșia-Cloșani	Nature reserve	14.57

Project	Code	Name	Category	Distance (km)
	RONPA0632	Coșușta River Gorges	Nature reserve	15.62
	ROSCI0284	Teregova River Gorges	Site of Community Importance	16.02
	RONPA0628	Fossil site Bahna	Natural monument	16.77
	RONPA0456	Gorganu Forest	Scientific reserve, natural monument and nature reserve	18.41
	RONPA0623	Draghiceanu Forest	Nature reserve	18.42
• 55 MW (AHE Surduc-Siriu)	ROSAC0103	Buzau River Meadow	Special protection area	0.88
	ROSPA0160	Buzau River Meadow	Special avifaunal protection area	0.88
	ROSAC0190	Penteleu	Special protection area	2.71
	ROSCI0280	Upper Buza	Site of Community Importance	3.11
	ROSCI0256	Turbăria Ruginosu Zagon	Site of Community Importance	3.99
	RONPA0941	Turbăria Ruginosu	Nature reserve	3.99
	RONPA0287	Pădurea cu tisă	Scientific reserve, natural monument and nature reserve	6.27
	RONPA0292	Buzau Amber	Scientific reserve, natural monument and nature reserve	9.57
	RONPA0282	Crivineni Forest	Scientific reserve, natural monument and nature reserve	11.2
	ROSAC0374	Black River	Special protection area	11.27
	ROSPA0147	Black River Valley	Special avifaunal protection area	11.27
	ROSAC0208	Putna – Vrancea	Special protection area	12.37
	ROSPA0088	Vrancea Mountains	Special avifaunal protection area	12.37
	RONPA0829	Goru Montain	Scientific reserve, natural monument and nature reserve	12.37
	RONPA0932	Putna-Vrancea Natural Park	Nature Park	12.37
	ROSAC0096	Lake Bâlbâitoarea	Special protection area	16.65
	ROSCI0038	Ciucaș	Site of Community Importance	16.66
	ROSCI0228	Șindrilița	Site of Community Importance	17.04
	RONPA0290	Focul Viu – Lopătari	Scientific reserve, natural monument and nature reserve	18.36
	ROSCI0097	Black Lake	Site of Community Importance	19.94
	RONPA0830	Black Lake	Nature reserve	19.94

Project	Code	Name	Category	Distance (km)
	RONPA0691	Tigăile din Ciucaș	Scientific reserve, natural monument and nature reserve	19.98
• 38 MW (AHE Cosmești – Movileni, on the Siret River)	RONPA0844	Siret River Meadow	Nature reserve	1.47
	ROSAC0334	Buciumeni – Homocea Forest	Special protection area	7.57
	RONPA0423	Fossil site Rateș	Scientific reserve, natural monument and nature reserve	9.87
	RONPA0426	Buciumeni Forest	Nature reserve	10.92
	ROSAC0134	Balta – Munteni Forest	Special protection area	14.48
	ROSAC0178	Torcești Forest	Special protection area	14.82
	ROSPA0075	Odobești Mountain	Special avifaunal protection area	15.35
• 40.5 MW (AHE Cornetu – Avrig, on the Olt River)	ROSPA0098	Făgăraș Piedmont	Special avifaunal protection area	2.74
	RONPA0713	Eocene limestones from Turnu Roșu - Porcești	Nature reserve	3.35
	RONPA0716	Șuvara Sașilor	Nature reserve	5.12
	RONPA0801	Avenul Piciorul Boului	Natural monument	9.27
	ROSAC0046	Cozia	Special protection area	10.83
	RONPA0010	Cozia National Park	National park	10.83
	RONPA0815	Călinești – Brezoi Forest	Nature reserve	10.98
	ROSPA0025	Cozia - Buila - Vânturarița	Special avifaunal protection area	11
	ROSPA0003	Avrig - Scorei – Făgăraș	Special avifaunal protection area	12.06
	RONPA0726	The Alpine Pass of the Făgăraș Mountains between Podragu - Suru	Nature reserve	12.75
	RONPA0714	Calcarele cu hipuriți din Cisnădioara	Scientific reserve, natural monument and nature reserve	15.1
	ROWHSZT02	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe - buffer zone	Natural World Heritage Site	15.67
	ROWHS0002	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe	Natural World Heritage Site	16.54
	RONPA0723	Dumbrava Sibiului	Scientific reserve, natural monument and nature reserve	16.81
	RONPA0823	Stârpu – Dealul Negru	Nature reserve	17.27
	ROSPA0099	Hârtibaciu Plateau	Special avifaunal protection area	17.56
• 35 MW (AHE Răstolița)	ROSPA0030	The Upper Mureș Gorge	Special avifaunal protection area	3.55
	RONPA0955	Deda-Toplița Gorge	Nature reserve	3.55

Project	Code	Name	Category	Distance (km)
	RONPA0938	Upper Mureș Gorge Natural Park	Nature park	3.55
	ROSCI0051	Cuşma	Site of Community Importance	7.22
	RONPA0889	Scaunul Domnului	Nature reserve	7.52
	RONPA0232	Tăul Zânelor	Nature reserve	8.75
	RONPA0231	Valea Repede	Nature reserve	12.5
	ROSCI0368	Mureș River between Deda and Reghin	Site of Community Importance	13.63
	RONPA0497	Iezer Lake Reserve in Călimani	Nature reserve	15.65
	RONPA0747	Juniper trees with Pinus cembra - Călimani	Scientific reservation	15.99
	RONPA0235	The Transylvanian Bistrita Gorges	Nature reserve	17.2
	RONPA0241	The Tatar Rocks	Nature reserve	19.91
AHE Cerna-Motru-Tismana Stage II – 13 MW	RONPA0001	Domogled - Valea Cernei National Park	Nature reserve	9.28
	RONPA0002	Retezat National Park	Nature reserve	10.78
	RONPA0439	Piatra Cloșanilor	Nature reserve	14.33
	RONPA0440	Ciucevele Cernei	Nature reserve	10.76
	RONPA0442	Martel Cave	Nature reserve	19.75
	RONPA0446	Piatra Andreaua	Nature reserve	14.86
	RONPA0448	Izvoarele Izvernei	Nature reserve	14.69
	RONPA0449	Izbucul Jaleșului	Nature reserve	10.29
	RONPA0450	Gura Plaiului Cave	Nature reserve	5.66
	RONPA0451	Lazului Cave	Nature reserve	21.12
	RONPA0453	Cotul cu Aluni	Nature reserve	8.19
	RONPA0454	Cioclovina Botanical Reserve	Nature reserve	9.87
	RONPA0455	Tismana - Pocruia Forest	Nature reserve	10.13
	RONPA0459	Cheile Sohodolului	Nature reserve	8.74
	RONPA0460	Oslea Mountain	Nature reserve	7.02
	RONPA0462	Cornetul Pocruiei	Nature reserve	11.4
	RONPA0463	Piatra Boroștenilor	Nature reserve	2.69
	RONPA0512	The Coral Cave	Nature reserve	10.34
	RONPA0513	Zeicu's Cave	Nature reserve	10.78
	RONPA0931	Mehedinți Plateau Geopark	Nature reserve	20.81
	RONPA0943	Pătrunsa Gorge and Cave	Nature reserve	9.94
	ROSAC0069	Domogled - Valea Cernei	Special Protection Area	9.4
	ROSAC0198	Mehedinți Plateau	Special Protection Area	19.22
	ROSCI0217	Retezat	Site of Community Importance	9.78
	ROSPA0035	Domogled - Valea Cernei	Special Protection Area for Birds	9.78
	ROSPA0084	Retezat Mountains	Special Protection Area for Birds	9.78
	ROWHSZT02	Ancient and Primeval Beech Forests of the Carpathians and Other	Ancient and Primeval Beech Forests of the Carpathians and	9.78

Project	Code	Name	Category	Distance (km)
		Regions of Europe – Buffer Zone	Other Regions of Europe – Buffer Zone	
	ROWHS0002	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe	Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe	11.06
430 MW (Iernut)	ROSCI0210	Lechința Ravine	Site of Community Importance	0.22
	ROSPA0041	Eleșteiele Iernut – Cipău	Special avifaunal protection area	1.18
	ROSCI0367	Mureș River between Morești and Ogra	Site of Community Importance	7.91
	ROSPA0050	Iazurile Miheșu de Câmpie - Tăureni	Special avifaunal protection area	11.04
	ROSCI0040	Coasta Lunii	Site of Community Importance	14.67
	ROSAC0313	Confluence of the Mureș and Arieș rivers	Special protection area	15.29
	ROSAC0384	Small Târnava River	Special protection area	17.75
	ROSAC0187	Pajiștile lui Suciu	Special protection area	18.65
	RONPA0874	Dealul cu Fluturi	Nature reserve	19.24
At least 860 MW (Mintia), with the possibility of expansion up to 1,700 MW	ROSCI0373	Mureș River between Brănișca and Ilia	Site of Community Importance	0.64
	ROSCI0054	Deva Fortress Hill	Site of Community Importance	3.75
	RONPA0521	Colț Hill and Zănoaga Hill	Scientific reserve, natural monument and nature reserve	3.85
	RONPA0535	Deva Fortress Hill	Scientific reserve, natural monument and nature reserve	5.21
	RONPA0529	Bejan Forest	Scientific reserve, natural monument and nature reserve	7.19
	ROSCI0136	Bejan Forest	Site of Community Importance	7.19
	RONPA0550	Boholt	Scientific reserve, natural monument and nature reserve	8.62
	ROSPA0132	Metaliferi Mountains	Special avifaunal protection area	10.16
	RONPA0534	The limestones of Măgura Hill	Scientific reserve, natural monument and nature reserve	12.01
	ROSCI0110	Măgurile Băiței	Site of Community Importance	12.1
	ROSAC0064	Mureș River Gorge	Special protection area	14.02
	RONPA0541	Simeria Arboretum	Scientific reserve, natural monument and nature reserve	14.64
	ROSPA0139	Piedmont of the Metaliferi Mountains - Vințu	Special avifaunal protection area	15.45
	RONPA0536	Uroi Hill	Nature reserve	17.07

Project	Code	Name	Category	Distance (km)
	RONPA0527	Măgurile Săcărâmbului	Scientific reserve, natural monument and nature reserve	18.87
	RONPA0528	Chizid Forest	Scientific reserve, natural monument and nature reserve	19.29
Işalniţa	ROSAC0045	Jiu Corridor	Special protection area	2.03
	RONPA0407	Fossil site Bucovăț	Nature reserve	10.63
	RONPA0411	Complexul lacustru Preajba - Făcăi	Scientific reserve, natural monument and nature reserve	15.39
	ROSPA0023	Jiu - Danube confluence	Special avifaunal protection area	15.66
	RORMS0018	Jiu - Danube confluence	Wetland of international importance	15.66
	RONPA0416	The Desnățui and Terpezița rivers upstream of Fântânele	Scientific reserve, natural monument and nature reserve	18.21
Turceni	ROSAC0045	Jiu Corridor	Special protection area	0.37
	RONPA0464	Fossil site Groșera	Scientific reserve, natural monument and nature reserve	7.94
	ROSAC0366	Motru River	Special protection area	8.62
	RONPA0465	Fossil site Gârbovu	Nature reserve	9.49
	RONPA0467	Fossil site Săulești	Scientific reserve, natural monument and nature reserve	16.38
	ROSAC0405	Strehaia – Bâtlanele Hills	Special protection area	16.61
80 MW (Rompetrol NĂvodari)	RONPA0365	Corbu – Nuntași – Histria	Scientific reserve, natural monument and nature reserve	0.67
	ROSPA0060	Tașaul - Corbu Lakes	Special avifaunal protection area	0.85
	ROSPA0076	Black Sea	Special avifaunal protection area	2.63
	ROSCI0065	Danube Delta	Site of Community Importance	3.59
	ROSPA0031	The Danube Delta and the Razim - Sinoie Complex	Special avifaunal protection area	3.59
	ROSCI0066	Danube Delta - marine area	Site of Community Importance	3.59
	ROMAB0003	Danube Delta Biosphere Reserve	Biosphere reserve	3.59
	RORMS0001	Danube Delta	Wetland of international importance	3.59
	ROWHS0001	Danube Delta World Heritage Site	Natural World Heritage Site	3.59
	ROWHSZT01	Danube Delta - buffer zone	Natural World Heritage Site	3.59

Project	Code	Name	Category	Distance (km)
	ROSPA0057	Lake Siutghiol	Special avifaunal protection area	7.81
	ROSAC0215	Recifii Jurasici Cheia	Special protection area	10.31
	ROSPA0019	Dobrogea Gorges	Special avifaunal protection area	11.66
	RONPA0940	Gura Dobrogei	Nature reserve	17.41
	RONPA0366	Histria Fortress	Scientific reserve, natural monument and nature reserve	18.96
	RONPA0373	At Adam's Cave	Nature reserve	18.42
	RONPA0374	Gura Dobrogei Cave	Nature reserve	18.63
52 MW (CTE Constanța)	RONPA0376	Valu lui Traian	Scientific reserve, natural monument and nature reserve	3.88
	ROSPA0076	Black Sea	Special avifaunal protection area	4.16
	ROSPA0057	Lake Siutghiol	Special avifaunal protection area	5.61
	RONPA0385	Lake Agigea	Scientific reserve, natural monument and nature reserve	7.12
	ROSCI0398	Straja – Cumpana	Site of Community Importance	7.63
	ROSAC0073	The Sea Dunes of Agigea	Special protection area	8.02
	RONPA0383	The Sea Dunes of Agigea	Nature reserve	8.02
	ROSPA0061	Lake Techirghiol	Special avifaunal protection area	11.23
	RONPA0937	Lake Techirghiol	Scientific reserve, natural monument and nature reserve	11.23
	RORMS0005	Lake Techirghiol	Wetland of international importance	11.23
	ROSAC0197	Eforie Nord - Eforie Sud Submerged Beach	Special protection area	11.32
	ROSAC0083	Murfatlar Fountain	Special protection area	16.51
	RONPA0381	Murfatlar Fountain	Nature reserve	16.51
	ROSAC0273	Marine area at Capul Tuzla	Special protection area	17.44
	ROSPA0060	Tașaul – Corbu Lakes	Special avifaunal protection area	18.55
34 MW (CTE Grozavesti)	RONPA0954	Văcărești Natural Park	Nature park	6.08
	ROSCI0308	Cernica Lake and Forest	Site of Community Importance	13.87
	ROSPA0122	Cernica Lake and Forest	Special avifaunal protection area	13.87
295 MW (CTE Craiova)	ROSAC0045	Jiu Corridor	Special protection area	6.87
	RONPA0407	Fossil site Bucovăț	Nature reserve	7.84

Project	Code	Name	Category	Distance (km)
	RONPA0411	Complexul lacustru Preajba - Făcăi	Scientific reserve, natural monument and nature reserve	7.48
	ROSPA0023	Jiu - Danube confluence	Special avifaunal protection area	9.56
	RORMS0018	Jiu – Danube confluence	Wetland of international importance	9.56
	RONPA0416	The Desnățui and Terpezița rivers upstream of Fântânele	Scientific reserve, natural monument and nature reserve	19.87
300 MW (CTE Sud Vitan)	RONPA0954	Văcărești Natural Park	Nature park	0.66
	ROSCI0308	Cernica Lake and Forest	Site of Community Importance	6.64
	ROSPA0122	Cernica Lake and Forest	Special avifaunal protection area	6.64
50 MW (CTE Progresu)	RONPA0954	Văcărești Natural Park	Nature park	3.26
	ROSCI0308	Cernica Lake and Forest	Site of Community Importance	12.49
	ROSPA0122	Cernica Lake and Forest	Special avifaunal protection area	12.49
	RONPA0928	Comana Natural Park	Nature park	17.82
	RORMS0008	Comana Natural Park	Wetland of international importance	17.82
	ROSAC0043	Comana	Special protection area	17.82
	ROSPA0022	Comana	Special avifaunal protection area	17.82
462 MW SMR	ROSAC0344	The forests of the Southern Piedmont of Cândești	Site of Community Importance/Special Area of Conservation	11.71
	ROSPA0124	The lakes on the Ilfov Valley	Special avifaunal protection area	15.21
CNE Cernavodă U3 -700MW and U4 - 700MW	ROSPA0039	Danube - Ostroave	Special avifaunal protection area	1.69
	RORMS0017	The Danube Ostroave - Bucgeac - Iortmac	Wetland of international importance	1.69
	ROSAC0022	Canaralele Dunării	Site of Community Importance/Special Area of Conservation	2.14
	RONPA0371	Fossil site Cernavodă	Natural monument	2.44
	ROSCI0412	Ivrinezu	Site of Community Importance	8.09
	RONPA0372	Fossil site Seimenii Mari	Nature reserve	9.14
	ROSPA0002	Allah Bair – Capidava	Special avifaunal protection area	9.22
	ROSPA0012	Borcea Arm	Special avifaunal protection area	10.72
	RORMS0014	Borcea Arm	Wetland of international importance	10.72

Project	Code	Name	Category	Distance (km)
	ROSPA0001	Aliman – Adamclisi	Special avifaunal protection area	12
	ROSCI0353	Peștera - Deleni	Site of Community Importance	13.41
	RONPA0885	Canton Hățiș Forest	Nature reserve	15.35
	ROSAC0071	Dumbraveni - Urluia Valley - Vederoasa Lake	Special protection area	15.57
	ROSPA0007	The Vederosa Pond	Special avifaunal protection area	15.74
	ROSCI0319	The Fetești Swamp	Site of Community Importance	16.66
	RONPA0881	Lake Vederoasa	Nature reserve	17.08
	ROSCI0278	Bordusani - Borcea	Site of Community Importance	19.34

In the analysis of potential effects on protected natural areas, the indirect influence zone of 6 km around each objective belonging to PAM4 Development of new CCGT capacities, PAM5 Promotion of high-efficiency cogeneration capacities, PAM24 Building small hydro power plants was taken into account based on the general structural and functional characteristics of the proposed projects, estimating that the potential effects of these projects, generated in the construction, operation and closure stages, are limited to a maximum distance of 6 km from the location of the objective. For the objectives belonging to PAM60 Increased use of nuclear energy, the influence zone was established at a maximum distance of 20 km for the SMR objective and for the objectives building U3 and U4 and retrofitting U1 and U2.
Table 14 presents data on protected natural areas of community interest that may be affected by each project identifiable by Stereo 1970 coordinates within the measures mentioned above.

Table 14. Data on ANPIC affected by the projects proposed through the updated NECP 2021-2030

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
ROSCI0063 Jiu Gorge	10927.10	Site of Community Importance declared for the conservation of 21 habitats of community interest and 25 species of community interest	Plan of Management in approval/approval procedure	ANANP note No.13421/ THAT/ 11.09.2020	Alpine (99.92%) and continental (0.08%)	naturally	RONPA47 The Gorge Jiu, 2427 Sfinxul Lainicilor, 2455 Stâncile Rafaila	To the east: ROSCI0188 ROSAC0128 ROSAC0362 ROSAC0359 ROSAC0239 ROSAC0085 ROSPA0043 To the north: ROSPA0045 ROSCI0087 ROSCI0236 To the west: ROSCI0217 ROSPA0084 ROSAC0129 To the south: ROSAC0045	Not the case.
ROSAC0122 Făgăraș Mountains	198620.5	Special area of conservation declared for the conservation of 28 habitats of community interest and 42 species of community interest	Plan of management approved by OMMAP no. 1156/2016	ANANP Decision No. 547/ 27.10.2021	Alpine (100%)	naturally	ROSPA0098 Făgăraș Piedmont, ROSCI0352 Perșani, ROSCI0112 Mlaca Tătarilor, IV.46 Tătarilor Lake, 2.106. Piscul Negru Cave, 2.113. Iezer Lake, 2.114. Zârna Lake, 2.115. Jgheburoasa Lake, 2.116. Hârtop I Lake, 2.117. Hârtop II Lake,	North: ROSPA0098 ROSCI0352 ROSCI0112 PINK 0205 ROSPA0037 ROSAC0329 ROSCI0415 ROSAC0304 ROSAC0132 To the west: ROSAC0085 ROSPA0043 ROSAC0132 ROSPA0025 ROSAC0046 To the south:	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
							2.118. Hârtop V Lake, 2.120. Valea Rea Lake, 2.119. Mânăstirii Lake, 2.121. Buda Lake, 2.122. Izvorul - Muşeteică Lakes, 2.123. Scărişoara Galbenă Lake, 2.124. Galbena IV Lake, 2.125. Vâlsan Valley, code IV.2 Valea Rea Zârna Alpine Valley, 2,701. Bâlii Valley, 2,105. Moldoveanu – Capra Alpine Valley, 2,709 Alpine valley of the Făgăraş Mountains between Podragu-Suru, 2,696. Eocene limestones from Turnu Roşu – Porceşti, 2,784 Avenul Piciorul Boului	ROSCI0268 ROSPA0062 ROSAC0326 ROSCI0316 ROSCI0258 To the east: ROSAC0381 ROSAC0194	
ROSAC0132 Middle Olt - Cibin - Hârtibaciu	2910.50	Special conservation area declared for the conservation of	Plan of management approved by OMMAP no. no.1166/2016	ANANP Decision No. 522/ 18.10.2021	Alpine (12.27%) and continental (87.73)	Natural and anthropogenic	ROSPA0003 Avrig - Scorei – Făgăraș, ROSPA0099 Hârtibaciu Plateau	The area is winding, so the cardinal points are not important:	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
		2 habitats of community interest and 19 species of community interest						ROSAC0304 ROSPA0098 ROSAC0112 ROSCI0282 ROSPA0003 ROSAC0144; ROSAC0143; ROSCI0303; ROSAC0205; ROSAC0085; ROSPA0043; ROSPA0025; ROSAC0046;	
ROSAC0304 Hârtibaciu South - West	22840.80	Special conservation area declared for the conservation of 13 habitats and 16 species of community interest	Plan of management approved by OMMAP no. no.1166/2016	ANANP Decision No. 522/ 18.10.2021	Alpine (8.54%) and continental (91.46%)	Natural and anthropogenic	ROSPA0099 Hârtibaciu Plateau ROSPA0098 Făgăraș Piedmont ROSAC0132 The Eocene limestones from Turnu Roșu	The area is winding, so the cardinal points are not important: ROSAC0132 ROSAC0085 ROSPA0043 ROSAC0122 ROSCI0282 ROSPA0003	Not the case.
ROSAC0085 Frumoasa	137256.1	Special area of conservation declared for the conservation of 22 habitats and 26 species of community interest	Plan of management approved by OMMAP no. 1158/2016	ANANP Decision No. 263/ 27.04.2023	Alpine (100%)	Natural	ROSPA0043 Frumoasa, Nature Reserves The Jewish Table, Stânca Grunzii, La Grumaji, Lake Sureanu, Luncile Prigoanei, Şuvara Saşilor, Cindrelului Lakes, Cindrel Natural Park,	To the South: ROSCI0188; ROSCI0239; to the East: ROSCI0122; ROSCI0132; ROSCI0304; To the North: Calcarele cu gipuriți from Cisnădioara; Dumbrava Sibiului	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
							Jnepenișul Stricatul, Sterpu – Dealul Negru, Cristești.	National Park; Spurs from the Jina coast To the West: ROSCI0087 ROSPA0045 Călianu Ponorici Ciclovina karst complex; Șura Mare Cave Gorges; Tecuri Cave; Taia Gorges	
ROSAC0229 Siriu	6242.2	Special area of conservation declared for the conservation of 10 habitats and 10 species of community interest	Plan of management approved by OMMAP no. 209/2016	ANANP Decision No. No. 576/ 03.11.2021	Alpine (100%)	Natural	-	To the West: ROSCI0038 To the North: ROSCI0280 To the East: ROSAC0190 To the South ROSPA0160 ROSAC0096 Yew Forest	Not the case.
ROSAC0162 Lunca Siretului Inferior	24980.60	Special area of conservation declared for the conservation of 8 habitats and 18 species of community interest	Plan of management approved by OMMAP no. 949/2016	ANANP Decision No. No. 335/ 26.07.2021	Continental (29,32%) and steppe (70.68%)	Natural and anthropogenic	ROSCI0072 Sand Dunes from Hanul Conachi, 2827 Lunca Siretului Natural Reserve, 2411 Balta Potcoava Natural Reserve, 2412 Balta Tălăbasca Natural Reserve, 2402 Sand Dunes from Hanu	To the North: ROSPA0063 To the North-East: ROSAC0334 To the East: ROSAC0134 ROSAC0178 ROSAC0151 ROSPA0121 To the West: ROSPA0077	Not the case.

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							Conachi Natural Reserve, Merișor– Cotul Zătuanului Forest Natural Reserve, Black Forest Natural Reserve ROSPA0071 ROSAC0162		
ROSCI0019 Călimani - Gurghiu	135257	Special area of conservation declared for the conservation of 25 habitats and 44 species of community interest	Plan of management approved by OMMAP no. 1143/2007	ANANP Decision No. No. 156/ 19.04.2021	Alpine (99.39%) and continental (0.61%)	Natural and anthropogenic	Călimani Natural Park, 2.480 Iezer Lake Reserve, 2.730 Juniper trees with Pinus cembra, 2.710 12 Apostles Reservation, ROSPA0033 ROSPA0030 ROSPA0133 ROSCI0051 12 Apostles; Juniper trees with Pinus cembra – Călimani; Deda-Toplița Gorge; The resonance spruce from the Lăpușna forest	To the North: ROSAC0247 ROSAC0249 ROSAC0101 ROSAC0245 To the East: ROSAC0252 ROSAC0243 ROSAC0279 To the Soth: ROSAC0244 ROSAC0297 To the West: ROSPA0028 ROSAC0297 ROSCI0320 ROSCI0368	Not the case.
ROSAC0069 Domogled - Valea Cernei	62121,30	Special area of conservation declared for the conservation of 35 habitats and 57 species of community interest	Plan of management approved by OMMAP no. 1121/2016	Dec ANANP Decision No. Nr. 546/ 09.08.2023	Alpine (52.03%) and continental (47.97%)	Natural and anthropogenic	Domogled - Valea Cernei National Park and the following national reserves: Domogled, Coronini-Bedina, Iauna-Craiova,	To the North-West: ROSCI0126 ROSCI028 To the North-East: ROSAC0129 To the East:	Not the case.

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							Belareca, Ion Bârzoni's Cave, Piatra Cloşanilor, including the following caves: Cloşani and Cioaca cu Brebenei, Ciucevele Cernei, Peştera Martel, Cheile Corcoaiei, Vârful lui Stan, Valea Ţesna; ROSPA0035 ROSAC0198, ROSCI0217; ROSPA0084;	ROSAC0198 ROSAC0366 To the South: ROSPA0080 ROSCI0206 ROSPA0026 To the West: Râpa Neagră; Rezervația naturală Crouri; Cheile Globului; Dealul Petolea Cuptoare; Fossil site de la Globu Craiovei	
ROSAC0044 Corabia - Turnu Măgurele	8354,1	Special area of conservation declared for the conservation of 5 habitats and 17 species of community interest	Plan of management approved by OMMAP no. 909/2023	ANANP Decision No. No. 545/ 09.08.2023	Continental (100%)	Natural and anthropogenic	ROSPA0024 Olt – Danube confluence, Nature Reserve B10 Ostrovul Mare	North: ROSAC0076 ROSPA0106 East: ROSPA0102 West: ROSCI0372 ROSPA0135 ROSAC0046 ROSPA0023	Not the case.
ROSAC0376 Olt Olt River between Mărunței and Turnu Măgurele	12146	Special conservation area declared for the conservation of 9 species of community interest	Plan of management approved by OMMAP no.1199/2016	ANANP Decision No. 28/ 20.01.2022	Continental (100%)	Natural and anthropogenic	ROSPA0106 Lower Olt Valley, ROSPA0024 Olt-Danube Confluence ROSCI0166 ROSAC0266	East: ROSAC0140 ROSCI0423 ROSPA0102 West: ROSAC0174 ROSAC0183 ROSPA0137 ROSAC0011	Not the case.

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ROSCI0210 Lechința Ravine	323	Site of Community Importance declared for the conservation of a habitat of community interest and 7 species of community interest	-	ANANP note No. 7899/BT/08.04.2021	Continental (100%)	Natural and anthropogenic	-	South: ROSPA0041 East: ROSCI0367	Not the case.
ROSCI0373 Mureș River between Brănișca and Ilia	1855	Site of Community Importance declared for the conservation of 15 species of community interest	-	ANANP Note No. 19929 /MF/ 20.11.2020	Continental (100%)	Natural and anthropized	-	West: ROSAC0064 South: ROSCI0054 East: Boholt Reserve	Not the case.
ROSAC0045 Jiu Corridor	71362.70	Special area of conservation declared for the conservation of 18 habitats of community interest and 24 species of community interest	Plan of management approved by OMMAP no.1645/2016	ANANP Decision No. 657 /03.12.2021	Continental (100%)	Natural and anthropized	ROSPA0023 Jiu Danube Confluence, ROSPA0010 Bistreț, 2,390 Fossil site Bucovăț, 2,391 Fossil site Drănic, 2,399 Cleanov, 2,448 Fossil site Gârbovu, IV.33 Zăval Forest	West: ROSAC0366 ROSAC0405 ROSAC0202 South: ROSPA0155 ROSCI0372 ROSPA0135 East: ROSAC0011 ROSPA0137 ROSAC0266	Not the case.
ROSCI0076 Dealul Mare - Harlau	25062.60	Site of Community Importance declared for the conservation of	-	ANANP Note No. 7899/BT/ 08.04.2021	Continental (100%)	naturally	ROSPA0116 Tudora Forest; Humusu Secular Beech Tree Forrest	North: ROSAC0391; Northeast: ROSPA0156 East:	Not the case.

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		5 habitats of community interest and 7 species of community interest						ROSPA0109 South: ROSAC0176 West: ROSPA0064 ROSCI0310 ROSCI0371 ROSCI0380	
ROSAC0103 Buzau Meadow	6987	Special area of conservation declared for the conservation of 9 habitats of community interest and 15 species of community interest	Plan of management approved by OMMAP no. 1075/2016	ANANP Decision No. 161/ 19.04.2021	Alpine (0.54%), continental (24.20%) and steppe (75.27%)	Natural and anthropized	ROSPA0160 Cameniţa Forest;	East: ROSPA0004 ROSCI0005 Northeast:ROSPA0048 ROSCI0305 ROSPA0077 North: ROSCI0404 ROSAC0272 ROSPA0141 Northwest: ROSAC0096 ROSA0229 Southwest:ROSAC0057 ROSAC0235 South: ROSCI0259 ROSPA0145	Not the case.
ROSCI0126 Ţarcu Mountains	58606.10	Site of Community Importance designated for the complex concentration of predominantly natural	-	ANANP Note No. 13915/CA/17. 09.2020	Alpine (95.55%) and continental (4.45%)	Natural, semi-natural and anthropized	-	North: ROSAC0219 ROSCI0355 ROSAC0250 ROSCI0028 Northeast: ROSCI0292 ROSCI0052	Not the case.

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		ecosystems (81%)						East: ROSPA0084 ROSCI0217 Southeast: ROSAC0069 ROSPA0035 South: Southwest: ROSCI0284 West: ROSCI0385	
ROSCI0256 Turbăria Ruginosu Zagon Peatland	346.6	Site of community importance that hosts rare plant species characteristic of raised bogs.	-	ANANP note No. 265080/BT/21.12.2021	Alpine (100%)	naturally	Ruginosu Zagon Peatland Nature Reserve	Northeast: ROSCI0097 Goru Peak Nature Reserve Southeast: ROSAC0190 Southwest: ROSCI0280 Northwest: ROSAC0374 ROSPA0147	Not the case.
ROSCI0280 Upper Buzău River	199.1	Site of Community Importance	-	ANANP note No. 265080/BT/21.12.2021	Alpine (100%)	Natural, semi-natural and anthropized	-	East: ROSAC0190 South: ROSAC0229 ROSPA0160 Southwest: ROSCI0038	Not the case.
ROSCI0054 Deva Fortress Hill	113.30	Site of Community Importance declared for the conservation of habitats and	-	ANANP note No. 11140/BT/21.04.2021	Alpine (72.96%), and continental (27.04%)	Natural and anthropized	Deva Fortress Hill Nature Reserve, Colț Hill Nature Reserve and Zănoaga	East: ROSPA0139 South: ROSCI0136 Southwest: ROSCI0373	Not the case.

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		species of Community interest						North: Boholthro Reserve	
ROSCI0065 Danube Delta	453645.50	Site of Community Importance declared for the conservation of habitats and species of Community interest	Management plan in approval procedure	ANANP note No. 1259/BT/23.06.2022	Pontic (50.20%) and Steppe (49.80%)	Natural, semi-natural and anthropized	1.2009 Prundu with Birds Islands, 2.2009 Ceaplace Island, 2.346. Chituc Grind, 2.347. Lupilor Grind, 2.348. Corbu - Nuntași – Histria, 2.349. Histria Fortress, 2.749. Murighiol Salts, 8 2.751. Letea Forest, 2.752. Răducu Grind and Lake, 2.753. Nebunu Lake, 2.754. Vătafu – Lunguleț Complex, 2.755. Caraorman Forest, 2.756. Arinișul Erenciuc, 2.757. Popina Island, 2.758. Sacalin Zătoane Complex, 2.759. Periteașca – Leahova Complex, 2.760. Cape Doloșman, 2,761. Lake Potcoava, 2,762. Lake Belciug,	ROSCI0413 ROSPA0076 ROSCI0066 ROSPA0057 ROSAC0083 ROSCI0398 ROSPA0061 ROSCI0073 ROSPA0060 ROSAC0215 ROSPA0019 ROSPA0100 ROSCI0201 ROSPA0091 ROSPA0032 ROSAC0067 ROSAC0060 ROSPA0052 ROSPA0009 ROSCI0123 ROSPA0073 ROSPA0121 ROSCI0105	Not the case.

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							2,763. Lake Rotundu, IV.56. Călugăru – Iancina, IV.59. Beștepe Hills, IV.60. Enisala, V.2. Lower Prut Lowland Natural Park, Danube Delta Biosphere Reserve, 2,750. Roșca – Buhaiova ROSPA0031 (Danube Delta and Razim Sinoie Complex)		
ROSCI0066 Danube Delta - marine area	336200.2	Site of Community Importance declared for the conservation of habitats and species of Community interest	Management plan in approval procedure	ANANP note No. 1259/BT/23.06.2022	Black Sea (100%)	naturally	ROSPA0076 Sacalin Zătoane;	East: ROSCI0413 Southwest: ROSPA0060 ROSPA0057 ROSPA0019 ROSAC0215 West: ROSPA0031 ROSCI0065	Not the case.
ROSCI0278 Bordusani - Borcea	5847	The importance of the site lies in the fact that it functions as an ecological corridor along the Borcea arm, connecting the sites along the Danube with the	-	ANANP Note No. 10034/BT/08.04.2021	Steppe (100%)	Natural and anthropized	ROSPA0012 Borcea Arm, ROSPA0017 Canaralele Hârșova ROSCI0290 ROSAC0022	West: ROSAC0022 South: ROSPA0012 Northwest: ROSCI0290 North: ROSPA0120	Not the case.

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		Ialomița Corridor.							
ROSCI0319 The Fetești Swamp	2110.9	Site of Community Importance declared to ensure the conservation status of 1 habitat and 4 fauna species of community interest.	-	ANANP Note No. 20520/ THAT/ 26.06.2020	Steppe (100%)	Natural and anthropized	ROSPA0012	Northeast: ROSPA0012 Southeast: ROSAC0022 ROSPA0039	Not the case.
ROSCI0353 Peștera - Deleni	2549.3	Site of community importance because it represents a specific habitat for 2 species of conservation interest.	-	ANANP Note No. 7585/ 05.11.2020	Steppe (100%)	Natural and anthropized	ROSPA0001 Aliman-Adamclisi	North: ROSCI0412 East: ROSAC0083 South: ROSAC0071 West: ROSAC0071	Not the case.
ROSCI0412 Ivrinezu	411.10	Site of community importance for the conservation of the species Mesocricetus newtoni, Testudo greaca, Elaphe sauromates, Spermophilus citellus and their habitat.	-	ANANP Note No. 3950/ 24.06.2021	Steppe (100%)	Natural and anthropized	-	West: ROSAC002 ROSPA0039 North: the Cernavodă fossil site; South: ROSPA0001 Southeast: ROSCI0353	Not the case.

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ROSAC0176 Tătărași Forest	53.20	Special area of conservation declared for the conservation of a habitat of community importance and two species included in Annex II of the Habitats Directive.	Management plan approved by Order no. 1017/2016	ANANP Decision No. 147/ 08.04.2021	Continental (100%)	naturally	Tătărași Forest	South: ROSAC0159 West: ROSAC0363	Not the case.
ROSAC0128 North of the Eastern Gorj	49201	Special area of conservation declared for the conservation of several species and habitats of community importance	The Management Plan and the Regulation were approved by MEWF Order no. 1243/2016	ANANP Decision No. 653/ 03.12.2021	Alpine (88.97%) and continental (11.03%)	Natural and anthropized	Barcului Forest; Iedului Cave; Muierii Cave; Olteț Gorges and Polovragi Cave; Polovragi Forest;	North: ROSAC0188 Northeast: ROSAC0239 East: ROSAC0015 Southeast: Bat Cave; Bistrita Valley Cave; South: ROSAC0362 ROSAC0359 West: ROSCI0063 ROSAC0129	Not the case.
ROSAC0129 North of the Western Gorj	86,980.5	Special Conservation Area declared for the conservation of several protected forest	The Management Plan and the Regulation were approved by MEWF Order no. 1251/2016	ANANP Decision No. 656/ 03.12.2021	Alpine (78.12%) and continental (21.88%)	Natural and anthropized	Corals Cave; Oslea Mountain; Boroșteni Stone; Cioclovina Botanical Reserve; Gura Plaiului Cave; Tismana-Pocruia	South:ROSAC0366 Southwest: ROSAC0198 West: ROSAC0069 ROSPA0035 Northwest:	Not the case.

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		habitats and species					Forest; Cotul cu Aluni; Cornetul Pocruieri; Tismana-Pocruia Forest; Cotul deu Aluni; Cornetul Pocruiei; Tismana – Pocruia Forest; Andreaua Stone; Izvernei Springs; Sohodolului Gorges; Izbucul Jalești; Gornăcelu Hill;	ROSCI0217 ROSPA0084 North: ROSCI0236 East: ROSCI0063 ROSAC0128	
ROSAC0188 Parâng	30290	Special Conservation Area designated for the conservation of 19 habitats, 2 plant species and 7 animal species.	The Management Plan and the Regulation were approved by MEWF Order no. 1964/2007	ANANP Decision No. 616/ 16.12.2020	Alpine (100%)	Natural and anthropized	Jiep Gorges; Piatra Crinului; Miru-Bora reservation; Latorița Lake; Câldarea Gâlcescu;	Northeast: ROSAC0085; ROSPA0043; East: ROSAC0239 South: ROSAC0128 Southwest: ROSCI0063 Northwest: ROSCI0087	Not the case.
ROSAC0198 Mehedinți Plateau	53,555.90	Special conservation area designated for the purpose of preserving 10 habitat types, 26 species of fauna and 2 species of flora	The Management Plan and the Regulation were approved by MEWF Order no. 1198/2016	ANANP Decision No. 700/ 23.11.2022	Continental (100%)	Natural and anthropized	Mehedinți Plateau Geopark ROSAC0069 ROSPA0035 Gorganu Forest; Drăghiceanu Forest; Lazului Cave; Cornetul Băii and the Monastery Valley Karst complex at	North: ROSPA0035 ROSAC0069 Northeast: ROSAC0129 East: ROSAC0366 South: ROSCI0206 ROSPA0026 West:	Not the case.

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							Ponoarele; Lilac Forest at Ponoarele; Cornetul Piatra Încălecată; Cornetul Babelor and Cerboaniei; Coșuștei Gorges; Cornetul Bălții; Epuran Cave; Topolnița Gorges; Borovăț Forest; Cârmana springs and cliffs; Limestone walls at Izvoarele Coșutei, Tufărișile mediteraneene de la Isverna	ROSPA0035 ROSAC0069	
ROSAC0190 Penteleu	11275.7	Special conservation area for habitats (forests, alpine scrub), large carnivores (bear, wolf, lynx) and Rosalia alpina	The Management Plan and the Regulation were approved by MEWF Order no. 215/2016	ANANP Decision No. 496/ 06.10.2021	Alpine (100%)	naturally	-	North: ROSCI0256 ROSPA0088 Northeast: ROSCI0028 East: ROSCI0018 ROSCI0127 Southeast: ROSCI0009 ROSAC0199 South: ROSPA0160 Southwest: ROSAC0229 ROSCI0280 Northwest: ROSCI0256	Not the case.

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ROSAC0344 The forests of the Southern Piedmont of Cândești	4317.1	Special conservation area covered almost entirely by forests, the most representative and widespread habitats of community interest (9130, 91Y0, 9170, 91M0).	The Management Plan and the Regulation were approved by MEWF Order no. 1200/2016	ANANP Decision No. 284/ 04.05.2022	Continental (100%)	Natural and semi-natural	-	East: ROSPA0124 ROSAC0014 South: ROSPA0161 West: ROSPA0062 North: ROSAC0326	Not the case.
ROSAC0022 Danube's Canarale	26109.90	Special conservation area featuring a great diversity of habitats and protected species.	Management plan approved by MEMAP Order no. 1252/2016	ANANP Decision No. 541/ 26.10.2021	Steppe (100%)	Natural, semi-natural and anthropized	ROSPA0017 ROSPA0002 ROSPA0039 The canarale in the Port of Harsova; The Neo-Jurassic reef from Topalu; Fossil site Movila Banului; Fossil site Cernavodă	North: ROSPA0040 ROSCI0012 ROSCI0006 ROSPA0005 Northwest: ROSCI0278 ROSPA0120 ROSCI0290 ROSCI0389 ROSPA0111 West: ROSCI0319 ROSPA0012 Southwest: ROSPA0051 ROSPA0021 ROSPA0055 ROSAC0131 South: ROSAC0149 ROSPA0053 ROSCI0340 ROSPA0008	Not the case.

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								ROSAC0172 ROSPA0056 Southeast: ROSPA0054 ROSPA0007 ROSAC0071 ROSPA0001 ROSCI0353 East: ROSCI0412 ROSPA0002 ROSAC0053	
ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake	18024.40	Special Conservation Area designated for the conservation of several habitats and species of community interest.	Management plan approved by MEMAP Order no. 1557/2016	ANANP Decision No. 414/ 03.08.2022	Steppe (100%)	Natural, semi-natural and anthropized	ROSPA0007 ROSPA0039 ROSPA0036 Dumbrăveni Forest; Limestone walls from Petroșani; Fossil site Credința; Credința Aliman	Northwest: ROSPA0054 West: ROSPA0008 Southeast: ROSPA0166 East: ROSPA0151 ROSPA0001 ROSCI0353 Northeast: ROSCI0412	Not the case.
ROSPA0043 Frumoasa	130890.8	Special avifaunal protection area declared for the conservation of 11 bird species of community interest	Plan of management approved by OMMAP no.1158/2016	ANANP Decision No. 218/ 04.07.2024	Alpine (100%)	naturally	ROSCI/ROSAC0043 Frumoasa, 2.7. Stânca Grunzii, 2.703. La Grumaji, 2.708. Masa Jidovului, 2.18.Surianul Lake, 2.46. Luncile Prigoanei, 2.705. Cindrelului Lakes, 2.707.	To the northeast: Dumbrava Sibiului Park; Limestones with hippurites from Cisnădioara; To the east: ROSAC0132 ROSAC0122 ROSAC0304	Not the case.

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							Cindrel, 2.794. Jnepenișul Stricatul, 2.806. Sterpu - Dealul Negru, 2.807. Cristești Reservation	ROSAC0085 ROSPA0098 South: ROSCI0188 ROSAC0239 To the west: ROSPA0045 ROSCI0087 ROSAC0085 North: The Spurs of the Jina Coast; Oul Arșițea	
ROSPA0071 Lower Siret Meadow	37479.50	Special avifaunal protection area declared for the conservation of 110 bird species of community interest	Plan of management approved by OMMAP no.949/2016	ANANP decision No.125/ 28.03.2022	Continental (20.52%) and steppe (79.48%)	Natural and anthropized	ROSAC0162 ROSAC0072	North: ROSPA0063 Northeast: ROSAC0334 East: ROSAC0134 ROSAC0178 South: ROSPA0077 West:	Not the case.
ROSPA0133 Calimani Mountains	29160.1	Special avifaunal protection area declared for the conservation of 103 bird species of community interest	Management Plan approved by Government Decision no. 1035/2011	ANANP Decision No. 53/ 31.01.2023	Alpine (100%)	Natural and anthropized	ROSCI0019 Junipeniș with Pinus Cembra-Călimani; Lake Iezer Reservation; Twelve Apostles	North: ROSAC0247 Northwest: Fountain Stone; West: Fairy Tale; ROSCI0051 Repedea Valley; Transylvanian Bistrița Gorges; South: ROSPA0030 East:	Not the case.

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								Dobrean Stream; Northeast: ROSAC0249 Tinovul Şarul Dornei;	
ROSPA0035 Domogled-Valea Cerna	66734	Special avifaunal protection area declared for the conservation of 23 bird species of community interest	Plan of management approved by OMMAP no.1121/2016	ANANP Decision No. 191/ 21.05.2021	Alpine (48.44%) and continental (51.56%)	naturally	Domogled National Park - Cerna Valley, 2,292. Domogled, 2,293. Coronini – Bedina, 2,294. Iauna – Craiova, 2,296. Belareca, 2,297. Ion Bârzoni's Cave, 2,422. Piatra Cloșanilor including the Cloșani and Cioaca cu Brebenei caves, 2,423. Ciucevele Cernei, 2,425. Martel Cave, 2,426. Corcoaiei Gauges, 2,602. Vârful lui Stan, 2,603. Tesna Valley	North:ROSPA0084 ROSCI0217 ROSCI0292 Northwest: ROSCI0126 West: ROSCI0284 ROSCI0385 South: ROSCI0206 ROSPA0080 ROSPA0026 South East: East: ROSAC0198 ROSAC0366 ROSAC0129	Not the case.
ROSPA0024 Olt-Danube Confluence	20483.80	Special avifaunal protection area declared for the conservation of	-	ANANP Note No. 11269/CA/18. 02.2020	Continental (100%)	Natural and anthropized	ROSCI0044 Corabia – Turnu Măgurele, ROSCI0376 Olt	East: ROSCI0433 ROSPA0102 West: ROSPA0135	Not the case.

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		90 bird species of community interest					River between Mărunței and Turnu Magurele and RONPA962 B10. Ostrovul Mare	The Forest House in the Potelu Forest Northwest: ROSAC0011 Braniștea Mulârilor Forest;	
ROSPA0041 Elești Iernut - Cipău	437	Special avifaunal protection area declared for the conservation of 69 bird species of community interest	-	ANANP note No. 21433/BT/29. 07.2021	Continental (100%)	Natural and anthropized	-	East: ROSCI0367 North: ROSCI0210	Not the case.
ROSPA0060 Tașaul - Corbu Lakes	2734	Special avifaunal protection area declared for the conservation of 69 bird species of community interest	-	ANANP Note No. 14745/CA/24. 09.2023	Pontic (98.97%) and Steppe (1.03%)	Natural and anthropized	Scientific reservation 2,348. Corbu - Nuntași - Histria	East: ROSPA0076 South: ROSPA0057 Northwest: ROSAC0215 ROSPA0019 North: ROSPA0031	Not the case.
ROSPA0160 Buzau Meadow	9575.4	Special avifaunal protection area declared for the conservation of 25 bird species of community interest	-	ANANP Note No. 9864/BT/ 06.04.2022	Alpine (0.54%), continental (24.20%) and steppe (75.27%)	Natural and anthropized	ROSAC0103	East: ROSPA0004 ROSCI0005 Northeast: ROSPA0048 ROSCI0305 ROSPA0077 North: ROSCI0404 ROSAC0272 ROSPA0141	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
								Northwest: ROSAC0096 ROSA0229 Southwest:ROSAC0057 ROSAC0235 South: ROSCI0259 ROSPA0145	
ROSPA0106 Lower Olt Valley	52789.80	Special avifaunal protection area declared for the conservation of 104 bird species of community interest	Plan of management approved by OMMAP no. 1093/2016 regarding the approval of the Management Plan of the Natura 2000 site ROSPA0106 Lower Olt Valley	ANANP Decision No. 202/ 30.03.2023	Continental (100%)	Natural and anthropized	ROSCI0266 Olteț Valley, ROSCI0166 Reșca Hotărani Forest, ROSCI0376 Olt River between Mărunței and Turnu Măgurele, ROSCI0354 Cotmeana Platform, IV.44. Reșca Forest Nature Reserve, VI.22. Special avifaunal protection area Strejesti Lake, VI.23. Special avifaunal protection area Slatina Lake, VI.24. Special avifaunal protection area Izbiceni Lake, VI.25 Special	South: ROSPA0024 ROSAC0044 Southwest:ROSAC0011 ROSAC0174 ROSAC0183 ROSPA0137 West:ROSAC0266 ROSAC0168 ROSCI0296 Northeast: ROSCI0177 ROSAC0354 ROSAC0225 East:ROSAC0386 ROSAC0140 Southeast: ROSCI0423	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
							avifaunal protection area Iris-Malu Roșu		
ROSPA0116 Dorohoi – Șaua Bucecei	25359	Important site due to important populations of threatened species at EU level – 4 species	-	ANANP Note No. 9864/BT/ 06.04.2022	Continental (100%)	Natural, semi-natural and anthropized	2.231. Tudora Forest, 2.232. Arinișul from Horlăceni ROSCI0076	East:ROSPA0156 North:ROSPA0157 ROSAC0255 Northwest: ROSCI0184 ROSCI0075 ROSPA0110 Vest:ROSCI0075 ROSAC0391 ROSCI0380	Not the case.
ROSPA0098 Făgăraș Piedmont	71201.7	Special avifaunal protection area	Plan of management approved by OMMAP no.1156/2016	ANANP Decision No. 217/04.07.2024	Alpine (51.88%), continental (48.12%)	Natural, semi-natural and anthropized	Nature Reserve IV.46. Tatar's Lake, 2,696. Eocene limestones from Turnu Roșu – Porcești, 2,701. Bâlii Valley, 2,709. Alpine Valley of the Făgăraș Mountains between Podragu - Suru	To the north: ROSPA0098 ROSCI0352 ROSCI0112 PINK 0205 ROSPA0037 ROSAC0329 ROSCI0415 ROSAC0304 ROSAC0132 To the west: ROSAC0085 ROSPA0043 ROSAC0132 ROSPA0025 ROSAC0046 East: ROSPA0037	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
ROSPA0030 Upper Mureș Gorge	10158.6	Special avifaunal protection area	Plan of management approved by OMMAP no.1556/2016	ANANP Decision No. 52/31.01.2023	Alpine (92.74%)	Natural and anthropized	ROSCI0019 Deda-Toplița Gorge	North: ROSPA0133 East: ROSAC0252 West: ROSCI0368	Not the case.
ROSPA0031 Danube Delta and Razim - Sinoie Complex	508302.3	Special avifaunal protection area	Management plan in approval procedure	ANANP Note No. 4494/BT/ 16.02.2023	Pontic (44.74%), steppe (55.26%)	Natural, semi-natural and anthropized	1.2009 Prundu with Birds Islands, 2.2009 Ceaplace Island, 2.346. Chituc Grind, 2.347. Lupilor Grind, 2.348. Corbu - Nuntași – Histria, 2.349. Histria Fortress, 2.749. Murighiol Salts, 8 2.751. Letea Forest, 2.752. Răducu Grind and Lake, 2.753. Nebunu Lake, 2.754. Vătafu – Lunguleț Complex, 2.755. Caraorman Forest, 2.756. Arinișul Erenciuc, 2.757. Popina Island, 2.758. Sacalin Zătoane Complex, 2.759. Periteașca – Leahova Complex, 2.760. Dolosman Cape,	ROSCI0413 ROSPA0076 ROSCI0066 ROSPA0057 ROSAC0083 ROSCI0398 ROSPA0061 ROSCI0073 ROSPA0060 ROSAC0215 ROSPA0019 ROSPA0100 ROSCI0201 ROSPA0091 ROSPA0032 ROSAC0067 ROSAC0060 ROSPA0052 ROSPA0009 ROSCI0123 ROSPA0073 ROSPA0121 ROSCI0105	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
							2,761. Potcoava Lake, 2,762. Belciug Lake, 2,763. Rotundu Lake, IV.56. Călugăru – Iancina, IV.59. Beștepe Hills, IV.60. Enisala, V.2. Lower Prut Lowland Natural Park, Danube Delta Biosphere Reserve, 2,750. Roșca - Buhaiova		
ROSPA0076 Black Sea	149143.90	Special avifaunal protection area	Plan of management approved by OMMAP no.1643/2016	ANANP Decision No. 195/ 23.03.2023	Black Sea (100%)	Natural, semi-natural and anthropized	ROSCI0269 Vama Veche - 2 Mai, ROSCI0094 Mangalia submarine sulfur springs, ROSCI0197 Eforie - Nord - Eforie Sud submerged beach, ROSCI0273 Cape Tuzla marine area, ROSCI0237 Sfântu Gheorghe methanogenic submarine structures, ROSCI0066 Danube Delta Biosphere Reserve-Marine area, ROSCI0281	Northwest: ROSPA0031 Northeast: ROSCI0413 West: ROSPA0060 ROSPA0057 Southeast: ROSAC0073 ROSCI0398 ROSPA0061 ROSCI0114 ROSPA0066 ROSCI0191	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
							Cap Aurora and ROSCI0293 Costinești-23 August, 2,346. Chituc Grind, 2,347. Lupilor Grind, 2,758. Sacalin Zătoane Complex, 2,759. Periteașca - Leahova Complex		
ROSPA0061 Lake Techirghiol	2950.70	Special avifaunal protection area	-	ANANP Decision No. 14745/CA/24. 09.2020	Pontic (35.98%), steppe (64.02%)	Natural, semi-natural and anthropized	Nature Reserve 1610 Lake Techirghiol	East: ROSPA0076 ROSAC0197 ROSAC0273 North: ROSAC0073 Northwest: ROSCI0398	Not the case.
ROSPA0124 The Lakes on the Ilfov Valley	602.3	This site hosts important populations of protected bird species.	Plan of management approved by Order no. 302/2020	ANANP Decision No. 343/ 14.06.2022	Continental (100%)	Natural, semi-natural and anthropized	-	East: ROSAC0014 West: ROSAC0344	Not the case.
ROSPA0039 Danube - Ostroave	16243.80	This site hosts important populations of protected bird species.	Plan of management approved by Order no. 1252/2016	ANANP Decision No. 419/ 16/09.2020	Steppe (100%)	Natural, semi-natural and anthropized	Nature Reserve IV.19. Ostrovul Soimul, Nature Reserve IV.25. Cetate Forest, Nature Reserve V.26. Bratca Forest, Nature Reserve IV.27. Oltina Lake, 2,354. Cernavodă Fossil Site ROSPA0022	Southwest: ROSPA0051 ROSAC0131 ROSPA0021 ROSAC0149 ROSPA0053 ROSCI0340 South: ROSPA0056 ROSAC0172 ROSPA0054 Southeast: ROSPA0007	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
								ROSCI0412 North: ROSAC0022 ROSPA0012 Northwest: ROSCI0319 ROSPA0012	
ROSPA0001 Aliman – Adamclisi	18908.70	This site hosts important flocks of birds protected at European level.	Plan of management approved by Order no. 1557/2016	ANANP Decision No. 414/ 03.08.2022	Steppe (100%)	Natural, semi-natural and anthropized	ROSCI0071 Dumbrăveni - Valea Urluia - Vederoasa Lake and Dumbrăveni Forest ROSCI0353 ROSAC0022	South: ROSAC0071 ROSPA0036 North:ROSCI0412 ROSPA0007 ROSPA0039 Aliman fossil site Northwest: ROSPA0054 ROSAC0172 Southwest: ROSPA0008 The forest is the canary of the girl;	Not the case.
ROSPA0002 Allah Bair – Capidava	11645	An important site for nesting populations of some species and also an important area during the migration period for raptors.	Plan of management approved by Order no. 1252/2016	ANANP Decision No. 613/16.12.2020	Steppe (100%)	Natural, semi-natural and anthropized	Nature Reserve IV.34. Canton Hățiș Forest, 2,367. Alah Bair Hill ROSAC0053 ROSAC0022	Southwest: Movila Banului fossil site; ROSPA0039 West: ROSPA0012 ROSCI0278 Northwest: The Neo-Jurassic reef from Topalu East: ROSPA0019	Not the case.

Name and ANPIC code	Surface (Ha)	Importance/Role	Plan of management and no. OM by which was approved	Decision/Approval Note of goals conservation of ANPIC	Region/ regions biogeographical regions in which ANPIC is located	Types ecosystems	Overlap with other ANPIC or PA	ANPIC relations with other ANPIC	Other PARTICULARS
								ROSAC0215	
ROSPA0007 Vederoasa Pond	2139.60	This site hosts important flocks of birds protected at European level.	Plan of management approved by Order no. 1557/2016	ANANP Decision No. 414/ 03.08.2022	Steppe (100%)	Natural, semi-natural and anthropized	Nature Reserve IV.30. Vederoasa Lake, 2,351. Aliman Fossil Site ROSAC0071	North: ROSPA0039 West: ROSPA0054 Southeast: ROSPA0001 Northeast: ROSCI0412	Not the case.
ROSPA0012 Borcea Arm	13097	This site hosts important populations of protected bird species.	-	ANANP Note No. 20521/CA/26. 06.2020	Steppe (100%)	Natural, semi-natural and anthropized	ROSCI0319 ROSCI0278	Southwest: ROSPA0051 ROSPA0039 ROSAC0172 ROSAC0022 South: ROSPA0056 ROSPA0054 ROSPA0007 East: ROSCI0412 ROSPA0002 ROSAC0053	Not the case.

Identification of habitats and species of community interest within Natura 2000 sites intersected by the projects proposed through the updated NECP 2021-2030

Of the 23 projects identified in the updated NECP 2021-2030, 7 new hydroelectric power generation capacities cross Natura 2000 sites in Romania. Of these Natura 2000 sites, 2 are sites of community importance (SCI), 9 are special areas of conservation (SAC) and 5 are special avifaunal protection areas (SPA).

The number of habitats of community interest crossed by the projects proposed through the updated NECP 2021-2030 are presented for each ANPIC in table 15.

Table 15. Habitats of community interest at the level of sites of community importance intersected by the updated NECP 2021-2030

No.	Name of SCI/SAC crossed by NECP 2021-2030 updated projects	No. of habitats of community interest	Priority habitats*
1	ROSCI0063 Jiu Gorge	21	40A0*, 7220*, 9180*, 91E0*
2	ROSAC0122 Făgăraș Mountains	28	4070*, 6230*, 7240*, 9180*, 91E0*
3	ROSAC0132 Middle Olt - Cibin - Hârtibaciu	2	0
4	ROSAC0304 Hârtibaciu South - West	13	40A0*, 6110*, 6210*, 91I0*
5	ROSAC0085 Frumoasa	22	4070*, 40A0*, 6230* 7110*, 91D0*, 91E0*
6	ROSAC0229 Siriu	10	7110*, 9180*, 91E0*
7	ROSAC0162 Lower Siret Meadow	8	91E0*, 91I0*
8	ROSCI0019 Călimani - Gurghiu	25	4070*, 6230*, 6240* 7110*, 7240*, 9180*, 91E0*
9	ROSAC0069 Domogled - Cerna Valley	35	4070*, 40A0*, 6110*, 6210*, 7220*, 8160*, 9180*, 91E0*, 91H0*, 9530*
10	ROSAC0044 Corabia - Turnu Magurele	5	91E0*
11	ROSAC0376 Olt River between Mărunței and Turnu Măgurele	0	0

Source: Natura 2000 Standard Forms

The number of species of community interest in the protected natural areas crossed by the updated NECP 2021-2030 are presented for each ANPIC in table 16.

Table 16. Species of community interest at the level of sites of community importance of the updated NECP 2021-2030

No.	Name of SCI/SAC intersected by NECP 2021-2030 updated projects	No. of species of community interest	Priority species*
1	ROSCI0063 Jiu Gorge	25	1352* Canis lupus 1354* Ursus arctos 1093* Austropotamobius torrentium 6966* Osmoderma eremita Complex 1087* Alpine Rose 4070* Campanula serrata
2	ROSAC0122 Făgăraș Mountains	42	1352* Canis lupus 1354* Ursus arctos 1093* Austropotamobius torrentium 6199* Euplagia quadripunctaria 6966* Osmoderma eremita Complex 1087* Alpine Rose 4070* Campanula serrata
3	ROSAC0132 Middle Olt - Cibin - Hârtibaciu	19	0
4	ROSAC0304 Hârtibaciu South - West	16	1352* Canis lupus 1354* Ursus arctos
5	ROSAC0085 Frumoasa	26	1352* Canis lupus 1354* Ursus arctos 6199* Euplagia quadripunctaria 4024* Pseudogaurotina excellens 1087* Alpine Rose 4070* Campanula serrata
6	ROSAC0229 Siriu	10	1352* Canis lupus 1354* Ursus arctos 4070* Campanula serrata
7	ROSAC0162 Lower Siret Meadow	18	0
	ROSCI0019 Călimani - Gurghiu	44	1352* Canis lupus 1354* Ursus arctos 6199* Euplagia quadripunctaria 6966* Osmoderma eremita Complex 1087* Alpine Rose 4070* Campanula serrata
8	ROSAC0069 Domogled - Cerna Valley	57	1352* Canis lupus 1354* Ursus arctos 1093* Austropotamobius torrentium 6199* Euplagia quadripunctaria 4039* Nymphalis vaualbum 6966* Osmoderma eremita Complex 1087* Alpine Rose 4070* Campanula serrata
9	ROSAC0044 Corabia - Turnu Magurele	17	0

No.	Name of SCI/SAC intersected by NECP 2021-2030 updated projects	No. of species of community interest	Priority species*
10	ROSAC0376 Olt River between Mărunței and Turnu Măgurele	9	0

Source: Natura 2000 Standard Forms

The number of bird species of community interest corresponding to each SPA-type protected natural area intersected by the projects proposed by the updated NECP 2021-2030 are presented in table 17.

Table 17. Bird species at the level of special avifaunal protection sites intersected by the updated NECP 2021-2030

No.	Name of SPAs intersected by NECP 2021-2030 updated projects	No. of bird species
1	ROSPA0043 Frumoasa	11
2	ROSPA0071 Lower Siret Meadow	110
3	ROSPA0133 Călimani Mountains	103
4	ROSPA0035 Domogled-Valea Cerna	23
5	ROSPA0024 Olt-Danube Confluence	90

Source: Natura 2000 Standard Forms

Identification of habitats and species of community interest that do not intersect Natura 2000 sites, but are located in the area of influence of the projects

In the case of the updated NECP 2021-2030, in addition to the category of projects presented in the previous section that cross Natura 2000 sites, the second category targets projects located at a distance of 6 km (PAM4 Development of new CCGT capacities, PAM5 Promotion of high-efficiency cogeneration capacities, PAM24 Building small hydro power plants) and respectively 20 km (PAM60 Increased use of nuclear energy) from Natura 2000 sites. This analysis took into account, first of all, the following: i) the vulnerability of Natura 2000 sites; ii) the purpose of designating the protected natural area, namely to maintain or bring to a favorable conservation status the species and habitats of community interest existing on their territory, and iii) carrying out works in the immediate vicinity of the boundary of a Natura 2000 site may affect its components, especially in the case of biotic elements that are characterized by mobility and a distribution area, and the coherence of the Natura 2000 Network by degrading the connecting paths between them.

Following the analysis, a number of 18 projects proposed through the updated NECP 2021-2030 were identified, 13 located at a distance of 6 km from Natura 2000 sites and 5 located at a distance of 20 km from Natura 2000 sites.

Table 18. Number of Natura 2000 sites within the area of influence of the updated NECP 2021-2030 objectives

Natura 2000 site type	Total number of Natura 2000 sites within the area of influence of the updated NECP 2021-2030 objectives
SCI	13
SAC	11
SPA	16
Total	**40**

The total number of species and habitats of community importance corresponding to each protected natural area was established based on the Natura 2000 Standard Forms.
The number of habitats of community interest located in the area of influence of the projects proposed by the updated NECP 2021-2030 are presented for each ANPIC in Table 19. Also, the number of species of community interest is presented for each SCI (Table 20).

Table 19. Habitats of community interest at the level of sites of community importance located in the area of influence of the updated NECP 2021-2030 objectives

No.	Name of SCI located in the area of influence of the updated NECP 2021-2030 objectives	No. of habitats of community interest	Priority habitats*
1	ROSCI0076 Dealul Mare - Harlau	5	91E0*
2	ROSCI0126 Țarcu Mountains	22	4070*, 6230*, 7220*, 9180*, 91E0*
3	ROSCI0256 Turbăria Ruginosu Zagon	3	91D0*
4	ROSCI0280 Upper Buzău River	2	91E0*
5	ROSCI0210 Lechința Ravine	1	6240*
6	ROSCI0054 Deva Fortress Hill	4	9180*
7	ROSCI0373 Mureș River between Brănișca and Ilia	0	0
8	ROSCI0065 Danube Delta	29	1150*, 1530*, 2130*, 40C0*, 6120*, 62C0, 7210*
9	ROSCI0066 Danube Delta - marine area	6	0
10	ROSCI0278 Bordusani - Borcea	4	62C0*
11	ROSCI0319 Fetești Swamp	1	0
12	ROSCI0353 Peștera - Deleni	0	0
13	ROSCI0412 Ivrinezu	0	0

Source: Natura 2000 Standard Forms

Table 20. Species of community interest at the level of sites of community importance located in the area of influence of the updated NECP 2021-2030 objectives

No.	Name of SCI located in the area of influence of the updated NECP 2021-2030 objectives	No. of species of community interest	Priority species*
1	ROSCI0076 Dealul Mare - Harlau	7	0
2	ROSCI0126 Țarcu Mountains	15	1352* Canis lupus

3	ROSCI0256 Turbăria Ruginosu Zagon	1	1
4	ROSCI0280 Upper Buzău River	2	0
5	ROSCI0210 Lechința Ravine	7	0
6	ROSCI0054 Deva Fortress Hill	1	6199* Euplagia quadripunctaria
7	ROSCI0373 Mureș River between Brănișca and Ilia	15	0
8	ROSCI0065 Danube Delta	42	1356* Mustela lutreola
9	ROSCI0066 Danube Delta - marine area	10	0
10	ROSCI0278 Bordusani - Borcea	2	0
11	ROSCI0319 Fetești Swamp	4	0
12	ROSCI0353 Peștera - Deleni	2	0
13	ROSCI0412 Ivrinezu	4	0

Source: Natura 2000 Standard Forms

The number of species of community interest within the area of influence of the updated NECP 2021-2030 objectives are presented for each ANPIC in Table 21. The number of priority species is also presented for each SAC (Table 22).

Table 21. Habitats of community interest at the level of special conservation areas located in the area of influence of the updated NECP 2021-2030 objectives

No.	**Name of SACs located in the area of influence of the updated NECP 2021-2030 objectives**	**No. of habitats of community interest**	**Priority habitats***
1	ROSAC0176 TătărușІ Forest	1	0
2	ROSAC0128 North of the Eastern Gorj	25	4070*, 6210*, 7220*, 9180*, 91E0*
3	ROSAC0129 North of the Western Gorj	24	4070*, 6210*, 7220*, 9180*, 91E0*
4	ROSAC0188 Parâng	19	4070*, 6230*, 7240*, 9180*, 91D0*
5	ROSAC0198 Mehedinți Plateau	10	40A0*, 6210*, 9180*
6	ROSAC0103 Buzau Meadow	9	1530*, 62C0*, 91E0*
7	ROSAC0190 Penteleu	7	91E0*
8	ROSAC0045 Jiu Corridor	18	1530*, 6120*, 91E0*, 91I0*
9	ROSAC0344 The forests of the Southern Piedmont of Cândești	7	91E0*
10	ROSAC0022 Danube Canarale	15	40C0*, 62C0*, 91I0*
11	ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake	8	40C0*, 62C0*, 91I0*

Table 22. Species of community interest at the level of special conservation areas located in the area of influence of the updated NECP 2021-2030 objectives

No.	**Name of SACs located in the area of influence of the updated NECP 2021-2030 objectives**	**No. of species of community interest**	**Priority species***

1	ROSAC0176 TătărușІ Forest	2	0
2	ROSAC0128 North of the Eastern Gorj	25	1352* Canis lupus, 1354* Ursus arctos, 6199* Euplagia quadripunctaria, 4070* Campanula serrata
3	ROSAC0129 North of the Western Gorj	34	1352* Canis lupus, 1354* Ursus arctos, 6199* Euplagia quadripunctaria, 6966* Osmoderma eremita *Complex*, 1087* Rosalia alpina, 4070* Campanula serrata
4	ROSAC0188 Parâng	10	1352* Canis lupus, 1354* Ursus arctos, 4024* Pseudogaurotina excellens
5	ROSAC0198 Mehedinți Plateau	29	1352*Canis lupus, 1354* Ursus arctos, 1093*Austropotamobius torrentium, 4070*Campanula serrata
6	ROSAC0103 Buzau Meadow	15	6199* Euplagia quadripunctaria
7	ROSAC0190 Penteleu	15	1352* Canis lupus, 1354* Ursus arctos, 6199* Euplagia quadripunctaria, 1087** Rosalia alpina, 4070* Campanula serrata
8	ROSAC0045 Jiu Corridor	24	0
9	ROSAC0344 The forests of the Southern Piedmont of Cândești	3	0
10	ROSAC0022 Danube Canarale	25	0
11	ROSAC0071 Dumbrăveni - Urluia Valley - Vederoasa Lake	26	0

Source: Natura 2000 Standard Forms

The number of bird species corresponding to each SPA-type protected natural area located in the area of influence of the updated NECP 2021-2030 objectives are presented in table 23.

Table 23. Bird species at the level of special avifaunal protection sites located in the area of influence of the updated NECP 2021-2030 objectives

No. of documents.	**Name of SPAs located in the area of influence of the NECP 2021-2030 objectives updated**	**No. of bird species***
1	ROSPA0116 Dorohoi – Șaua Bucecei	15
2	ROSPA0106 Lower Olt Valley	104
3	ROSPA0160 Buzau Meadow	25
4	ROSPA0098 Făgăraș Piedmont	26
5	ROSPA0030 Upper Mureș Gorge	23
6	ROSPA0041 Elești Iernut Cipau	69
7	ROSPA0031 Danube Delta and Razim Complex - Sinoie	283
8	ROSPA0060 Tașaul - Corbu Lakes	69
9	ROSPA0076 Black Sea	37
10	ROSPA0061 Lake Techirghiol	109
11	ROSPA0124 The lakes on the Ilfov Valley	104
12	ROSPA0039 Danube - Ostroave	57
13	ROSPA0001 Aliman – Adamclisi	69

No. of documents.	Name of SPAs located in the area of influence of the NECP 2021-2030 objectives updated	No. of bird species*
14	ROSPA0002 Allah Bair – Capidava	91
15	ROSPA0007 Vederoasa Pond	125
16	ROSPA0012 Borcea Arm	100

Source: Natura 2000 Standard Forms

For the proposed projects under the updated NECP 2021–2030 for which the potentially affected Sites of Community Importance (ANPIC) could not be identified , it is necessary to determine these sites once the location (geographical coordinates) and technical details of the project are established.

In general, the identification of potentially affected ANPICs by an energy production project is carried out using four criteria: i) intersection (including full overlap of the project with the ANPIC); ii) proximity (influence zone); iii) species mobility; and iv) ecological connectivity.

In the case of ANPICs that host high-mobility species, such as bird of pray or geese, it is recommended that renewable energy projects (e.g., wind farms) be located at a precautionary distance of at least 20 km from the ANPIC boundary.

The identification of ANPICs whose connectivity (within the site or with the rest of the Natura 2000 network) could be disrupted by the emergence of barriers along ecological corridors should include all ANPICs connected along the corridor and these should be added to the list of potentially affected sites.

It is also recommended that this identification process consider possible structural or functional changes in terrestrial or aquatic ecological corridors caused by an energy production project, in order to correctly identify and select all ANPICs connected through the ecological corridor.

The identification of ANPICs that are part of ecological corridors in the project area should be carried out by analyzing a wider territory, relevant to the project being assessed (e.g., within a minimum distance of 30 km from the site boundaries in the case of watercourses).

The analysis for identifying potentially affected ANPICs is conducted through spatial (GIS) analysis, based on information such as: project location, ANPIC boundaries, water body boundaries, and the location of ecological corridors and areas with ecological connectivity/continuity.

b).2. Data on habitats/species in protected natural areas of community interest potentially affected by the plan

At this stage, data on the location of habitats and species, population size, population dynamics, habitat area of species of community interest potentially affected by the implementation of the updated NECP 2021-2030 objectives are difficult to identify and quantify, with no concrete information on their location, numbers and dynamics within the protected natural areas of the Natura 2000 network.

This analysis will be carried out within the appropriate assessment studies for each project with significant impact on Natura 2000 sites.

b).3. Structural and functional relationships that create and maintain the integrity of the protected natural area

Protected natural areas have been designated with the aim of protecting, maintaining or improving the favorable conservation status of species and habitats of Community interest. At the same time, the structural and functional interconnection of protected natural areas, components of the European Ecological Network Natura 2000, must be taken into account. This Network is a European instrument for the conservation of biodiversity comprising areas of high conservation value. This structural and functional link is essential for the survival of some species or the improvement of their conservation status.

The structural alteration of these links, however small, will bring about a chain reaction with observable effects at the functional level. Thus, in any of the sites intersected by the updated NECP 2021-2030, the structure of ecological systems is essential for maintaining the conservation status of species and habitats of community interest, any structural change at the site level further leading to new long-term structural and functional changes, some potentially irreversible.

Land areas outside Natura 2000 sites are important for maintaining structural integrity and functional capacities by protecting site boundaries and maintaining the conservation status of species by providing buffer zones that allow population connectivity and food resources.

Although these buffer zones and the connectivity between them are not clearly documented in the Natura 2000 Standard Forms and Management Plans of protected natural areas, the structural and functional maintenance of these zones is important for the conservation of protected natural areas.

Appropriate assessment studies carried out for projects within the updated NECP 2021-2030 with potential impact on protected natural areas within the Natura 2000 Network, the analysis of potential impact will have to include the effects of the project on all types of land use and on species of conservation importance, given that significant structural and functional changes to habitats can generate long-term negative effects.

b).4. Conservation objectives of protected natural areas of community interest

Table 24 presents the general objectives for the conservation of Natura 2000 sites within the area of influence of the updated NECP 2021-2030 objectives from the Management Plans, where they exist. The indirect influence zone was established at 6 km around each objective belonging to PAM4 Development of new CCGT capacities, PAM5 Promotion of high-efficiency cogeneration capacities, PAM24 Building small hydro power plants based on the general structural and functional characteristics of the proposed projects, estimating that the potential effects of these projects, generated during the construction, operation and closure stages, are limited to a maximum distance of 6 km from the location of the objective. For the objectives belonging to PAM60 Increased use of nuclear energy, the influence zone was established at a maximum distance of 20 km for the SMR objective and the objectives of construction U3 and U4 and retrofitting U1 and U2.

Table 24. General objectives regarding the conservation of Natura 2000 sites identified as having a management plan

No.	Name	General objectives
1	Integrated Management Plan of the Jiu Gorge National Park and the Natura 2000 Site ROSCI0063 Jiu Gorge and the protected natural areas within their area	• Conservation and management of biodiversity (of species and habitats of conservation interest); • Detailed inventory/assessment and monitoring of biodiversity Objective; • Effective administration and management of the protected natural area and ensuring the sustainability of management; • Communication, environmental education and public awareness; • Sustainable use of natural resources; • Sustainable tourism (through natural and cultural values).
2	Integrated Management Plan of the Natura 2000 Site ROSCI0085 Frumoasa and ROSPA0043 Frumoasa	• Ensuring favorable conservation status for all types of habitats and species of community interest in the sites; • Promoting and implementing forms of visiting and tourism in line with the site's conservation objectives; • Improving the population's attitude towards the natural values of the site, through information, awareness, involvement and education of the younger generation in the spirit of nature protection; • Ensuring efficient and adaptable integrated management to achieve objectives.
3	Management Plan of ROSCI0122 Făgăraș Mountains and ROSPA0098 Făgăraș Piedmont	• Ensuring the conservation of species and habitats for which protected natural areas have been declared, in order to maintain their favorable conservation status; • Ensuring the information/data base regarding the species and habitats for which the sites have been declared - including their conservation status - in order to provide the necessary support for biodiversity conservation management and the evaluation of management efficiency; • Ensuring efficient management of sites with the aim of maintaining the favorable conservation status of species and habitats of conservation interest; • Raising awareness - improving knowledge, changing attitudes and behavior - for stakeholder groups that have an impact on biodiversity conservation; • Maintaining and promoting sustainable natural resource exploitation activities in areas designated for these activities and reducing unsustainable ones; • Creating opportunities for sustainable tourism - through natural and cultural values - with the aim of limiting the impact on the environment.

No.	Name	General objectives
4	Management Plan of protected natural areas ROSPA0099 Hârtibaciu Plateau, ROSCI0227 Sighişoara-Târnava Mare, ROSCI0144 Sessile oak and oak forest on Purcăreţului Hill, ROSCI0143 Sessile oak and oak forest from Dosul Fânaţului, ROSCI0132 Middle Olt-Cibin Hârtibaciu, ROSCI0303 Hârtibaciu South-East, ROSCI0304 Hârtibaciu South-East, Secular Oaks Nature Reserve from Breite Sighişoara Municipality, Mihăileni Canyon Reserve, Downy Oak Reserve	• Maintaining/restoring the favorable conservation status for habitats and species of conservation interest, by applying and improving management measures, in collaboration with land and natural resource owners and managers; • Maintaining the characteristic landscape by preserving the mosaic of lands with varied uses and localities with specific architecture; • Involving local communities in the management of Protected Areas by providing support for sustainable management of natural resources and identifying solutions for sustainable development based on the values of the area; • Increasing the attractiveness of Protected Areas by developing and implementing a strategy to transform the area into a major ecotourism attraction for Romanian and foreign visitors; • Increasing support from local communities for maintaining and capitalizing on the values of the protected area; • Maintaining the integrity and values of Protected Areas by regulating relevant activities and ensuring the necessary resources for management.
5	Natura 2000 Site Management Plan ROSCI0229 Siriu	• Maintaining the favorable conservation status of species and habitats of community interest in ROSCI0229 Siriu and/or improving it; • Sustainable use of biodiversity components; • Administration of the site of community importance ROSCI0229 Siriu by the custodian; • Supporting and promoting traditional practices and knowledge; • Communication, education and public awareness; • Developing the general institutional framework and ensuring financial resources.
6	Management Plan of ROSPA0071 Lower Siret Meadow and overlapping protected natural areas	• Medium and long-term conservation of species and habitats by applying preventive management aimed at stopping biodiversity loss; • Scientifically substantiated development of existing knowledge regarding species and habitats in protected natural areas by implementing a monitoring system; • Strengthening protected natural area management activities and supporting long-term sustainable management;

No.	Name	General objectives
		• Increasing the degree of community involvement by promoting a transparent communication process, environmental education and public awareness; • Promoting the sustainable use of natural resources for the benefit of communities; sustainable use of natural resources; • Attracting income for the community through sustainable tourism and the sustainable exploitation of natural and cultural values.
7	Management Plan of the Călimani National Park, of the site of community importance ROSCI0019 Călimani-Gurghiu (the part that overlaps with the Călimani National Park) of the special avifaunal protection area ROSPA0133 Călimani Mountains and of the natural protected areas of national interest that overlap with it	• Conserving biodiversity and landscape to high standards through adequate monitoring, allowing the study of the factors that threaten them, their dynamics and structure; • Raising awareness and educating the public and stakeholders to understand the importance of nature conservation and to obtain support for achieving the Park's objectives; • Encouraging local communities to develop nature-friendly economic activities outside the Călimani National Park, and through sustainable use of resources to bring them benefits and contribute to reducing pressure on park resources; • Sustainable use of tourism resources for the benefit of the park through the development of specific programs; • Park management will ensure the human, financial and physical resources necessary to achieve the objectives of the Management Plan, while achieving local, national and international recognition.
8	Integrated Management Plan of the Domogled-Valea Cernei National Park and the Natura 2000 sites ROSAC0069 Domogled-Valea Cernei and ROSPA0035 Domogled-Valea Cernei - without the overlapping area with the Mehedinți Plateau Geopark, including the nature reserves	• Conservation of non-forest habitats, in the sense of maintaining and, where appropriate, improving the conservation status in order to achieve favorable conservation status; • Conservation of forest habitats, in the sense of maintaining and, where appropriate, improving the conservation status in order to achieve favorable conservation status; • Conservation of plant species, in the sense of maintaining and, where appropriate, improving the conservation status in order to achieve a favorable conservation status; • Conservation of invertebrate species, in the sense of maintaining and, where appropriate, improving their conservation status in order to achieve favorable conservation status; • Conservation of fish species, in the sense of maintaining and, where appropriate, improving the

No.	Name	General objectives
		conservation status in order to achieve the conservation status; • Conservation of amphibian and reptile species, in the sense of maintaining and, where appropriate, improving their conservation status in order to achieve favorable conservation status; • Conservation of mammal species (excluding bats), in the sense of maintaining and, where appropriate, improving their conservation status in order to achieve favorable conservation status; • Conservation of bat species, in the sense of maintaining and, where appropriate, improving their conservation status in order to achieve favorable conservation status; • Conservation of bird species, in the sense of maintaining and, where appropriate, improving their conservation status in order to achieve favorable conservation status; • Conservation of beech forests, UNESCO components of the World Natural Heritage site.
9	Management Plan of protected natural areas ROSPA0024 Olt-Danube Confluence and ROSCI0044 Corabia – Turnu-Măgurele, including the protected natural area of national interest B10. Ostrovul mare	• Ensuring the conservation of species and habitats of conservation interest for which the Natura 2000 sites ROSPA0024 Olt-Danube Confluence, ROSCI0044 Corabia Turnu Măgurele, including the protected natural area of national interest B10. Ostrovul Mare have been designated in order to maintain/achieve a favorable conservation status; • Detailed biodiversity inventory/assessment; • Biodiversity monitoring; • Ensuring effective management of the protected natural area; • Implementing the management of the protected natural area through communication actions, ecological education, and awareness; • Achieving efficient management of the protected natural area through the sustainable use of natural resources; • Achieving efficient management of the protected natural area by promoting sustainable tourism.
10	Integrated Management Plan for the Natura 2000 site ROSCI0376 Olt River between Mărunţei and Turnu Măgurele	• Ensuring the conservation of species on the site in order to maintain the favorable conservation status of the species; • Carrying out assessments and monitoring of protected species in the site and factors impacting designated species; • Achieving effective administration and management of the site and ensuring the sustainability of management;

No.	Name	General objectives
		• Increasing the level of awareness and education of the public and interested groups regarding the importance of biodiversity conservation and to obtain support for achieving the objectives of the management plan of the ROSCI0376 Olt River between Mărunței and Turnu Măgurele site; • Promoting the sustainable use of natural resources, which ensures support for species and habitats of community interest; • Creating opportunities for sustainable tourism - through natural and cultural values - with the aim of limiting the impact on the environment.
11	Management Plan of the Natura 2000 site ROSCI0129 North of the Western Gorj	• Conservation of biodiversity and landscape through adequate monitoring of the dynamics and structure of disturbing factors; • Exploiting tourism resources by developing specific programs in accordance with the principles of sustainable development; • Promoting local cultural and traditional values and creating opportunities based on the principles of sustainable development; • Increasing the level of education and awareness of the public and stakeholders regarding the importance of the site and nature conservation; • Strengthening administrative capacity by establishing adequate mechanisms for carrying out specific activities on the site.
12	Integrated Management Plan for the Natura 2000 site ROSCI0128 North of the Eastern Gorj	• Ensuring the conservation of the species for which the ROSCI0128 North of East Gorj site was declared, in order to maintain their favorable conservation status; • Carrying out assessments and monitoring of protected species from the ROSCI0128 North of the East Gorj site and of factors impacting on the designated species; • Achieving effective administration and management of the site and ensuring the sustainability of management; • Increasing the level of awareness and education of the public and interested groups regarding the importance of biodiversity conservation and to obtain support for achieving the objectives of the management plan of the ROSCI0128 North of East Gorj site; • Promoting the sustainable use of natural resources, which ensures support for species and habitats of community interest; • Creating opportunities for sustainable tourism through natural and cultural values with the aim of limiting environmental impact.

No.	Name	General objectives
13	Integrated Management Plan for the Natura 2000 site ROSCI0188 Parâng and for the protected areas of national interest 2,800 Miru Bora, 2,803 Latoriţa Lake, 2,799 Câldarea Gâlcescu, 2,528 Jieţului Gorges and 2,498 Piatra Crinului.	• Conservation and biodiversity management of habitats and species of conservation interest; • Detailed inventory/assessment and monitoring of biodiversity; • Effective administration and management of the ROSC0188 Parâng site and ensuring the sustainability of management; • Communication, environmental education and public awareness; • Maintaining and promoting sustainable natural resource exploitation activities in areas designated for these activities and reducing unsustainable ones; • Creating opportunities for sustainable tourism through natural and cultural values with the aim of limiting the impact on the environment.
14	Lower Olt Valley Management Plan ROSPA0106	• Ensuring the conservation of species and habitats for which the protected natural area was declared, in order to maintain their favorable conservation status; • Carrying out assessments and monitoring of priority species on the site and factors impacting bird species; • Achieving effective administration and management of the site and ensuring the sustainability of management; • Increasing the level of awareness and education of the public and interested groups regarding the importance of biodiversity conservation and to obtain support for achieving the objectives of the site management plan; • Promoting the sustainable use of natural resources, which ensures support for species and habitats of community interest; • Creating opportunities for sustainable tourism through natural and cultural values, with the aim of limiting the impact on the environment.
15	Management plan of the Natura 2000 Site ROSCI0103	• Ensuring favorable conservation status for habitats and species of conservation interest; • Raising awareness (improving knowledge and changing attitudes and behavior) for interest groups that have an impact on biodiversity conservation and the level of acceptance of protected area status; • Promoting the sustainable use of natural resources; • Ensuring efficient and adaptable management of the site by supporting a functional management structure, during the implementation of the management plan; • Updating the knowledge base on species and habitats of conservation interest (including their conservation status) in order to provide the necessary support for

No.	Name	General objectives
		assessing the effectiveness of management measures and adjusting them.
16	Management plan of the Natura 2000 Site ROSPA0060 Taşaul – Corbu Lakes	• Maintaining functional aquatic ecosystems and habitats in the Taşaul-Corbu Lakes Natura 2000 site, contributing to maintaining and improving the favorable conservation status of bird species of community interest; • Adaptive management based on integrated monitoring of Taşaul-Corbu Lakes, also contributing to increasing the administrative capacity of the protected natural area; • Ensuring participatory management of Taşaul-Corbu Lakes through the active involvement of all stakeholders, increasing public awareness of the Natura 2000 site and understanding of environmental problems in the area, thus contributing to the sustainable development of the area.
17	Management plan of the Natura 2000 Site ROSCI0210 Lechinţa Ravine	• Conservation and management of species and habitats of community interest; • Biodiversity monitoring; • Effective administration and management of the protected natural area and ensuring the sustainability of management; • Communication, environmental education and public awareness; • Sustainable use of natural resources.
18	Revised RBDD Management Plan	• Conservation and management of biodiversity (of species and habitats of conservation interest); • Detailed biodiversity inventory and assessment and biodiversity monitoring; • Effective administration and management of the protected natural area and ensuring the sustainability of management; • Communication, environmental education and public awareness; • Sustainable use of natural resources; • Sustainable tourism (through natural and cultural values); • Conserving biodiversity, protecting the local human population and developing a sustainable economic environment.
19	Management plan for the Natura 2000 site ROSPA0124 Lakes on the Ilfov Valley	• Ensuring the conservation of bird species for which the Natura 2000 site has been designated and their associated habitats in order to maintain/achieve a favorable conservation status.

No.	Name	General objectives
		• Ensuring the database/information on bird species for which the Natura 2000 site has been designated and their associated habitats, including their conservation status, in order to provide the necessary support for biodiversity conservation management and the evaluation of management efficiency. • Ensuring efficient management of the protected natural area with the aim of maintaining/achieving the favorable conservation status of the bird species for which the Natura 2000 site was designated. • Raising awareness - improving knowledge and changing attitudes and behavior - for stakeholder groups that have an impact on biodiversity conservation. • Promoting the sustainable use of natural resources, which ensures support for the bird species for which the Natura 2000 site was designated. • Creating opportunities for sustainable tourism, through natural and cultural values, with the aim of limiting the impact on the environment.
20	Management plan for protected natural areas: ROSCI0071 Dumbrăveni - Urluia Valley - Vederoasa Lake, ROSPA0036 Dumbrăveni ROSPA0001 Aliman – Adamclisi, ROSPA0007 Vederoasa Pond, 2361 Dumbrăveni Forest Nature Reserve, 2350 Petroșani Limestone Walls Nature Reserve – Deleni, 2351 Aliman Fossil Site Nature Reserve, IV.30 Vederoasa Lake Nature Reserve	• Ensuring the conservation of the habitats and species for which the site was declared, in order to achieve and/or maintain their favorable conservation status; • Updating the information/database regarding the habitats and species for which the site was declared - including their conservation status - in order to provide the necessary support for biodiversity conservation management and the evaluation of management efficiency; • Ensuring efficient long-term site management; • Raising awareness - improving knowledge and changing attitudes and behavior - for interested groups that have an impact on biodiversity conservation; • Promoting the sustainable use of natural resources, which ensures support for species and habitats of conservation interest; • Creating opportunities for sustainable tourism – through natural and cultural values.
21	Management plan of the Natura 2000 site ROSCI0103 Buzăului Meadow	• Ensuring favorable conservation status for habitats and species of conservation interest; • Raising awareness (improving knowledge and changing attitudes and behavior) for interest groups that have an impact on biodiversity conservation and the level of acceptance of protected area status; • Promoting the sustainable use of natural resources;

No.	Name	General objectives
		• Ensuring efficient and adaptable management of the site by supporting a functional management structure, during the implementation of the management plan; • Updating the knowledge base regarding species and habitats of conservation interest (including their conservation status) in order to provide the necessary support for evaluating the effectiveness of management measures and adjusting them.
22	Management plan Lower Olt Valley ROSPA0106	• Ensuring the conservation of species and habitats for which the protected natural area was declared, in order to maintain their favorable conservation status; • Carrying out assessments and monitoring of priority species on the site and factors impacting bird species; • Achieving effective administration and management of the site and ensuring the sustainability of management; • Increasing the level of awareness and education of the public and interested groups regarding the importance of biodiversity conservation and to obtain support for achieving the objectives of the site management plan; • Promoting the sustainable use of natural resources, which ensures support for species and habitats of community interest; • Creating opportunities for sustainable tourism through natural and cultural values, with the aim of limiting the impact on the environment.
23	Integrated management plan of the site of importance Community ROSCI0176 TătărușІ Forest and Nature Reserve 2,546 TătărușІ Forest	• Forest Habitat Management 9130 Asperulo-Fagetum Beech Forests • Management of the plant species Cypripedium calceolus • Management of the invertebrate species Isophya stysi • Effective administration and management of the Natura 2000 site ROSCI0176 TătărușІ Forest and the TătărușІ Forest nature reserve

b).5. Analysis of conservation measures in the management plan/ANPIC regulation that may limit/influence the interventions and activities proposed by the plan

Following the identification of the general conservation objectives of the ANPIC potentially affected by the projects proposed by the updated NECP 2021-2030, it is observed that one of the objectives is common to all protected natural areas. This objective involves ensuring the favorable conservation status of habitats and species of conservation interest. Based on this objective, specific conservation measures are provided for in the management plans of each protected natural area. The constraints imposed on human activities on the territory of protected natural areas by these measures vary from prohibiting human presence to imposing restrictions on the conduct of economic activities.

The management plans of the ANPIC include specific restrictions aligned with conservation objectives, targeting projects in the energy production sector. For these projects, which are generally complex, it is recommended to identify both the restrictive measures that directly target these types of projects (for example, banning the construction of small hydropower plants on certain rivers or on all rivers within an ANPIC; banning the construction of wind farms within an ANPIC or at a certain distance from its boundaries), as well as restrictive measures that could be related to any of the components/interventions proposed by the project (for example, the placement of overhead and underground power lines).

The implementation of restrictive measures can influence the siting and development solutions of renewable energy projects (for example, in the case of wind farms, an exclusion zone with a radius of 3 km may be applied around ANPICs where highly mobile species such as birds and bats are found).

The construction of wind farms can negatively affect, both directly and indirectly, flight routes, feeding habitats and food availability, hibernation and breeding areas, potentially causing both the degradation or destruction of these areas and an increase in accidental mortality of bat species.

For wind farms of over 50 MW, it is recommended to delineate areas where wind turbines are prohibited within a radius of at least 10 km from the turbine location, or more, if colonies of long distances traveling species are present in the area (for example, near resting, nesting, or feeding areas; areas designated for bat protection, near coniferous or deciduous forests, within 200 m from the forest edge, tree alignments; wetlands and watercourses, etc). To delineate these areas, it is recommended to study the behavior of the species throughout their entire phenological cycle.

In the case of photovoltaic parks, exclusion zones include areas within ANPICs where habitats of community interest are found (semi-natural and natural grasslands, such as semi-dry grasslands, mountain and lowland hay meadows, secondary saline and silvosteppe grasslands). Exclusion zones should be established based on the ecological requirements and behavior of species of community interest, with exclusion limits potentially ranging from 500 m to 6 km from the project area.

The construction/installation of photovoltaic parks on grassland and/or arable land directly affects the feeding habitat of species, by removing these areas from their hunting territory. Therefore, it is recommended to avoid placing photovoltaic parks within or near protected natural areas designated for bird species protection or located along their migration corridors.

Energy production projects that include the placement of medium-voltage power lines within ANPICs or crossing the surface of an ANPIC must be insulated to prevent high mortality of bird species, such as diurnal raptors and storks.

b).6. Other relevant information regarding the conservation of ANPIC, including possible changes in its natural evolution

The current conservation status of protected natural areas of community interest, including the evolution/changes that may occur in the future, are difficult to assess at the moment, because

some of the management plans are under review and the implementation details of the projects proposed by the updated NECP 2021-2030 that intersect or overlap with protected natural areas are not known. This information will be obtained following the appropriate assessment studies carried out for each project with a potential significant impact on protected natural areas.

Ic). Presentation of the results of field activities

At this stage, field activities cannot be carried out, as detailed information about the projects within the updated NECP 2021-2030 is not known.

Id). Analysis of pressures and threats

The pressures and threats associated with the projects proposed by the updated NECP 2021-2030 are present both in the construction and operation/exploitation phases of these objectives.

The objectives proposed by the NECP 2021-2030 involve works that may exert pressure on biodiversity in the areas where they are carried out. All works related to the construction period, as well as those in the operating phase, will be analyzed in detail within the environmental impact assessment studies for each individual project.

Ie). Impact assessment

e).1. Identification and quantification of impact

The projects under PAM4 Development of new CCGT capacities and PAM5 Promotion of high-efficiency cogeneration capacities are located on existing sites that do not overlap with protected natural areas; however, protected natural areas have been identified in the area of influence of these objectives.
The potential impact generated by the implementation of projects may come in the construction phase from the exploitation of the necessary raw materials and from the generation of air emissions and waste through their improper management. In the operation phase, the potential impact may be generated by emissions of combustion gases and waste resulting from the activity of the respective facility. The combustion of natural gas may result in polluting particles that accumulate in the air or reach the ground with acid rain. The main effects of acid rain are the acidification of water or soil and the impact on tree growth or their foliar degradation, especially at high altitudes. Another gas eliminated in the atmosphere is carbon dioxide – the main responsible for global warming that causes climate change. The potential effects of global warming cause changes in the distribution of vegetation at the level of ecological systems, changes in the distribution areas of species, loss of habitats, increased mortality due to thermal stress among organisms, changes in reproductive cycles, expansion of the areas of invasive species and trophic changes.

Policies and measures within PAM 22 Increase of the domestic generation capacity from PV power plants are aimed at increasing the national energy production capacity in photovoltaic power plants. Thus, it is planned to install and put into operation, by 2050, an additional capacity for producing electricity from solar sources of 700 MW each year from 2023 to 2030. The main impacts generated by photovoltaic parks are represented by the alteration, through the introduction of invasive species and the fragmentation of habitats of conservation interest.

An indirect effect of the alteration and fragmentation of the supporting habitats of birds and bats by modifying the conditions necessary for resting, nesting, feeding of these species. Also, the alteration of habitats can cause the reduction of the numbers of small mammals, amphibians and reptiles by modifying their shelter and feeding conditions. The modification of habitats and the change in land use also have potential direct effects on the invertebrate species located within the perimeter and in the areas adjacent to the photovoltaic park.

Policies and measures within PAM 23 Increase of the domestic generation capacity from wind aim to increase the contribution of energy obtained from wind sources. Currently, the locations of the wind farms are not determined, but investments are proposed to increase the energy from wind sources. Additionally, self-wind capacities will be built (electricity production capacities from wind energy owned by entities whose main activity is not electricity production and which can use, partially or fully, the electricity production for self-consumption).

The potential impact of wind farms can manifest itself through fragmentation and/or alteration of habitats, reduction of ecological connectivity and reduction of the population numbers of some bird and bat species. Habitats of conservation interest can be affected by removing the land occupied by the turbines from the natural circuit and by changing the use of the wind farm land. The wind farm land can be introduced into the agricultural circuit, which can lead to the appearance of invasive species. Bird and bat species can be directly affected by increasing the mortality of the population of these species following the collision with the turbine blades. At the same time, the migration corridors of bird and bat species can be affected by the presence of wind turbines. An indirect effect is the alteration of the supporting habitat of birds and bats by modifying the conditions necessary for resting, nesting and feeding. Furthermore, the alteration of habitats can cause a reduction in the populations of small mammals, amphibians and reptiles by modifying their shelter and feeding conditions. Habitat modification and land use change also have potential direct effects on invertebrate species within and adjacent to the wind farm.

The projects under PAM24 Building small hydro power plants overlap in varying proportions over protected natural areas, except for the Pașcani hydropower plant, which is located near protected natural areas. The potential impact generated by the implementation of these objectives is manifested by habitat fragmentation, alteration of some habitats through hydro morphological modification of watercourses, destruction/reduction of nesting or feeding areas of aquatic species and by waste generation. Species and habitats of conservation interest are affected by temporary or permanent diversion of the watercourse and by major modification of the course bed as a result of the works of regulation and strengthening of the banks (concrete protections). The interruption of habitat connectivity by the construction of the hydropower plant dam will permanently affect aquatic species throughout the entire operation of the hydropower plant. The absence of water can also have indirect effects on mobile, nesting species or those that use the water surface and the banks of the watercourse for feeding and shelter. Another potentially significant effect of the construction of hydropower plants is the modification of the ecological status of the watercourse by increasing turbidity or chemical status through accidental water pollution during the construction phase of the facility. The loss or alteration of habitats, as well as the reduction in the numbers of water-dependent species

(amphibians, fish, insects) can have indirect negative effects on the entire food chain, also affecting species and habitats in the rest of the protected natural area.
The potential effects are not only manifested at the level of the main watercourse, but its tributaries may be affected by works to regulate the riverbed and capture water to increase the water flow necessary for the operation of the hydroelectric power plant. Thus, all habitats and species on the territory of the protected natural area(s) will be irreversibly affected.
Construction The construction/completion of hydropower developments that almost entirely overlap protected natural areas can generate a significant impact through the complete destruction of habitats of conservation interest with irreversible negative impact on species and habitats in protected natural areas. This impact can be reduced by applying prevention, avoidance and impact reduction measures characteristic of each hydropower development completion project.

Hydropower development of the Jiu River on the Livezeni-Bumbești sector, Hydropower development of the Olt River gorge on the Cornetu-Avrig sector, Pașcani hydropower development on the Siret River, Răstolița hydropower development, Surduc-Siriu hydropower development, Hydropower development of the Siret River on the Cosmești-Movileni sector, Hydropower development of the Olt River on the Izbiceni - Danube sector, Islaz hydroelectric power plant, Cerna Belareca hydropower development and Cerna-Motru-Tismana Stage II hydropower development are provided for in the annex to Emergency Ordinance no. 175/2022 for establishing measures regarding projects for the implementation of hydropower developments under execution, as well as other projects of major public interest that use renewable energy, as well as for amending and supplementing certain normative acts. The projects provided for in this annex are declared as projects of major public interest that use renewable energy and are considered exceptional situations, within the meaning of the provisions of art. 5 paragraph (2) of Law no. 292/2018 on the assessment of the impact of certain public and private projects on the environment, being projects of national interest/importance/national security, for the implementation of which the removal of land from the agricultural circuit is permitted under the terms of the Land Fund Law no. 18/1991, republished, with subsequent amendments and supplements, and, where appropriate, the definitive removal of land from the national forest fund under the terms of art. 36 of Law no. 46/2008 - Forestry Code, republished, with subsequent amendments and supplements.
These projects are subject to decisions of the Ministry of Environment, Waters and Forests of partial exemption from the application of the provisions of Law 292/2018, namely the exemption from the application of the provisions of art. 9 para. (2) – (9) of the law and from art. 9-13, art. 14 para. (1) letter. b, art. 16 para. (1) letter. c) and d), para. (2) and para. (3) of Annex 5 – PROCEDURE for environmental impact assessment for certain public and private projects of the law. Following these decisions, the projects are subject to environmental impact assessment (EIA), Strategic Environmental Assessment (EA) and water body impact assessment study (SEICA).
For the Cerna-Belareca, Livezeni-Bumbești, Surduc-Siriu, Răstolița, Pașcani and Cerna-Motru-Tismana Stage II hydroelectric power plants on the Siret, the Strategic Environmental Assessment, the impact assessment study on water bodies and the environmental impact report were completed.

For these projects, the conclusions of the appropriate assessment (EA) studies and the water impact assessment (SEICA) studies are briefly presented below. Also, the specific impact mitigation/reduction measures identified in these studies complete the chapter on Impact avoidance and reduction measures of this study.

The conclusions of the EA carried out for the AHE Cerna-Belareca are the following:

The project includes elements that have not been completed within the Cerna-Belareca Hydropower Development project approved by Decree no. 158/13.05.1980, the current stage of project implementation being over 80%. The interventions within the project (works remaining to be executed) can be divided into 4 main areas:

- Zone 1 Cornereva Lake; - It will not be implemented in protected natural areas (the straight-line distance from the Natura 2000 Sites boundary is between 2-4.1 km). Cornereva Lake will be created by damming the Belareca watercourse (stage already completed, now this stage is over 80% completed, the river course being diverted through the dam body, via the pipeline). At the same time, it should be noted that this watercourse is a right tributary of the Cerna River (it is partially located in a protected natural area), the Cornereva Dam being built over 23.5 km from the confluence of the two rivers, on the Belareca River there being over 10 transverse and lateral fragmentations (including bottom sills, dams, natural barriers) from the confluence with the Cerna River to the dam. So, although it is certain that a negative impact will occur in the area of this watercourse (Belareca River), it is not part of a protected natural area of community interest (ANPIC) and the ecological connectivity with the Cerna River is already interrupted by the numerous fragmentations already existing.
- Zone 2 Bolvașnița 1 – here the remaining works to be executed are works inside the galleries already drilled;
- Zone 3 Bolvașnița 2 – here the remaining works to be executed are works inside the galleries already drilled;
- Zone 4 Balance Castle – Herculane pressure node – penstock – 110 kV station – Starting with the works in the balance castle area and those of the pressure node and ending with those for the 110 kV station, all of these will be carried out on the surface of the above-mentioned protected natural areas. At the level of these works and in order to analyze the effects generated by them, some clear clarifications must be made:

❖To carry out these works (remaining to be executed), no additional land will be occupied, no deforestation or removal from the forest fund will be carried out;

❖No works will be carried out on the waters, thus no work will be carried out in the Cerna Riverbed (no damming of watercourses, deforestation/cutting of woody vegetation will be carried out) and at the same time there will be no leakage of pollutants into the river waters;

❖There will be no rock dislocations, extraction of mineral aggregates from riverbeds or rocky slopes on the site or in its vicinity;

❖No other access routes (roads, paths, etc.) will be built, but existing roads (including forest roads) will be used;

Following the detailed analysis carried out within the Strategic Environmental Assessment, it can be stated that the impact manifested by the implementation of the project, in all its phases, on the species and habitats for which the protected natural areas of community interest were designated, will be insignificant, not affecting their structure and functions.

SEICA conclusions for AHE Cerna-Belareca are the following

The SEICA study aimed to analyze the potential impacts on the ecological status/ecological potential and chemical status of surface water bodies (rivers), the quantitative and qualitative status of groundwater bodies, respectively the status of protected areas as a result of the project implementation. The works related to the AHE Cerna Belareca are designed on the 3 water bodies identified as potentially affected by the project.

Regarding the cumulative impact, in the case of some quality elements ("longitudinal connectivity" and "fish fauna"), possible permanent and significant effects were identified in the case of the water bodies Belareca – spring – Mehadica confluence + tributaries. It is mentioned that in the case of the body Cerna watershed - Herculane accumulation - Bela Reca confluence, the possible permanent and significant effects were identified in the case of substrate, phytobenthos and benthic invertebrates; in the case of flow, depth and width and macrophytes, permanent and uncertain effects were identified that can be mainly associated with upstream users (AHE Cerna-Motru-Tismana).

The conclusions of the EA carried out for the AHE Livezeni – Bumbești are the following:

"The project on increasing the share of electricity production from renewable sources by completing the works and ensuring permanent monitoring of the environmental impact of the hydropower development of the Jiu River on the Livezeni - Bumbești sector" - continuation of the remaining works to be executed at the AHE Livezeni - Bumbești will be implemented almost entirely (except for the LEA area) on the territory of the Natura 2000 site ROSCI0063 Jiu Gorge.

In order to correctly substantiate the measures to prevent, avoid and reduce the impact generated by the project on elements of conservation interest in the protected natural area, specific studies were carried out on each group of species/habitats, the results of which are presented in the previous chapters, with an emphasis on assessing the impact of the project on each species/habitat of conservation interest.

The residual impact after the project implementation was estimated to be insignificant, provided that the prevention, avoidance and mitigation measures proposed in this study are respected. At the same time, both during the construction period and subsequently, in the operation phase, are necessary

monitoring of biodiversity elements, in order to accurately calculate the impact generated and possibly recalibrate impact reduction measures.

The SEICA conclusions for the AHE Livezeni – Bumbești are as follows:

The SEICA study aimed to analyze potential impacts on ecological status/potential ecological and chemical status of surface water bodies (rivers) and the status of protected areas as a result of the project implementation.

All water bodies analyzed for which possible effects (impact/impact cumulatively) currently meet the environmental objectives (good ecological status and good chemical status) and, therefore, may present a risk of deterioration in some quality elements.

Regarding the cumulative impact, possible permanent and significant effects were identified in the case of the water body Jiu - confl. Jiu de Est - Acum. Vădeni for the quality elements "depth and width of the river", "structure and substrate of the riverbed", "phytobenthos",

"macrophytes" and "benthic invertebrates" as well as possible permanent and significant effects in the case of the water body Bratcu - spring - Jiu confluence for the quality elements "longitudinal continuity" and "fish fauna".

The conclusions of the EA carried out for the AHE Surduc-Siriu are as follows:

The location of the Project regarding increasing the share of electricity production from renewable sources by completing the works and ensuring permanent monitoring of the environmental impact at the Surduc - Siriu hydropower development" - continuation of works remaining to be executed at the investment objective" is outside the limits of protected natural areas, ecologically connected only with the Natura 2000 Site ROSAC0190 Penteleu.

In order to correctly substantiate the measures to prevent, avoid and reduce the impact generated by the project on elements of conservation interest in the protected natural area, specific studies were carried out on each group of species/habitats, the results of which are presented in the previous chapters, with an emphasis on assessing the impact of the project on each species/habitat of conservation interest.

The residual impact after the project implementation was estimated to be insignificant, provided that the prevention, avoidance and mitigation measures proposed in this study are respected. At the same time, both during the construction period and subsequently, in the operation phase, are necessary

monitoring of biodiversity elements, in order to accurately calculate the impact generated and possibly recalibrate impact reduction measures.

SEICA's conclusions for the AHE Surduc-Siriu are as follows:

The hydro morphological response assessment was carried out for the following water bodies:

- RORW12-1-82-15_B1 Bâsca and its tributaries;
- RORW12-1-82_B2 Buzău – Siriu Accumulation – Bâsca confluence.

Conclusions of the hydro morphological response assessment for the Bâsca River

- Considering the works proposed by the project, but also the existing works, the analysis indicates a potential significant impact in relation to the hydro morphological quality elements of the hydrological regime, the structure and substrate of the riverbed and the structure of the riparian zone at the water body level;
- A change in the grain size composition of the riverbed is estimated due primarily to the construction of the Surduc dam and the change in the flow regime along the length of approx. 34 km (downstream of the dam). Both upstream and downstream of the dam through sedimentation and erosion processes, respectively, the degree of uncertainty is a result of the variability of the length over which these processes will manifest.
- For the hydro morphological elements: "Morphological conditions, riparian zone structure", the length of the impact produced by the project could not be accurately assessed. It is estimated that the maximum impact will extend to the area located downstream of the dam (approx. 35 km). The impact at the water body level was considered "uncertain". Despite the uncertainties, the existing observations and conditions provide a basis for establishing premises that suggest that a significant impact is plausible, for the hydro morphological element longitudinal continuity of the river: The proposed works create a reservoir of 1.6 km in length (approx. 2% of the length of the water body) with an area of less than 10 ha, which does not meet the criteria for a water body, therefore it does not imply a change in the typology at the

water body scale. The project provides for the construction of a fish ladder in the Surduc dam area to ensure the migration of ichthyofauna in the area. By constructing the fish ladder, the impact of the dam construction will be insignificant on the continuity longitudinal of the water body;

- For the hydro morphological quality element lateral continuity of the river, the impact is considered to be insignificant at the water body scale;
- There is a potential for the proposed works for the construction of the AHE Surduc to lead to deterioration of hydro morphological quality elements, thus affecting the overall condition of the water body.

Conclusions of the assessment of the hydro morphological response for the Buzău River

- For the hydro morphological element "Hydrological regime": the quantity and dynamics of the flow will be modified because the flows derived from the Bâsca River will be processed in the Nehoiașu 2 HPP. Also, on this water body is located the Nehoiașu 1 HPP, which processes water from the Siriu reservoir;
- The hydrological regime of the water body will be modified as follows:
  - during the exploitation of the two HPPs, the discharged flows will be higher than the natural flows on the Buzău River;
  - during the period when no processing is carried out, the outflow flows are the ecological/servitude flows discharged from the Siriu reservoir.

The impact of the project and the existing works on the water body will be insignificant from the point of view of the hydrological regime indicator.

- For the hydro morphological elements: ''Morphological conditions: structure and substratum of the riverbed and structure of the riparian zone'' no major changes were assessed compared to the existing situation of the water body. The effect at the water body level was considered insignificant;
- For the other hydro morphological elements, the impact is insignificant at the water body level;
- The works proposed for the implementation of the Surduc WFD do not cause deterioration of the hydro morphological quality elements and do not affect the general condition of the water body.

The conclusions of the EA carried out for the AHE Pașcani, on the Siret River, are as follows:

The works necessary for the construction of the AHE Pașcani and its operation will not affect habitats of community interest and the populations of species found on the project site and those in the vicinity of the site, including those for whose protection the existing protected natural areas in the project's area of influence have been designated because:

a. The project does not involve removing areas from agricultural use within protected natural areas;

b. The species for whose protection the protected natural areas have been designated will not be affected.

c. Habitats of community interest will not be affected;

d. The implementation of the project will not lead to habitat fragmentation;

e. The feeding habitat of fauna species identified in the project site or mentioned in the standard forms of protected natural areas will not be lost or degraded;

f. Reproduction, resting and shelter areas will not be affected;
g. The implementation of the project will not lead to significant changes in population density (no. of individuals / area);
h. The noise produced will not contribute to the significant impact on the fauna species identified in the AHE Pașcani site area;
i. Indirect effects on fauna populations within the site or in its vicinity are insignificant.
Taking into account all the aspects presented in this Strategic Environmental Assessment, the negative impact of the works at AHE Pașcani on the environment is insignificant, temporary and reversible, except for the permanent occupation of some work areas, but even in their case, because they represent a very small percentage of the analyzed area, because these areas are located entirely outside protected natural areas, are not occupied by habitats of conservation interest and do not represent a breeding or feeding area, the residual impact is insignificant.
According to the Impact Assessment Matrix on Specific Conservation Objectives, which assessed the impact of the project on the specific conservation objectives established by the National Agency for Protected Natural Areas for the protected natural areas existing in the area of influence of the project, the impact on each parameter and target values established for each species and for each habitat existing within the protected natural areas was assessed. Following this assessment, it emerged that the parameters established for the species and habitats existing within these protected natural areas will not be affected, with the exception of the parameter of longitudinal fragmentation elements in the case of the ROSCI0378 Siret River between Pașcani and Roman site, but given that the project provided for the construction of a fish ladder, the impact will be insignificant, consequently the construction of the AHE Pașcani will not affect the conservation objectives of the protected natural areas and the integrity of these protected natural areas. From a very cautious approach, it was considered that the implementation of the project may affect the population size of some of the species observed in the project site (but which were considered not to be part of the populations within the protected natural areas, given the distance from the areas where they were observed). Thus, the execution of the construction works of the AHE Pașcani may generate a risk of accidental casualties, but this risk is extremely low considering that the works will be carried out in areas that are only occasionally used for foraging (generally by raptor species) and do not represent a breeding area for these species. The level of traffic generated by the transport of construction materials and electrical equipment is very low, and the risk of accidental casualties is practically zero.
During the operating period, no transport activities are necessary, so the mortality risk is represented by the risk of collision of bird specimens with the CHE Pașcani building but given that this building exists and that no accidental victims have been recorded, this risk is zero.
The assessment also showed that there is a risk of affecting the surface area of the habitats of species associated with aquatic habitats, water quality based on physic-chemical indicators and water quality based on ecological indicators, but only for species outside protected natural areas. The occupied surface area represents a very small percentage of the total surface area of the habitats in the analyzed area. No surface area within protected natural areas will be occupied by the project. In the case of the parameters water quality based on physic-chemical indicators and water quality based on ecological indicators, it was taken into account that during the clearing and completion of the dams, water turbidity will increase as a result of sediment entrainment. The project does not represent a direct source of water pollution; it does not

involve water sampling from protected natural areas or the discharge of wastewater into protected areas.

Following the impact assessment on specific conservation objectives, the trends and distributions of species will not be affected, consequently the implementation of the project will not affect the conservation objectives of protected natural areas and the integrity of these protected natural areas.

The SEICA conclusions for the AHE Pașcani, on the Siret River, are as follows:

Conclusions of the assessment of the hydromorphological response for the Siret River, the works being located on the water body RORW12-1_B4 Siret (Bucecea dam - cf Moldova):

- considering the works proposed by the project, but also the existing works, the analysis indicates a potential significant impact in relation to hydro morphological quality elements "Longitudinal connectivity";
- a significant effect is also estimated in terms of morphological conditions: the structure and substratum of the riverbed. A change in the granulometric composition of the riverbed is thus estimated, primarily due to the change in the flow regime, both upstream and downstream.

downstream of the dam through sedimentation and erosion processes, but also a negative effect on riparian/border vegetation, the degree of uncertainty being the result of the variability of the distance over which these processes will manifest.

- the impact is considered to be insignificant at the water body scale for the hydro morphological quality element "Lateral continuity of the river";
- the impact on quantitative and qualitative parameters is insignificant, except for the fish fauna for which the implementation of the project would lead to stress; by building a fish ladder it is estimated that the impact will be reduced.
- a significant impact will be recorded by changing the typology of the water body (from river to lake) which will lead to its designation as a heavily modified or artificial water body;
- there is a potential for the proposed works for the construction of the AHE Pașcan to lead to the deterioration of hydro morphological quality elements, thus affecting the general condition of the water body.

For the **AHE Răstolița Hydropower Development**, a Strategic Environmental Assessment, an impact assessment study on water bodies and an environmental impact report were carried out for the "Final removal from the forest fund and land clearing in order to complete the Răstolița Hydropower Development". The procedure for obtaining the environmental agreement was concluded by obtaining the Environmental Agreement no. 6 of 28.10.2024, issued by the Mureș Environmental Protection Agency.

EA Conclusions for the AHE Răstolița Hydropower Development show that in accordance with the assessments carried out on the species and habitats of community interest, corroborated with their presence at the level of the investment objective, also taking into account the biology and ecology of the species, the conservation status according to the management plan and their conservation objective, it was possible to establish that the project in its entirety or only separate stages thereof may have a significant impact on the protected areas with which it overlaps. The proposed measures to prevent, avoid and reduce the negative impact can reduce the significant impact identified, but not for all the protection elements of the sites. Thus, Alternative 3 was identified and proposed, which has the role of ensuring the partial implementation of the

Răstolița Hydropower Development project in accordance with maintaining an insignificant impact on the species, habitats and sites of community interest with which the project overlaps. The monitoring program carried out during the project stages will confirm the predicted impact on species and habitats, respectively the effects mentioned in the Strategic Environmental Assessment.

The subsequent detailing of the distribution of species and habitats, the target value for the parameters of the specific conservation objectives, the pressures and threats will be able to quantify the impact of the lake filling stage at 760 mdM based on the impact assessment carried out for the deforestation stage, the rest to be executed and even for the operation stage at the time of each stage. Thus, following the confirmation or denial of the predicted impact, the entity that will implement the entire monitoring program will conclude at the end of the implementation, after the 5 years of the operation period, the possibility of starting environmental impact assessment procedures for the completion of the investment at the initially designed elevation (760 mdM).

SEICA conclusions for the AHE Răstolița Hydropower Development are as follows:
This study aimed to analyze the potential impacts on the ecological status/ecological potential and chemical status of surface water bodies (rivers), the quantitative and qualitative status of groundwater bodies, and the status of protected areas as a result of the project implementation. Of the 10 water bodies potentially affected by the project, the works related to the AHE Răstolița are designed on 6 water bodies.
The main quality elements affected by the completion and commissioning of the AHE Răstolița, respectively by the implementation of the water capture works, are the flow and longitudinal connectivity. In some cases, the decrease in flow may also generate effects on the depth, width and substrate parameters as well as on benthic invertebrates. Also, in all situations where longitudinal connectivity is interrupted by the dam works related to the AHE Răstolița on more than 30% of the length of the water body (see the approach from the element longitudinal connectivity - spatial extension from a local analysis scale to the analysis at the level of the entire water body), it was considered that this fragmentation of the aquatic habitat has an effect on the fish fauna.
Regarding the cumulative impact, possible permanent and significant effects were identified only in the case of two water bodies (Bistra and tributaries and Ilva and tributaries) for the quality elements "longitudinal connectivity" and "fish fauna".
All water bodies analyzed for which possible effects (impact/cumulative impact) were identified currently meet the environmental objectives (good ecological status/good ecological potential and good chemical status) and, therefore, may present a risk of deterioration in some quality elements.

For the hydroelectric power plants Cornetu – Avrig on the Olt River and Cosmești – Movileni on the Siret River, the environmental studies (adequate assessment study, impact assessment study on water bodies and environmental impact report) have not been completed.

For the project "Hydropower development of the Olt River on the Izbiceni - Danube sector. Islaz Hydroelectric Power Plant", the request for issuing the Environmental

Agreement was rejected because the documentation requested by the environmental authority was not submitted within 2 years of the date of their request.

EA Conclusions for AHE Cerna-Motru-Tismana Stage II

The project includes elements that were not completed as part of the "AHE Cerna-Motru-Tismana Stage II" project, approved by the Council of Ministers Decision No. 1611/20.12.1974, the current completion stage of the project is over 80%. The interventions within the project (remaining works to be executed) can be divided into two main areas:

- Area 1 – Vâja Dam and reservoir, received at the intermediate elevation of 546 masl
- Area 2 – Regulation of the Tismana River within the downstream Tismana drop step

Given the impact caused by the **fragmentation works on the Tismana River regulation in the downstream Tismana drop step** (specifically 17 longitudinal and lateral fragmentations), and the fact that no feasible measures were identified to reduce the impact to a level where the residual impact would be insignificant negative, and after analyzing the proposed alternative solutions, it is proposed that the project be implemented through **Alternative "two" – completion of the investment as proposed in the Feasibility Study for the Vâja Dam and without the Regulation of the Tismana River downstream of Tismana HPP**.

For the implementation of the selected alternative, the following clarifications are made:

- No additional land will be occupied for the execution of these remaining works, and no deforestation or removal from the forest fund will be carried out. It should be noted that deforestation was initially carried out up to the designed elevation of the dam, namely up to 604.00 masl.;
- No rock displacements, extraction of mineral aggregate from riverbeds or rocky slopes on or near the site will be carried out;
- No new access routes (roads, trails, etc.) will be built; existing roads (including forest roads) will be used, with maintenance works proposed for them.

Following the detailed analysis conducted in the study, it can be stated that the impact of the project implementation, in all its phases, on the species and habitats for which the protected natural area of community interest was designated, will be insignificantly negative for **Alternative "two" – completion of the investment as proposed in the Feasibility Study for the Vâja Dam and without the Regulation of the Tismana River downstream of Tismana HPP**, not affecting their structure and functions.

SEICA Conclusions for AHE Cerna-Motru-Tismana Stage II are as follows:

The project titled "Increasing the share of electricity production from renewable sources by completingthe works and ensuring continuous environmental impact monitoring at the Cerna-Motru-Tismana Hydrotechnical and Energy Complex, Stage II" – continuation of the remaining works at the investment objective AHE Cerna-Motru-Tismana Stage II- partially overlaps with the Natura 2000 site ROSAC0129 Nordul Gorjului de Vest, with the following works:

- The Vâja Dam and implicitly the Vâja reservoir fully overlap with ROSAC0129 Nordul Gorjului de Vest;

- The area of the regulation works and thresholds on the Tismana River, resulting from the appropriate assessment study overlaps with ROSAC0129 Nordul Gorjului de Vest.

Due to its spatial extension, the project intersects with the Jiu River basin and directly influences the surface water bodies: RORW7.1.31.6b_B47a – Bistrița – source – including Bistricioara and its tributaries Lespezel, Vâja, and Bistricioara, and RORW7.1.31_B37 – Tismana – downstream of Tismana reservoir – including Jiu.

For groundwater, the project may cause local changes to the phreatic elements and potentially influence three water bodies, namely: ROJI03 Tismana – Dobrița (Vâlcan Mountains), ROJI05 Jiu floodplain and terraces and its tributaries, and ROJI07 Oltenia.

Conclusions of the Hydromorphological Response Assessment for the Bistrița River
The proposed works on the Bistrița River are located on the water body RORW7-1-31-6B_B47A – Bistrița – source – confluence with Bistricioara and tributaries Lespezel, Vâja, and Bistricioara.

- Considering the proposed works and the existing ones, the analysis indicates an insignificant impact on hydromorphological quality elements;
- The effects of the Vâja and Clocotiș dams (from Stage I) on the longitudinal continuity of the river have already occurred, given that these have been operational since the 1980s;
- For the 2.31 km river section that becomes a reservoir, a probable effect is estimated on morphological conditions,particularly the structure and substrate of the riverbed. A change in the granulometric composition of the riverbed is expected, primarily due to the altered flow regime, along with a negative effect on riparian/adjacent vegetation. However, the impact is localized and insignificant;
- Regarding the lateral continuity of the river, the impact is considered insignificant at the scale of the water body.

Conclusions of the Physico-Chemical and Biotic Factors Assessment for the Bistrița River

- By implementing the safety variant of the dam (at 572 masl.), the project is expected to affect a smaller area of the water body. Additionally, the magnitude of the impact on the physico-chemical elements such as oxygenation and temperature conditions is reduced due to the shallower water layers. In this variant, the impact on these elements is considered insignificant at the water body level.
- The analysis of the impact on biotic factors for Project Variant B shows that reducing the affected sector to 8.9% of the water body, of which only 3.52% will be permanently transformed into a reservoir, limits the impact on aquatic communities, keeping it insignificant. For phytobenthos, increased light and oxygen availability will support natural adaptation and recolonization. Macrophytes will continue to develop in unaffected sectors, and improved hydrological conditions will aid their recovery over time. Benthic invertebrate fauna, although influenced by sedimentation and substrate changes, will benefit from refuge habitats and a high regeneration capacity. Thus, given the small proportion of the water body permanently affected and the ecosystem's recovery capacity, the impact on these parameters is insignificant.

- From the analysis of the proposed and cumulative projects, no mechanisms were identified that would cause a significant impact on the ROSAC0129 Nordul Gorjului de Vest site, which overlaps with the affected water body. The identified effects are spatially and temporally limited, without long-term influence on the structure and functionality of the ecosystem, insignificant.

Conclusions of the Hydro morphological Response Assessment for the Tismana River
The proposed works on the Tismana River are located on the water body **RORW7-1-31_B37 – Tismana – Tismana Downstream Reservoir – to Jiu**.

- Considering the proposed works in the project, as well as the existing ones, the analysis does not indicate a potential significant impact on any of the hydro morphological quality elements;
- For the quality elements to the hydrological regime - flow quantity and dynamics, and connectivity with groundwater - no cause-effect mechanisms were identified in the analysis;
- For the other analyzed hydro morphological elements, the works may produce a local impact that does not alter the classification of the indicators according to the Jiu River Basin Management Plan (RBMP) 2022–2027.

Conclusions of the Physic-Chemical and Biotic Factors Assessment for the Tismana River

- A significant physic-chemical impact at the water body level was anticipated for oxygenation conditions elements. This significant impact was assessed only in the case of a cumulative effect with the desilting works proposed to be carried out on this water body. Essentially, this would result in increased turbidity, which could significantly affect oxygenation conditions.
- The cumulative effect of the regulation works proposed in the project with the desilting and bank protection works carried out by **SGA Gorj** leads to a significant impact on **phytobenthos, macrophytes, benthic invertebrate fauna, and ichthyofauna**. Substrate and sediment transport changes will affect algal and macrophyte communities, prolonging their recovery period. Benthic fauna will be impacted by the loss of hard habitats, and fish populations will experience the cumulative effects of increased turbidity, reduced oxygen levels, and loss of microhabitats. Therefore, the impact on these parameters remains significant.
- From the analysis of the proposed project and of the cumulative effects, no mechanisms were identified that would cause a significant impact on the **ROSAC0129 Nordul Gorjului de Vest** site, which overlaps with the affected water body. The identified effects are spatially and temporally limited, without long-term influence on the structure and functionality of the ecosystem, remaining insignificant.

The projects under PAM29 Increase of the domestic generation capacity from biomass and biogas CHP and PP through the construction of new power and cogeneration plants have not established the location and the details of the execution of these objectives are not known.
The potential impact generated by the implementation of the projects may come in the construction phase from the exploitation of the necessary raw materials and from the generation

of air emissions and waste through their improper management. In the operation phase, the potential impact may be generated by the waste resulting from the activity of the respective objective. Biogas plants represent a neutral energy source in terms of carbon dioxide emissions, because sources from plants and animals emit the carbon dioxide that they have accumulated during their life and that they would have released even without energy use. Also, biogas production is sustainable, renewable, neutral in terms of carbon dioxide emissions and reduces dependence on fossil fuels. Thus, the impact of these projects is positive, reversible and long-term.

Projects under PAM60 Increased use of nuclear energy are located on existing sites that do not overlap with, but are located in close proximity to, protected natural areas. The potential impact of these objectives may be represented by the gaseous and liquid effluents and the radioactive and non-radioactive waste generated.

The U1 Refurbishment Project has completed the environmental impact assessment procedure and is in the process of issuing the Environmental Agreement. The conclusions of the Environmental Impact Report show that the project does not have a significant impact on biodiversity.

For units U3 and U4 of the CNE Cernavodă, the potential impact on biodiversity as a result of the discharge of cooling water was analyzed in the study of the appropriate assessment of Units 3 and 4 of the CNE Cernavodă – Impact on biodiversity (DDNI, 2012). The main conclusions of this study were:

- The impact of the CNE Cernavodă Units 3 and 4 project is insignificant, the simultaneous operation of 4 nuclear units on the CNE Cernavodă site not affecting the favorable conservation status of habitats and species, including those of community interest present on the territories of the closest Natura 2000 sites (ROSCI0022 Canaralele Dunării, ROSPA0002 Allah Bair-Capidava and ROSPA0017 Canaralele from Hârșova);
- No significant negative impact on the evolution of flora and fauna in the project's area of influence was identified due to the discharge of hot technological water into the Danube;
- In the event of an accident, the Cernavodă nuclear power plant has emergency intervention procedures and trained personnel for rapid interventions;
- The analysis of the effects on the natural succession and composition of rheophilic phytoplankton in the Danube, on the conservation status of species of community interest (plants, invertebrates, fish, amphibians, reptiles, birds, mammals) highlighted that the impact will be insignificant.

From a radiological point of view, the studies for assessing the impact of the activities on the CNE Cernavodă platform on biodiversity, the impact on the flora and fauna in the habitats present around the CNE Cernavodă due to the releases of tritium into the environment from the two units of the plant, is negligible. It is also estimated that tritium emissions on the CNE Cernavodă platform will decrease as a result of the application of the heavy water tritium removal process through the operation of the heavy water tritium removal facility, thus reducing the radiological impact on biodiversity.

The potential impact of the SMR is expected to be below the current level of the CNE Cernavodă, taking into account the small size of the reactor, as well as the state-of-the-art technology used in small modular reactors. The potential impact of the SMR will be analyzed within the environmental impact assessment procedure, identifying and assessing the forms of impact and the appropriate measures to reduce them.

Another potential source of impact on protected natural areas associated with energy production objectives is electricity transmission lines. These can be overhead or underground depending on the type, transmission capacity and areas crossed by these lines.
The potential impact caused by the commissioning of new power lines is the result of their construction and operation activities. Crossing protected natural areas and clearing forested areas for the construction of OHL support poles or burying OHL have multiple direct and indirect effects on biodiversity.

The main forms of potential impact are the alteration of habitats and flora in areas in the immediate vicinity of the work area, thus affecting the integrity of the habitats, the reduction of the number of individuals and the distribution areas of species and the accentuation of the fragmentation process. Invertebrates are indirectly affected by the reduction of the area used for feeding, reproduction and rest. Since they represent a source of food for countless other categories of organisms, the reduction of the number of invertebrates in forested areas produces major functional ecological imbalances, as is the case with the appearance of invasive insect species or the reduction of food sources for birds, amphibians, reptiles or bats.

e).2. Assessment of the significance of impacts

The projects proposed through the updated NECP 2021-2030 will have a positive impact on the environment by reducing fuel consumption and greenhouse gas emissions.

Some of the projects proposed by the updated NECP 2021-2030 are in various phases of investment approval. For those objectives that have completed the appropriate evaluation procedure, the conclusions of these evaluations are presented below.

Implementation of projects under PAM4 Development of new CCGT capacities and PAM5 Promotion of high-efficiency cogeneration capacities may have a short-term negative impact during the construction or retrofitting phase of the projects and a long-term positive effect by increasing the efficiency of natural gas use for electricity production and reducing flue gas emissions through the use of modern technologies. At the same time, in the operation phase, new CCGT and high-efficiency cogeneration (CHP) capacities may generate a potential negative impact through the exploitation of natural gas resources and their transportation (Table 25).

Table 25. Identification of potential indirect negative impacts of CCGT and CHP projects

Natural gas exploitation	Transportation
- the appearance or increase of erosion; - noise pollution; - atmospheric pollution; - degradation and fragmentation of species habitats, especially through deforestation of certain forest areas, and facilitating the entry of invasive species; - change in water quality.	- air emissions from mobile sources; - destruction and fragmentation of habitats caused by natural gas pipelines.

Developing objectives within PAM22 Increase the domestic generation capacity from PV power plants may have a negative, short-term impact during their construction phase and a positive, long-term impact by introducing the use of renewable energy sources without air emissions for energy production. At the same time, the potential negative impact of these objectives can be reduced by the use of good practice guides and appropriate management of biodiversity on the site and in the photovoltaic park area.

Implementation of projects within and PAM23 Increase the domestic generation capacity from wind can have a negative, short-term impact during their construction phase and a positive, long-term impact by introducing the use of renewable energy sources without air emissions for energy production. The potential negative impact of wind farms on biodiversity can be reduced by operational and management measures applied throughout the life cycle of the wind farm.

Projects under PAM24 Building small hydro power plants are associated with green, clean, carbon-free energy that uses a renewable resource to produce electricity. The construction of small hydropower plants is associated with a potential negative impact on biodiversity generated by the modification and alteration of watercourses with significant effects on the habitats of aquatic flora and fauna. At the same time, the modification of watercourses can have a potential negative impact on the hydrological circuit in the affected basin by modifying the structure of habitats and the availability of food resources and nesting areas for bird and animal species. Another potential negative impact is generated by the occurrence of physico-chemical changes in the water body with direct effects on aquatic fauna and flora. However, a positive impact is the creation of new resting and feeding places for bird and animal species at the level of reservoirs.

The projects under PAM29 Increase of the domestic generation capacity from biomass and biogas CHP and PP through the construction of new power and cogeneration plants have a positive long-term impact by reducing the amount of CO2, thus contributing to mitigating the effects of global warming.

The construction of units U3 and U4 of the CNE Cernavodă, as well as the construction of the SMR, are the main investments under PAM60 Increased use of nuclear energy. The potential impact on biodiversity of the construction of U3 and U4 and the retrofitting of U1 was assessed as insignificant within the impact assessment procedure.

The potential impact of the SMR is expected to be below the current level of the CNE Cernavodă, taking into account the small size of the reactors, as well as the state-of-the-art technology used in these reactors.

The construction of electricity transmission lines may have an initial potential negative impact generated by the construction of support poles and the installation of high-voltage lines, an impact diminished during the operating period through reduced human presence for maintenance and operation.

If). Measures to avoid and reduce the impact

The projects proposed within the updated NECP 2021-2030 will have different planning, design and implementation stages, which allow for the establishment of sets of complementary measures to avoid and reduce the potential impact on the national network of Natura 2000 sites.

These measures represent a set of general measures applicable to the implementation of all projects for which a potential impact has been identified within the updated NECP 2021-2030. The set of proposed measures is:

- Projects located in the same area or in adjacent areas will be built in phases, and the specific prevention, reduction, compensation measures (if applicable) of each project will be correlated to reduce the potential impact of each project, but also the cumulative impact on the entire area;
- For projects located in the same area or in adjacent areas, common access roads and utilities will be designed for all projects (where possible) and the same sources of raw materials will be used. It is also recommended to use the same site organization for these projects;
- One of the criteria for selecting raw material supply sources will be the shortest route to the project (where possible);
- One of the selection criteria for implementation should be the ratio between the economic benefit of the project and the negative effects on protected natural areas;
- Avoiding the location of projects inside or in the immediate vicinity of Natura 2000 sites. If these projects are of strategic importance, their development will be carried out only after applying the provisions of Article 6.4 of the Habitats Directive, respectively the compensatory measures;
- Developing monitoring plans for projects throughout their duration (design, construction and operation stages).

At the same time, it is recommended to implement specific measures to prevent and reduce negative effects on environmental components (Table 26).

Table 26. Specific measures to prevent and reduce negative effects on environmental components that may affect protected natural areas

No.	Environmental component	Specific measures
1	Air	Choosing locations so that transportation distances for raw materials, employees and waste are minimal.
		Avoiding areas where air quality is poor when selecting the location of projects involving high emissions of air pollutants, during construction or in the operational phase.
		Selecting the best available technologies for project implementation.
2	Water	Selecting the best available technologies for achieving projects and the implementation of measures to mitigate the impact on water bodies.
		Implementation of projects and measures that do not lead to deterioration of the chemical status of water bodies and the ecological potential/status of surface water bodies. Where this cannot be avoided, the conditions for the application of Art. 4.7 of the Water Framework Directive must be justified and taken into account.
		Selecting a project site taking into account all water uses downstream of the project, existing, under construction or included in some plans or programs (e.g. drinking water sources, food industry, energy, protected natural areas, irrigation).
		Ensuring the ecological/servitude flow downstream of the damming and water capture works, taking into account the provisions of Government Decision No. 148/2020 on the approval of the method of determining and calculating the ecological flow.
		Construction of fish passage structures in accordance with current regulations.
		Re-introduction of sediments downstream of reservoirs. Improvement of the morphological conditions of the riverbed (increasing the diversity/morphological complexity of the riverbed).
		Installing fish screens at each water intake to reduce accidental entry of fish into water intakes.
		Keeping the fish ladder clean and in good working order through frequent unclogging and cleaning.
		Wood waste will be released from the lake basin and utilized or spread in nearby terrestrial habitats to support xylophagous invertebrate communities; The burning of any type of waste resulting from the implementation of the project is prohibited.
		The filling of the lakes will be carried out in stages, outside of sensitive periods for fish, according to a pre-established schedule together with an expert. Biologist.
3	Soil	Limiting the land areas temporarily occupied during the construction phase.

No.	Environmental component	Specific measures
		Development and implementation of a program to prevent and reduce the quantities of waste generated and to manage substances and chemicals throughout the project's life cycle.
		Restoring the locations of work points immediately after the completion of construction works.
4	Climate change	Carrying out greenhouse gas emission inventories and assessing the climate impact of projects; Priority selection of renewable energy sources to power projects; Use of techniques and technologies with a low carbon footprint.
5	Biodiversity	Establishing the implementation calendar of projects so as to avoid nesting and breeding periods of species.
		Ensuring ecological corridors/passages for wildlife movement.
		Elimination of invasive species identified on the project site.
		All biodiversity elements will be monitored during the construction period and for a minimum of 3 years (except for ichthyofauna which is recommended for a minimum of 5 years) during the operation period.
		Implementation of monitoring programs for the mortality of vulnerable species in the project area.
		A prevention and intervention plan in case of accidental pollution will be implemented, which will provide concrete measures to prevent accidental leaks of diesel, oil or other hazardous/polluting substances into water or onto the ground.
		Throughout the construction period, allochthonous tree and shrub species, uncharacteristic of the habitat types, ruderal or nitrophilous identified on the project site will be carefully monitored, so as to prevent their spread. If necessary, their elimination will be carried out, including the shoots/roots originating from them.
		The storage of construction materials will be carried out as close as possible to the work areas (in areas already affected by the works).
		Selective collection, recovery and periodic disposal of waste will be carried out in order to avoid attracting animals, causing them illness or injury.
6	Landscape	Choosing locations for projects so that the visual impact from natural, recreational, tourist, and residential areas is minimal.
7	Cultural aspects	Including in projects measures to protect objectives with cultural and architectural value.
8	Conservation of natural resources	Using recycled materials to implement projects where possible; For new capacities, requirements regarding energy efficiency and the possibility of powering from renewable energy sources should be introduced from the design phase; Rational use of natural resources.
9	Waste	Increasing the recycling rate of municipal waste through selective collection; Transformation of non-recycled waste into usable energy (incineration, co-incineration with energy recovery, etc.).

No.	Environmental component	Specific measures
10	Population and human health	Implementing air quality, water quality and noise monitoring programs for projects located near residential areas.
		Reducing noise levels in residential areas near future objectives that would generate potential discomfort for the population.
		Reducing risks to workers' health through various measures (use of new, efficient and reliable machinery/equipment).

Furthermore, a series of general measures applicable to project types within the updated NECP 2021-2030, with potential direct effects on protected natural areas, are proposed to reduce their impact (Table 26).

Table 26. General measures applicable to project types within the updated NECP 2021-2030

Impact type	Measure description	Result
Habitat loss	Avoiding the location of projects on the surface of protected natural areas.	Avoiding damage to components of community interest
	When it is not possible to avoid locating proposed projects within protected natural areas, it is recommended to avoid areas with priority habitat distribution or habitat of priority species, as well as areas with strict protection according to the EU Biodiversity Strategy for 2030.	
	Minimize related/additional activities that will be generated as a result of implementing the proposed projects within and in the immediate vicinity of Natura 2000 sites and, in particular, avoid proposing them within protected areas.	Reducing the impact on Natura 2000 sites
	Compensation for losses/changes in habitat areas/structure. The number of areas for compensation will be determined taking into account the structural and functional relationships of the habitats (food, nesting, etc.) without limiting the compensation only to the area of the affected habitats (areas favorable to the species will be analyzed).	Compensation for losses
Habitat alteration	To avoid altering habitat surfaces, it is recommended that operations secondary to construction works (site organization, borrow pits, temporary platforms, etc.) be carried out outside protected natural areas.	Reducing impact on habitats
	Reducing and preventing the generation and improper disposal of waste throughout the project's life cycle.	
	Avoiding the exploitation of natural resources (stone, ballast pits, borrow pits, etc.) on the surface of protected natural areas.	
	The implementation of ecological restoration and reconstruction plans will be approved by the custodians of protected natural areas (the use of	

Impact type	Measure description	Result
	invasive species will be avoided, the criterion of genetic variety will be respected when selecting native species used for renaturation and repopulation of affected areas, etc.).	
	Preparation of prevention and intervention plans in case of accidental pollution for all phases of the project.	Avoiding impact through accidental contamination
	Avoiding the use of invasive species or fast-growing species for green spaces related to investment projects.	Invasive species control
Habitat fragmentation	Creating ecological corridors connecting protected natural areas/habitats for projects where technical solutions that cause habitat fragmentation cannot be avoided (for example, transport infrastructure).	Ensuring a high degree of permeability for species of community interest
	Avoiding modification of the hydrological regime of water bodies that feed or are part of protected natural areas. In the case of projects where this is not possible, it is recommended to carry out construction works in such a way as to minimize the effects on aquatic vegetation and fauna (ensuring a water flow that provides habitats favorable to flora and fauna species, avoiding excessive regulation of water courses, avoiding deforestation of banks, etc.).	Avoiding changing habitat requirements
death rate	Identify and apply technical solutions in wind and overhead line projects to avoid mortality caused by collisions of bird and bat species with wind turbines or high voltage lines. Where this is not possible, it is recommended to identify and apply operational measures to avoid mortality of these species due to collisions (reducing turbine speed, insulating overhead line cables, acoustic and visual signaling, etc.).	Reducing mortality rates for species of community interest
Disturbance of the activity of species of community interest	Establishing, from the design phase, technical and operational solutions to reduce noise produced by construction and operation works of projects located near or inside protected natural areas.	Reducing disturbance caused by noise and vibration
	Avoiding the placement of overhead power lines in areas populated by bats to avoid disturbances caused by vibrations of high-voltage lines.	

Ig). Monitoring of measures to avoid and reduce impact

Pursuant to Article 17(1) of Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, each Member State must report to the European Commission every two years on the state of implementation of the NECPs, through an integrated national energy and climate progress report covering all five dimensions of the Energy Union. These biennial progress reports are a key source for the assessment by the European Commission, pursuant to

Article 29 of Regulation (EU) 2018/1999, of progress made both at the European Union level towards achieving the Energy Union objectives and at the level of each Member State towards achieving its own targets and contributions and towards implementing the policies and measures set out in their integrated national energy and climate plans.

Implementing Regulation (EU) 2022/2299 laying down detailed rules for the application of Regulation (EU) 2018/1999 of the European Parliament and of the Council with regard to the structure, format, technical details and procedures for the integrated national energy and climate progress reports provides the necessary framework for the reporting process by including the format of the 23 annexes to be completed by the Member State and covering the 5 dimensions of the Energy Union: Decarbonisation, Energy Efficiency, Energy Security, Internal Energy Market and Research, Innovation and Competitiveness.

The biennial progress reports are an essential source for the assessment of the NECP, carried out by the European Commission, pursuant to Article 29 of Regulation (EU) 2018/1999, of the progress made both at the level of the European Union towards achieving the objectives of the Energy Union, and at the level of each Member State towards achieving its own objectives and contributions and towards implementing the policies and measures set out in the NECP.

In the context of the above, the reporting related to the NECP document was finalized by Romania in November 2023, by completing the annexes related to the reporting, with the second reporting process to take place in 2025, in accordance with the legal provisions stated above.

Romania submitted to the European Commission, within the reporting related to the NECP 2021-2030 document updated in 2023, the following:

Reporting on progress on the "decarbonisation" dimension

- information on progress towards the greenhouse gas emissions and removals targets referred to in point (a) of Article 4(1) of Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council, including progress towards the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119 of the European Parliament and of the Council in accordance with the reporting formats set out in Annex I.
- information on progress towards the achievement of the targets and contributions for energy from renewable sources referred to in Article 4(a)(2) and Article 20(a) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex II.
- the information on adaptation referred to in Article 4(a)(1) of Regulation (EU) 2018/1999 in accordance with the formats set out in Annex III to the report.

Reporting on progress made in the "energy efficiency" dimension

- information on progress towards the achievement of the objectives and contributions relating to the 'energy efficiency' dimension referred to in Article 4(b) and Article 21(a) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex IV.

Reporting on progress made on the "energy security" dimension

- information on progress towards the objectives and contributions relating to the energy security dimension referred to in Article 4(c) and Article 22(a)-(d) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex V.

Reporting on progress on the "internal energy market" dimension

- information on progress towards the objectives and contributions relating to the 'internal energy market' dimension referred to in Article 4(d) and Article 23(1)(a) to (g) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex VI.

Reporting on progress made in the "research, innovation and competitiveness" dimension

- information on progress towards the objectives and contributions relating to the 'research, innovation and competitiveness' dimension referred to in Article 4(e) and Article 25(a)-(c) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex VII.
- information on progress towards the national targets for the phasing out of energy subsidies, in particular for fossil fuels, referred to in Article 25(d) of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex VIII.

Reporting on national policies and measures

- information on progress towards the implementation of national policies and measures and, where applicable, updated or new policies and measures or groups of policies and measures referred to in points (a) and (c) of Article 17(2) and Articles 20 to 25 of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex IX.
- When reporting on the new policies and measures referred to in Article 21(b)(3) of Regulation (EU) 2018/1999, Member States shall submit the information in accordance with the reporting formats set out in Annex X.

Reporting on the amount of energy savings achieved pursuant to Article 7 of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

- the information referred to in points (b) to (d) of Part 2 of Annex IX to Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex XI.

Reporting in accordance with Article 5 of Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC

- report the total renovated floor area of heated and cooled buildings owned and occupied by their central government, referred to in point (g) of Part 2 of Annex IX to Regulation (EU) 2018/1999, in accordance with the formats set out in Table 1 of Annex XII to the reporting.
- The amount of energy savings in eligible buildings owned and occupied by their central government, referred to in point (g) of Part 2 of Annex IX to Regulation (EU) 2018/1999, shall be reported in accordance with the formats set out in Table 2 of Annex XII to the reporting.

Reporting on progress towards funding

- information on progress towards financing the policies and measures or groups of policies and measures referred to in Article 17(2)(a), Article 20(b)(3), Article 21(b)(7), Article 22(g), Article 23(1)(j) and Article 25(g) of Regulation (EU) 2018/1999, including an analysis of actual investments against initial investment assumptions, in accordance with the formats set out in Annex XIII of the report.

Reporting the impact on air quality and air pollutant emissions

- quantifying the impact of policies and measures or groups of policies and measures on air quality and emissions of air pollutants, Member States shall do so in accordance with the reporting formats set out in Annex XIV.

Reporting on policies and measures to phase out energy subsidies, in particular for fossil fuels

- on the policies and measures referred to in Article 17(2)(a) and (c) of Regulation (EU) 2018/1999 relating to the phasing out of energy subsidies, in particular for fossil fuels, in accordance with the reporting formats set out in Annex XV.

Additional reporting obligations in the field of renewable energy

- the additional information in the field of energy from renewable sources referred to in Part 1 of Annex IX to Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex XVI.

Additional reporting obligations in the field of energy efficiency

- the additional information referred to in points (e), (f) and (h)-(k) of Part 2 of Annex IX to Regulation (EU) 2018/1999 in accordance with the formats set out in Annex XVII to the reporting.

Reporting on energy poverty and just transition

- Article 3(3)(d), second subparagraph of Regulation (EU) 2018/1999, Member States shall report:

  (a) information on progress towards achieving the national indicative targets for reducing the number of households in energy poverty referred to in Article 24(a) of Regulation (EU) 2018/1999, in accordance with the reporting formats set out in Annex XVIII;

  (b) quantitative information on the number of households affected by energy poverty, referred to in Article 24(b) of Regulation (EU) 2018/1999, in accordance with the formats set out in Table 1 of Annex XIX to the report.

- Member States may report on energy poverty indicators in accordance with the formats set out in Tables 2 and 3 of Annex XIX to the report.

- Member States may report information on the national definition of energy poverty in accordance with the formats set out in Table 4 of Annex XIX to the report.

- Member States may report information on how the implementation of the integrated national energy and climate plans contributes to the just transition, including by promoting both human rights and gender equality, and addresses energy poverty inequalities in accordance with the formats set out in Annex XX of the report.

Reporting on the implementation of regional cooperation

- information on the implementation of regional cooperation referred to in Article 12, Article 20(b)(2), Article 21(b)(6), Article 22(f), Article 23(1)(i) and Article 25(f) of Regulation (EU) 2018/1999 in the context of the implementation of the objectives and contributions in accordance with the reporting formats set out in Annex XXI.

Reporting on the implementation of the recommendations referred to in Article 32(1) or (2) of Regulation (EU) 2018/1999

- information on the policies and measures adopted or planned to be adopted and implemented to address those recommendations, referred to in Article 17(6) of Regulation (EU) 2018/1999, in accordance with the reporting formats set out in Annex XXII.

Reporting on the multilevel dialogue on energy and climate referred to in Article 11 of Regulation (EU) 2018/1999

- information on progress towards establishing the dialogue referred to in Article 11 of Regulation (EU) 2018/1999 in accordance with the reporting formats set out in Annex XXIII.

The monitoring program must begin once the updated NECP 2021-2030 projects are implemented, aiming to assess the effectiveness of the measures to avoid, reduce and compensate for the impact identified in the Strategic Environmental Assessment.

The monitoring programme must: i) have established clear, comparable and feasible monitoring methods adapted to the project schedule to allow for the proper observation of the effects of the project on Natura 2000 sites, as well as the effectiveness of the measures to avoid, reduce and compensate for the impact; ii) include procedures to allow the implementation of corrective or adaptive measures to respond to unforeseen problems.

The scope, objectives, timetable and monitoring programme depend on the type and complexity of the project, as well as the characteristics of the Natura 2000 site(s) affected by the project implementation and should be established from the project planning phase and re-evaluated based on field results.

Given the level of detail of the updated NECP 2021-2030, the fact that it includes a series of projects that will be implemented throughout the national territory, for which the location of some of them is not yet known at this time, a detailed program for monitoring the effects of all projects on Natura 2000 sites cannot be proposed, but in the following a relevant set of monitoring indicators of the updated NECP 2021-2030 is proposed, which will be quantified based on the results of the individual monitoring programs at the level of each project (Table 28).

Table 28. Indicators for monitoring environmental effects in the context of the updated NECP 2021-2030

Environmental aspects	**Relevant environmental objectives for the updated NECP 2021-2030**	**Monitoring indicators**	**Frequency**	**Description**	**responsive**
Air	REO 1 Improving air quality by reducing emissions of pollutants into the air.	Emissions of pollutants into the atmosphere (COx, NOx, SO2, suspended particles, heavy metals, VOCs, PAHs) resulting from the construction and operation phases of projects within the updated NECP 2021-2030.	Quarterly measurements during the construction phase; Semi-annual measurements during the operation phase.	By implementing projects, during the construction phase, it is possible that pollutant emissions may have values that exceed the admissible limits established by the legislation on ambient air quality, but during the operation phase they may have a significant decrease compared to the current situation, through the implementation of non-polluting technologies (supercritical and ultrasupercritical parameters in the case of thermal power plants).	The plan/project owner
Water	REO 2 Improving water quality	Volume of wastewater discharged; STRENGTHS	Quarterly, during the works execution phase, for the projects proposed by the	Maintaining the permitted limit values for the discharge of wastewater through	The plan/project owner

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		pollutants discharged into natural receptors; Changes in the hydro-geomorphological regime associated with the energy sector – • ecological status / ecological potential of surface water bodies (rivers/lakes) on which hydropower developments are being carried out; • number of water bodies potentially impacted. • number of barriers (dams and weirs) constructed that affect the longitudinal connectivity of surface water bodies; • monitoring of hydromorphological, biological and physico-chemical elements of water bodies, according	updated NECP 2021-2030, by taking water samples from the wastewater/possibly thermally polluted water discharge points; Semi-annually, during the operation phase, for projects within the NECP 2021-2030, by taking water samples from wastewater discharge points. Specific frequencies of assessment requirements under the Water Framework Directive, during the execution and operation period	natural outfalls - NTPA001/ /water management authorizations;	
	REO 3 Achieving and maintaining the environmental objectives of water bodies (WMD)			Changes may occur in the morphology of the minor riverbed and in the flow dynamics as a result of works for the construction of hydropower facilities and as a result of their functioning/operation.	

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		to the Water Framework Directive.			
Soil	REO 4 Limitation and reduction of point-source soil pollution REO 5 Maintaining the pedological condition of the soil	Emissions of pollutants into the soil resulting from the construction and operation phases of projects within the updated NECP 2021-2030; Number of accidental pollutions recorded and the affected areas; Quantity and type of substances that caused the accidental pollution.	Quarterly measurements in the execution phase; Semi-annual measurements in the operation phase; Annually, both in the execution phase and in the operation phase.	The evolution of pollutant emissions into the atmosphere can lead to an estimate of the evolution of soil quality; This indicator is relative, the number of accidental pollutions does not entirely depend on the characteristics of the projects proposed by the updated NECP 2021-2030, as they can also be caused by human errors, means of transport, etc.	The plan/project owner
Climate change	REO 6 Reducing greenhouse gas emissions from the energy sector to achieve EU targets	Greenhouse gas emissions related to targets using coal as a raw material; Number of incidents resulting	Quarterly measurements in the execution phase; Semi-annual measurements in the operation phase;	Achieving this objective depends more on facilitating the market launch of alternative fuels, developing	The plan/project owner

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		from extreme weather conditions.	Annual.	infrastructure for alternative fuels, and improving the operating technology of thermal power plants; It will be compared with the situation before the project implementation.	
biodiversity	REO 7 Conservation of habitats and species of flora and fauna of community importance.	Natura 2000 habitats within sites of community interest lost/altered as a result of the implementation of projects from the NECP 2021-2030 updated; Natura 2000 habitat areas (ha) within sites of community interest reversibly affected by construction works related to projects in the updated NECP 2021-2030; Mortality of fauna species of community interest	In the execution phase and in the operation phase through monitoring programs, which target different stages of the biological cycle, depending on each class of organism.	The location of the projects (those for which the location has not yet been established) will avoid crossing protected natural areas as much as possible or where this is not possible, the occupancy percentage must be minimal and not affect habitats; In the case of those located in protected natural areas, compensation measures will be proposed depending on the	The plan/project owner

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		within Natura 2000 sites resulting from the operation of projects in the updated NECP 2021-2030; Number of protected areas intersected by projects proposed through the updated NECP 2021-2030; Surface area (ha) of protected natural areas permanently affected by new projects and/or projects that involve the continuation of discontinued investments.		occupied area and the species of flora and fauna found in the respective areas; In case of presence bats or nesting birds, monitoring the mortality of specimens within and near protected natural areas to reduce the impact on protected species.	
Landscape	REO 8 Protection and conservation of the natural landscape	Surfaces of protected natural areas affected (ha) by the projects proposed through the updated NECP 2021-2030 compared to the total area of the Natura 2000 network; Total landscape	In the execution phase and in the operation phase through specific annual measurements; During the design phase, measures will be taken to limit the negative effects on Natura 2000 habitats,	Land areas permanently occupied by projects proposed through NECP 2021-2030 updated; In the execution phase and in the operation phase through specific annual measurements.	The plan/project owner
Cultural aspects	REO 9 Preservation and conservation of cultural heritage elements				

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		transformations that could occur as a result of the implementation of the projects proposed through the updated NECP 2021-2030; Number of archaeological sites opened on various sections of the proposed projects following the discovery of archaeological sites, etc.	which will be implemented both during the execution phase and during the operation phase. If the implementation of the measures does not have the expected results, they will be permanently adapted depending on the situation on the ground. Upon completion of the execution, the habitats will be restored including through compensatory measures. During the construction works.	In the design phase, measures will be taken to limit the negative effects on Natura 2000 habitats, which will be implemented both in the execution phase and in the operation phase. If the implementation of the measures does not have the expected results, they will be permanently adapted depending on the situation on the ground. Upon completion of the execution, the habitats will be restored including through compensatory measures.	
Conservation of natural resources	REO 10 Reducing the exploitation of non-renewable resources	Quantity of alternative fuels used (tons of petroleum equivalent).	Annual	During the design phase, measures may be imposed to equip facilities that use exhaustible sources with	The plan/project owner

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
				technologies/facilities that can also use alternative fuels; The data will be compared with those from the period prior to the implementation of the projects.	
Waste	REO 11 Sustainable waste management.	The amount of waste generated for the projects proposed by the updated NECP 2021-2030 calculated per built area; The amount of waste reused or recovered through recycling for the projects proposed by the updated NECP 2021-2030 calculated per built area.	Quarterly, during the execution period and annually during the operation period.	Reports will be made on the amount of waste generated both during the execution period and during the operation period.	The plan/project owner
Population and human health	REO 12 Improving the health of the human population	The number of people affected and the number of accidents caused by the implementation of the projects proposed	Annual	During the design phase, measures will also be taken to protect the population against the risks associated with thermal energy	The plan/project owner

Environmental aspects	Relevant environmental objectives for the updated NECP 2021-2030	Monitoring indicators	Frequency	Description	responsive
		through the updated NECP 2021-2030; The number of people potentially exposed to elevated concentrations of pollutants in the atmosphere in the project implementation area; The number of occupational and work-related diseases that could result from the implementation of the projects.		facilities, measures that will be implemented by contractors. It is estimated that the number of accidents in the energy sector will be reduced; The data will be compared with the reference scenario.	

Ih) Residual impact assessment

The residual impact represents the level of impact remaining after the application of measures to avoid and reduce impacts. The reduction of the estimated impact following the implementation of the updated NECP 2021-2030 projects can be achieved by applying the measures proposed in Chapter 6.

Measures to avoid and reduce impacts. There are mainly two essential approaches:

- Avoidance of sensitive areas. Avoidance of Natura 2000 sites and/or sensitive areas within them. In this way, projects will intersect territories belonging to lower sensitivity classes or even “no sensitivity” classes, resulting in a reduction in the significance of the impact (from significant to moderate impact or from moderate to low impact);
- Reducing the magnitude of the changes. Implementing measures to reduce impacts (of the areas affected by the manifestation of these impacts), thus leading to a reduction in the magnitude of the changes and implicitly to the possibility of reducing the impact (similar to the previous approach); For small sites (preferably < 3000 ha, but especially those < 1000 ha) it is mandatory to find solutions to avoid the location/intersection of projects with Natura 2000 sites. This solution would lead to the avoidance of most of the significant impacts identified (except for the ROSCI0063 Jiu Gorge site).

For large sites where it is not possible to avoid the location/intersection of projects with Natura 2000 sites, measures are needed to avoid areas of very high and high sensitivity, and preferably also areas of moderate sensitivity.

Impact mitigation measures are required for all projects located within or in the immediate vicinity of Natura 2000 sites, whose magnitude of proposed changes is moderate, large or very large.

Implementing impact avoidance and reduction measures in the manner proposed in this study is able to ensure the avoidance of a significant residual impact.

II. Alternative solutions

In the case of this study, the zero alternative is presented (without NECP 2021-2030 updated), alternative 1 (NECP 2021-2030 updated, first version, 2023) and alternative 2 (NECP 2021-2030 updated, current version, 2024).

In the case of Alternative 0, the failure to implement the updated NECP 2021-2030 will have effects both at the national level through Romania's failure to comply with the targets and objectives regarding the increase in the use of energy from renewable sources and the reduction of greenhouse gas emissions assumed at the European Union level, and at the regional level through the lack of investments in energy transport and production infrastructure and the increase in greenhouse gas emissions, particulate matter, nitrogen and sulfur oxides, etc. Thus, Romania risks entering an infringement procedure for failure to fulfill the commitments assumed before the European Union, in accordance with the provisions of Regulation 2018/1999 on the governance of the energy union and climate action.

Alternative 1 - NECP 2021-2030 updated, first version, 2023

In 2023, the first version of the updated NECP 2021-2030 was communicated to the European Commission and published as part of the public consultation procedure. Between December 2023 and March 2024, the public consultation procedure for the updated NECP draft was carried out, which included 3 public debates during which stakeholders could express comments and observations.

The updated NECP 2021-2030 document has undergone an extensive evaluation and review process, based on the observations received in the public consultation process and the recommendations of the European Commission, which involved adjusting the level of ambition regarding national and sectoral targets.

Part of the European Commission's recommendations provide for the completion of the updated NECP 2021-2030 with:

- Information on policies and measures, clearly specifying the scope, timing and expected impact of greenhouse gas emission reductions, including for measures under Union funding programmes such as the common agricultural policy.
- Identify the amount of CO2 emissions that could be captured annually by 2030, including sources.
- Providing a long-term plan for the implementation of renewable energy technologies over the next 10 years, with a view to 2040.
- Further develop detailed and quantified policies and measures in a way that allows for the timely and cost-effective achievement of Romania's national contribution to the Union's binding renewable energy target of at least 42.5% in 2030, with a collective effort to increase it to 45%.
- Including the amount of energy consumption reduction to be achieved by all public bodies, disaggregated by sector and the total area of heated and/or cooled buildings owned by public bodies to be renovated annually or the corresponding annual energy savings to be achieved.
- Including the value of cumulative energy savings to be achieved between 1 January 2021 and 2031 December 2030 and an explanation of how the annual savings rate and calculation level were determined.
- Establish comprehensive policies and measures to achieve national energy efficiency contributions and quantify energy savings generated by reported energy efficiency measures to ensure the achievement of the necessary amount of cumulative energy savings at end-use level by 2030 and establish measures to promote energy audits and energy management systems.
- Supporting the decarbonisation objectives of buildings by including additional information on policies, measures and their expected impact on energy savings for the implementation of a coherent long-term renovation strategy
- Defining clear objectives to encourage gas demand reduction, as well as developing detailed policies and measures to achieve these objectives by 2030. Further assessing the compatibility of its gas infrastructure with decarbonisation objectives.
- Specify appropriate measures for the diversification and long-term supply of nuclear materials, fuel, spare parts and services, including for planned new nuclear units, as

well as the long-term management of nuclear waste. Provide more details on announced plans to develop small modular reactor (SMR) designs.

- Provide further details on existing and potential measures to combat energy poverty, as well as on the financial resources dedicated from both a social policy (affordability) and structural energy measures perspective, in particular regarding access to energy efficiency, building renovation and renewable energy.
- Further clarify national research, innovation and competitiveness objectives to deploy clean technologies, setting a path for 2030 and 2050 to support the decarbonisation of industry and promote the transition of enterprises to a circular and net-zero emissions economy. Present policies and measures to promote the development of net-zero projects, including those relevant to energy-intensive industries.
- Provide detailed information on the social, employment and skills consequences or any other distributional effects of the climate and energy transition, as well as on the objectives, policies and measures planned to support a just transition. Specify the form of support, the impact of the initiatives, the groups targeted and the resources allocated, taking into account the Council Recommendation on ensuring a just transition towards climate neutrality.
- Ensure that adaptation priorities, strategies, policies, plans and efforts are proportionate to expected future climate vulnerabilities and risks, based on the best available scientific evidence and available climate prediction and early warning tools. Ensure systematic and periodic monitoring and evaluation of adaptation policies, and the results reflected in the design and implementation of subsequent revised policies.
- Promote nature-based solutions and ecosystem adaptation at national level strategies, policies and plans and provide investments for their implementation.

Alternative 2 - NECP 2021-2030 updated, current version, 2024

In October 2024, the updated NECP 2021-2030 document, which integrates both the response to the European Commission's observations on the first notified draft of the plan, as well as the observations received in the public consultation process, by increasing the level of ambition of the assumed objectives and targets, was notified to the European Commission and subsequently published on the European Commission's website.

At this stage of development of the updated NECP 2021-2030, alternative solutions for each project cannot be analyzed, given that the proposed investment projects are at different stages of development, and they will be analyzed and evaluated within the environmental impact assessment procedure for each of them.

The updated NECP 2021-2030 does not present the analyzed variants for the proposed projects, but the selection of the projects included in each policy and measure sheet was based on criteria that target the respective project's capacity to contribute to the ambitious targets and objectives of the plan, their capacity to comply with policies on reducing greenhouse gas emissions, their capacity to be financed through national, private and/or European, international financing mechanisms/sources, but also their capacity to be achieved within the time horizon targeted by the implementation of the plan, namely by 2030.

Thus, Alternative 2 of the updated NECP 2021-2030 has positive effects on environmental components through the ambitious targets for reducing greenhouse gas emissions and through the new policies and measures proposed in addition to Alternative 1. All these new policies and measures support the positive effects of implementing the updated NECP 2021-2030.

III. Compensatory measures

The projects included in PAM 24 Building small hydro power plants are projects of major public interest, being include for in the annex to Emergency Ordinance no. 175/2022 for establishing measures regarding projects for the implementation of hydropower developments under execution, as well as other projects of major public interest that use renewable energy, as well as for amending and supplementing certain normative acts.

Objectives of strategic importance or major public interest may be developed on the territory of protected natural areas of community interest under the conditions provided for by law and only after applying the provisions of Art. 6.4 of the Habitats Directive, respectively the compensatory measures.

The compensatory measures defined to protect the overall coherence of the Natura 2000 network will have to refer to the conservation objectives of the protected natural area, as well as to the habitats and species negatively affected in comparable proportions in terms of number and status. At the same time, the role played by the protected natural area in question in terms of the biogeographical distribution of the habitats and species affected must be appropriately replaced.

Therefore, in order to ensure the overall coherence of the Natura 2000 network, the compensatory measures proposed for the projects proposed by the updated NECP 2021-2030 should: i) address, in comparable proportions, the habitats and species negatively affected; and ii) provide functions comparable to those that justified the selection of the original protected natural area, in particular in terms of appropriate geographical distribution. The distance between the original protected natural area and the place where the compensatory measures are taken does not necessarily constitute an obstacle, as long as it does not affect the functionality of the protected natural area, its role in the geographical distribution and the reasons for the initial choice.

Thus, the establishment of new protected areas may constitute compensatory measures under Article 6.4 of the Habitats Directive, but they are not sufficient. Compensatory measures must comply with the following criteria: i) ensure specific, effective compensation, ii) be technically feasible, iii) the extent of the compensation must be proportionate to the disturbance, functionality and role of the original protected area, iv) the location of the measures must ensure the same biogeographical, structural and functional characteristics as the original protected area, v) the timing of the compensation and vi) long-term applicability.

Therefore, in relation to the Habitats Directive, compensation could similarly consist of recreating a comparable habitat or in biologically improving a habitat of the same type that does not meet the standards within an already designated protected area or even adding a new site of comparable quality to the original protected area to the Natura 2000 network.

In the case of the Birds Directive, compensation could, for example, include works to improve the biological value of an area that is or will be classified, so that the carrying capacity or feeding potential is increased by an amount corresponding to the loss on the site affected by the project. Accordingly, the recreation of a habitat suitable for the bird species concerned is acceptable, provided that the site created is available at the time the affected site loses its natural value.

Thus, the compensatory measures for the projects proposed by the updated NECP 2021-2030 that have a significant residual impact on protected natural areas will be established depending on the result of the Strategic Environmental Assessment carried out for each project, taking into account the criteria presented above. In the Strategic Environmental Assessments carried out for the Livezeni-Bumbești, Cerna-Belareca, Surduc Siriu, Pașcani and Răstolița hydropower development projects, no compensatory measures were established. The residual impact on protected natural areas was assessed as insignificant, thus no compensatory measures were required.

IV. Methods used to collect information on species and/or habitats of community interest affected

Given the territorial extension of the updated NECP 2021-2030, the strategic level of approach to the evaluation, as well as the fact that most of the projects that can be spatially located are at different stages of development, the following aspects were taken into account:

- The analysis was carried out at national level and not through a "site by site" approach, in order to ensure a unitary approach to the assessment;
- The analysis included only those geospatial resources that uniformly and fully cover the national territory (e.g. the boundaries of protected natural areas);
- The analysis also included the use of existing information (general objectives regarding the conservation of Natura 2000 sites) from the management plans approved/revised to date, given the availability of Management Plans for most of the Natura 2000 sites;
- All information regarding the presence and numbers identified at the level of Natura 2000 sites was taken from the Natura 2000 Standard Forms;
- The assessment of the potential impact was carried out mainly based on GIS analysis, quantifying the areas within and in the immediate vicinity of Natura 2000 sites that could be affected by the proposed projects;
- The distances to protected natural areas were calculated without taking into account the Digital Terrain Model.

This Strategic Environmental Assessment was carried out taking into account the best practices that can be applied at this strategic level, attempting to quantify as precisely as possible the main forms of potential impact on the national network of Natura 2000 sites.

The results of this study represent a general, overview picture of the potential impact of the projects proposed under the updated NECP 2021-2030 on protected natural areas. The study does not include a detailed assessment of the impact on all types of habitats and species of community interest due to the following limitations:

- The difficulty of accurately locating habitat types and species of community interest;
- The locations of the projects proposed for implementation are not final, and many of them may undergo changes in the coming period. We also specify that only projects for which details regarding the spatial location were taken into account in the analysis;
- The identification of the potential negative impact on protected natural areas was carried out based on the percentage of overlap of the project over the surface of protected natural areas. The chosen method provides an overview of the potential impact generated by the implementation of the projects proposed within the updated NECP 2021-2030 on the Natura 2000 network, but cannot capture the importance of the sites' territories for each habitat type and each species of community interest. Such an analysis can only be carried out at the level of a project;
- The conventional spatial location of habitats and species (depending on the type of land use) represents a prudent/conservative approach (the spatial extension of the habitats indicated in the standard form was not taken into account, considering, for example, that any grassland habitat can be found on all grassland areas in the respective site), but it is ineffective in accurately locating the truly critical areas for maintaining the habitats and species for which the site was designated.

These limits did not allow estimating the potential impact of each project for each type of habitat and species of community interest, so at this level, alternatives and compensatory measures cannot be proposed for projects in the updated NECP 2021-2030 with potential negative impact on protected natural areas. Alternatives and compensatory measures can be established following the appropriate assessment studies carried out for these projects.

Adequate Assessment Study Conclusions

The potential impact associated with the implementation of the updated NECP 2021-2030 objectives on the Natura 2000 network of protected natural areas in Romania was carried out based on GIS analysis, the Management Plans of protected natural areas, the Natura 2000 Standard Forms and specialized works on protected species and habitats.

The potential impact of all projects proposed by the policies and measures in the updated NECP 2021-2030 could not be assessed in detail because the technical projects and the alternatives considered for them are not known. For projects identified by geographical coordinates, the degree of overlap and distances to protected natural areas likely to be affected by their implementation were determined. These projects were indicated on maps in relation to the protected natural areas.

The main positive impact of the projects proposed through the updated NECP 2021-2030 is manifested in the reduction of fossil fuel consumption and reduced greenhouse gas emissions.

Some of the projects proposed through the updated NECP 2021-2030 are in various phases of project approval.
For the Cerna-Belareca, Livezeni-Bumbești, Surduc-Siriu, Răstolița and Pașcani hydroelectric power plants on the Siret River and Cerna-Motru-Tismana Stage II, the Strategic

Environmental Assessment, the impact assessment study on water bodies and the environmental impact report were completed.

For these projects, the conclusions of the appropriate assessment studies and the impact assessment studies on water bodies are briefly presented in chapter *e).1. Identification and quantification of the impact*. Also, the specific impact mitigation/reduction measures identified in these studies complement chapter I.f). Impact avoidance and reduction measures of this study.

For the proposed projects under the updated NECP 2021–2030 for which the potentially affected Sites of Community Importance (ANPIC) could not be identified , it is necessary to determine these sites once the location (geographical coordinates) and technical details of the project are established.

In general, the identification of potentially affected ANPICs by an energy production project is carried out using four criteria: i) intersection (including full overlap of the project with the ANPIC); ii) proximity (influence zone); iii) species mobility; and iv) ecological connectivity.

In the case of ANPICs that host high-mobility species, such as bird of pray or geese, it is recommended that renewable energy projects (e.g., wind farms) be located at a precautionary distance of at least 20 km from the ANPIC boundary.

The identification of ANPICs whose connectivity (within the site or with the rest of the Natura 2000 network) could be disrupted by the emergence of barriers along ecological corridors should include all ANPICs connected along the corridor and these should be added to the list of potentially affected sites.

It is also recommended that this identification process consider possible structural or functional changes in terrestrial or aquatic ecological corridors caused by an energy production project, in order to correctly identify and select all ANPICs connected through the ecological corridor.

The identification of ANPICs that are part of ecological corridors in the project area should be carried out by analyzing a wider territory, relevant to the project being assessed (e.g., within a minimum distance of 30 km from the site boundaries in the case of watercourses).

The analysis for identifying potentially affected ANPICs is conducted through spatial (GIS) analysis, based on information such as: project location, ANPIC boundaries, water body boundaries, and the location of ecological corridors and areas with ecological connectivity/continuity.

For projects with a potentially significant impact on protected natural areas, appropriate assessment studies are recommended, taking into account possible alternatives and compensation measures that allow for the reduction of the negative impact on protected habitats and species.

In the case of projects located within protected natural areas with potentially significant impact, alternative locations outside the boundaries of protected natural areas or outside sensitive areas for habitats and species of conservation interest may be identified.

In the case of projects where relocation of projects is not technically and economically feasible, compensation measures specific to the type of habitats and species affected must be identified and applied. The completion of this strategic environmental assessment was limited by the availability of data on the projects proposed through the updated NECP 2021-2030, as well as by the availability of information on the location of protected species and habitats on the surface of potentially affected protected natural areas.

Measures to reduce negative impacts can be specific measures to protect natural areas by avoiding habitat loss and fragmentation, creating ecological corridors, preventing the mortality of fauna species, avoiding disturbance of nesting and feeding areas, etc.

The management plans of the ANPIC include specific restrictions aligned with conservation objectives, targeting projects in the energy production sector. For these projects, which are generally complex, it is recommended to identify both the restrictive measures that directly target these types of projects (for example, banning the construction of small hydropower plants on certain rivers or on all rivers within an ANPIC; banning the construction of wind farms within an ANPIC or at a certain distance from its boundaries), as well as restrictive measures that could be related to any of the components/interventions proposed by the project (for example, the placement of overhead and underground power lines).

The implementation of restrictive measures can influence the siting and development solutions of renewable energy projects (for example, in the case of wind farms, an exclusion zone with a radius of 3 km may be applied around ANPICs where highly mobile species such as birds and bats are found).

The construction of wind farms can negatively affect, both directly and indirectly, flight routes, feeding habitats and food availability, hibernation and breeding areas, potentially causing both the degradation or destruction of these areas and an increase in accidental mortality of bat species.

For wind farms of over 50 MW, it is recommended to delineate areas where wind turbines are prohibited within a radius of at least 10 km from the turbine location, or more, if colonies of long distances traveling species are present in the area (for example, near resting, nesting, or feeding areas; areas designated for bat protection, near coniferous or deciduous forests, within 200 m from the forest edge, tree alignments; wetlands and watercourses, etc). To delineate these areas, it is recommended to study the behavior of the species throughout their entire phenological cycle.

In the case of photovoltaic parks, exclusion zones include areas within ANPICs where habitats of community interest are found (semi-natural and natural grasslands, such as semi-dry grasslands, mountain and lowland hay meadows, secondary saline and silvo-steppe grasslands). Exclusion zones should be established based on the ecological requirements and behavior of species of community interest, with exclusion limits potentially ranging from 500 m to 6 km from the project area.

The construction/installation of photovoltaic parks on grassland and/or arable land directly affects the feeding habitat of species, by removing these areas from their hunting territory.

Therefore, it is recommended to avoid placing photovoltaic parks within or near protected natural areas designated for bird species protection or located along their migration corridors.

Energy production projects that include the placement of medium-voltage power lines within ANPICs or crossing the surface of an ANPIC must be insulated to prevent high mortality of bird species, such as diurnal raptors and storks.

Bibliography

1. National Agency for Environmental Protection, Annual Report on the State of the Environment in Romania, 2023.
2. The National Administration “Apele Române”, Water Quality Summary of Romania, 2023.
3. Aquaproiect, 2024, Impact Assessment Study on Water Bodies for the Project on increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the hydropower development of the Jiu River on the Livezeni - Bumbești sector.
4. The Association formed by Contractor: EPMC Consulting SRL and Subcontractor: JBA Consult Europe SRL, 2024, Water Bodies Impact Assessment Study for the Project to increase the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the AHE Pașcani.
5. Green Collective SRL – Wildlife Management Consulting SRL Association, 2024, Strategic Environmental Assessment for the "Project on increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the hydropower development of the Jiu River on the Livezeni – Bumbești sector" – continuation of remaining works at the AHE Livezeni – Bumbești investment objective.
6. Green Collective SRL-Wildlife Management Consulting SRL Association, 2024, Strategic Environmental Assessment for the Project "Project on increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the Cerna - Belareca hydropower development" - continuation of remaining works to be executed at the AHE Cerna Belareca investment objective.
7. Green Collective SRL-Wildlife Management Consulting SRL Association, 2024, Strategic Environmental Assessment for the "Project on increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the AHE Surduc - Siriu Hydropower Development" - continuation of remaining works to be executed at the investment objective.
8. Green Collective SRL-Wildlife Management Consulting SRL Association, 2024, Water Bodies Impact Assessment Study for the project “Increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the Surduc-Siriu Hydropower Development”.
9. Association SC Aquaproiect SA - National Institute of Hydrology and Water Management (INHGA), 2024, Water Bodies Impact Assessment Study for the project "Increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at AHE Cerna Belareca ".
10. The Association SC Aquaproiect SA - National Institute of Hydrology and Water Management (INHGA), 2024, Water Bodies Impact Assessment Study for the project “Permanent removal from the forest fund and deforestation of land for completion of the Răstoliţa Hydropower Development”.
11. The association formed by EPMC Consulting SRL and JBA Consult Europe SRL, 2025, Water Bodies Impact Assessment Study for the project on increasing the share of

electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the Cerna – Motru – Tismana Hydrotechnical and Energy Complex, Phase II.
12. The association Green Collective S.R.L. – Wildlife Management Consulting S.R.L., 2025, Appropriate Assessment Study for the “Project on increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at the Cerna–Motru–Tismana Hydrotechnical and Energy Complex, Phase II” – continuation of remaining works to be executed at the investment objective CHE Cerna–Motru–Tismana Phase II.
13. Standard Data Forms for Natura 2000 sites.
14. PFA Bădescu Iulia Simona, 2024, Appropriate Assessment Study for the project "Increasing the share of electricity production from renewable sources by completing the works and ensuring continuous environmental impact monitoring at AHE Pașcani"
15. The Management Plan of the Natura 2000 Site ROSCI0229 Siriu.
16. The Management plan for the Natura 2000 site ROSPA0124 Lacurile de pe Valea Ilfovului.
17. The Integrated Management Plan for the Jiului Gorge National Park and the Natura 2000 Site ROSCI0063 Defileul Jiului.
18. The Integrated Management Plan for the Domogled-Valea Cernei National Park and the Natura 2000 sites ROSAC0069 Domogled-Valea Cernei and ROSPA0035 Domogled-Valea Cernei - excluding the overlapping area with the Mehedinți Plateau Geopark, including the nature reserves.
19. The Integrated Management Plan of the Natura 2000 Site ROSCI0085 Frumoasa and ROSPA0043 Frumoasa.
20. The Integrated Management Plan for the Natura 2000 Site ROSCI0128 Nordul Gorjuui de Est.
21. The Integrated Management Plan for the Natura 2000 Site ROSCI0188 Parâng and the nationally protected areas 2,800 Miru Bora, 2,803 Iezerul Latoriţa, 2,799 Câldarea Gâlcescu, 2,528 Cheile Jieţului and 2,498 Piatra Crinului.
22. The Integrated Management Plan for the Natura 2000 Site ROSCI0376 Râul Olt between Mărunţei and Turnu Măgurele.
23. The Management Plan for the protected natural areas ROSPA0024 Olt-Danube Confluence and ROSCI0044 Corabia – Turnu-Măgurele, including the nationally protected area B10. Ostrovul Mare.
24. The Management Plan of protected natural areas ROSPA0099 Hârtibaciu Plateau, ROSCI0227 Sighişoara-Târnava Mare, ROSCI0144 Sessile Oak and Pedunculate Oak Forest on Purcăreț Hill, ROSCI0143 Sessile Oak and Pedunculate Oak Forest at Dosul Fânațului, ROSCI0132 Oltul Mijlociu-Cibin Hârtibaciu, ROSCI0303 Southeast Hârtibaciu, ROSCI0304 Southeast Hârtibaciu, Breite Ancient Oak Tree Reserve, Sighișoara Municipality, Mihăileni Canyon Reserve, Downy Oak Reserve.
25. The Management Plan of the Călimani National Park, of the site of Community Importance ROSCI0019 Călimani-Gurghiu (the part overlapping with the Călimani National Park), of theSpecial avifaunal Protection Area ROSPA0133 Călimani Mountains and of the nationally protected natural areas that overlap with it.
26. The Revised DDBR Management Plan, pending approval.

27. The Management Plan of ROSCI0122 Făgăraș Mountains and ROSPA0098 Făgăraș Piedmont.
28. The Management Plan of ROSPA0071 Lower Siret Meadow and overlapping protected natural areas.
29. The Management Plan of the Natura 2000 Site ROSCI0103.
30. The Management Plan of the Natura 2000 site ROSCI0129 Nordul Gorjului de Vest.
31. The Management Plan of the Natura 2000 Site ROSCI0210 Lechinţa Ravine.
32. The Management Plan of the Natura 2000 Site ROSPA0060 Tașaul – Corbu Lakes.
33. The Integrated Management Plan for the Site of Community importance ROSCI0176 Tătărușı Forest and of the Natural Reserve 2,546 Tătărușı Forest
34. The Management Plan for the protected natural areas: ROSCI 0071 Dumbrăveni - Urluia Valley - Vederoasa Lake, ROSPA 0036 Dumbrăveni ROSPA0001 Aliman – Adamclisi, ROSPA 0007 Balta Vederoasa, Natural Reserve 2361 Dumbraveni Forest, , Natural Reserve 2350 Limestone Cliffs of Petroșani – Deleni Commune, Natural reserve 2351 Aliman Fossil Site, Natural Reserve IV.30 Vederoasa Lake.
35. The Lower Olt Valley Management Plan ROSPA0106.
36. The Management plan for the Natura 2000 Site ROSCI0103 Lunca Buzăului.
37. Integrated National Plan for Energy and Climate Change 2021-2030 updated.
38. Romania's Informative Inventory Report 2024.
39. SC EPMC Consulting SRL, May 2024 Adequate Assessment Study for the project “Permanent removal from the forest fund and deforestation of land for the completion of the Răstoliţa Hydropower Development”
40. Yüksel, I., 2010. Hydropower for sustainable water energy development. Renewable and Sustainable Energy Reviews 14 (1), 462-469.
41. DDNI, 2012, Study on recommendations regarding areas in Dobrogea where the placement of wind farms should be restricted due to the migration corridors of soaring birds (diurnal raptors, storks, pelicans) and due to the wintering of geese and swans.
42. AIT Austrian Institute of Technology GmbH și Regional Centre for Energy Policy Research (REKK), 2023, Study on the wind power potential in Bulgaria, Hungary, and Romania.