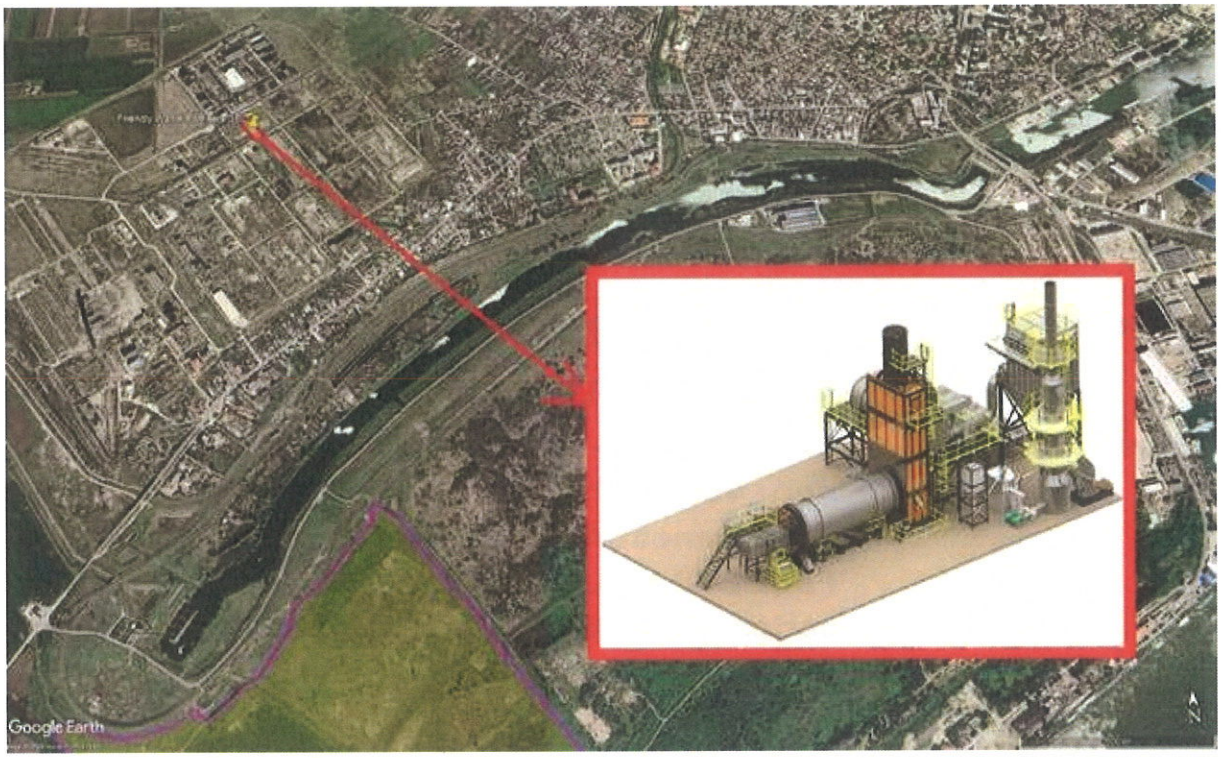
STUDY OF
APPROPRIATE ASSESSMENT Rev. 1



PROJECT: **CONSTRUCTION OF HALL BUILDING, CONCRETE DRAINABLE BASIN, CONCRETE PLATFORMS, FENCING, LIGHTING SYSTEM, EXECUTION OF DRILLING AND INTERNAL NETWORK FOR WATER SUPPLY AND SEWERAGE, LOCATION OF WASTEWATER PRE-TREATMENT STATION, INSTALLATION OF MEDICAL WASTE INCINERATOR WITH RELATED FACILITIES**

LOCATION: **GIURGIU MUNICIPALITY, STR. SLOBOZIEI, KM. 4, LAND REGISTER NO. 41214, NC 41214, GIURGIU COUNTY**

OWNER: **FRIENDLY WASTE ROMANIA SRL**

DEVELOPER: **OANA SAVIN - EA**
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TRADUCĂTOR AUTORIZAT DE MINISTERUL JUSTIȚIEI
ENE ANCUȚA
Engleză, Spaniolă
ROMÂNIA

Name of the work:	**APPROPRIATE ASSESSMENT STUDY Rev. 1**
Project:	**CONSTRUCTION OF HALL BUILDING, CONCRETE DRAINABLE BASIN, CONCRETE PLATFORMS, FENCING, LIGHTING SYSTEM, EXECUTION OF DRILLING AND INTERNAL NETWORK FOR WATER SUPPLY AND SEWAGE, INSTALLATION OF WASTEWATER PRE-TREATMENT STATION, INSTALLATION OF MEDICAL WASTE INCINERATOR WITH RELATED FACILITIES**
Location:	**GIURGIU MUNICIPALITY, SOS. SLOBOZIEI, KM. 4, LAND REGISTER NO. 41214, NC 41214, GIURGIU COUNTY**
Holder:	**FRIENDLY WASTE ROMANIA SRL**
Processors:	**SAVIN OANA - SHE** **FECHETE VOLODEA – RIM**
Attest:	**SAVIN OANA - Certificate of attestation RGX series, no. 450/25.01.2023 issued by the Romanian Environment Association for EA** **FECHETE VOLODEA - Certificate of attestation RGX series, no. 485/02.03.2023 issued by the Romanian Environment Association (includes RIM - 11b)**

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MARCH 2023

JULY 2023 - Rev. 1

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1. GENERAL INFORMATION

The present work represents the appropriate assessement study for the project **"CONSTRUCTION OF HALL BUILDING, DRAINABLE CONCRETE BASIN, CONCRETE PLATFORMS, FENCES, LIGHTING SYSTEM, EXECUTION OF DRILLING AND INTERNAL WATER SUPPLY AND SEWERAGE SYSTEM, INSTALLATION OF WASTEWATER PRETREATMENT STATION, INSTALLATION OF MEDICAL WASTE INCINERATOR WITH CONNECTED FACILITIES",** owner FRIENDLY WASTE ROMANIA SRL.

The project proposed by FRIENDLY WASTE ROMANIA SRL falls under *Annex 1 - List of projects subject to environmental impact assessment* of Law No 292/2018 on the assessment of the environmental impact of certain public and private projects, in point *9. Hazardous waste landfills or facilities for the disposal of hazardous waste by incineration or chemical treatment, as defined in Annex No. 2 to Law No. 211/2011 on the waste regime, republished, as amended.*

According to the Decision of the classification stage no. 1480/SAAA/07.07.2022, issued by the Giurgiu Environment Protection Agency, for the project "***Construction of a hall building, concrete drainable basin, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, installation of wastewater pre-treatment station, installation of medical waste incinerator with related facilities***" the decision was taken to request the environmental impact assessment and to request the appropriate assessment.

This Appropriate Assessment Study has been prepared in accordance with the Methodological Guidelines for the Appropriate Assessment of the Potential Effects of Plans or Projects on Protected Natural Areas of Community interest, approved by M.M.P. Order no. 19/2010, as subsequently amended and supplemented, with a view to issuing the environmental consent for the above-mentioned project.

The Appropriate Assessment Study also complies with the guidance on the conduct of the Appropriate Assessment Study according to Order no. 19/2010, issued by the Giurgiu Environmental Protection Agency by Address no. 1785/1480/2021/S.A.A.A./27.02.2023 (attached).

1.1. Project holder information

- **Name: FRIENDLY WASTE ROMANIA SRL**
- **Postal address (registered office):** Bucharest, Corneliu Botez Street, no. 10, building F, ground floor, office no. 1, ap. 1, district 2
- **Project address:** municipality Giurgiu, Şos. Sloboziei, km. 4, CF no. 41214, Giurgiu county
- **Telephone number and e-mail address**
  tel: 0720 060 444; office@friendlywaste.ro
- **Contact person name:** FADEL MOHAMAD

1.2. Information on the author of the appropriate assessement study

- **EA drafter**: **Oana SAVIN**, certified expert - main level, holding the attestation Certificate RGX series, no. 450/25.01.2023 issued by the Romanian Environment Association
- ***Address:*** Focşani, 4 Horia, Cloşca and Crişan Street, Vrancea County;
- ***Telephone number and e-mail address***: tel: 0756 039 802; e-mail: oana.savin@divori.ro

The attestation certificate mentioned above is hereby attached.



2. INFORMATION ON THE PROJECT SUBMITTED FOR APPROVAL[1]

2.1. Information on the proposed project

2.1.1. Name, description and objectives of the project

Name of the project under consideration, according to the Town Planning Certificate no. 123 of 07.03.2023 issued by the Municipality of Giurgiu, is **"CONSTRUCTION OF HALL BUILDING, DRAINABLE CONCRETE BASIN, CONCRETE PLATFORMS, FENCING, LIGHTING SYSTEM, EXECUTION OF DRILLING AND INTERNAL NETWORK FOR WATER SUPPLY AND SEWERAGE, INSTALLATION OF WASTE WATER PRETREATMENT STATION, INSTALLATION OF MEDICAL WASTE INCINERATOR WITH CONNECTED FACILITIES".**

It is planned to build a metal structure hall and to purchase and install a revolving incinerator for the incineration of medical and animal waste, in order to develop new incineration capacities for the geographical area comprising Giurgiu County and neighbouring counties, by equipping it with high-performance equipment complying with the highest standards and technologies for environmental protection, with a reduction in the transport distances of waste between generators and processors.

Thermal waste treatment processes are a feasible option after recovery options (collection, sorting, recycling) and before controlled landfilling. High-temperature oxidation converts organic components into specific gaseous oxides, which are mainly carbon dioxide and water. The inorganic components are mineralised and transformed into ash.

The general purpose of waste incineration is:

1. minimising the potential for risk and pollution;
2. reducing the amount and volume of waste;
3. conversion of the remaining substances into a form that allows their recovery or storage;
4. transformation and valorisation of the energy produced.

The works to be carried out for the implementation of the project, ensuring a technological flow in accordance with the legal provisions but also ensuring operation at maximum performance in terms of protection of environmental factors, will consist of:

- → construction of a hall made of coated sheet metal panels placed on a metal structure
- → purchase and installation in the technological flow of a waste incinerator type IER 1000-300
- → purchase and installation in the technological flow of 2 cold rooms with V = 16 m3 each
- → purchase and installation of a weighing platform
- → purchase and location
- → a mobile weighing scale for 1 t
- → purchase and installation in the technological flow of 4 LPG tanks of 5,000 l each
- → construction of concrete platforms
- → location of a basin with V = 10 m3
- → construction of water supply and sewage networks
- → making a connection to the city's drinking water network
- → to make a connection to the sewerage network in the premises of the former Giurgiu Chemical Plant.

[1] The information on the project subject to approval (Chapter 2 of the Appropriate Assessment Study) has been taken from the Environmental Impact Report prepared by Volodea FECHETE

The administrative location of the project site is in Giurgiu municipality, Şoseaua Sloboziei, km 4, lot 2, Giurgiu county, inside the industrial platform no. 2 of the former Giurgiu Chemical Plant.

The Stereo 70 coordinates of the project site are highlighted in the table below:

Table no. 1. Stereo 70 coordinates of the site

Point determination	System degrees, minutes, seconds		STERO 70 System	
	Latitude	Longitude	Latitude (N)	Longitude (E)
1	43°53'13.28 N	25°55'56.53 "E	265677.891	575049.227
2	43°53'10.73 "N	25°55'59.13 "E	265599.852	575108.173
3	43°53'9.68 "N	25°55'57.28 "E	265566.969	575067.248
4	43°53'12.20 "N	25°55'54.76 "E	265644.103	575010.099

The land under analysis, with an area of 3050.00 sqm, is classified as a building yard, production area, C.U.T. (Land Use Coefficient) = 2.4 sqm ADC/sqm of land and P.O.T. (Percentage Of Land Occupation)= 60%. The land is located in zone "C" according to HCLM no. 173/2007. No changes to the current use are planned.

According to the updated General Towing Plan of the Municipality Giurgiu, approved by the Decision of the Local Council of the Municipality Giurgiu no. 37/2011, extended by the Decision of the Local Council of the Municipality of Giurgiu no. 89/2021, the land is located in **subzone I1 - Production, storage area**. The area is intended for buildings with maximum Gf + 3 levels and maximum height of 20.0 m (except for machine accents), with discontinuous building regime, with various functions related to productive activities: storage, specialized services for production, distribution and marketing plus various services for staff and customers.

Project description

The project owner proposes to construct a metal structure hall and to purchase and install a revolving incinerator for the incineration of non-hazardous, medical (hazardous and non-hazardous) and animal waste.

Incinerator technical features:

- incineration capacity - 300 kg/h respectively 7500 kg/day in continuous operation
- fuel - LPG
- fuel consumption - 24.6 ÷ 122.5 l/h
- primary combustion chamber with the characteristics
  - primary combustion chamber volume = 10.5 m3
  - primary combustion chamber temperature - 850 C°
  - 1 incinerator type P 61 on LPG
- secondary combustion chamber with the characteristics
  - primary combustion chamber volume = 9.7 m3
  - primary combustion chamber temperature - 1100 C°
  - 1 incinerator type P 61 on LPG
  - gas retention time in the secondary combustion chamber - 2 seconds
- volume of ash resulting - 3
- measured emission parameters

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Table 1 - Incinerator emission parameters

Parameter	Emission limits every 30 minutes	Measured values of incinerator type IER-1000-300
Solid particle	30 mg/m³	1.2 mg/m³
Sulphur dioxide	200 mg/m³	2.4 mg/m³
Nitrogen Dioxide*	400 mg/m³	60 mg/m³
Carbon Monoxide	100 mg/m³	78.3 mg/m³

IER 1000-300 incinerators are equipped with state-of-the-art technology, both in terms of plant efficiency and environmental protection features.

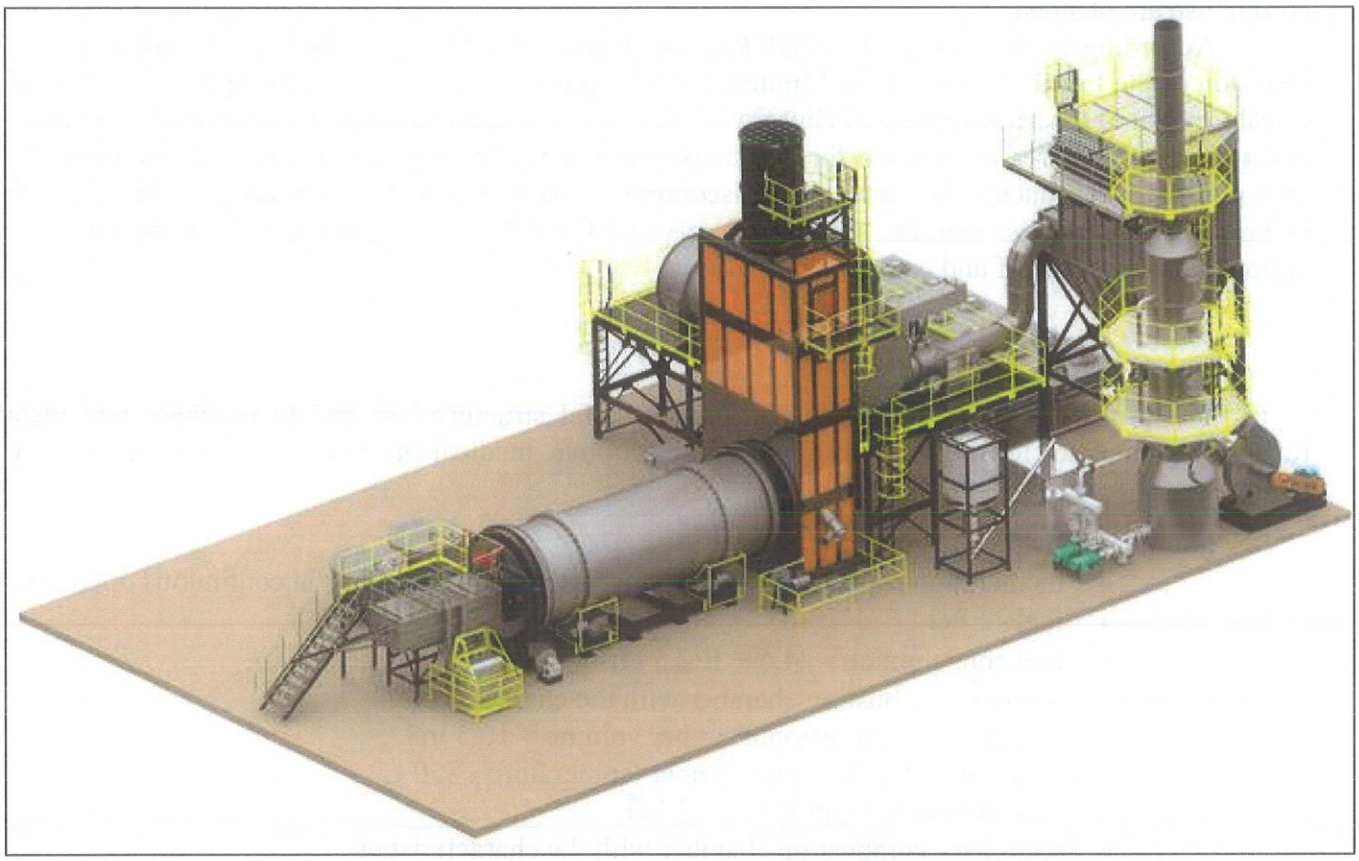

Figure 1 - Incinerator overview

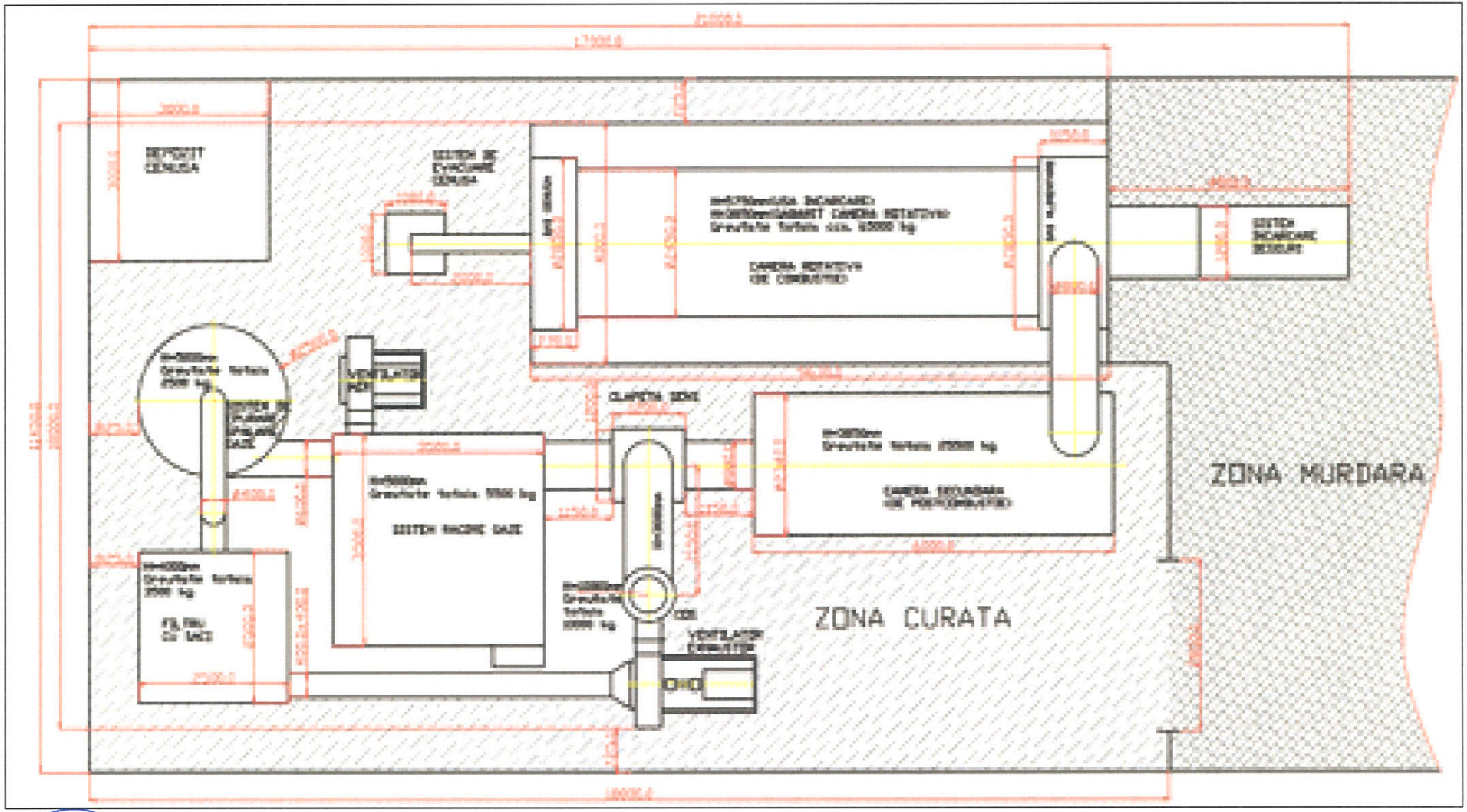

Figure 2 - Layout of the location of the incinerator components with the gauge dimensions

The IER 1000-300 is modern and innovative in terms of waste incineration efficiency. It is an incinerator model equipped with a controlled air supply system designed to ensure the best conditions for incinerating a very wide range of waste, both hazardous and non-hazardous.

Presentation of the constructive elements of the incinerator type IRE 1000-300

According to the technical regulations, the IER 1000-300 type environmental incinerator with two combustion chambers is equipped with two independent incinerators, so that the gases and suspended materials resulting from the primary combustion in the revolving combustion chamber pass into the fixed after incineration chamber, where any gases and suspended particles are retained and destroyed. The incinerators that equip the revolving environmental incinerator operate with LPG and are each controlled by an electronic regulator. This ensures a residence time of the combustion gases (min. 2 s, according to the legislation in force) in the fixed after incineration chamber, which results in a proper/complete combustion, ensuring that the emission values are within the limits set by the regulations in force.

The incinerator's resistance frame is made of carbon steel pipe by cutting, mechanical machining and electric welding processes. The configuration of the metal structure ensures:

- mechanical strength of the assembly during the execution and operation of the installation;
- access for waste loading and ash disposal;
- supporting the incinerator components.

The metal construction has provided locations for access to the incinerators, viewing windows and the electrical drive and automation installation. It is protected by painting with primer and enamel suitable for this category of machinery.

Revolving primary combustion chamber

The revolving primary combustion chamber has a volume of 10.5 m^3 and is equipped with an injector to introduce additional air, thus ensuring complete and homogeneous combustion up to a temperature of 850°C. The incinerator in this chamber, type P 61, on LPG fuel with a consumption of (24,6 ... 122,5) l/h, is controlled by an electronic microprocessor controller and is easy to use.

The combustion chamber (primary combustion) masonry is made of refractory brick or insulating concrete, outwards and at the ends of the revolving chamber.

Fixed, secondary combustion after incineration chamber

Fixed, secondary combustion afterburner chamber has a volume of 9.7 m^3, in which the complete combustion of volatile organic compounds takes place at a temperature of 1100° C, ensuring a residence time of min. 2 seconds. The incinerator in this chamber, type P 61, on LPG fuel with a consumption of (24,6 ... 122,5) l/h, is controlled by an electronic microprocessor controller and is easy to use.

The temperature in this room is programmable and monitored by a thermocouple. The measured temperature in the fixed after incineration chamber and the programmed temperature will be read on a digital display.

In the incineration process the gases from the primary combustion chamber will be sucked into the scrubbing area, which before being discharged, will be scrubbed and cleaned so as not to cause negative effects on the environment.

The after incineration (secondary combustion) chamber is made of brick and refractory concrete, similar to the revolving chamber.

The after incineration chamber is equipped with an emergency chimney, which in the event of a fault, allows the flue gases to be removed until the incineration of the current batch has been completed.

Each combustion chamber is equipped with a incinerator, which starts automatically when the flue gas temperature drops below 850° C or 1100° C after the last combustion air intake. These incinerators are also used in the start-up and shut-down phases, in order to ensure the combustion temperatures in these phases and also during the period when unburned waste is in the combustion chamber. Incinerators may not be fuelled with fuels which could produce emissions higher than those resulting from the combustion of petrol as referred to in Article 50(2). 3 of Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) of November 24, 2010.

The implementation of the project involves the construction of lightweight, metal frame constructions, namely:

- metal posts for support
- metal trusses for roof construction
- metal roof frames
- side walls made of fireproof sandwich panels

Lightweight construction will be placed on foundations to be built on site. The posts will be fixed to the foundations by means of metal anchor connections which will be fixed to the concrete with anchor bolts.

The location of the incinerator and the technological annexes involves:

- making connections for fixing them to the concrete platform
- the realisation of technological lines for the fuel supply of incinerators
- the construction of electrical lines and connections
- location of the incinerator's construction elements.

Metal hall

It is intended to build a hall with the following characteristics:

- foundation made of reinforced concrete blocks
- resistance structure - metal beams
- sandwich panel walls
- dimensions:
  - L = 24.68 m
  - l = 12.84 m
  - H eaves = 5 m
  - H cornice = 7.5 m
- 2-shell roof made of sandwich panels
- floor - concrete platform

The location of the proposed project is represented by an area of land located in the premises of the former Giurgiu Chemical Plant, at a distance of approx. 1430 m from the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube.

The location of the project in relation to the protected natural area of community interest ROSPA0108 Vedea - Danube is represented graphically in the following images:

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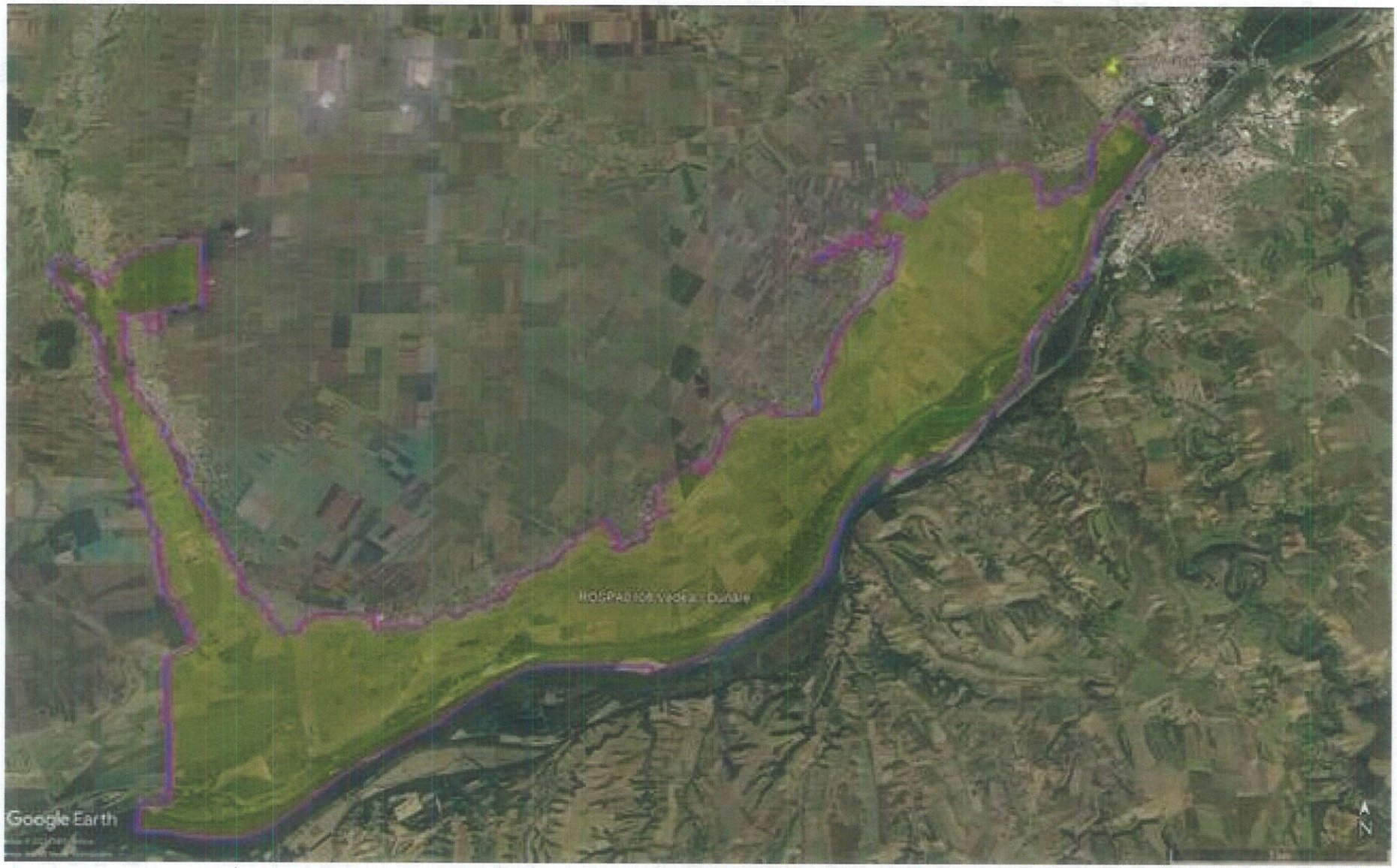

Figure no. 1. Location of the project site in relation to ROSPA0108 Vedea - Danube, view from 7 km
(Source: natura2000.eea.europa.eu via Google Earth)



Figure no. 2. Location of the project site in relation to ROSPA0108 Vedea - Danube, view from 1 km
(Source: natura2000.eea.europa.eu via Google Earth)

2.1.2. Information on the production to be carried out

The activity to be carried out as a result of the implementation of the project is the incineration of non-hazardous animal and medical waste.

To determine the incineration capacity an analysis based on:

A. incineration capacity for non-hazardous animal waste

B. Incineration capacity for medical waste

For both types of waste the combustion capacity is 300 kg/h, i.e. 7.2 t/day in continuous operation.

The incineration capacity of the incinerator, for the same volume of the primary combustion chamber, is given by the capacity of the incinerators, the waste feed rate and the rotation speed of the primary combustion chamber.

Taking into account the technical characteristics of the incinerator (as specified in the technical book), its incineration capacity is 300 kg/h, i.e. 7.2 t/day.

The annual incineration capacity is calculated according to the hourly capacity, the daily capacity and the number of operating days/year:

0.3 t/h x 24 h = 7.2 t/day

7.2 t/day x 320 days/year = 2304 t/year

This represents the total maximum incineration capacity for all types of waste.

2.1.1. Information on raw materials, chemical substances or preparations used

The project owner - Friendly Waste Romania SRL proposes to use the incinerator to incinerate medical waste (non-hazardous and hazardous) and non-hazardous waste (including animal waste), packaged and unpackaged.

The tables below (Table 3, 4, and 5) show the types of waste to be incinerated.

The classification and coding of waste, including hazardous waste, is carried out accordingly: (a) Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(1) of Council Directive 91/689/EEC on waste (a) of Council Directive 75/442/EEC on waste and Council Directive 94/904/EC establishing a list of hazardous waste pursuant to Article 1(a) of Directive 75/442/EEC on waste and Council Directive 94/904/EC establishing a list of hazardous waste pursuant to Article 1(a) of Directive 75/442/EEC on waste (4) of Council Directive 91/689/EEC on hazardous waste, as amended, in accordance with Article 7(4) of Directive 91/689/EEC. (1) of Government Emergency Ordinance No 92/2021 on the waste regime.

Table 2 - Types of non-hazardous medical waste to be incinerated in the incineration plant

18	WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCHES (except food preparation wastes from kitchens or restaurants, which do not arise directly from health care activities)
18 01	waste resulting from prevention, diagnosis and treatment activities carried out in health facilities
18 01 01	sharp objects (except 18 01 03)

18 01 02	human organs and fragments, including blood containers and preserved blood (except 18 01 03)
18 01 04	waste whose collection and disposal is not subject to special infection prevention measures (e.g. clothing, plaster casts, underwear, disposable clothing, diapers)
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 09	medicines other than those specified in 18 01 08
18 02	waste from veterinary establishments for research, diagnosis, treatment and prevention of diseases
18 02 01	sharp objects (except 18 02 02)
18 02 03	waste whose collection and disposal is not subject to special measures for the prevention of infection
18 02 06	chemicals other than those specified in 18 02 05
18 02 08	medicines other than those specified in 18 02 07

Table 3 - Types of hazardous medical waste to be incinerated in the incineration plant

18	WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCHES (except food preparation wastes from kitchens or restaurants, which do not arise directly from health care activities)
18 01 03*	waste whose collection and disposal is subject to special infection prevention measures
18 01 06*	chemicals consisting of or containing dangerous substances
18 01 08*	cytotoxic and cytostatic drugs
18 02	waste from veterinary establishments for research, diagnosis, treatment and prevention of diseases
18 02 02*	to prevent infection
18 02 05*	chemicals consisting of or containing dangerous substances
18 02 07*	cytotoxic and cytostatic drugs

Table 4 - Types of non-hazardous waste to be incinerated in the incineration plant

02 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01 sludges from washing and cleaning
02 01 02 animal tissue waste
02 01 04 plastic wastes (except packaging)
02 01 06 animal faeces, urine and manure (including straw), effluent, collected separately and treated off-site
02 01 09 agrochemical wastes other than those mentioned in 02 01 08
02 01 99 wastes not otherwise specified
02 02 wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01 sludges from washing and cleaning

02 02 02 animal tissue waste
02 02 03 materials unsuitable for consumption or processing
02 02 04 sludges from treatment of own effluent
02 02 99 other wastes not otherwise specified
02 03 wastes from fruit, vegetables, cereals, edible oils, cocoa powder, coffee, tea and tobacco preparation and processing; cans production; yeast and yeast extract and molasses preparation and fermentation
02 03 01 sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02 waste conservation agents
02 03 03 wastes from solvent extraction
02 03 04 materials unsuitable for consumption or processing
02 03 05 sludges from treatment of own effluent
02 03 99 other wastes not otherwise specified
02 05 wastes from the dairy products industry
02 05 01 materials unsuitable for consumption or processing
02 05 02 sludges from treatment of own effluent
02 05 99 other wastes not otherwise specified
02 06 wastes from the baking and confectionery industry
02 06 01 materials unsuitable for consumption or processing
02 06 02 waste conservation agents
02 06 03 sludges from treatment of own effluent
02 06 99 other wastes not otherwise specified
02 07 wastes from the manufacture of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01 wastes from washing, cleaning and mechanical processing of raw materials
02 07 02 wastes from spirits distillation
02 07 03 wastes from chemical treatment
02 07 04 materials unsuitable for consumption or processing
02 07 05 sludges from on-site effluent treatment
02 07 99 other wastes not otherwise specified
18 WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCHES (excluding food preparation wastes from kitchens or restaurants not arising directly from health care activities)
18 01 wastes from prevention, diagnosis and treatment activities of health care facilities
18 01 01 sharp objects (except 18 01 03)
18 01 02 human organs and fragments, including blood containers and preserved blood (except 18 01 03)
18 01 04 wastes whose collection and disposal is not subject to special measures for infection prevention (e.g. dressings, plaster casts, linen, disposable clothing, diapers)
18 01 07 chemicals other than those mentioned in 18 01 06
18 01 09 medicines other than those specified in 18 01 08
18 02 waste from veterinary units for research, diagnosis, treatment and prevention of disease
18 02 01 sharp objects (except 18 02 02)

18 02 03 wastes whose collection and disposal is not subject to special measures for the prevention of infection
18 02 06 chemicals other than those mentioned in 18 02 05
18 02 08 medicines other than those specified in 18 02 07

Fuels used

The fuels to be used are diesel and LPG and the activities where they will be used are as follows:

- LPG in the incineration of non-hazardous and medical waste;
- diesel fuel, when transporting waste from generators to the incinerator and when handling waste with a forklift.

The maximum quantities of fuel that can be used are:

1. waste incineration activity - LPG:
   - ➢ hourly fuel consumption
     - min. = 24,6 l/h
     - max. = 122,5 l/h
   - ➢ maximum daily operating hours = 10 hours[2]
   - ➢ estimated daily fuel consumption:
     - minimum = 10 hours x 24.6 l/hour = 246 l/day
     - maximum = 10 hours x 122.5 l/hour = 1225 l/day
   - ➢ estimated annual fuel consumption
     - minimum = 246 x 320 = 78720 l/year
     - maximum = 1225 l/day x 320 days/year = 392000 l/year
     - average = 150000 l/year
2. Consumption for trucks serving the incineration of non-hazardous waste and medical waste (truck transport and forklift transport) - approx. 5 t/year

LPG will be supplied to the incinerator from tanks to be installed on site (total capacity 20,000 l) through a special piping system to transport it to the incinerator and then through the systems fitted to each incinerator.

LPG is supplied to the tanks by specialised tankers authorised by approved suppliers. The LPG is unloaded from the tanker into the on-site tanks by means of special equipment provided.

[2] The operating hours of the incinerator are 24 hours/day; normally the incinerator starts burning when it is fed with waste and then the burning is maintained by the heat input (self-sustaining burning) from the incinerated waste. For this reason, it has been calculated that, in practice, the LPG supply to the burners for the operation of the incinerator takes on average 10 hours/day.

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2.2. Geographical and administrative location with coordinates Stereo 70

The administrative location of the project site is in Giurgiu municipality, Giurgiu county.

The municipality of Giurgiu is a component of the anthropized geographical landscape. Changes in the character of the (underlying, active) surface within the city have brought with them climatic changes.

The town differs from rural settlements primarily in the building material used. While in most areas the rural areas are mainly covered with vegetation (gardens, orchards, courtyards), in urban areas artificial stone, brick, tiles or concrete roofs and walls, asphalt streets predominate.

Instead of the porous, overgrown soil of rural settlements, in the city there is asphalt and compact, impermeable concrete, differences that bring changes to the climate.

Alongside natural landscapes, man-made landscapes are of particular importance. They play an essential role in sustaining and developing tourism activities on the one hand, and on the other they are a barometer of the positive or negative evolution of human society.

The surface area of the land related to the works is 3050.00 sqm, it is located in the inner urban area of Giurgiu municipality, having the use category of courtyard buildings, production area, C.U.T. (Land Use Coefficient) = 2.4 sqm ADC / sqm land and P.O.T.(Percentage of Land Occupation) = 60%. It is a land located in zone "C" according to HCLM 173/2007. No changes to the current use regime are planned.

The land under analysis is located in the inner urban area of Giurgiu municipality, belonging to the private domain of the legal entity SC FRIENDLY WASTE ROMANIA SRL according to the Notarial Act no. 250 of 22.02.2021 issued by BIN Ciobanu Dinei Victor with the following characteristics:

- is not encumbered
- is not located in a protected area
- there are no building bans

The land remains with the same owner throughout the execution of the works and after the execution of the works.

According to the updated General Towning Plan of Giurgiu Municipality, approved by HCLM 37/2011, the land is located in subzone 11 - production area, storage, construction area with buildings with maximum Gf+3 levels and maximum height of 20.0 m (except for machinery accents), with discontinuous building regime: with various functions related to productive activities: storage, specialized services for production, distribution and marketing plus various services for staff and customers.

Table no. 2. Stereo 70 coordinates of the project site

Crt. no.	Coordinates Stereo 70	
	X	Y
1	265677.891	575049.227
2	265599.852	575108.173
3	265566.969	575067.248
4	265644.103	575010.099

The location of the analysed project in relation to the Municipality of Giurgiu is represented in the following figure:



Figure no. 3. Location of the project in relation to the Municipality of Giurgiu (Source: Google Earth)

2.3. Physical changes arising from the project (from excavation, consolidation, dredging, etc.) and which will occur during the various stages of implementation

The proposed project involves the construction of a metal structure hall on an area of land located on the premises of the former Chemical Plant and the installation of a revolving incinerator for the incineration of medical and animal waste.

The implementation of the proposed project will not result in physical changes to the protected natural area ROSPA0108 Vedea - Danube, given the considerable distance between the project site and the protected natural area.

The physical changes that will result from the project under review will consist of:

1. construction of a hall made of coated sheet metal panels placed on a metal structure
2. purchase and installation in the technological flow of a waste incinerator type IER 1000-300
3. purchase and installation in the technological flow of 2 cold rooms with V = 16 m^3 each
4. purchase and installation of a weighing platform
5. purchase and location
6. a mobile weighing scale for 1 t
7. purchase and installation in the technological flow of 4 LPG tanks of 10 m3 each
8. construction of concrete platforms
9. location of a basin with V = 10 m3
10. construction of water supply and sewage networks
11. making a connection to the city's drinking water network
12. making a connection to the sewerage network in the premises of former Giurgiu Chemical Plant.

No new access roads or changes to existing ones are planned for the implementation of the project.

2.4. Natural resources required for project implementation (water abstraction, renewable resources, non-renewable resources, etc.)

The natural resources to be used in the implementation activities of the project are:

Table no. 3. Natural resources to be used

reference period	natural resources used		
	water (m^3/year)	mineral aggregates (m^3/project)	fittings and other metal components (t/project)
project implementation phase	approx. 80	approx. 250	approx. 20

Information on the production to be achieved and the resources used to ensure production during the operating period are given below:

Table 5 - Information on production and resources used

Production		Resources used to ensure production		
Process name	**Estimated annual quantity**	**Name**	**Estimated annual quantity**	**Supplier**
Waste incineration	**2304 t/year**	Water	1494.40 m3	DELTA GAS COV SRL
		Electricity	314.24 MW	E-DISTRIBUȚIE MUNTENIA SA or other supplier
		Diesel	5 tons	PECO stations
		GPL	392 tons	Authorised supplier

The estimated annual quantities shown are the maximum quantities calculated.

The existing industrial water supply network on the site will be used for the water supply. Bottled water will be used for the consumption of staff serving the activity.

In order to make efficient use of water resources, its use has been optimised as follows:

A. construction period:
- the water supply necessary for consumption in the social group serving the site is provided by equipment that eliminates losses due to malfunctioning and the staff has been trained in the correct use of the utilities
- no water shall be used for washing machinery and vehicles on site
- recipes with a minimum water content shall be used in the preparation of the concretes required for the execution of the works according to the construction project

B. the operating stage:
- washing of machines and bins is carried out with special low-flow pressure washers
- the water supply necessary for consumption in the social group serving the site is provided by equipment that eliminates losses caused by malfunctioning and the staff has been trained in the correct use of utilities

No biodiversity-specific resources are used.

2.5. Natural resources to be exploited within the protected natural area of Community interest for use in the implementation of the project

For the implementation of the project under analysis, no natural resources within the Special Protection Avifaunistic Area ROSPA0108 Vedea - Danube will be exploited.

2.6. Emissions and waste generated by the project (in water, in the air, on the surface where the waste is stored) and how they will be disposed of

2.6.1. Emissions generated by the project

2.6.1.1. Emissions into water

From the activity carried out by Friendly Waste Romania SRL on the analyzed location, domestic wastewater and technological wastewater are the result. The wastewater will be discharged into the existing sewage system in the area, being collected initially in the basin with V = 10 m^3 that will be placed on the analyzed site. From the tank, the wastewater will be taken by the pre-treatment station and discharged into the existing sewerage network in the area (DELTA GAS SRL).

Domestic waste water - Construction phase

The average number of staff involved in the construction work is 10.

Domestic wastewater will be collected in the basins provided in the eco-toilets and disposed of by the company providing services for the licensed contractor.

The pollutants discharged daily into domestic wastewater and their quantities are shown experimentally in the table below.

Table 6 - Average experimental wastewater composition for the construction period

Parameter	Load (g/person/day)	Concentration (mg/litre)	Total load for 10 persons (kg/day) minimum and maximum limit	
Total solid	115-170	680-1000	1.150	1.700
Volatile solids	65-85	380-500	0.650	0.850
Solid suspensions	35-50	200-290	0.350	0.500
Suspended volatile solids	25-40	150-240	0.250	0.400
BOD5	35-50	200-290	0.350	0.500
CCOCr	115-125	680-730	1,150	1,250
Total nitrogen	6 - 17	35-100	0.060	0.170
Ammonium	1 - 3	6 - 18	0.010	0.030
Nitrites, nitrates	<1	<1	<1	<1
Total phosphorus	3 - 5	18-29	0.030	0.050
Phosphates	1 - 4	6 – 24	0.010	0.040
Coliform, total	-	1010-1012	-	-
Faecal coliform	-	108-1010	-	-

Period of exploitation/operation of the target

Eight people will be employed for the exploitation period. The loadings for the 8 newly employed persons for domestic waste water are shown in the table below:

Table 7 - Domestic sewage load related to staff during the operating period

Parameter	Load (g/person/day)	Concentration (mg/litre)	Total load for 3 persons (kg/day) minimum and maximum limit	
Total solid	115-170	680-1000	0.92	1.36
Volatile solids	65-85	380-500	0.52	0.68
Solid suspensions	35-50	200-290	0.28	0.4
Suspended volatile solids	25-40	150-240	0.2	0.32
BOD5	35-50	200-290	0.28	0.4
CCOCr	115-125	680-730	0.92	1
Total nitrogen	6 - 17	35-100	0.048	0.136
Ammonium	1 - 3	6 - 18	0.008	0.024
Nitrites, nitrates	<1	<1	<1	<1
Total phosphorus	3 - 5	18-29	0.024	0.04
Phosphates	1 - 4	6 - 24	0.008	0.032
Coliform, total	-	1010-1012	-	-
Faecal coliform	-	108-1010	-	-

The estimation of the values of domestic wastewater loadings resulting from the activity of S.C. Friendly Waste Romania S.R.L. on the analyzed location was made by corroborating the average number of inhabitants in relation to the number of hours with the values of the "Average composition of domestic wastewater (Imhoff - 1990) in g/place/day".

Technological waste water

The technological wastewater is generated only during the operational phase of the site, from:

- washing bins and the bodies of vehicles that will transport animal waste;
- washing of the concrete platforms in the loading area of the waste incinerator. The frequency of washing will be about once a week and low-flow pressure washing equipment will be used.
- washing of the concrete platform intended for unloading and possible temporary storage of non-hazardous waste. The frequency of washing will be about once a week and low-flow pressure washing equipment will be used.

Analysing the water loadings based on the results of analyses carried out at other sites with the same activity, in conjunction with the volumes of industrial wastewater expected to be generated at the site under analysis, the results are shown in the table below:

Table 8 -Expected discharges to process water during the operational period of the objective

Parameter	Analysis report values	U.M.	Estimated maximum volume for domestic waste water m^3			Maximum volume loads kg			VLA cf. NTPA 002/2005
			daily	monthly	annual	daily	monthly	annual	
pH	6.70	unit. pH							6.5 – 8.5

Total suspended solids	30	mg/l	4.8	102.4	1228.8	0.144	3.072	36.86	350
CCOCr	120	mgO /l 2				0.576	12,288	147.456	500
CBO_5	42	mgO /l_2				0.202	4.3	54.13	300
Ammonium	8.74	mg/l				0.042	0.895	11.26	30
Total phosphorus	0.89	mg/l				0.0043	0.091	1,147	5

The values of the indicators in domestic wastewater will be within the limits set in GD 352/2005, NTPA 002.
No waste water results from the operation of the "dry absorbing system" flue gas purification system, this being a dry type system.

2.6.1.2. Air emissions

Sources and pollutants generated during the realisation of the objective

At this stage there will only be mobile sources of pollution, not stationary sources.

The sources of air pollution during the incinerator and mobile construction works are the machinery and means of transport carrying out the works:

- transport of components of mobile buildings
- transport of incinerator components
- loading - unloading of the components of the mobile buildings and the incinerator
- construction of anchoring foundations (blocks of plain shaft bearings)
- incinerator assembly
- assembly of mobile constructions

The machinery and means of transport to be used are:

- crane
- heavy goods vehicles
- means of light goods vehicle transport

All of them are equipped with diesel engines. The characteristic pollutants are:

- sulphur dioxide
- carbon monoxide
- nitrogen oxides
- persistent organic pollutants (POPs)
- heavy metal compounds (especially cadmium) in exhaust gases

Concentrations and mass flow rates of discharged pollutants

The type and volumes of works to be carried out during the whole period of the incinerator and mobile construction are:

- crane handling of mobile construction components and incinerator components (approx. 40 hours crane operation)
- transport of materials for the construction of anchoring foundations and transport of mobile construction components and incinerator components. Approx. 300 t of materials with a number of approx. 30 trips

The mass flows of pollutants to be discharged with the exhaust gases by the machinery and means of transport used were calculated according to the Methodology for calculating the contributions and taxes due to the Environment Fund, approved by Ministerial Order no. 578/2006, depending on:

- type and capacity of the machine
- the type of fuel used and its sulphur content
- fuel consumption per machine/vehicle
- working regime
- operating conditions

The fuel used shall be diesel fuel with a maximum sulphur content of 0.2 %.

The calculation formula is:

$E_i = FE_i \times N_i \times CC_i$

where: E_i = pollutant mass flow rate

FE_i = emission factor corresponding to the pollutant and the category of the machine/vehicle

N_i = number of vehicles in the category

CC_i = specific diesel consumption for the machine/vehicle category (this must be converted into kg depending on the density of the fuel used - for diesel d = 820 -845 kg/mc (density at 15 degrees C.)

SO_2 emission calculation :

$ESO_2 = K_s \times C$ (in kg)

Where:

E SO_2 - emission of SO_2

Ks - S content of fuel, expressed in relative mass (kg/kg); for diesel used $K_S = 0,002$

C - fuel consumption (kg)

Emission factors for heavy-duty diesel vehicles (> 3,5 t) - diesel fuel

Table no. 4. Diesel emission factors

	NO_X	CH_4	VOC	CO	$N O_2$	CO_2
Moderate control, fuel consumption of 30.8 l/100 km						
total g/km	10.9	0.06	2.08	8.71	0.03	800
g/kg fuel	42.7	0.25	8.16	,34,	0.12	3138
g/MJ	1.01	0.00	019	0.80	0.003	73.9

For all the activities to be carried out, diesel consumption is estimated at approx. 700 l, a total number of operating hours of machinery and vehicles of approx. 50, an average hourly consumption of 15.4 l/h/vehicle and a number of 4 such machines (1 crane and 3 means of transport). In this case we will have:

A. Hourly average mass flow rates of pollutants from all sources assuming simultaneous operation:

average hourly consumption = 4 machines x 15.4 l/h/machine = 91.6 l/h = 76.03 kg/h (d = 0.830 kg/l)

Table no. 5. Pollutant mass flow rates (g/h)

	Mass flow (g/h)						
	NO_X	CH_4	VOC	CO	$N O_2$	CO_2	SO_2
FE g/kg fuel	42.7	0.25	8.16	34.2	0.12	3138	2
total emissions all sources	3246	19	620	2600	9	238583	152.06

It has been taken into account that not all machinery and vehicles involved in the construction and transport of materials and components are in operation at the same time.

B. Total emissions for the entire incinerator and metal hall instalation activity:
Estimated total diesel consumption = 700 l = 581 kg (d = 0.830 kg/l)

Table no. 6. Pollutant mass flow rates (kg)

	Mass flow (kg)						
	NO_X	CH_4	VOC	CO	$N O_2$	CO_2	SO_2
FE g/kg fuel	42.7	0.25	8.16	34.2	0.12	3138	2
total emissions all sources	24.80	0.14	4.74	19.87	0.07	1823.18	1.162

Bearing in mind the following:

- in reality the mass flow rates of these pollutants are much lower because the machines will never all work at the same time
- pollutants released in exhaust fumes are released freely into the atmosphere
- dispersion conditions at the site under consideration are very good
- the quantities of dust released during the works and transport are very low, as the site will be worked on only concrete platforms and vehicles will be driven only on asphalt or concrete roads

it is estimated that the pollution generated for the environmental factor air at this stage will be insignificant and will not cause discomfort

Sources and pollutants generated during operation of the target

Activities that will generate sources of air pollution are those related to:

- combustion of fuel (LPG) in the incinerator
- on-site traffic (vehicles entering and leaving the site carrying waste for disposal on site, removal of ash and waste from the site, internal transport)

The characteristic pollutants are:

- sulphur dioxide
- carbon monoxide
- nitrogen oxides
- persistent organic pollutants (POPs)
- heavy metal compounds (especially cadmium) in exhaust gases

Installations for the containment, discharge and dispersion of pollutants in the environment

For mobile sources - all vehicles and machinery that will be used, both during the project implementation phase and during operation, will be equipped with engines with pollution levels in accordance with European standards from EURO 5 upwards.

For stationary sources - the incinerator to be installed and commissioned:

The IER 1000-300 incinerator is equipped with:

- secondary combustion chamber with features:

- V = 9.7 m3 equipped with 1 incinerator to burn the flue gases from the primary chamber
- secondary combustion chamber temperature - 1100 C°
- gas retention time in the secondary combustion chamber - 2 seconds

- dry absorbing flue gas cleaning/washing system comprising:
  - flue gas cooling system;
  - dry absorbing system for flue gas cleaning;
  - dry particle filtration system;
  - exhaust fan for exhausting combustion gases;
  - flue gas chimney and chimney connector with features:
    - height H = 10 m
    - diameter Ø = 0.5 m
    - outlet area S = 0.196 m^2

Characterisation of sources of air pollutants related to the objective

a) The incinerator to be located on the site

The IER-1000-300 incinerator is to be installed on the site under consideration.

It runs on LPG and will have an hourly consumption of approx. 122 l/h resulting in a flue gas volume of 583.4 m^3 /h plus the air introduced by the forced draught supply system resulting in an exhaust gas volume of 5000 m /h.^{3}

The source falls into the category of sources with controlled pollutant control (emission containment) installations. In this respect, the incinerator is equipped with a dry absorbing system.

For the determination of the exhaust gas flow rate to the incinerator stack the calculation is exemplified below:

Stoichiometric conditions in the combustion process refer to the quantitative ratios between the fuel constituents and air.

Under laboratory conditions, with accurate and controlled measurements, one can speak of stoichiometric conditions, with an exact calculation of masses in the ratio of elements. Under normal operating conditions this is impossible.

The energy source in any fuel is carbon. In fuels there are also other elements that influence combustion, namely N, S, H 0. $_2$

For different types of fuel there is a ratio between the amount of atmospheric air (20% O_2) consumed to burn one kg of fuel.

The ratio for LPG is 1 l LPG requires 25 l air.

The calorific value for one litre of LPG is 11070 kcal/kg

1 kg LPG = 1.727 litres

1 kg air = 0.77 m^3

One kg of LPG requires 14.475 Nm^3 of air and one litre of LPG approximately 0.025 Nm^3 of air.

These are theoretical stoichiometric conditions.

In practice the conversion phenomenon is not 100% efficient, so incinerator manufacturers offer the possibility of adding excess air. In most cases this is up to 100%.

Taking all these data into account, the flue gas flow rates (where the additional air supply providing the necessary oxygen for combustion is also taken into account) can be calculated for the incinerator analysed above (all calculations are expressed under normal pressure and temperature conditions - 273.15° K, 101.325 kPa):

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- IER incinerator - 1000-300

122.5 x 25 x 0.77 + 100 % = 4716.25 Nm^3 /h

The literature says that an incinerator should provide at least 6% excess oxygen.

It results from the above that for every Kilocalorie we have to provide

- 9.542 / 8520 = 0.0011971 m^3 of air.

With this in mind, the incinerator is fitted with equipment to provide additional air for combustion, depending on the capacity of the primary combustion chamber. Thus we have the situations:

- The IER - 1000-300 incinerator is equipped with an additional air injection system (turbine), the operation of which is controlled by an automated and computerised temperature and combustion control system. At the same time, the injectors are also equipped with turbo blowers that ensure an increased air flow necessary for complete combustion, which are also controlled automatically. This system provides an air flow of between 2000 and 3000 Nm^3 /h. In this case the average hourly exhaust flow will be 5000 Nm /h^3

b) Traffic on the premises

It is represented by;

- entry and exit of vehicles transporting waste for disposal by incineration
- entry and exit of vehicles transporting waste water from the sewage ponds to the Oltenita waste water treatment plant
- entry and exit of vehicles transporting waste generated on the site
- internal waste handling activity

Transport of non-hazardous and medical waste is done with the company's own trucks (4 trucks to be authorised).

Taking into account the activity of the company, it is estimated that 1 ride/day with 4 trucks, respectively 4 rides/day will be made.

The specific diesel consumption of the vans used for transport is on average 17 l per 100 km.

The forklift works on average 4 hours/day, with a random schedule depending on the daily activity and has a consumption of 6 l/h.

The mass flows of pollutants discharged into the atmosphere with exhaust gases from means of transport and machinery used in the traffic of the premises were calculated according to the Methodology for calculating the contribution and taxes due to the Environmental Fund, approved by OM no. 578/2006 with subsequent additions and amendments.

The pollutants emitted consist of particulates, sulphur dioxide, carbon monoxide, nitrogen oxides, persistent organic pollutants (POPs), heavy metal compounds (mainly cadmium). These pollutants were calculated using the same formulae as for the calculation of pollutant emissions from machinery and transport vehicles used in the implementation phase of the project.

Taking into account the schedule of the activity, the average hourly mass flows of the resulting pollutants were calculated. The values obtained are presented in the table below:

Table no. 7. Pollutant mass flows

	Average mass flow (g/h)				
	NO_x	SO_2	PM	POP	Cd
All sources	118.3	2.07	19.6	0.0098	0.000028

The sources are undirected, i.e. the polluted air is not taken in and exhausted through an exhaust system. In this case it is not possible to calculate pollutant concentrations at emission. The pollutants discharged with the exhaust gases are spread freely in the atmosphere. Dispersion conditions at the analysed site are very good.

Analysing the mass flow rates of pollutants discharged into the atmosphere, it can be concluded that this source of pollution is insignificant, even more so if compared with the quantities of pollutants emitted on the traffic arteries (in this case on the DN4, which is located at a certain proximity to the objective analysed.

Concentrations and mass flow rates of pollutants discharged into the atmosphere

- *For stationary directed sources*

According to the specifications in the technical books of the incinerator equipped with LPG incinerators, compared with the average values according to European standards, for pollutants emitted into the atmosphere we have the values:

Table no. 8. Average emissions and EU Standards of basic incinerators (with secondary compartment)

Parameter	Standard values	Measured values at incinerators
Solid particle	30 mg/m³	1.2 mg/m³
Sulphur dioxide	200 mg/m³	2.4 mg/m³
Nitrogen Dioxide*	400 mg/m³	60 mg/m³
Carbon Monoxide	100 mg/m³	78.3 mg/m³

Normally incinerators equipped with:

- secondary combustion chamber for the flue gases from the primary chamber
- dry absorbing system,
- bag filtration system

stack emission values for these parameters are much lower.

For these reasons, the mathematical modelling of the dispersion of pollutants into the atmosphere resulting from the operation of the incinerator at full capacity will be done with the values in the technical book (those in Table 15).

Burning fuel (LPG) in the incinerator

Centralised data for pollutants emitted from stationary sources are given in the tables below for an hourly consumption of 122.5 l/incinerator = 122.5 l LPG/h:

Table no. 9. LPG emission factors

pollutant emitted	NO_X	PM_{10}	CO
FE mg/mc gas	0.001504	0.0001216	0.00064
FE mg/kg LPG	0.00036	0.000029	0.00015
FE mg/l LPG	0.00065	0.000053	0.00028

Table no. 10. Emissions from stationary sources of directed pollution

Source name	Pollutant	Mass flow (mg/h)	Gas/air flow rate (m^3 /h)	Emission concentration (mg/m)[3][3]	Alert threshold (mg/m)[3]	VLA[4] (mg/m)[3]
incinerator exhaust stack	NO_x	0.08	5000	0.00005	245	350
	SO_2	-		-	24.5	35
	CO	0.006		0.000004	70	100
	PM_{10}	0.034		0.00002	3.5	5
	VOC	-			n.n.	n.n.

Burning of fuel (LPG) and waste in the incinerator

For burning waste in the incinerator, the required hourly fuel consumption was set at 122.5 l LPG/h for an incinerated waste quantity of 300 kg/h.

The emission values given in the technical book for the analysed incinerator are those in Table 15, respectively:

- Solid particle = 1.2 mg/m^3
- Sulphur dioxide = 2.4 mg/m^3
- Nitrogen Dioxide = 60 mg/m^3
- Carbon Monoxide = 78.3 mg/m^3
- HCl = 5.38 mg/m^3
- HF = 0.04 mg/m^3
- TOC = 4.6 mg/m^3

These values are valid for an air flow required to burn the fuel used in the incinerator, respectively: 122.5 x 25 x 0.77 = 2415.88 m^3

Taking into account that the IER 1000-300 incinerator is equipped with an additional injection system (turbine) whose operation is controlled by an automated and computerised temperature and combustion control system and that the injectors are also equipped with turbo blowers which ensure an increased air flow necessary for complete combustion, which are also controlled automatically, an air surplus of between 2000 and 3000 Nm^3 /h is ensured. In this case the average hourly exhaust gas flow will be 5000 Nm^3 /h in which case the concentrations of pollutants in the emissions resulting from waste incineration will be corrected by a coefficient of 0.48 (2415.88 m^3 : 5000 m^3 = 0.48).

Consequently the concentrations of these pollutants at the outlet of the incinerator stack will be:

- solid particles = 1.2 x 0.48 = 0.579 mg/m^3
- sulphur dioxide = 2.4 x 0.48 = 1.152 mg/m^3
- nitrogen dioxide = 60 x 0,48 = 28,8 mg/m^3
- carbon monoxide = 78.3 x 0.48 = 37.584 mg/m^3
- HCl = 5.38 x 0.48 = 2.58 mg/m^3
- HF = 0.04 x 0.48 = 0.019 mg/m^3
- TOC = 4.6 x 0.48 = 2.208 mg/m^3

[3] the worst-case situation is considered when no additional air is added (by forced injection) to the fuel combustion process
[4] Reference conditions T = 273° K, P = 101,3 kPa, dry gas, oxygen content 11 %.

Table no. 11. Mass flow rates and concentrations of pollutants emitted to the atmosphere during operation under load without additional air supply

Source name	Pollutant	Mass flow (g/h)	Gas/air flow rate (m^3 /h)	Emission concentration (mg/m)[3][5]	VLE[6] (mg/m)[3]	Outlet point
LPG combustion + waste	NO_x	144	2416	60	200	incinerator exhaust stack
	SO_2	5.75		2.4	50	
	CO	187.9		78.3	-	
	TSP	2.9		1.2	5	
	VOC	0		0	n.n.	
	HCl	13		5.38	10	
	HF	0.097		0.04	1	
	TOC	11,11		4,6	10	
	PCDD and PCDF	101.47[7]		0.042[8]	0.1[9]	

Table no. 12. Mass flow rates and concentrations of pollutants emitted into the atmosphere during operation under load with supplementary air supply

Source name	Pollutant	Mass flow (g/h)	Gas/air flow rate (m^3 /h)	Emission concentration (mg/m)[3][10]	VLE[11] (mg/m)[3]	Outlet point
LPG combustion + waste	NO_x	144	5000	28,8	200	incinerator exhaust stack
	SO_2	5.75		1,15	50	
	CO	187.9		37,58	-	
	PST	2.9		0,58	5	
	VOC	0		0	n.n.	
	HCl	13		2,6	10	
	HF	0.097		0,019	1	
	TOC	11.11		2,22	10	

[5] the worst-case situation is considered when no additional air is added (by forced injection) to the fuel combustion process
[6] Daily average limit values cf Annex 6, L 278/2013, reference conditions T = 273° K, P = 101,3 kPa, dry gas, oxygen content 11%.
[7] expressed in ng I.TEQ/Nmc
[8] ibidem
[9] ibidem
[10] the situation when additional air is added (by forced injection) to the fuel combustion process is considered
[11] Daily average limit values cf Annex 6, L 278/2013, reference conditions T = 273° K, P = 101,3 kPa, dry gas, oxygen content 11 %.

	PCDD and PCDF	101.47[12]		0,0035[13]	-	

Normally the incinerator will only operate with additional air supply because in the event of a fault in this process the automation system will initiate the incinerator shutdown sequence. This consists of:

1. stopping the supply of waste to the primary chamber
2. combustion control in primary chamber injectors with injector air supply
3. operation of the incinerator until all waste in the primary combustion chamber has been incinerated
4. stopping the supply of injectors
5. cooling of incinerator chambers
6. troubleshooting
7. restarting the incinerator

The additional air supply does not affect the amount of pollutant emitted into the atmosphere per unit time but only its concentration at the incinerator stack outlet. This will not affect the calculated values of the pollutant concentrations in the immission determined by mathematical modelling, because the modelling is based on the amounts of pollutants emitted per unit time, regardless of their concentration in the emission.

[12] expressed in ng I.TEQ/Nmc
[13] ibidem

Table no. 13. Pollutants emitted into the atmosphere from incinerator operation

Name of activity	Sources of air pollutants					Physical characteristics of sources			Exhaust gas parameters		
	Name	LPG consumption l/h	Annual working time hours[14]	Pollutants generated	Quantities of pollutants generated kg/year[15]	Name	Height m	Inside diameter (area) at the top of the basket m^2	Speed m/s	temperature °C	Volume flow m^3/s mass flow mg/s
Waste incineration	Incinerator IER-1000-300	122.5	10 h/day x 320 days/year = 3200 h/year	NO_x	0.614	Flue gas exhaust	10	0.5 m 0.196	7.09	1900	• 1.38 • 0.00002
				SO_2	-						• -
				CO	0.046						• 1.38 • 0.0000017
				PM_{10}	0.261						• 1,38 • 0.000009
				VOC	-						• -

[14] Normally in the incinerator, combustion is initiated when the waste is fed into the incinerator and then the combustion is maintained by the heat input (self-sustaining combustion) from the incinerated waste. For this reason, it has been calculated that, in practice, the LPG supply to the burners for the operation of the incinerator takes on average 10 hours/day.

[15] the calculation is made for 24 h/day operation without taking into account the phenomenon of self-combustion of the waste (worst case where we have the maximum emissions into the atmosphere)

Table no. 14. Pollutants emitted into the atmosphere from the operation of the incinerator with a waste burning rate of 300 kg/h

Name of activity	Sources of air pollutants						Physical characteristics of sources			Exhaust gas parameters		
	Source name	Amount of waste incinerated kg/h	LPG consumption l/h	Annual working time hours[16]	Pollutants generated	Quantities of pollutants generated kg/year[17]	Name of outlet point	Height m	Inside diameter and area at the top of the basket m/m^2	Speed m/s	temperature °C	Volume flow m^3 /s mass flow mg/s
Waste incineration	Incinerator IER 1000-300	300	122,5	GPL: 10 h/day x 320 days/year = 3200 h/year waste: 24 x 320 = 7680 h/year	NO_x	1105,92	Flue gas exhaust	10	0,5 m 0,785 m^2	1,769	190	• 1.38 • 40
					SO_2	44,16						• 1.38 • 1.6
					CO	1443,07						• 1.38 • 52.19
					PST	22,27						• 1,38 • 0.8
					VOC	-						• 1.38
					HCl	99,58						• 1.38 • 3.61
					HF	0,74						• 1.38 • 0.0269
					TOC	85,10						• 1.38 • 3.086
					PCDD and PCDF	0,000768						• 1.8 • 0.0000278

[16] Normally in the incinerator, combustion is initiated when the waste is fed into the incinerator and then the combustion is maintained by the heat input (self-sustaining combustion) from the incinerated waste. For this reason, it has been calculated that, in practice, the LPG supply to the burners for the operation of the incinerator takes on average 10 hours/day.

[17] the calculation is made for 24 h/day operation without taking into account the phenomenon of self-combustion of the waste (worst case where we have the maximum emissions into the atmosphere)

- *For mobile sources*

The unit under analysis will use 4 diesel-powered trucks with a capacity of less than 3.5 t, with an average consumption of 11.5/100 km or 8 l/hour.

According to the specific activities to be carried out on the site under consideration, the most demanding situation concerning the simultaneous operation of the engines of the trucks and the forklift truck involves:

- a maximum of 2 trucks present on the site with engines running simultaneously
- their simultaneous operation for a maximum of 2 hours/day
- a maximum hourly consumption (combustion in the thermal engines of the trucks) of diesel fuel per site of 16 l
- operation of the fork-lift truck for a maximum of 1 hour overlapping with the operation of the truck engines, at an hourly consumption of 6 l diesel fuel
- a maximum hourly consumption (combustion in the thermal engines of the trucks + forklift engine) of diesel fuel per site of 16 + 6 = 22 l/h

The mass flows of pollutants to be discharged with the exhaust gases by the machinery and means of transport used were calculated according to the Methodology for calculating the contributions and taxes due to the Environment Fund, approved by Ministerial Order no. 578/2006, depending on:

- type and capacity of the machine
- the type of fuel used and its sulphur content
- fuel consumption per machine/vehicle
- working regime
- operating conditions

The fuel used shall be diesel fuel with a maximum sulphur content of 0,2 %.

The calculation formula is:

$E_i = FE_i \times N_i \times CC_i$

where: E_i = pollutant mass flow rate

FE_i = emission factor corresponding to the pollutant and the category of the machine/vehicle

N_i = number of vehicles in the category

CC_i = specific diesel consumption for the category of machine/vehicle (this must be converted into kg depending on the density of the fuel used - for diesel d = 820 -845 kg/mc (density at 15 degrees C.)

SO emission calculation$_2$:

$ESO_2 = K_s \times C$ (in kg)

Where:

E SO_2 - emission of SO_2

Ks - S content of fuel, expressed in relative mass (kg/kg); for diesel used $K_S = 0,002$

C - fuel consumption (kg)

Emission factors are used to determine the quantities of pollutants emitted into the atmosphere:

Table no. 15. Emission factors

	Mass flow (g/h)						
	NO_X	CH_4	VOC	CO	$N O_2$	CO_2	SO_2
FE g/km	1.44	0.005	0.42	1.58	0.017	284	-
FE g/kg fuel	15.9	0.055	4.64	17.5	0.188	3138	-

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Table no. 16. Mobile pollution sources

Source	Pollutant	NO_X	CH_4	VOC	CO	$N O_2$	CO_2	SO_2
	FE g/kg fuel	15.9	0.055	4.64	1.58	0.188	3138	2
	hourly diesel consumption l/h - kg/h	Mass flow (g/h)						
special car	16 - 13,6	216.24	0.74	63.1	21.48	2.55	42676.8	27.2
forklift	6 - 5,1	81.09	0.28	23.66	8.05	0.95	16003	10.2
Total	22 - 18,7	297.33	1.02	86.76	29.53	3.5	58679.8	37.4

Bearing in mind the following:

- in reality the mass flow rates of these pollutants are much lower because the machines will never all work simultaneously
- pollutants released in exhaust fumes are released freely into the atmosphere
- dispersion conditions at the site under consideration are very good
- the quantities of dust released during the works and transport are very low, as the site will be worked on only concrete platforms and vehicles will be driven only on asphalt or concrete roads

it is estimated that the pollution generated for the environmental factor air at this stage will be insignificant and will not cause discomfort.

Installations for the containment, discharge and dispersion of pollutants in the environment

For mobile sources - all vehicles and machinery that will be used, both during the project implementation phase and during operation, will be equipped with engines with pollution levels in accordance with European standards from EURO 4 upwards.

For stationary sources - the incinerator to be installed and commissioned:

The IER-1000 incinerator is equipped with:

- secondary combustion chamber with features:
  - V = 9.7 m3 equipped with 1 incinerator to burn the flue gases from the primary chamber
  - secondary combustion chamber temperature - 1100 C°
  - gas retention time in the secondary combustion chamber - 2 seconds
- dry absorbing flue gas cleaning/washing system comprising:
  - flue gas cooling system;
  - dry absorbing system for flue gas cleaning;
  - dry particle filtration system;
  - exhaust fan for exhausting combustion gases;
  - flue gas chimney and chimney connector with features:
    - height H = 10 m
    - diameter Ø = 0,5 m
    - outlet area S = 0,196 m^2

We will do the impact assessment for operation with LPG fuel and for a combustion rate of 300 kg/h waste.

The maximum emission concentrations from the incinerator in relation to the regulated limits are shown in the following table:

Table 9 - Maximum emission concentrations from the incinerator in relation to regulated limits

Source	Pollutant	Mass flow g/h	Emission competition with additional air supply mg/Nmc	Conc. to emission without additional air supply mg/Nmc	VLE cf. Annex 6, L 278/2013 mg/Nmc
IER 1000-300 incinerator flue gas exhaust stack	NO_X	144	28.8	60	200
	SO_2	5.75	1.15	2.4	50
	CO	187.9	37.58	78.3	-
	Particles	2.9	0.58	1.2	5
	HCl	0	2.6	5.38	10
	HF	13	0.019	0.04	1
	TOC	0.097	2.22	4.6	10

The concentrations of pollutants emitted by the incinerator are within the maximum permissible limits (MRLs) according to Annex 6, L 278/2013 for all indicators.

The mass flow rates of pollutants discharged into the atmosphere, calculated at maximum operating speed, are relatively low.

Concentration of pollutants in immission in relation to regulated limits

Project implementation phase

The assessment of the impact on the environmental factor air, for this stage, is done in terms of concentrations in immission (concentration of pollutants at respiratory level).

Only short remediation time concentrations (i.e., 1 hour) are important as they represent the highest likely respiratory concentrations due to sources operating simultaneously in the same perimeter. Consequently, only concentrations of nitrogen oxides and sulphur dioxide for which OM 592/2002 has set maximum permissible limits for remediation time of one hour are of interest. The determination of pollutant concentration in the immission is done by mathematical modelling of pollutant dispersion.

The results obtained, in relation to the maximum permitted concentrations, are shown in the table below:

Table 10 - Maximum concentrations in immissions from the operation of engines of motor vehicles and machinery involved in construction activities

Source	Pollutant	Cmaxim 1 h (µg/m3)	CMA1 h (µg/m3)
All sources	NOx	103.1	200
	SO2	1.53	350

It can be observed that the values of the maximum concentrations in immission in the short remediation time (one hour) of pollutants resulting from the operation of machinery and vehicles carrying out the transport and erection works of the incinerator IER-1000-300 as well as the metal hall are much lower than the maximum permissible values and are recorded at a distance of 80 m from the source and only under certain meteorological conditions (lack of air currents, excessive heat, etc.) and under any other meteorological conditions the concentrations in immission are lower. At the same time, the immission concentration values become lower as the distance from the source increases.

Maximum concentrations in immission are within the maximum permitted limits for all indicators.

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Air pollutant dispersion, maximum area of influence and changes in quality

Calculation of concentrations in immission was done only for the IER - 1000-300 incinerator by mathematical modelling of pollutant dispersion.

The concentrations in immission determined are related to the maximum permissible values provided by OM 462/1993 in conjunction with the provisions of Law 104/2011 as amended.

A Gaussian model, i.e. the climatological model based on the Martin and Tikvart model theory, was used to determine the immission concentration fields of the pollutants discharged into the atmosphere by the sources related to the operation of the target.

This is a model for estimating long-term averaging pollutant concentrations for continuous point or surface sources.

The fundamental physical basis of the model is the assumption that the spatial distribution of concentrations is given by the Gaussian wedge formula.

Long-term average concentration

The average AC concentration in a receiver at distance r from a source and at height z above ground is given by the relation:

$$\overline{C}_A = \frac{16}{\pi}\int_0^{\infty}\left[\sum_{k=1}^{16} q_k(\rho)\sum_{l=1}^{8}\sum_{m=1}^{7}\Phi(k,l,m)S(\rho,z;u_l,P_m)\right]d\rho$$

where:

- k = index for wind direction sector
- qk(□) = ∫Q(ρ,□)d□ □pentru sector k
- Q(ρ,□) = emission per unit time of the surface source
- ρ = receiver distance for an infinitesimal surface source
- θ = angle in polar coordinates centered on receiver
- l = index for wind speed class
- m = index for stability class
- Φ (k,l,m) = frequency function of weather states
- S(ρ,z;Ul,Pm)= function defining the dispersion
- z = height of receiver above ground
- ul= representative wind speed
- Pm= stability class

For point sources, the average CP concentration due to a number of **n** sources is given by the relation:

$$\overline{C}_P = \frac{16}{2\pi}\sum_{n=1}^{N}\sum_{l=1}^{8}\sum_{m=1}^{7}\frac{\Phi(k_n,l,m)\ G_n\ S(\rho_n,Z;u_l,P_m)}{\rho_n}$$

where:

- kn = wind sector for **n-th** source
- Gn = emission for source **n**
- ρn= receiver distance of source **n**

If the receiver is on the ground (breathing level), then z=0 and the form of the function S(ρ,z;ul,Pm) will be:

$$\overline{C}_P = \frac{16}{2\pi} \sum_{n=1}^{N} \sum_{l=1}^{8} \sum_{m=1}^{7} \frac{\Phi(k_n, l, m)\, G_n\, S(\rho_n, Z; u_l, P_m)}{\rho_n}$$

if sz(r) < 0,8 L and

$$S(\rho, 0; u_l, P_m) = \frac{2}{\sqrt{2\pi} u_l \sigma_z(\rho)} \exp\left(-\frac{0.692}{u_l T_{1/2}}\right) \exp\left(-\frac{H^2}{2\sigma_z^2}\right)$$

if $\sigma z(\rho) > 0.8$ L
where:

- $\sigma\zeta(\square)$ = vertical dispersion function, e.g. standard deviation of concentration in the vertical plane
- h = effective height of the source
- L = mixing height at noon
- $T_{1/2}$ = half-life of the pollutant.

The possibility of the pollutant disappearing by physical or chemical processes is given by the expression: exp (-0.692/ul Q1/2).

The total concentration for a given averaging period is the sum of the concentrations due to all sources for that period.

Input data includes information on:

Calculation grid - The model allows the calculation of the average pollutant concentration at any point at a certain distance from the source/sources by taking into account the contribution of all sources. As a result, it is possible to calculate concentrations over an area around the source. For this purpose, the area of interest is delimited and a grid, usually quadratic, is fixed on its surface, whose nodes constitute the receptors. The number of nodes and the pitch of the grid are chosen according to the characteristics of the source, the area of interest and the problem to be addressed. The grid will have an origin and a coordinate system with the Ox axis to the east and the Oy axis to the north, according to which the coordinates of the sources and nodes are determined.

Emission data include source characteristics: geometric height, diameter or area of emission, velocity and temperature of pollutant discharge.

Meteorological parameters are entered as the frequency function □(k,l,m) of the triplet wind direction, wind speed class and stability class, established over long (multi-annual) data series.

For example, if working on 16 wind sectors, 8 speed classes and 7 stability classes, the table of frequency function values contains 896 entries.

Calculations of pollutant concentrations for the specific sources of the objective were made on a 0.8 km x 1.0 km quadratic grid with 10 m grid spacing, with the sources in the centre.

Short-term maximum concentration

For the assessment of short-term averaging concentrations, a model of the up Gaussian type was used, which is much more appropriate than the climatological model (which by averaging by sector sometimes underestimates short-term concentrations).

The model uses as input data the pollutant emission characteristics (amount of pollutant discharged into the atmosphere per unit time, exhaust height, temperature and exhaust gas velocity) and the decisive meteorological factors in the pollutant distribution: wind speed, degree of thermal stratification of the atmosphere.

The relationship for calculating the pollutant concentration at a point is:

$$C(x,y,z) = \frac{Q}{\pi u \sigma_y \sigma_z} \cdot \exp\{-\frac{y^2}{2\sigma_y^2}\} \cdot \exp\{-\frac{H^2}{2\sigma_z^2}\}$$

where:

- Q - pollutant emission in g/s
- H - the effective height of the source as a function of temperature and gas discharge velocity, inside diameter at the top and stack height
- u - wind speed at source height
- σ_y, σ_z - dispersion parameters as a function of atmospheric stratification class, distance from source and emission environment (urban/rural)

Pollutant plume over-elevation, a decisive parameter in assessing pollutant concentrations at a given distance from the source, was determined with Briggs' formula corrected for stable atmospheric stratification. The dispersion parameters □y and □z were determined with the formulas recommended by WMO 1982.

Calculations were performed on the wind axis, where concentrations are highest for all possible meteorological conditions.

To evaluate the level of pollutant emissions resulting from the operation of the IER-1000 type incinerator, theoretical calculations were made for pollutant emissions based on fuel consumption and type, calorific value, waste gas discharge temperature and emission factors.

The calculation was performed for a calorific value of the fuel used (LPG of 11,872 kcal/kg (45 Mj/kg) - lower calorific value of the fuel).

The combustion source consists of the incinerators of the combustion and afterincinerator chambers. The flue gases are discharged through the flue gas flue (D = 0.5 m; H = 10 m) after passing through the scrubbing plant. Taking into account the facilities for flue gas desulphurisation (flue gas scrubbing plant) (sulphur <10 ppm, cf. prospectus) the emission factor for sulphur oxide can be calculated from the sulphur content of the fuel using the formula:

FE SO_2 = [S] x 20,000 / CVNet (Corinair 2013, 1.A.1- Ch.6.3.2) where:

- FE_{SO2} - SO emission factor$_2$ (g /GJ)
- [S] - fuel sulphur content (% g / g): LPG contains sulphur <10 ppm, i.e. at an LPG density of 537 kg/m^3 , a sulphur content of 0.00003 % (% gravimetric)
- CVNet - lower calorific value of fuel (Gj/t, net) = 45 Gj/t

FE_{SO2} = 0.013 g/GJ < compared to the emission factor for LPG set according to the EMEP/EEA Guideline requirements at 0.067 g/GJ.

For safety the assessement calculations for emission concentrations were done for the most disadvantageous emission factor.

For the calculation of flue gas concentrations resulting from the combustion of fuel in the incinerator, the following aspects were taken into account: the gaseous emissions resulting from the combustion chamber where fossil fuels + combustible materials are converted into heat are composed of:

- nitrogen - 78% of the air introduced into the enclosure, which does not take part in combustion
- CO2 - the result of carbon oxidation (which is the energy source in the thermal process)
- H2O - the result of hydrogen combustion.

Determination of the amount of compounds and airflow

Below is a theoretical calculation for the exclusive combustion of the combustible substance

In the composition of LPG (the calculation is done for propane C3H8) we have two main elements, namely carbon 75%, hydrogen 24% and several secondary elements, the only notable one being sulphur 0.00003%.

Carbon is oxidized and CO2 is produced

$C + O2 \rightarrow CO2$

If we enter the molecular mass, we have:

$12 + 32 \rightarrow 44$

This means that for 12 kg of carbon, 32 kg of oxygen are needed to produce 44 kg of CO2.

In our case we have 1 kg of fuel, resulting in:

$0.75 + 2.0 \rightarrow 2,75$

So 2.0 kg of oxygen is needed to burn the carbon in one kilogram of fuel (LPG)

Hydrogen is oxidized and H2O is produced

$2H2 + O2 \rightarrow 2H2O$

If we enter the molecular mass we have:

$4 + 32 \rightarrow 36$

In our case we have 1 kg of fuel resulting:

$0.25 + 0.96 \rightarrow 1.21$ kg

So it takes 0.96 kg of oxygen to burn hydrogen from one kilogram of fuel.

Sulphur is oxidised to SO2

$S + O2 \rightarrow SO2$

If we enter the molecular mass, we have:

$32 + 32 \rightarrow 64$

In our case we have 1 kg of fuel, resulting in:

$0.00003 + 0.003 \rightarrow 0.00303$

All masses summed C + H + S (2.17 + 1.08 + 0.00303) gives 3.236 kilograms of oxygen needed to burn 1 kg of LPG.

Since oxygen is present in the air at a concentration of 21%, the determination is done

$3.236 \div 0.21 = 15.4$ kg of air.

Under normal conditions, air has a density of 1.3 kg/m3, so we will need 20 m^3 of air for every kg of fuel or 16.6 m3 for every litre.

These are stoichiometric values. In a combustion process we will always have 20% excess air.

The molar mass of C3H8 is $3 \times 12 + 8 \times 1 = 44$ (g/mol).

Under normal conditions, the volume of one mole of gas is 22.4 litres.

The equation for the propane combustion reaction is:

$C H_{38} + 5O_2 \dashrightarrow 3CO_2 + 4H_2 O + Q$ (this reaction is exothermic)

1 x 44 g C_3H_8 reacts with 5 x 22.4 litres O_2

1000 g C_3H_8 will react with:

1000 x 5 x 22.4/44 = approx. 2545.45 litres O_2



When calculating the flue gas, nitrogen, which does not change significantly in the combustion process, will be taken into account, i.e. the amount entering the process will be equal to the resulting amount, i.e. 0.78 of the total volume.

The above are phenomena that occur under theoretical, laboratory conditions. In practical applications two other phenomena occur:

- a small part of the nitrogen will combine with oxygen to produce nitrogen oxides - NOx
- a small part of the carbon will form CO (due to the speed of the combustion process not all C atoms will get 2 O atoms)
- it is also taken into account that H2O (resulting from the oxidation of hydrogen) is in a gaseous state (0.8 kg/m3)

Calculation of the concentrations of noxides in the flue gas at emission is presented centrally in the table below.

To determine the parameters needed in the mathematical modelling process, the following were used:

1. climate parameter values for the year 2022 recorded at the meteorological station located on Sos. Sloboziei, nr. 195, municipality of Giurgiu
2. information from the March 2022 factor change modelling:

- wind speed in relation to prevailing directions

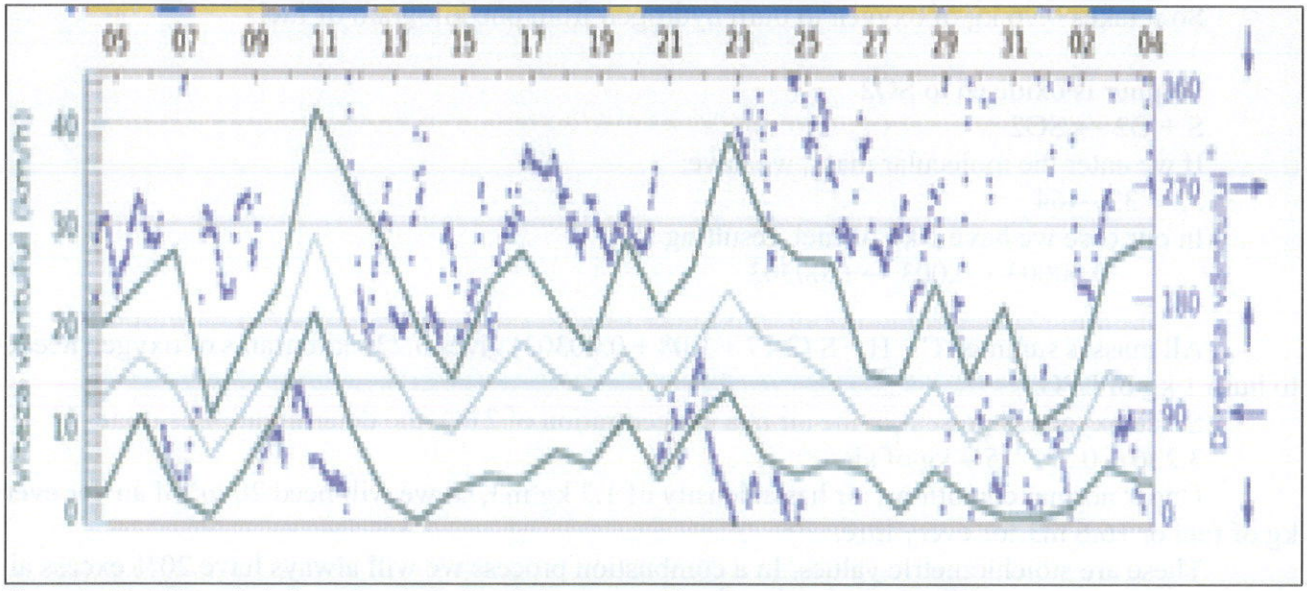

Figure 3 - Modelling of wind speed variation in relation to prevailing directions for March 2022

- precipitation amounts and atmospheric cloudiness

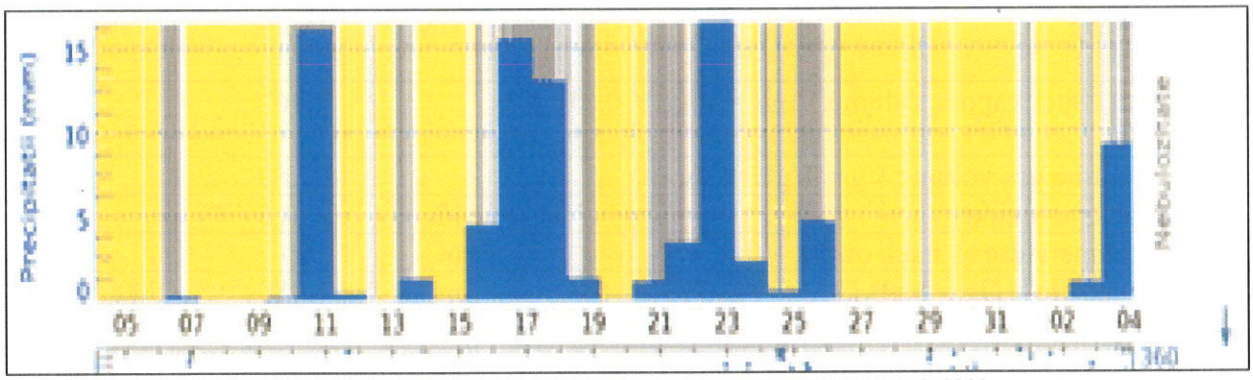

Figure 4 - Modelling of wind speed variation in relation to prevailing directions for March 2022

- variation of average temperatures in relation to humidity variation

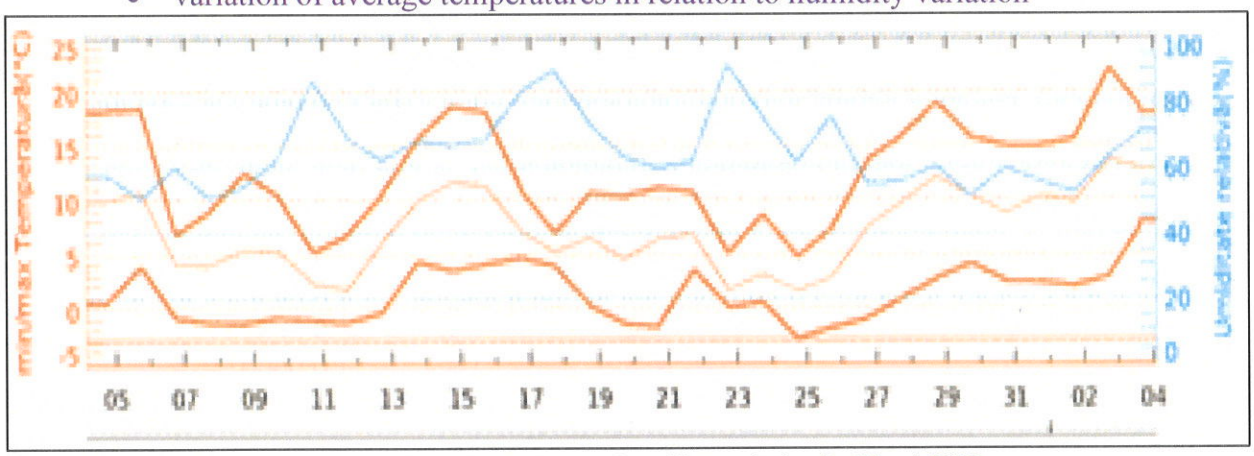

Figure 5 - Modelling of mean temperature variation versus humidity variation for March 2022

Calculation of the concentrations of noxides in the flue gas at emission is presented centrally in the table below:

Table 11 - Calculated physical parameters for soft modelling input with additional air supply

crt. no.	Parameter	UM	Value	Comments
1	Excess air coefficient λ = ratio of the actual amount of air supplied for combustion to the minimum amount required, λ = Lr / Lmin		1,7	
2	Theoretical dry air volume - Va	Nm /l^3	16.6	
3	Actual air volume	Nm /l^3	28,22	
4	Theoretical nitrogen volume $VN_2 = 0.79\ Va + N /100_2$	Nm /l^3	13.11	
5	Triatomic combustion gas volume $V_{RO2} = 0.01\ (CO_2 + CO + H_2\ S + sum.\ CmHn)$	Nm /l^3	1	
6	Theoretical dry gas volume $VgU = V_{N2} + V_{RO2}$	Nm /l^3	14.11	
7	Theoretical water vapour volume $V_{H2O} = 0.01\ (CO_2 + CO + H_2\ S + sum.\ CmHnn/2 + 0.124) + 0.0016\ \lambda$	Nm /l^3	1.98	
8	Theoretical flue gas volume Vg = VgU + VH2O		16.09	
9	Actual dry gas volume VgU = VgUo + (λ -1) Vao		25.73	

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crt. no.	Parameter	UM	Value	Comments
10	Actual water vapour volume $V_{H2O} = V_{H2O} + 0,016\ d\ (\lambda -1)\ Vao$		2.16	
11	Actual flue gas volume $Vg = VgU + V_{H2O}$		27.89	
12	Fuel consumption	l/h	122.5	
13	Gas temperature at stack outlet	oC	190	
14	Total gas flow $Qg = VgB\ (273 + Tg)/273$	m^3 /s	1,389	5000 m3/h
15	Dispersion basket diameter D	m	0.5	
16	Dispersion stack height H	m	10	
17	Gas outlet area Sg	m^2	0.196	
18	Exhaust gas velocity $Wg = Qg/Sg$	m/s	6,175	
19	Nox concentration (calculated)			
	NO_x	mg/m^3	0.05	
	CO	mg/m^3	0.004	
	Particles	mg/m^3	0.02	
	VOC	mg/m^3	-	
	SO_2	mg/m^3	-	
20	Amount of pollutant emitted			
	NO_x	g/s	0.00004	
	CO	g/s	0.0000036	
	Particles	g/s	0.000019	
	VOC	g/s	-	
	SO_2	g/s	-	
21	Average annual wind speed at the top of the chimney	m/s	6.95	
22	Average wind speed in the area analysed	m/s	6.9	
23	Average annual stack height $Dh = 1.5 \times S \times Wg / (Vo \times D)$	m	0.68	
24	Total flue gas lift height (annual average)	m	10.68	

Table 12 - Calculated physical parameters for soft modelling input without additional air supply

crt. no.	Parameter	UM	Value	Comments
1.	Excess air coefficient λ = ratio of the actual amount of air supplied for combustion to the minimum amount required, $\lambda = L_r / L_{min}$		1.7	
2.	Theoretical dry air volume - V_a	Nm /l^3	16.6	
3.	Actual air volume	Nm /l^3	28,22	
4.	Theoretical nitrogen volume $V_{N2} = 0.79\ V_a + N/100_2$	Nm /l^3	13.11	
5.	Triatomic combustion gas volume $V_{RO2} = 0.01\ (CO_2 + CO + H_2S + sum.\ C\ H)_{mn}$	Nm /l^3	1	
6.	Theoretical dry gas volume $V_{gU} = V_{N2} + V_{RO2}$	Nm /l^3	14.11	
7.	Theoretical water vapour volume $V_{H2O} = 0.01\ (CO_2 + CO + H_2S + sum.\ C\ H_{mn}\ n/2 + 0.124) + 0.0016\ \lambda$	Nm /l^3	1.98	
8.	Theoretical flue gas volume $V_g = V_{gU} + V_{H2O}$		16.09	
9.	Actual dry gas volume $V_{gU} = V_{gU}^o + (\lambda -1)\ V_a^o$		25.73	
10.	Actual water vapour volume $V_{H2O} = V_{H2O} + 0,016\ d\ (\lambda -1)\ V_a^o$		2.16	
11.	Actual flue gas volume $V_g = V_{gU} + V_{H2O}$		27.89	

12.	Fuel consumption	l/h	122.5	
13.	Gas temperature at stack outlet	°C	190	
14.	Total gas flow $Q_g = V_g B (273 + T_g)/273$	m^3/s	0.671	2416 m /h^3
15.	Dispersion basket diameter D	m	0.5	
16.	Dispersion stack height H	m	10	
17.	Gas outlet area S_g	m^2	0.785	
18.	Exhaust gas velocity $W_g = Q / S_{gg}$	m/s	0.85	
19.	**Nox concentration (calculated)**			
	NO_x	mg/m^3	60	
	SO_2	mg/m^3	2.4	
	CO	mg/m^3	78.3	
	PST	mg/m^3	1,2	
	HCl	mg/m^3	5.38	
	HF	mg/m^3	0.04	
	TOC	mg/m^3	4.6	
20.	**Amount of pollutant emitted**			
	NO_x	mg/s	40	
	SO_2	mg/s	1.6	
	CO	mg/s	52.19	
	PST	mg/s	0.8	
	HCl	mg/s	3.61	
	HF	mg/s	0.0269	
	TOC	mg/s	3,086	
21.	Average annual wind speed at the top of the chimney	m/s	6.95	
22.	Average wind speed in the area analysed	m/s	6.9	
23.	Average annual chimney lift height $D_h = 1.5 \times S \times W_g / (V_o \times D)$	m	0.68	
24.	Total flue gas lift height (annual average)	m	10.68	

Information on the prevailing direction of air (wind) currents and their speed - data collected for the years 2010 ÷ 2015 [18]

Table 13 - Average annual frequency of wind and calm (%) at Giurgiu weather station (Years, Direction)

ANII	DIRECTIA								
	N	NE	E	SE	S	SV	V	NV	CALM
2010	6,32	23,3	10,94	2,25	7,05	22,24	16,82	3,11	7,98
2011	5.7	21,31	14,7	2,67	5,57	21,27	15,48	4,17	9,13
2012	4,58	19,18	18	3,07	7,76	20,62	15,41	3,32	7,5
2013	3,8	17,7	19,8	3,55	5,05	16,5	22,82	3,39	7,47
2017	4,02	19,03	24,71	4,1	3,8	14,32	18,2	4,14	7,75
2015	3,42	12,8	24,5	2,48	3,78	16,28	23,34	3,83	9,57

Table 14 - Average monthly and annual wind speed (m/s) at Giurgiu weather station (Years, Months, Annual)

ANII	LUNILE												ANUALA
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
2010	2,4	2,7	3,1	2,3	1,8	1,6	1,3	1,5	2,2	2,4	2,2	2,0	2,1
2011	1,6	3,0	2,6	2,5	1,7	1,4	1,6	1,5	1,7	1,9	1,6	1,9	1,9
2012	2,7	3,1	2,3	2,1	1,8	1,6	2,1	1,7	1,9	1,9	1,9	2,5	2,1
2013	2,2	3,1	2,9	2,3	1,9	1,4	1,4	1,7	2,0	1,6	2,6	1,6	2,1
2017	2,4	2,1	2,8	2,7	1,4	1,5	1,5	1,6	1,8	1,8	1,8	2,7	2,0
2015	2,3	2,5	2,7	2,1	1,5	1,4	1,3	1,5	1,5	1,6	2,2	2,0	1,9

[18] Air Quality Report 2016

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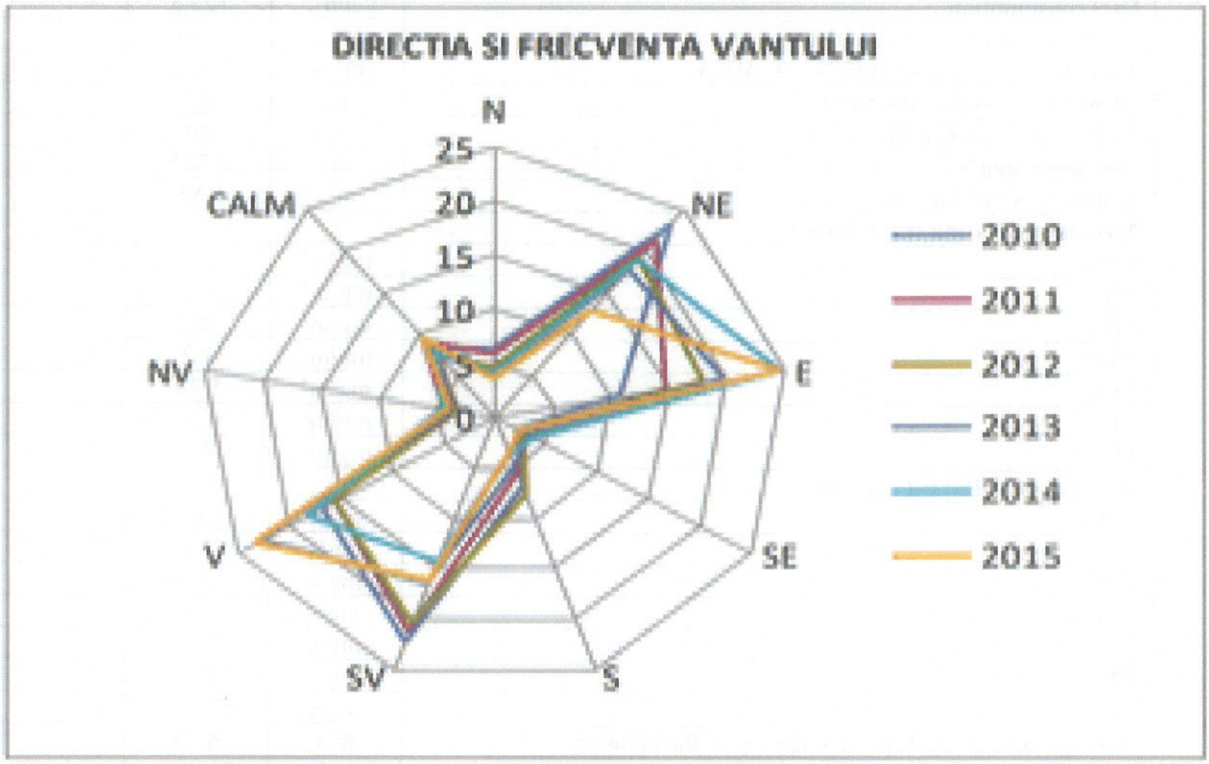

Figure 6 - Diagram representing wind direction and frequency

At the same time, the dispersion of pollutants in the atmosphere was modelled for the following situations:

1. Perform mathematical modelling for short, medium and long averaging periods for pollutants:
   - NO_x
   - SO_2
   - CO
   - TSP
   - HCl
   - HF
   - TOC
   - dioxins and furans

Mathematical modelling was also carried out for the pollutants dioxins and furans for a resulting emission concentration for an averaging period of 6-8 hours.

In order to estimate the dioxin and furan concentrations in the immission (values that can affect human health), the emission values for waste incineration activity in incinerators with secondary combustion chamber (and even more so with auxiliary filter systems) must first be estimated. Several studies carried out at international level have been analysed in this respect. These include:

- Measurement of Dioxin Emissions from a Small-Scale Waste Incinerator in the Absence of Air Pollution Controls[19]
- Incineration and Dioxins Review of Formation Processes[20]

[19] Int J Environ Res Public Health. 2019 Apr; 16(7): 1267.
[20] A consultancy funded by Environment Australia Department of the Environment and Heritage

- Hazardous Waste Incineration Measurement Guidance Manual: Volume 3 of the Hazardous Waste Incineration Series[21]

According to these and many other studies, the maximum concentration of dioxins and furans at the flue gas outlet of modern incinerators equipped with a secondary combustion chamber (and even more so of those with additional filter systems) is a maximum of 0.042 ng I.TEQ/Nmc. This will be the value for which the mathematical modelling will be carried out although this value is well below the limit value of 0.1 ng I.TEQ/Nmc.

2. single source of pollution (incinerator flue gas stack) - 1 source with constant hourly pollutant flow rate
3. use of meteorological data for one calendar year (data for 2020 recorded at Giurgiu weather station were used)
4. modelling for mediation duration 30 min
5. modelling for mediation duration 1 h
6. modelling for mediation duration of 8 h
7. modelling for mediation duration 24 h
8. modelling for mediation duration 1 year

The results of this modelling are presented below:

Location of emission source:

Table 15 - Stationary emission source coordinates

Incinerator	Source coordinates	
IER 1000-300	43°53'11.10 "N	25°55'56.78 "E



Figure 7 - Location of stationary emission sources

[21] U.S. Environmental Protection Agency

Figure 8 - Incinerator location



The following are the dispersion papers of the pollutants emitted into the atmosphere, in relation to the protected natural area of community interest ROSPA0108 Vedea - Danube:

NO_x - averaging period 1h, 24 h and 1 year

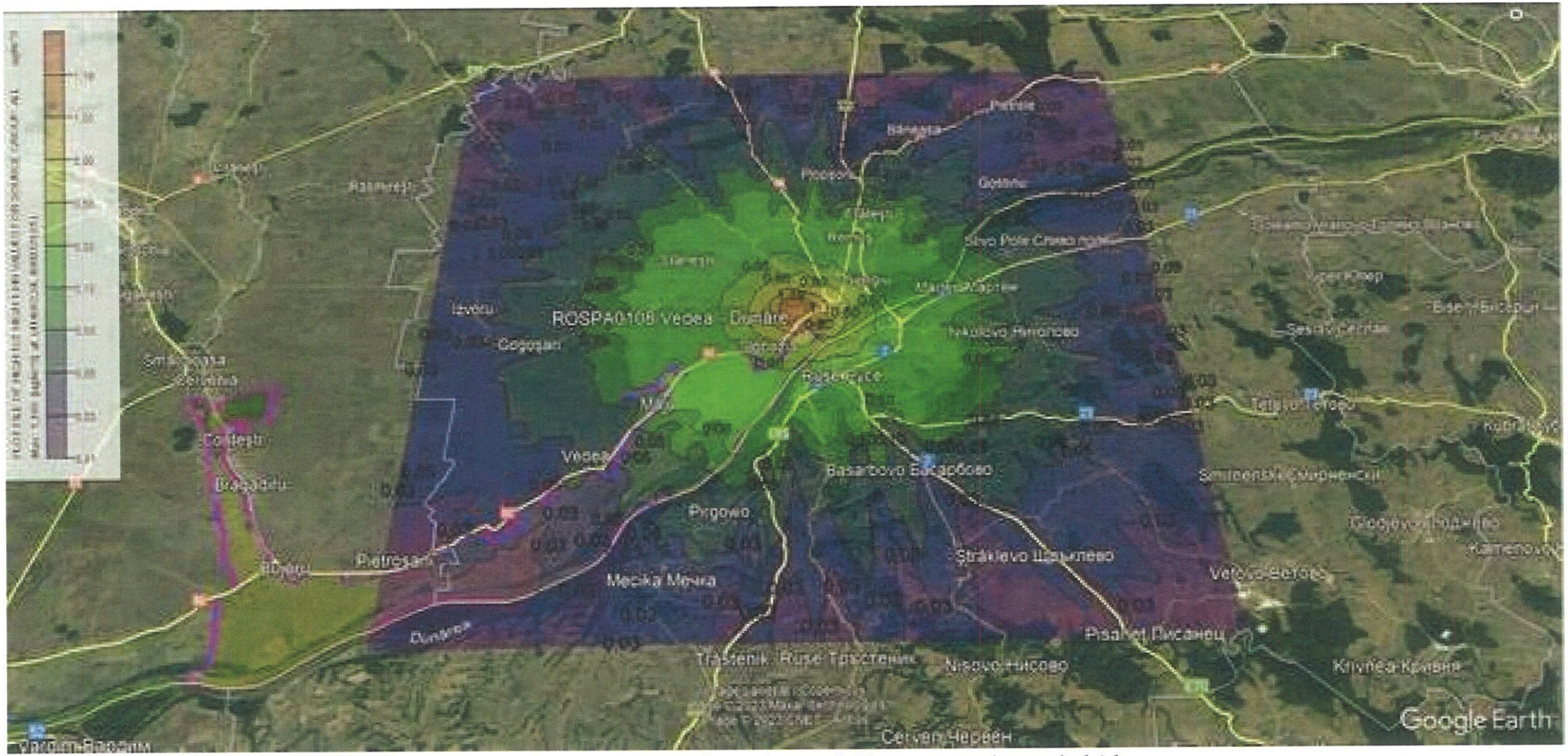

Figure no. 4. NO dispersion modelling$_x$ - averaging period 1 h

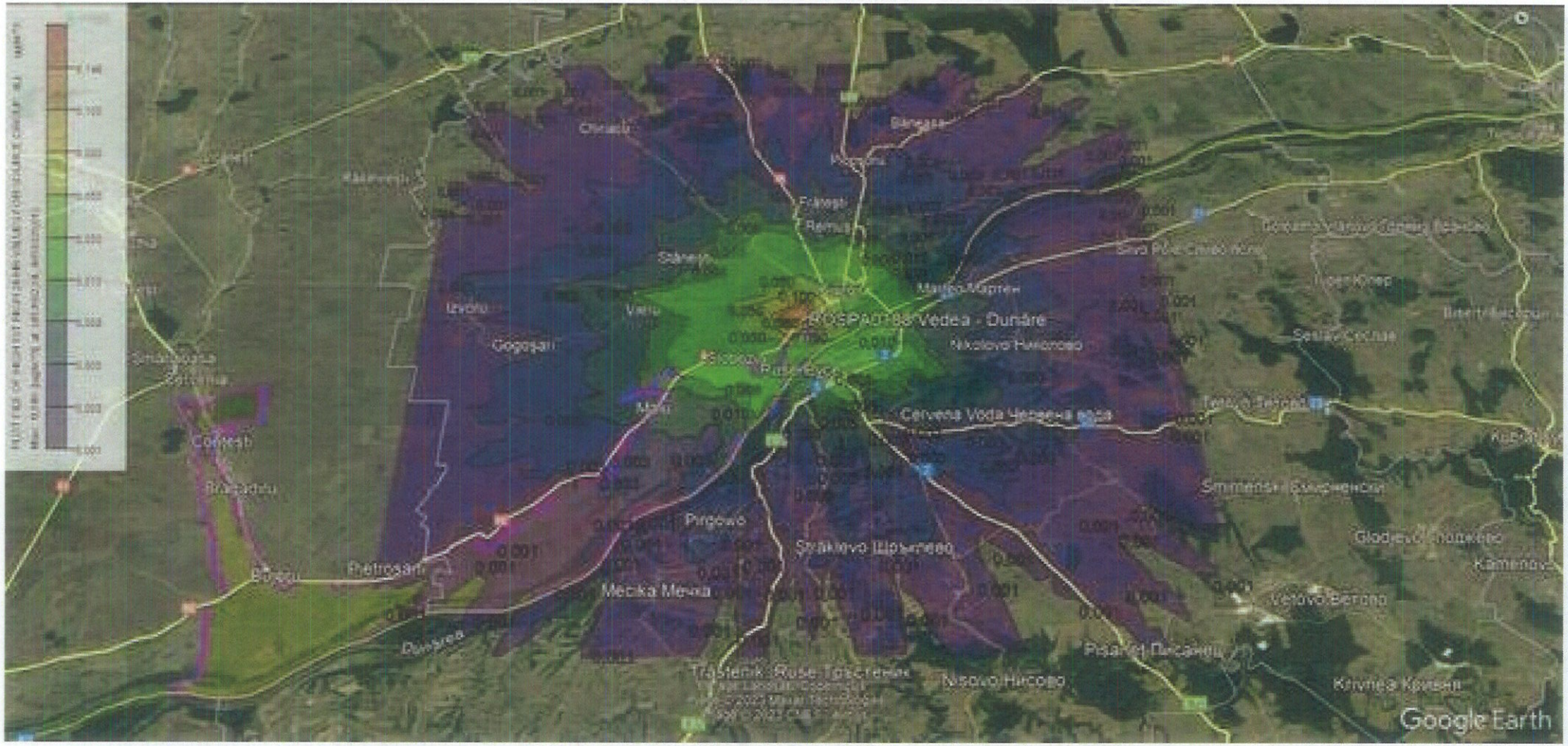

Figure no. 5. NO dispersion modelling$_x$ - averaging period 24 h

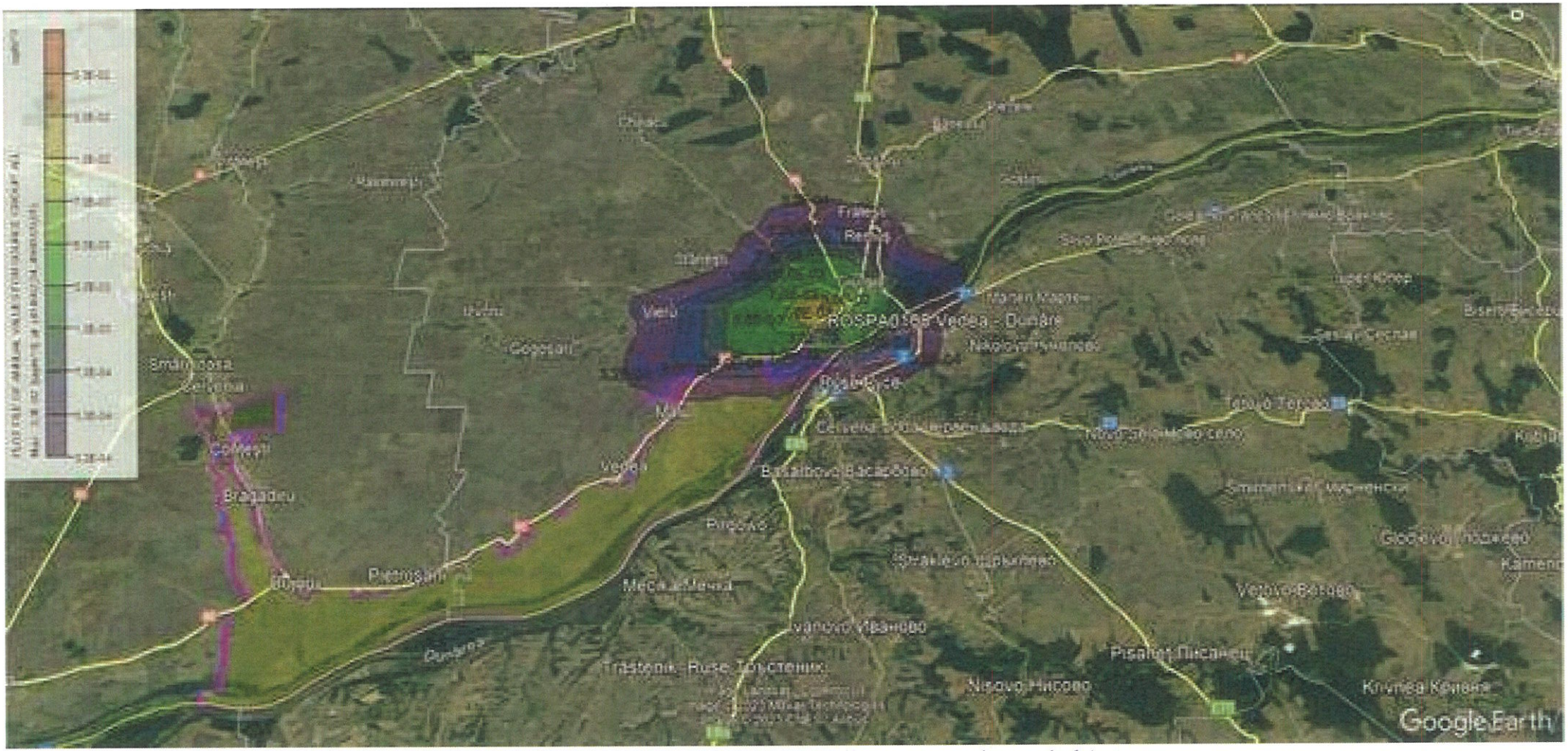

Figure no. 6. NO dispersion modelling$_x$ - averaging period 1 year

CO - averaging period 8 h, 24 h and 1 year

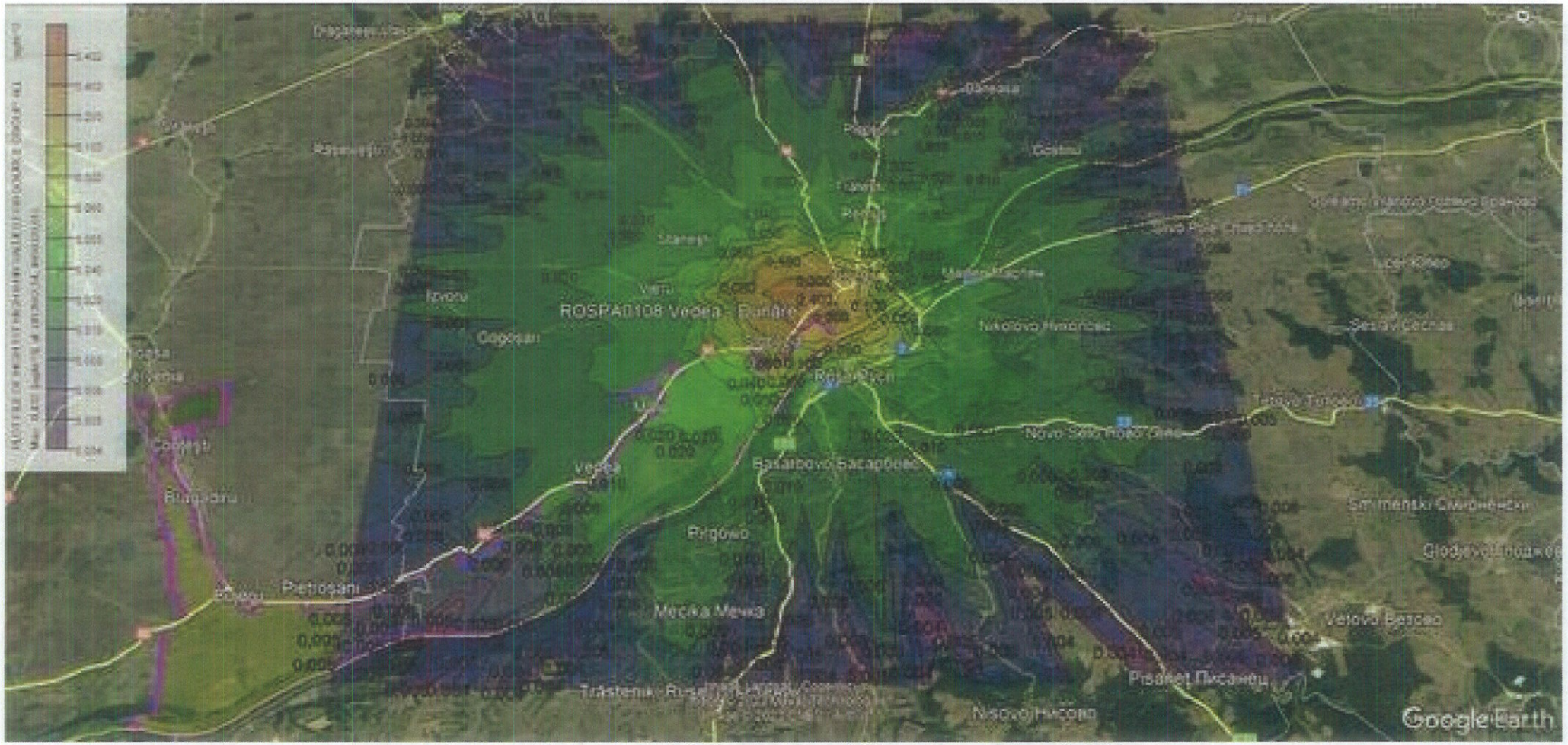

Figure no. 7. CO dispersion modelling - averaging period 8 h

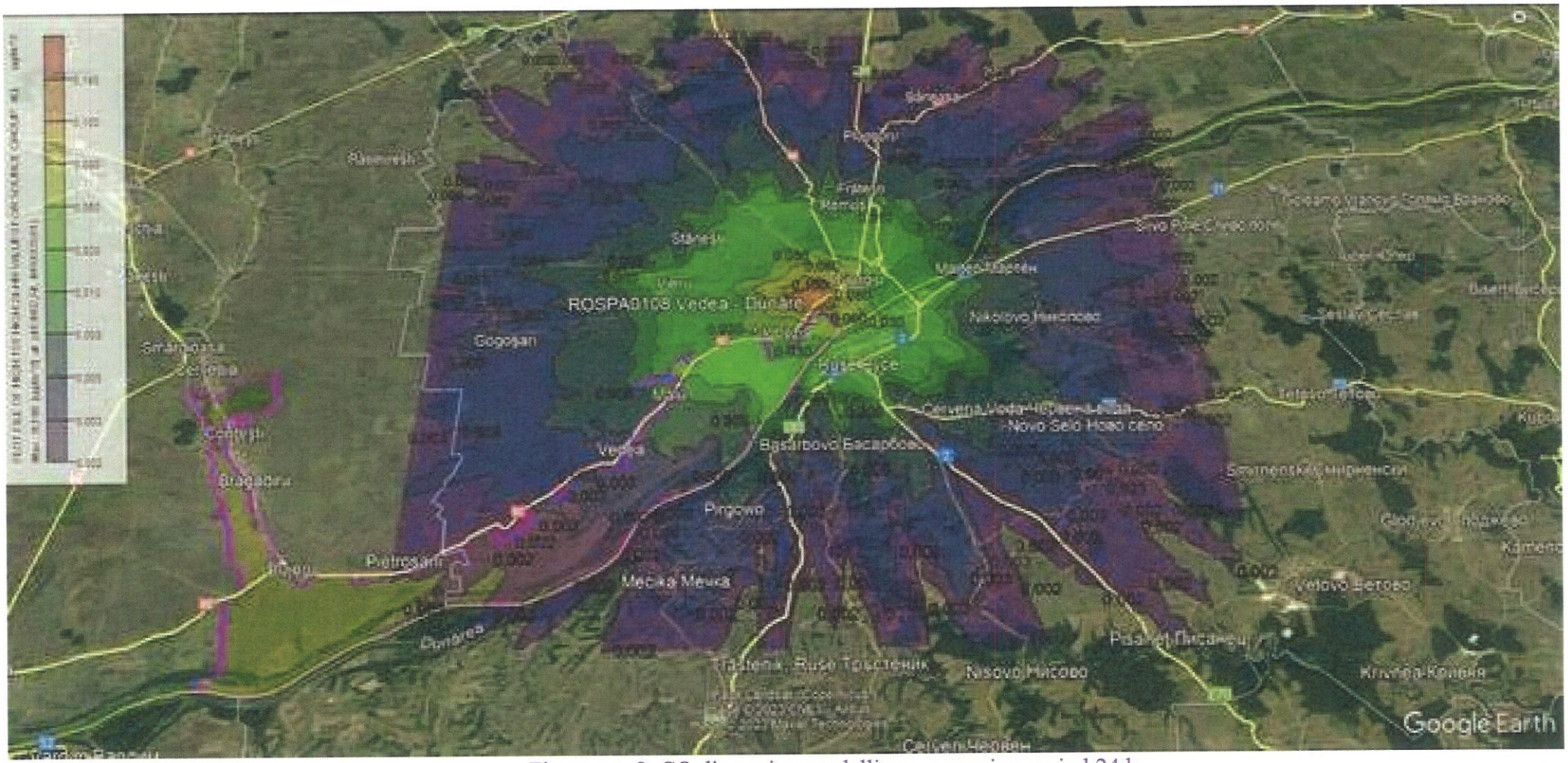

Figure no. 8. CO dispersion modelling - averaging period 24 h

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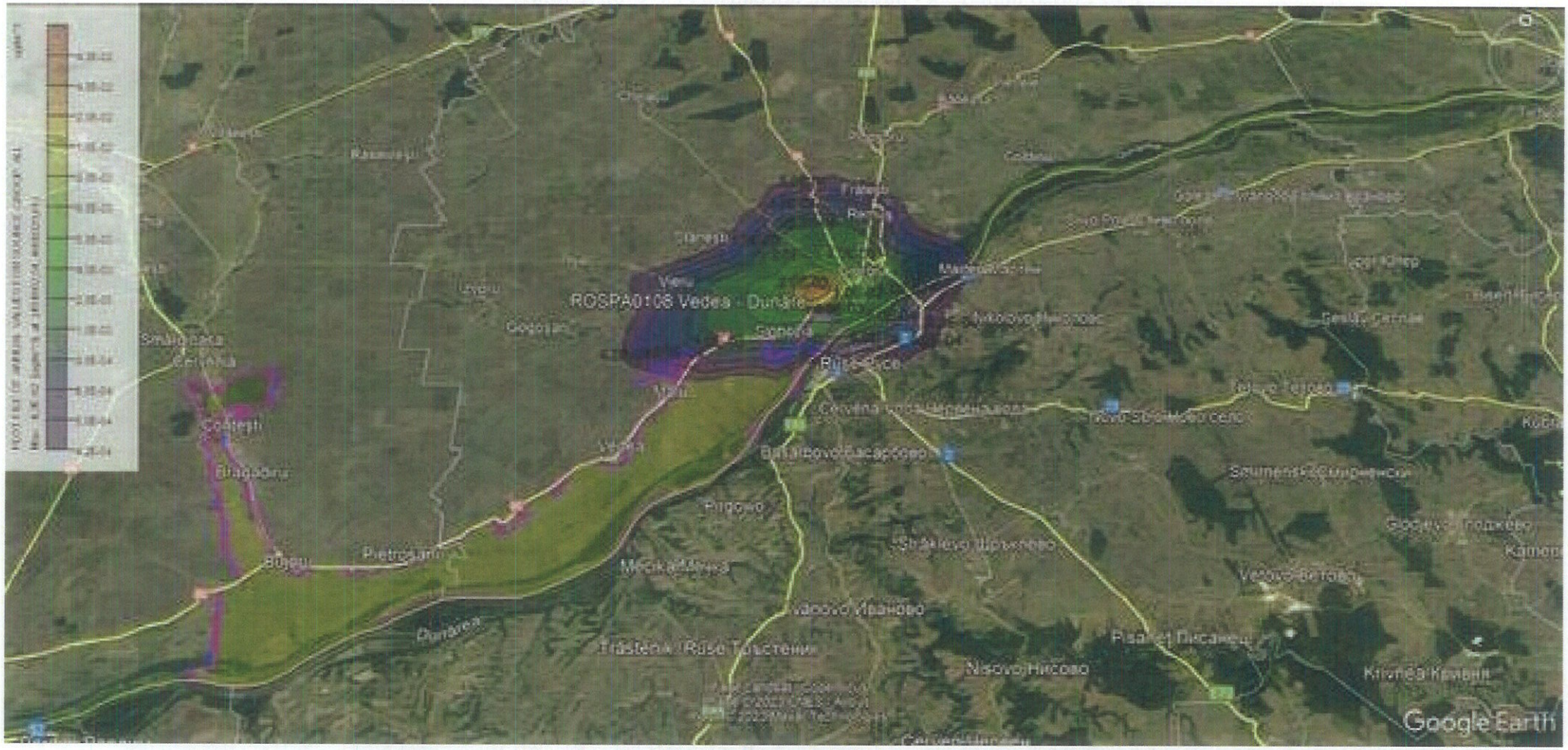

Figure no. 9. CO dispersion modelling - averaging period 1 year

TSP - averaging period 1h, 24 h and 1 year

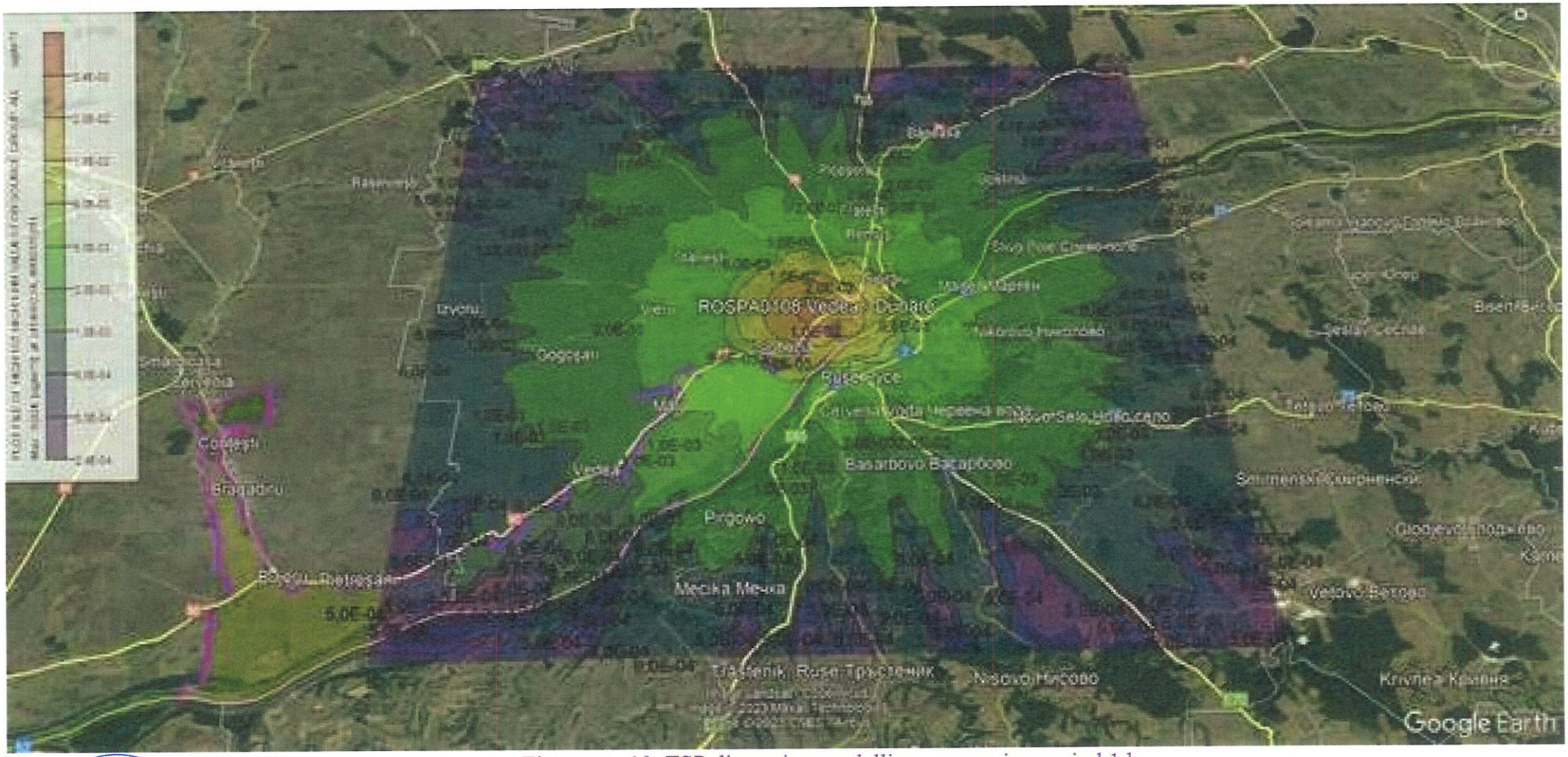

Figure no. 10. TSP dispersion modelling - averaging period 1 h

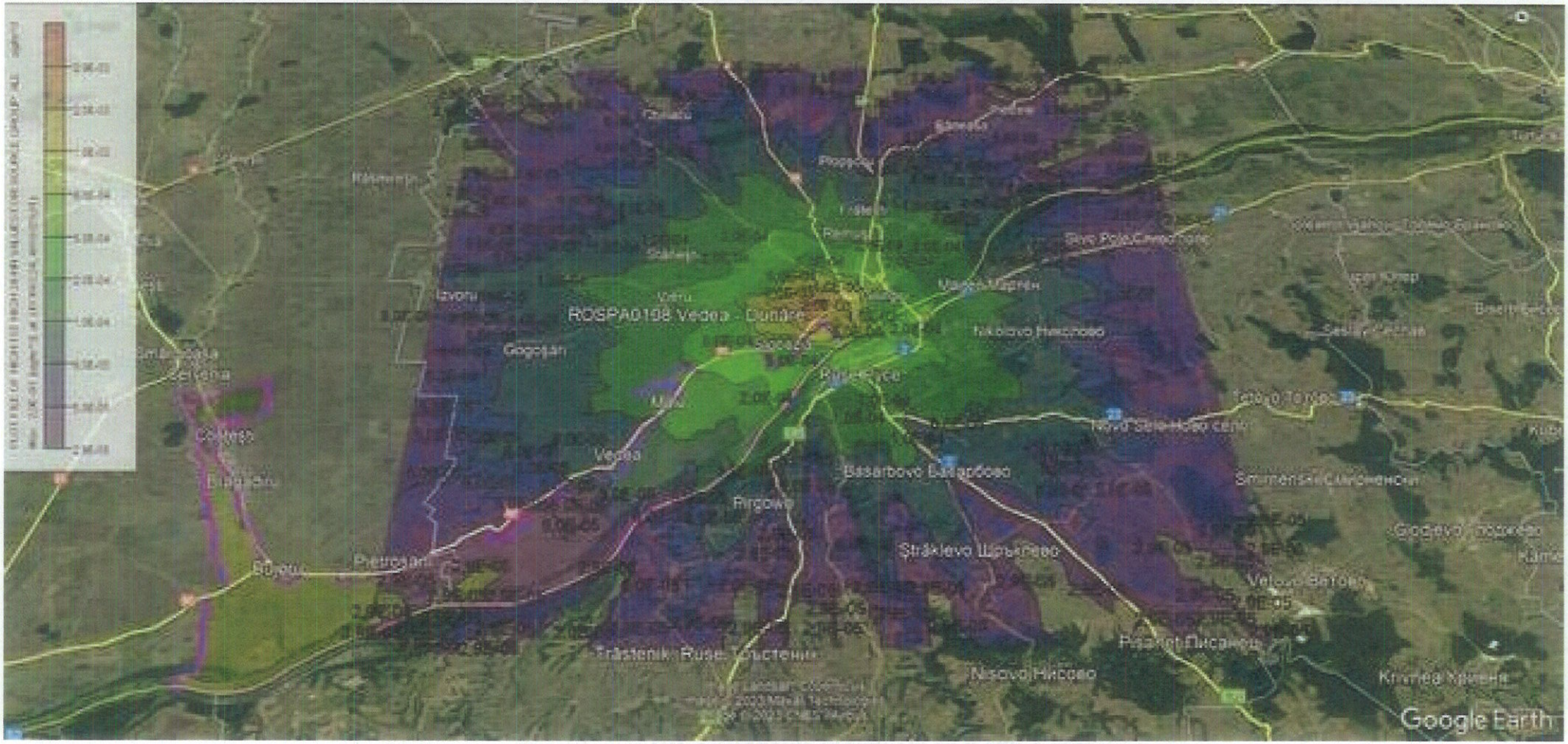

Figure no. 11. TSP dispersion modelling - averaging period 24 h

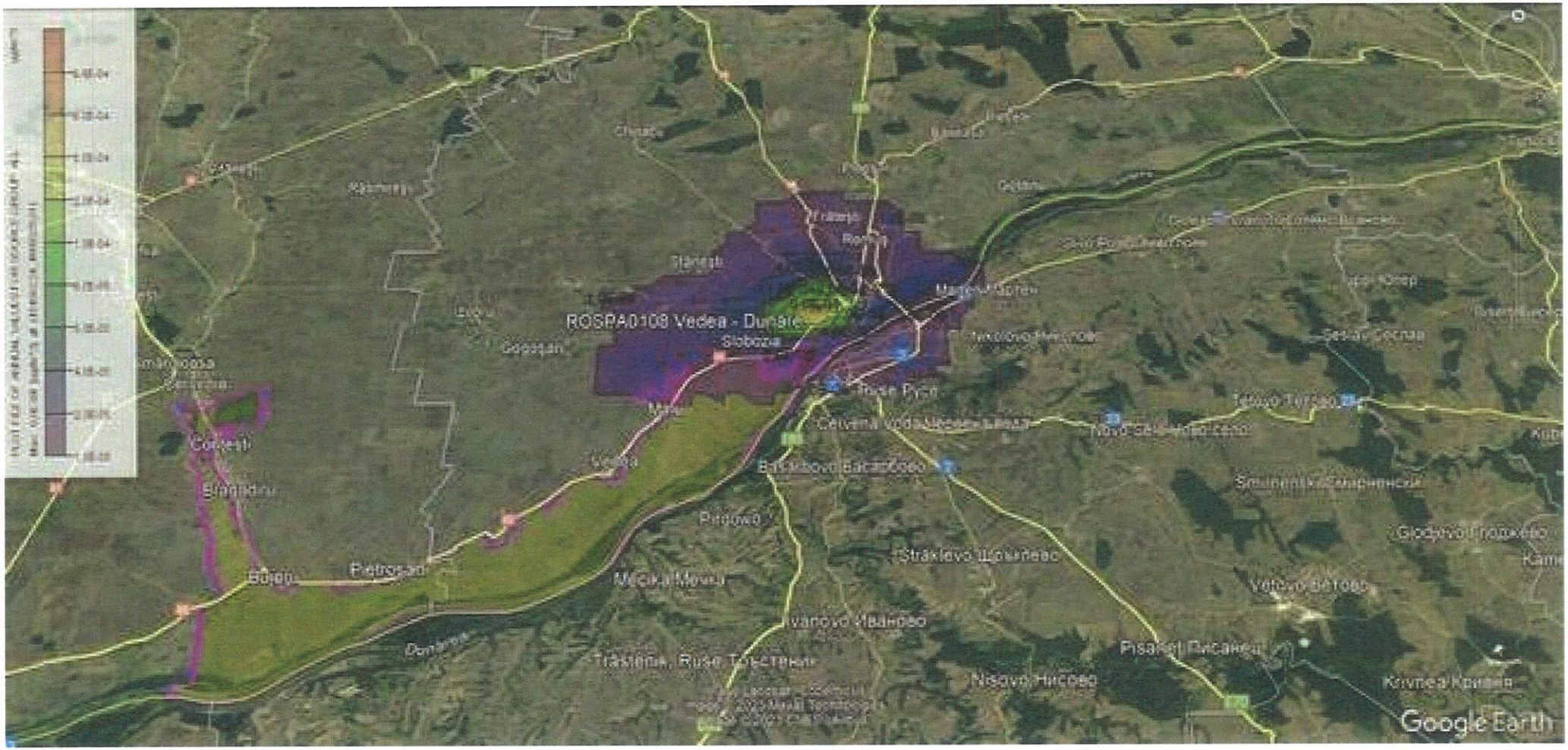

Figure no. 12. TSP dispersion modelling - averaging period 1 year

SO_2 - averaging period 1h, 24 h and 1 year

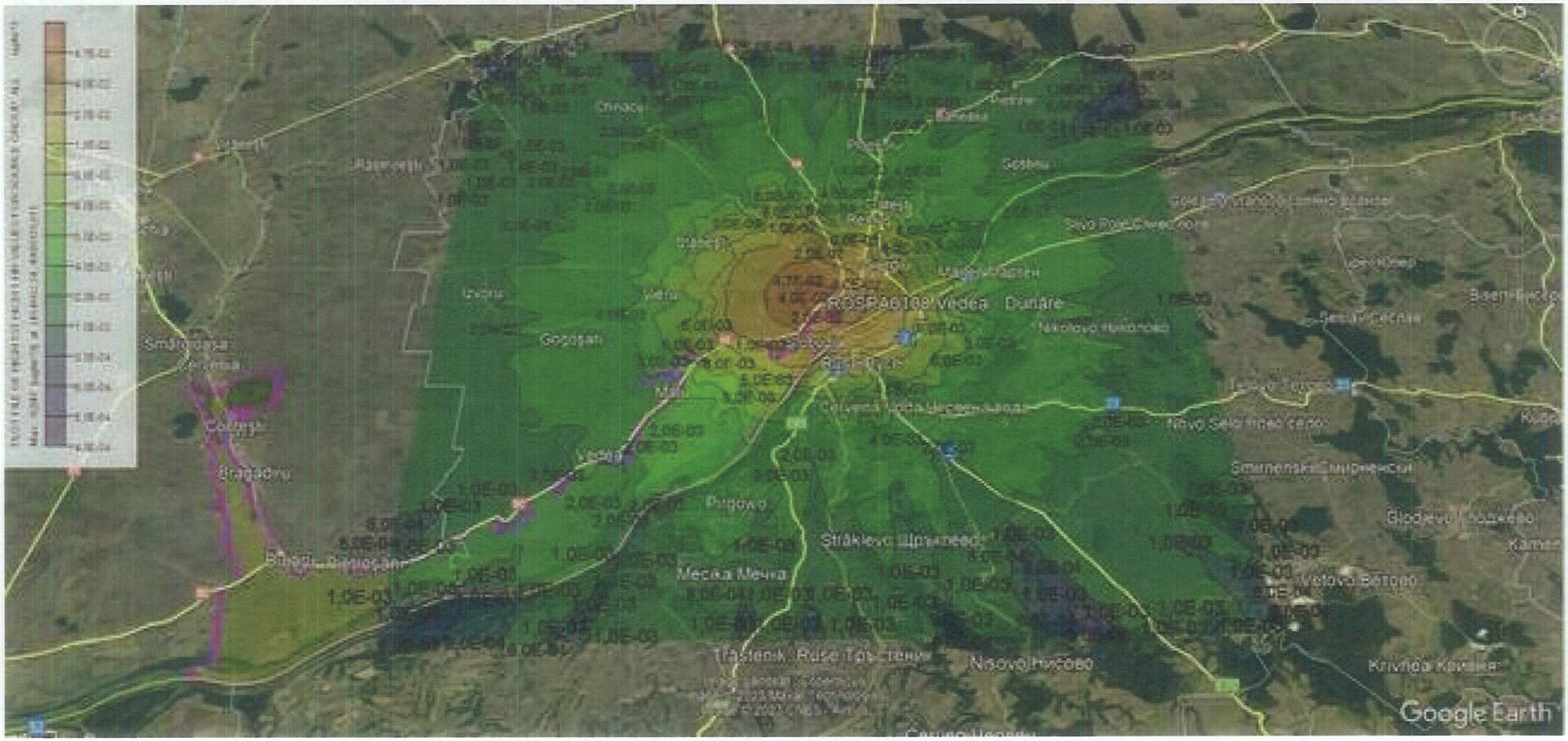

Figure no. 13. SO dispersion modelling$_2$ - averaging period 1 h

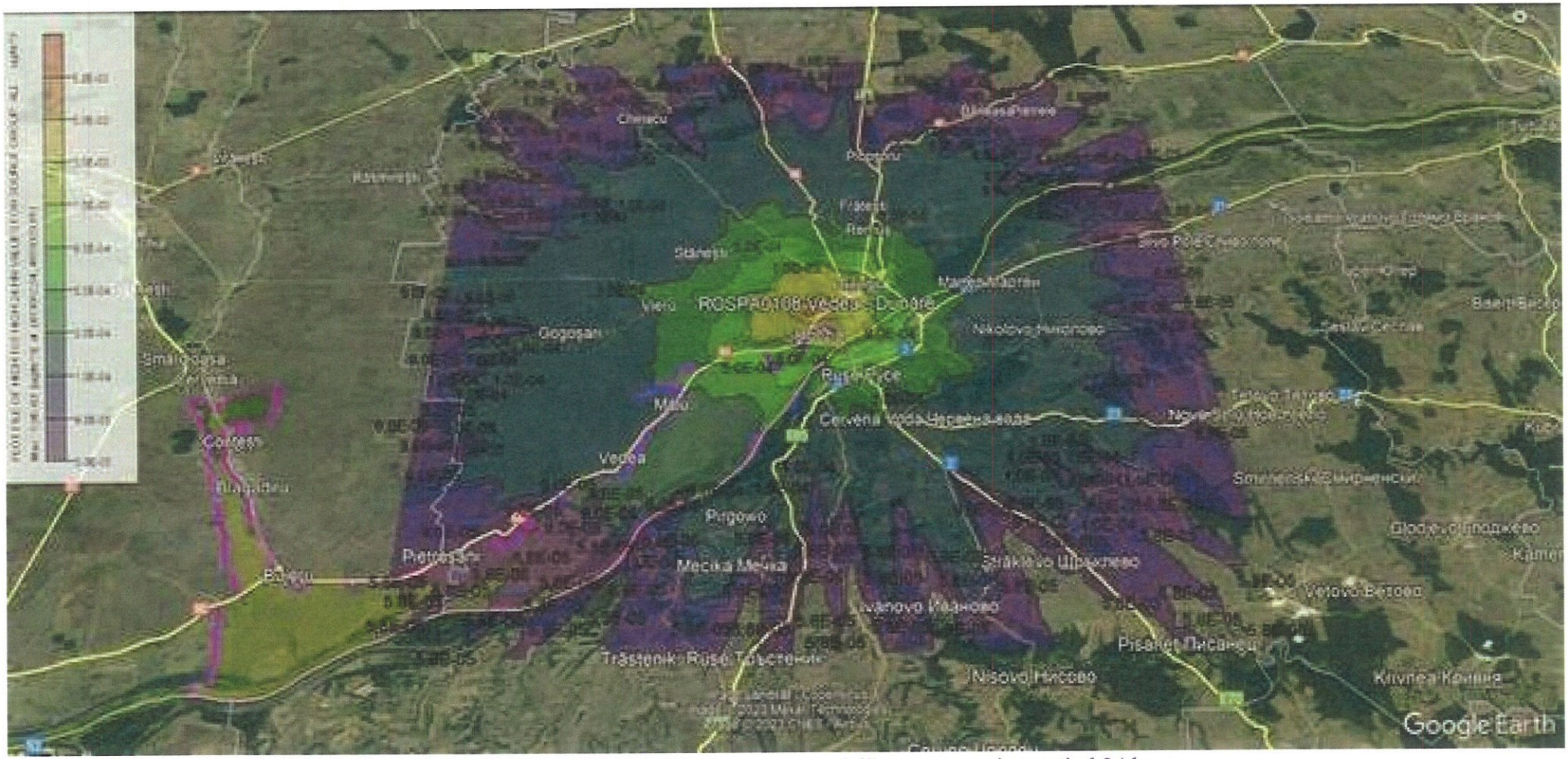

Figure no. 14. SO dispersion modelling$_2$ - averaging period 24 h

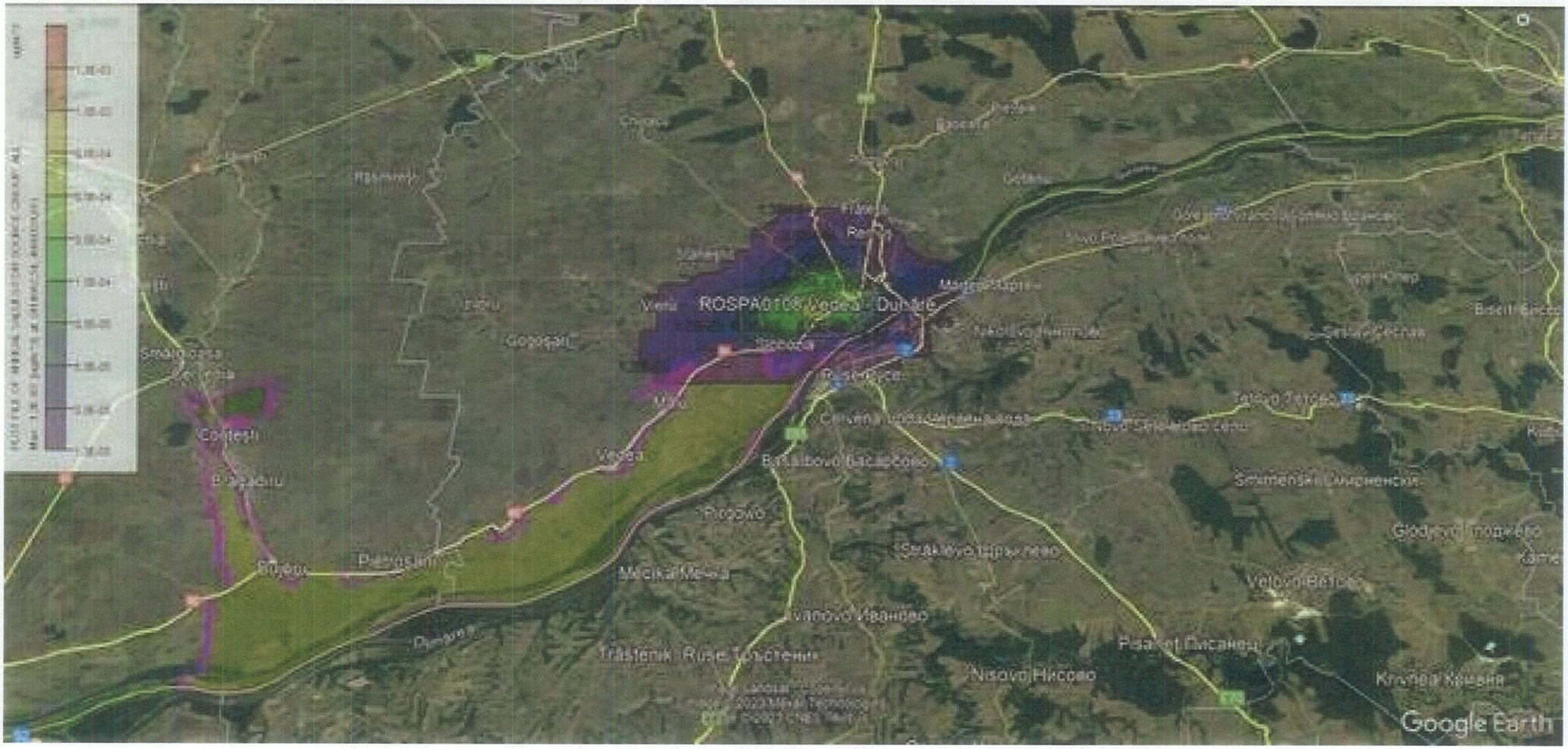

Figure no. 15. SO dispersion modelling$_2$ - averaging period 1 year

HCl - averaging period 30 minutes and 24 h

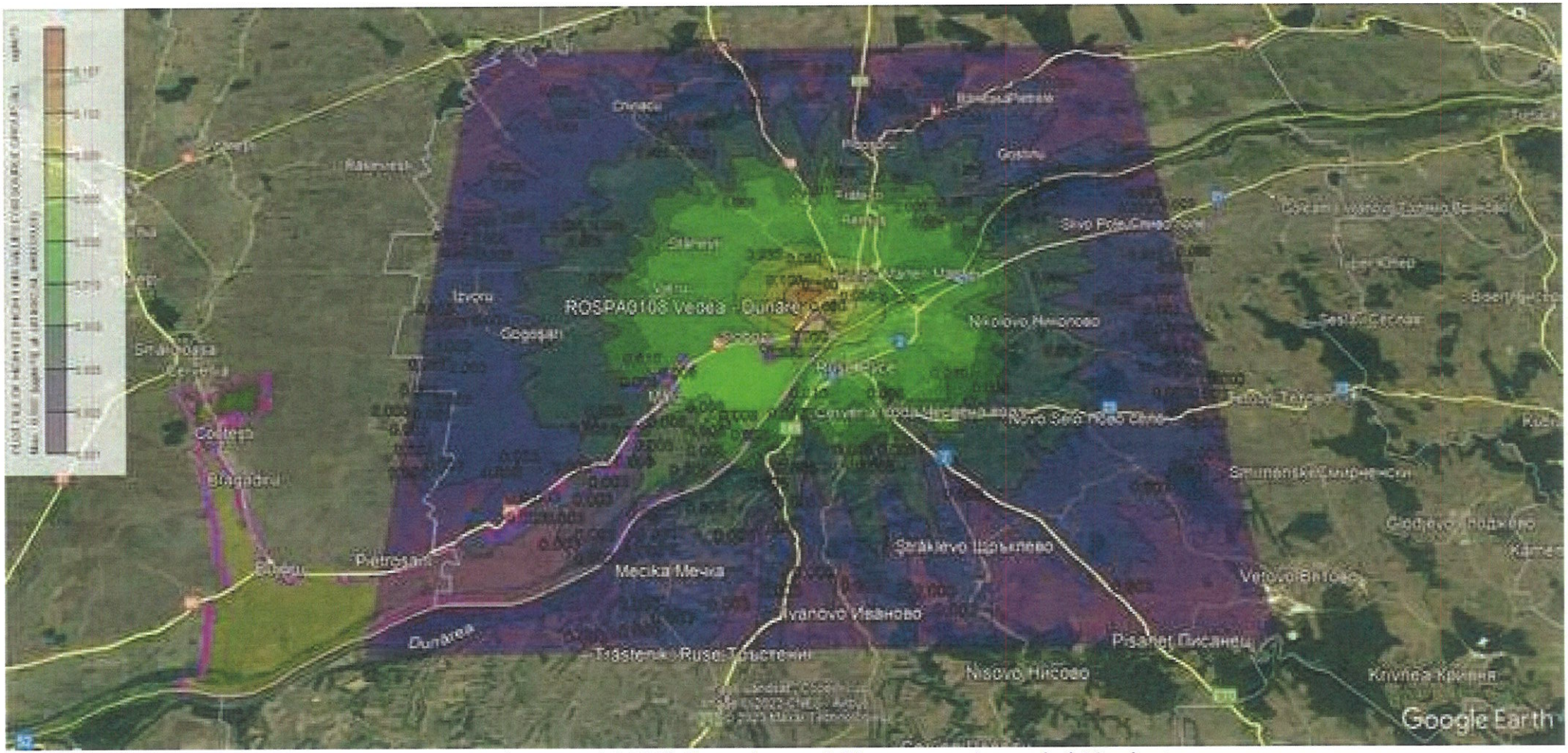

Figure no. 16. HCl dispersion modelling - averaging period 30 minutes

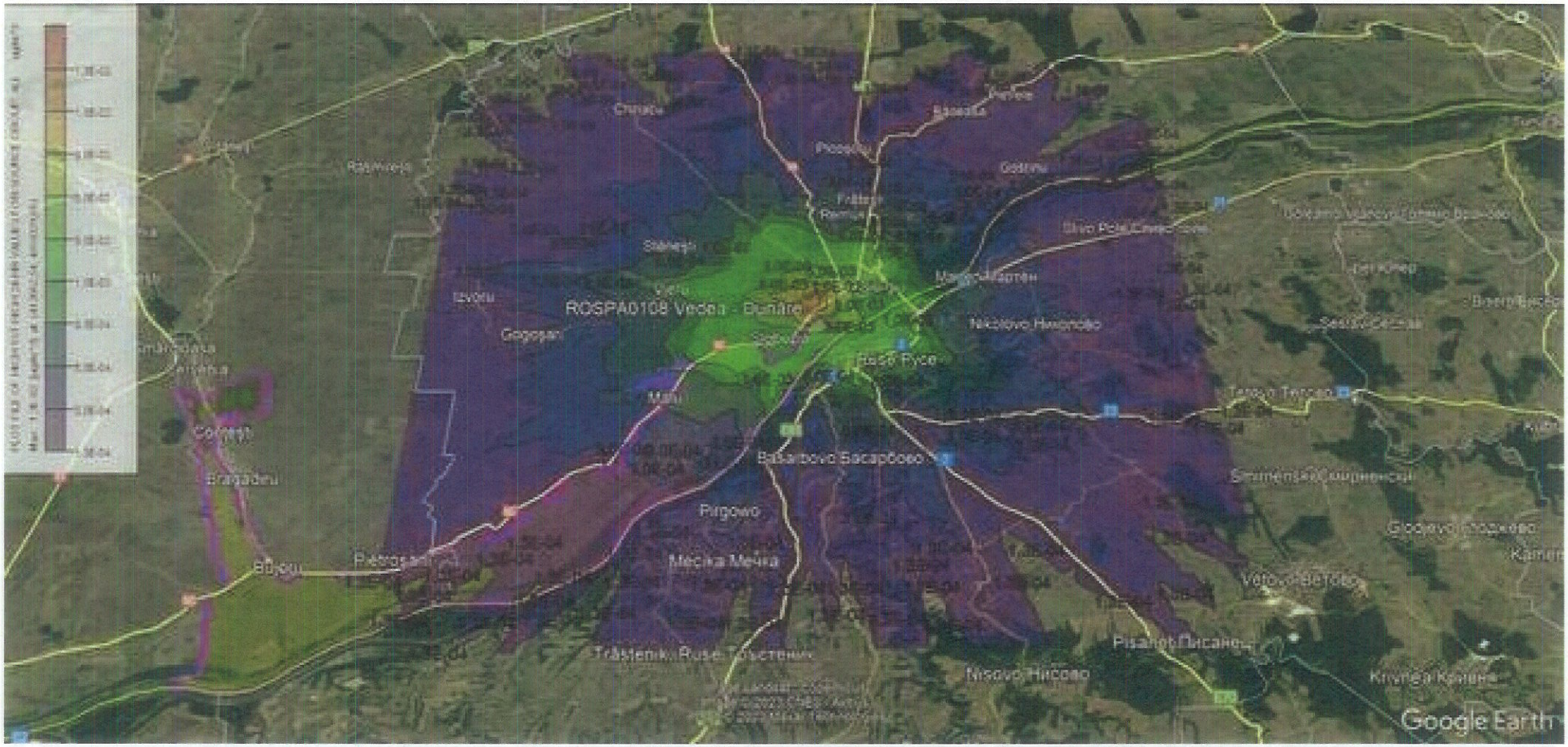

Figure no. 17. HCl dispersion modelling - averaging period 24 h

HF - averaging period 30 minutes and 24 h

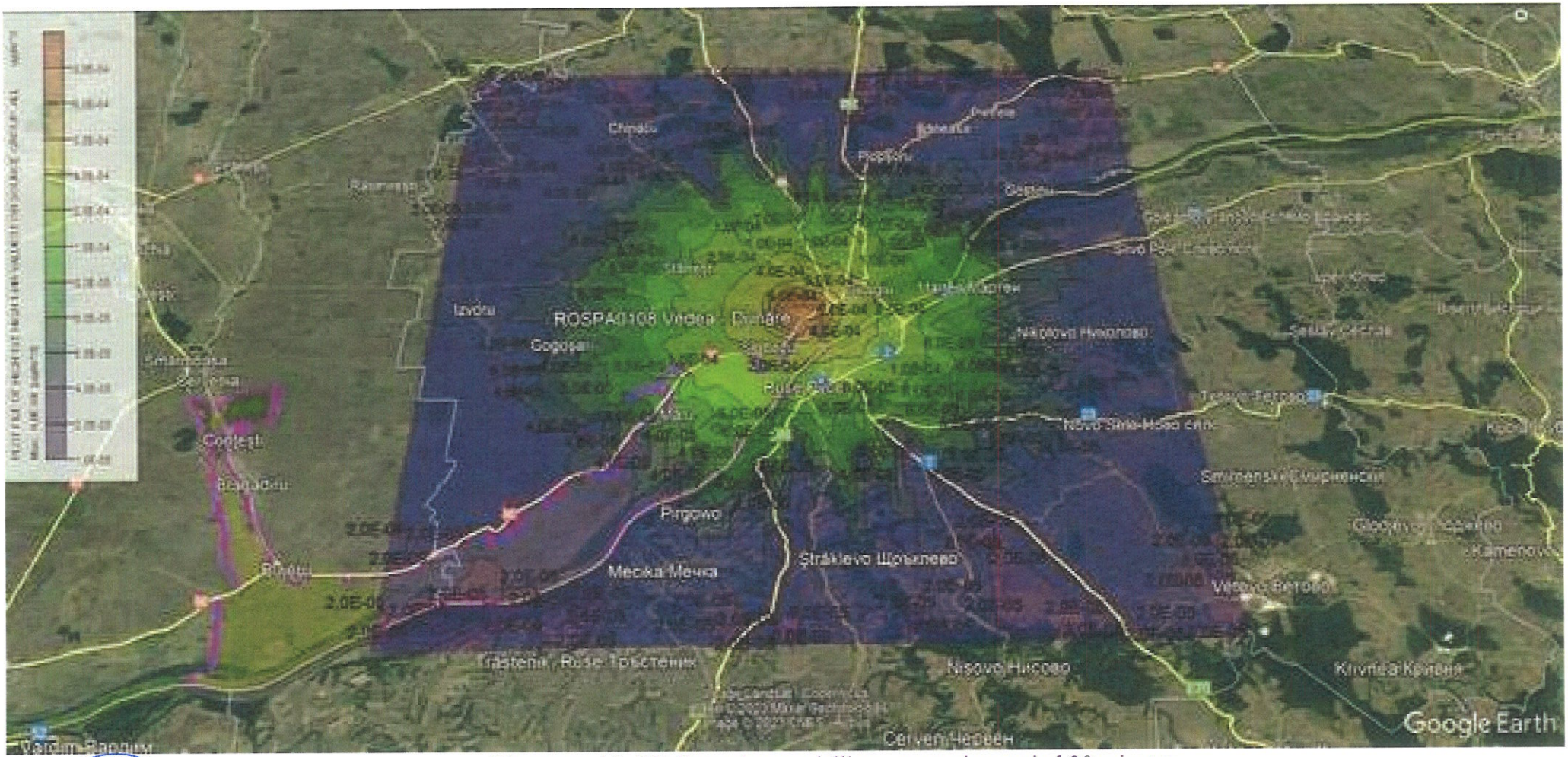

Figure no. 18. HF dispersion modelling - averaging period 30 minutes

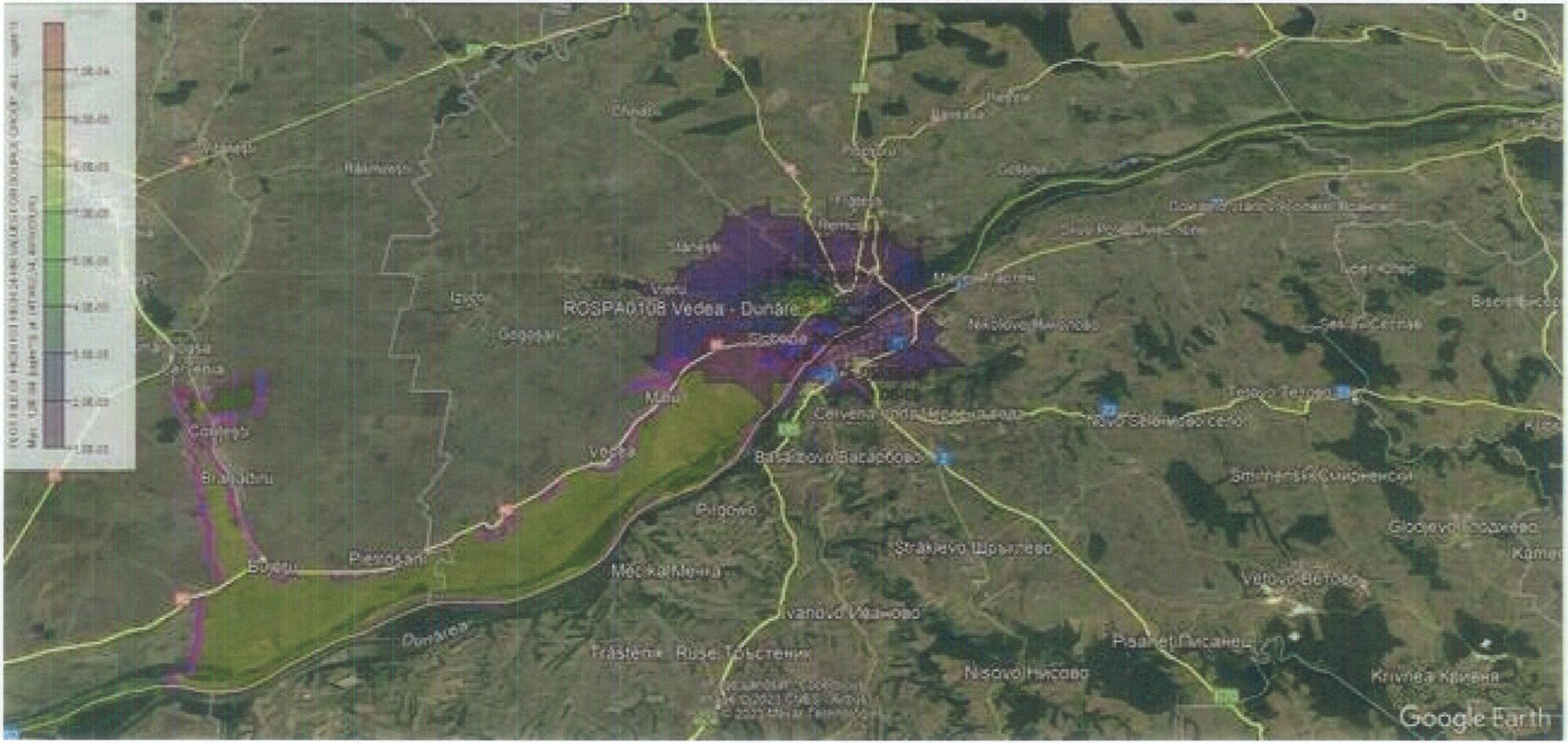

Figure no. 19. HF dispersion modelling - averaging period 24 h

TOC - averaging period 30 minutes, 24 h and 1 year

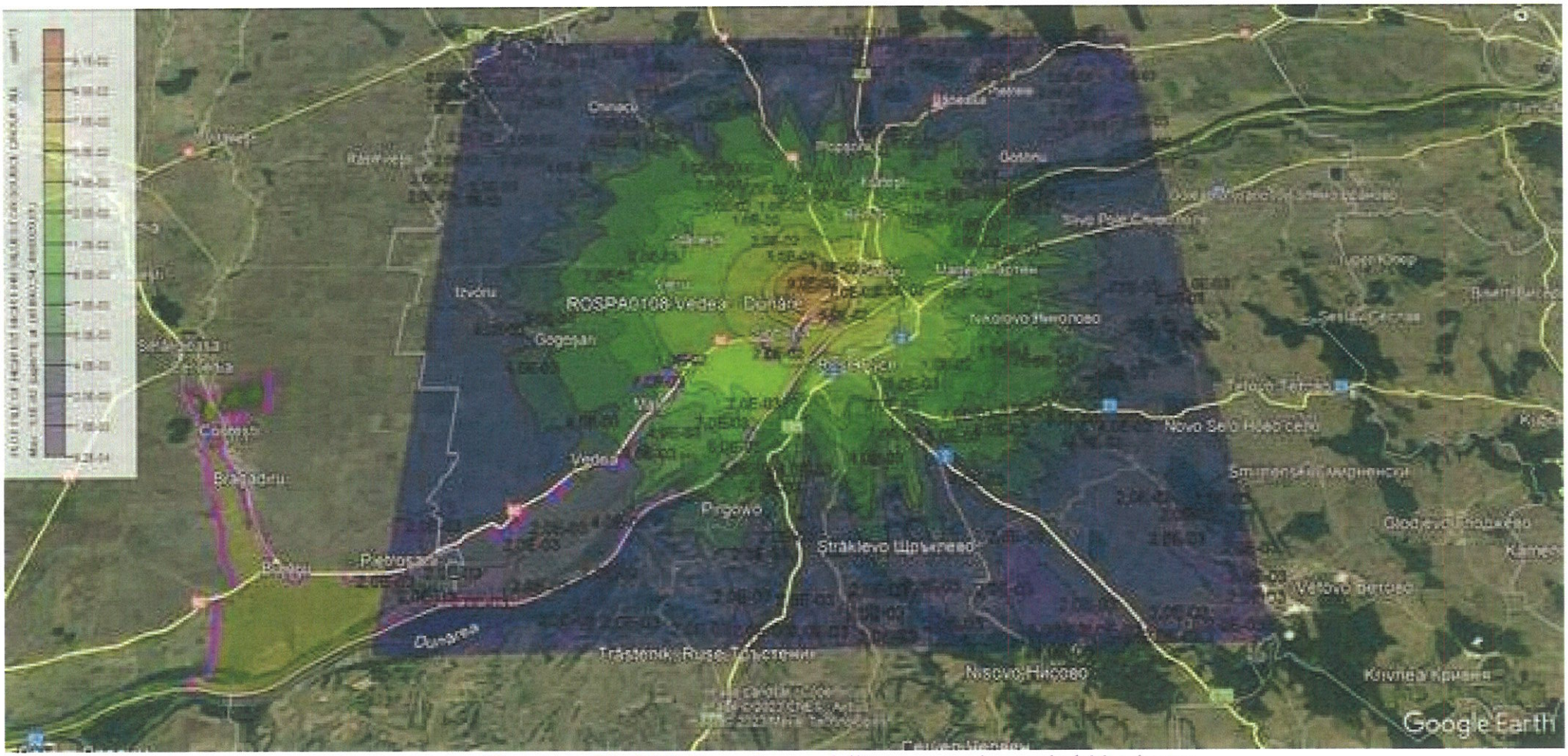

Figure no. 20. TOC dispersion modelling - averaging period 30 minutes

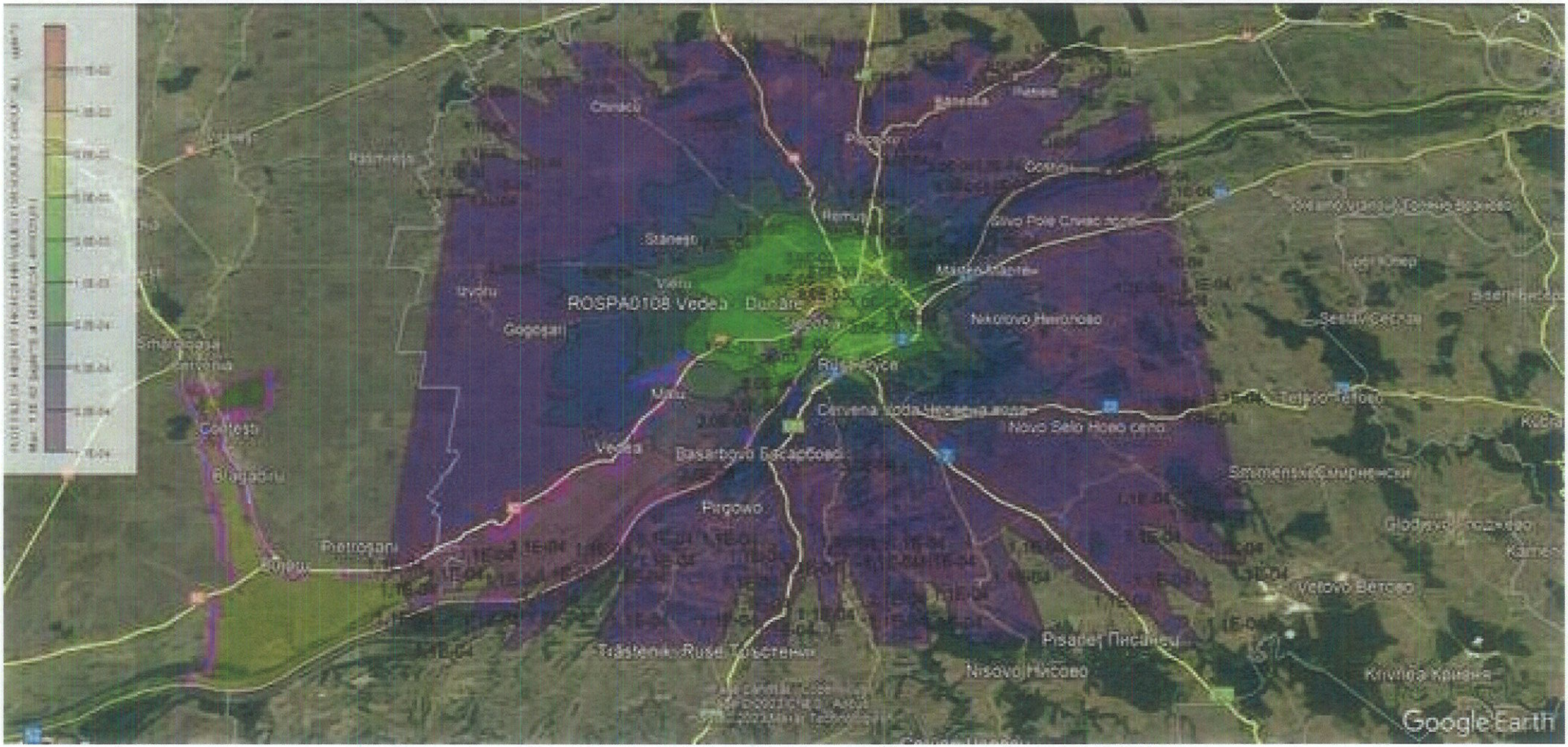

Figure no. 21. TOC dispersion modelling - averaging period 24 h

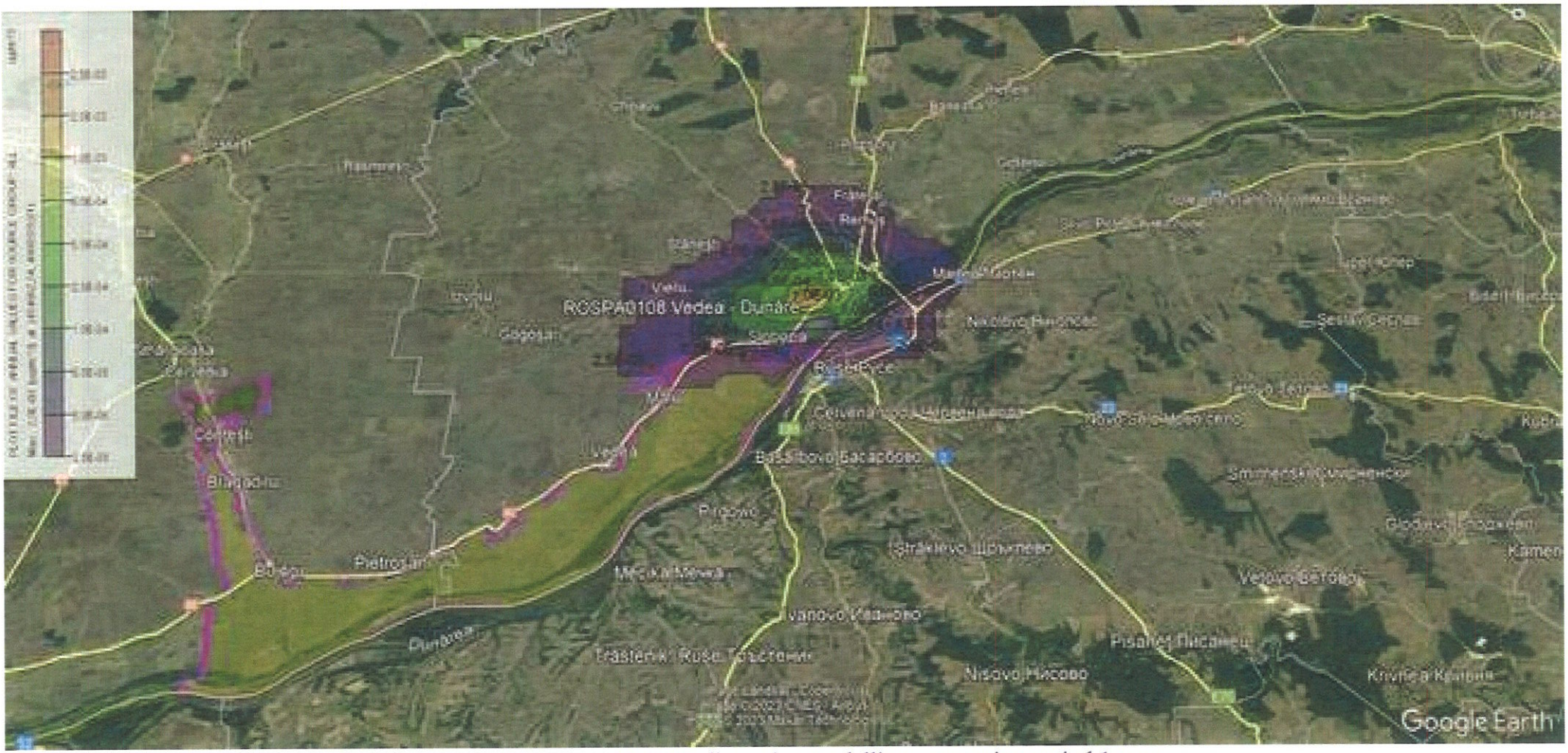

Figure no. 22. TOC dispersion modelling - averaging period 1 year

DIOXINS AND FURANS - averaging period 1 h, 8 h, 24 h and 1 year

An attempt was made to model the dispersion of dioxin and furan concentrations in immission but the software reported that it was impossible to construct dispersion diagrams because the concentration in emission was too low. The message issued by the software is as below:

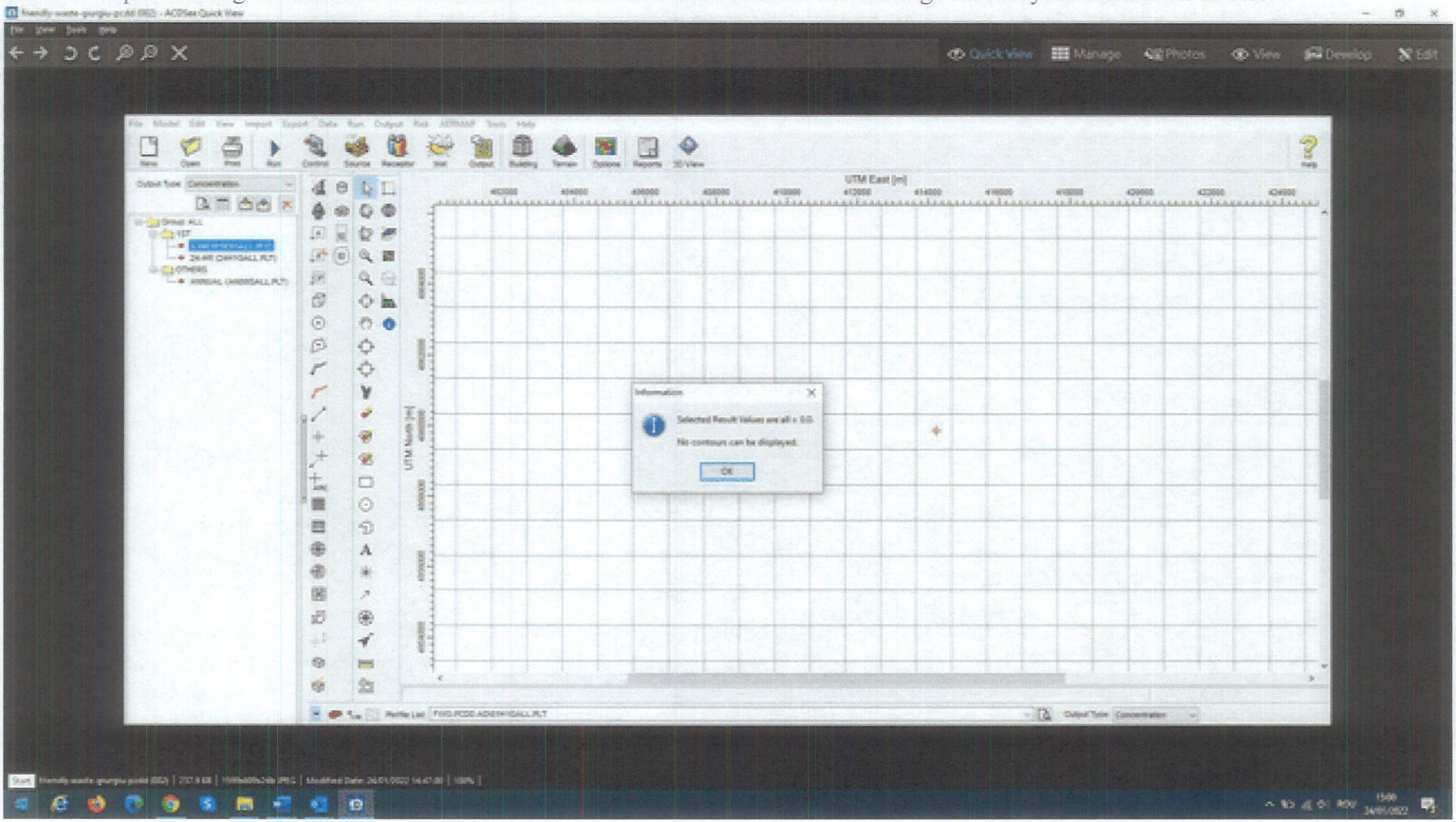

Figure no. 23. Soft message from the dioxin and furan concentration dispersion modelling test

In order to draw up scatter plots of dioxin and furan emission concentrations, 1000-fold values were entered into the modelling software, after which, when interpreting the plots, the return coefficient was applied to the initial values, i.e. x 10^{-3} , and the values were entered into the comparison tables. The diagrams obtained are shown below:

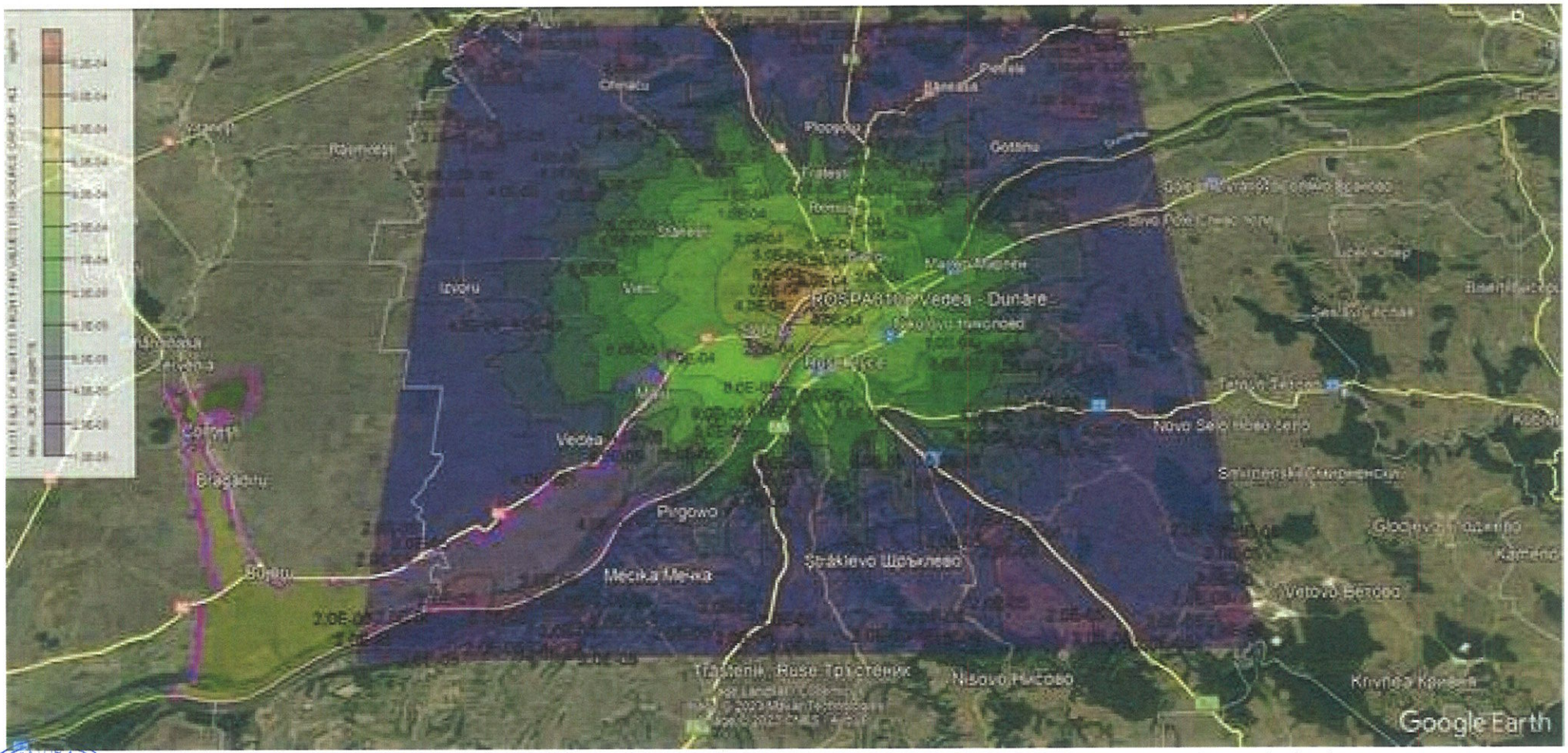

Figure no. 24. Modelling of dioxin and furan concentration dispersion in immission - averaging period 1 h

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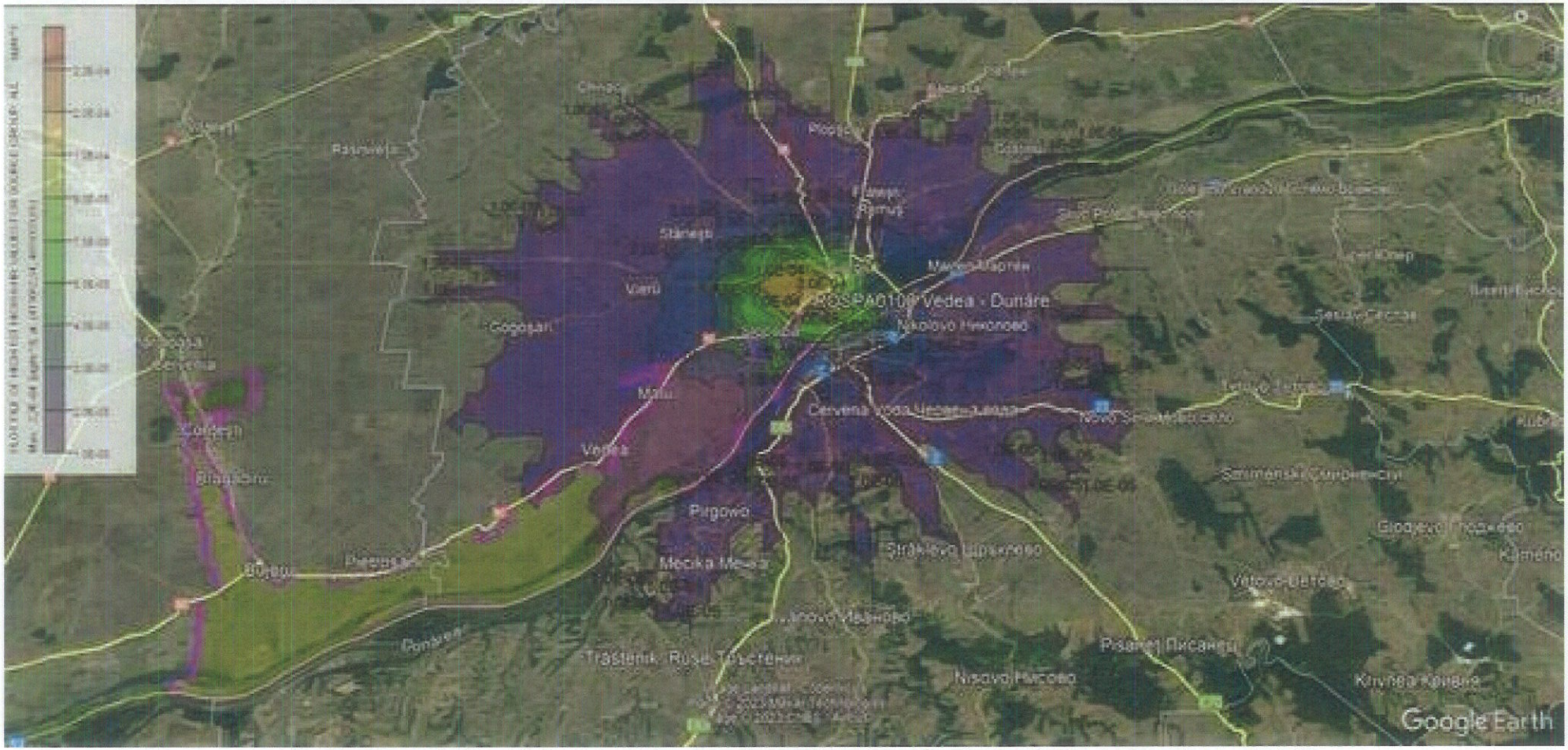

Figure no. 25. Modelling of dioxin and furan concentration dispersion in immission - averaging period 8 h

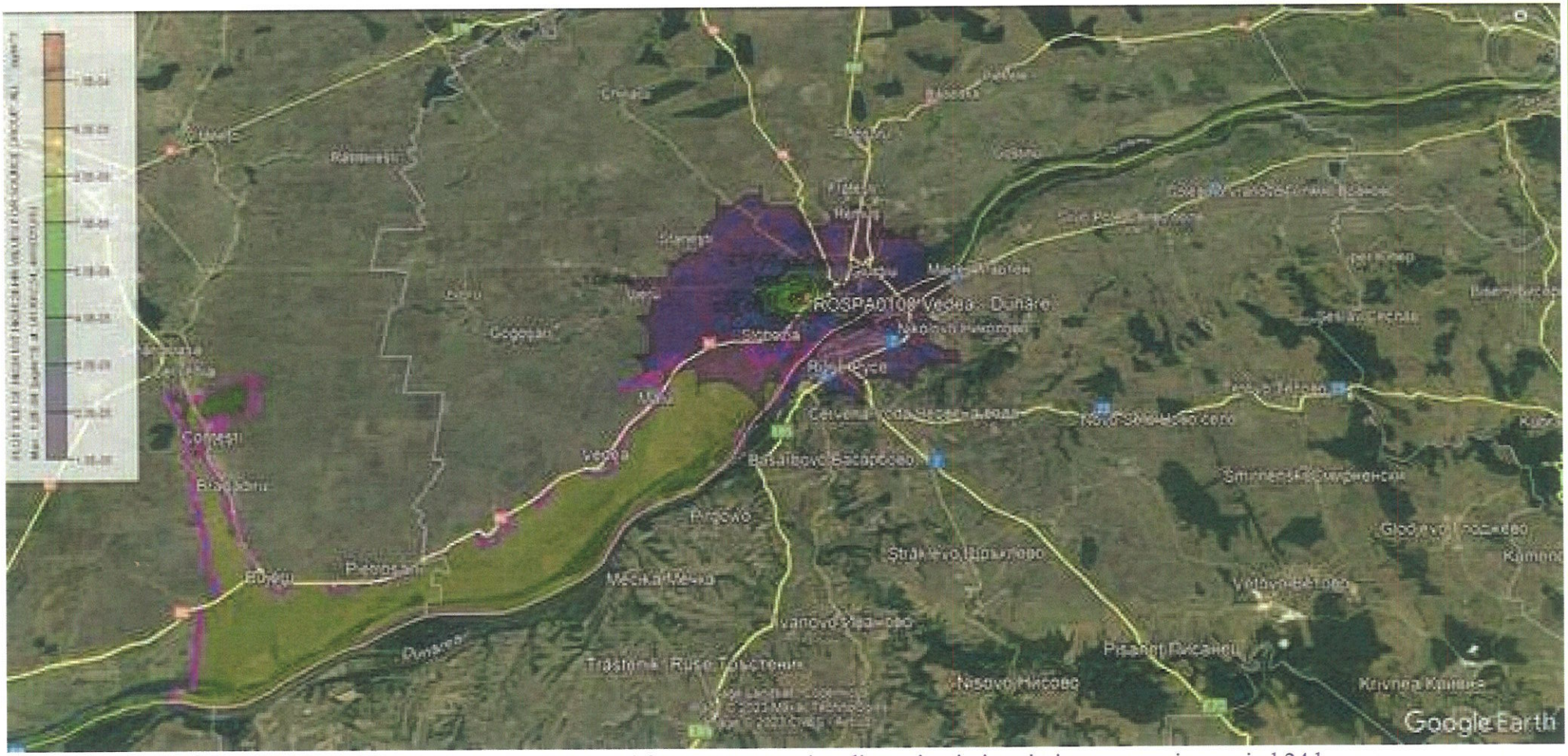

Figure no. 26. Modelling of dioxin and furan concentration dispersion in immission - averaging period 24 h



Figure no. 27. Dispersion modelling of dioxin and furan concentration in immission - averaging period 1 year

We reiterate that the values in the dioxin and furan dispersion diagrams are 1000 times higher than the actual values and were used only for the purpose of constructing the diagrams.

Centralisation of data obtained from mathematical modelling of pollutant dispersion in the atmosphere:

CARBON MONOXIDE (CO)

Table 16 - Variation of CO concentration with distance from the emission point

Propagation distances (m)			Concentrations determined by mathematical dispersion modelling (µg/mc)			Human health						Ecosystem			Obs.
						Hourly value (µg/mc)			Daily value (µg/mc)						
8 h	24 h	1 year	8 h	24 h	1 year	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
900			0.4						10000	7000	5000				< LV
2900			0.2												< LV
Bulgaria[22]			0.1												< LV
4000			0.1												< LV
5300			0.08												< LV
6700			0.06												< LV
10000			0.02												< LV
15000			0.008												< LV
	1380			0.1											< LV
	1660			0.08											< LV
	3340			0.05											< LV
	Bulgaria			0.03											< LV
	5080			0.03											< LV
	10000			0.01											< LV
	15000			0.05											< LV
		760			0.02										< LV
		1290			0.01										< LV
		1500			0.006										< LV
		1900			0.004										< LV
		Bulgaria			0.001										< LV
		5000			0.001										< LV
		10000			-										< LV
		15000			-										< LV

[22] at the border with Bulgaria

NO_x

Table 17 - Variation of NOx concentration with distance from the emission point

Propagation distances (m)			Concentrations determined by mathematical dispersion modelling (µg/mc)			Human health						Vegetation			Obs.
						Hourly value (µg/mc)			Annual value (µg/mc)						
1 h	24 h	1 year	1 h	24 h	1 year	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
400			1			200	140	100	40	32	26	30	24	19,5	< LV
1900			0.8												< LV
3390			0.5												< LV
Bulgaria			0.4												< LV
5330			0.3												< LV
355			5												< LV
10000			0.1												< LV
15000			0.05												< LV
	890			0.1											< LV
	1450			0.08											< LV
	2800			0.05											< LV
	Bulgaria			0.03											< LV
	3680			0.03											< LV
	8000			0.01											< LV
	10000			0.005											< LV
	15000			0.003											< LV
		960			0.01										< LV
		1400			0.007										< LV
		1700			0.005										< LV
		2200			0.003										< LV
		Bulgaria			0.001										< LV
		3880			0.001										< LV
		7900			0.00032										< LV
		10000			-										< LV
		15000			-										< LV

SO_x

Table 18 - Variation of SO2 concentration with distance from emission point

Propagation distances (m)			Concentrations determined by mathematical dispersion modelling (µg/mc)			Human health						Vegetation			Obs.
						Hourly value (µg/mc)			Daily value (µg/mc)			Annual value (µg/mc)			
1 h	24 h	1 year	1 h	24 h	1 year	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
540			0.04			350			125	75	50	20	12	8	< LV
3280			0.02												< LV
Bulgaria			0.02												< LV
6160			0.01												< LV
7500			0.008												< LV
10000			0.006												< LV
15000			0.002												< LV
	350			0.005											< LV
	1440			0.003											< LV
	Bulgaria			0.001											< LV
	3840			0.001											< LV
	6880			0.0005											< LV
	10000			0.0003											< LV
	15000			0.00009											< LV
		800			0.001										< LV
		960			0.0008										< LV
		1200			0.0005										< LV
		1570			0.0003										< LV
		2150			0.0001										< LV
		Bulgaria			0.00005										< LV
		3680			0.00005										< LV
		8000			0.000013										< LV
		10000			-										< LV
		15000			-										< LV

TSP

Table 19 - Variation of TSP concentration with distance from the emission point

Propagation distances (m)				Concentrations determined by mathematical dispersion modelling (µg/mc)				Human Health						Ecosystems			Obs.
								Hourly value (µg/mc)			Daily value (µg/mc)						
1 h	8 h	24 h	1 year	1 h	8 h	24 h	1 year	Limits values	Upper threshold	Lower threshold	Limits values	Upper threshold	Lower threshold	Limits values	Upper threshold	Lower threshold	
605				0.02				50	35	25	40	28	20				< VL
3360				0.01													< VL
Bulgaria				0.01													< VL
5390				0.006													< VL
6230				0.005													< VL
10000				0.002													< VL
15000				0.001													< VL
		875				0.002											< VL
		2730				0.001											< VL
		Bulgaria				0.0006											< VL
		3770				0.0006											< VL
		4800				0.0005											< VL
		10000				0.0001											< VL
		15000				0.00005											< VL
			980				0.0004										< VL
			1640				0.0001										< VL
			2680				0.00005										< VL
			Bulgaria				0.00002										< VL
			4260				0.00002										< VL
			10000				0.00001										< VL
			15000				-										< VL

HCl

Table 20 - Variation of HCl concentration with distance from the emission point

Propagation distances (m)		Concentrations determined by mathematical dispersion modelling (µg/mc)		Human health						Vegetation (µg/mc)			Obs.
				Hourly value (µg/mc)			Annual value (µg/mc)						
30 min	24 h	30 min	24 h	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
400		0.1											
1500		0.08											
3010		0.05											
Bulgaria		0.03											
4915		0.03											
10000		0.01											
15000		0.003											
	775		0.01										
	1180		0.008										
	1760		0.005										
	Bulgaria		0.003										
	3640		0.003										
	7370		0.001										
	10000		0.0005										
	15000		0.0003										

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HF

Table 21 - Variation of HF concentration versus distance from the emission point

Propagation distances (m)		Concentrations determined by mathematical dispersion modelling (µg/mc)		Human health						Vegetation			Obs.
				Hourly value (µg/mc)			Annual value (µg/mc)						
30 min	24 h	30 min	24 h	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
1630		0,0006											
2185		0,0005											
2830		0,0004											
Bulgaria		**0,0001**											
5500		0,0001											
10000		0,00008											
15000		0,00005											
	690		0,00008										
	895		0,00007										
	1410		0,00005										
	1680		0,00004										
	Bulgaria		**0,00002**										
	3450		0,00003										
	4950		0,00002										
	10000		-										
	15000		-										

TOC

Table 22 - Variation of TOC concentration with distance from emission point

Propagation distances (m)		Concentrations determined by mathematical dispersion modelling (µg/mc)		Human health						Vegetation			Obs.
				Hourly value (µg/mc)			Annual value (µg/mc)						
30 min	24 h	30 min	24 h	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
1380		0.07											
2610		0.05											
3251		0.04											
Bulgaria		0.03											
6045		0.02											
10000		0.007											
15000		0.005											
	715		0.008										
	1300		0.005										
	3370		0.003										
	Bulgaria		0.001										
	6390		0.001										
	7500		0.0008										
	10000		0.0005										
	15000		0.0003										

DIOXINS AND FURANS

Table 23 - Variation of PCDD & PCDF concentration with distance from emission point (values in µg/mc x 10-6)

Propagation distances (m)				Concentrations determined by mathematical dispersion modelling (µg /mc x 10)$^{-6}$				Human health						Ecosystem			Obs.
								Value 8 hours (pg I.TEQ/Nmc)			Daily value (pg I.TEQ/Nmc)						
1 h	8 h	24 h	1 year	1 h	8 h	24 h	1 year	limit values[23]	Upper threshold	Lower threshold	Limits values	Upper threshold	Lower threshold	Limits values	Upper threshold	Lower threshold	
840				0.0008				0,3									< VL
1600				0.0006													< VL
2250				0.0005													< VL
2900				0.0004													< VL
5600				0.0002													< VL
Bulgaria				0.0002													< VL
	1100				0.0002												< VL
	3050				0.0001												< VL
	3300				0.00009												< VL
	3750				0.00007												< VL
	5030				0.00005												< VL
	Bulgaria				0.00005												< VL
		900				0.00009											< VL
		1050				0.00008											< VL
		1230				0.00007											< VL
		1600				0.00005											< VL
		3450				0.00003											< VL
		5000				0.00002											< VL
		Bulgaria				0.00002											< VL
			1680				0.00001										< VL
			Bulgaria				-										< VL

[23] there is no worldwide limit value for the concentration of dioxins and furans in immission, but studies recommend 0.3 pg I.TEQ/Nmc - (U.S. Environmental Protection Agency) for an 8-hour averaging period

Table 24 - Variation of PCDD & PCDF concentration in relation to distance from emission point (values in pg I.TEQ/Nmc)

Propagation distances (m)				Concentrations determined by mathematical dispersion modelling (pg I.TEQ/Nmc)				Human health						Ecosystem			Obs.
								Hourly value (pg I.TEQ/Nmc)			Daily value (pg I.TEQ/Nmc)						
1 h	8 h	24 h	1 year	1 h	8 h	24 h	1 year	limit values[24]	upper threshold	lower threshold	limit values	upper threshold	lower threshold	limit values	upper threshold	lower threshold	
840				0.08				0,3									< LV
1600				0.06													< LV
2250				0.05													< LV
2900				0.04													< LV
5600				0.02													< LV
Bulgaria				0.02													< LV
	1100				0.02												< LV
	3050				0.01												< LV
	3300				0.009												< LV
	3750				0.007												< LV
	5030				0.005												< LV
	Bulgaria				0.005												< LV
		900				0.009											< LV
		1050				0.008											< LV
		1230				0.007											< LV
		1600				0.005											< LV
		3450				0.003											< LV
		5000				0.002											< LV
		Bulgaria				0.002											< LV
			1680				0.001										< LV
			Bulgaria				-										< LV

[24] there is no worldwide limit value for the concentration of dioxins and furans in immission, but studies recommend 0.3 pg I.TEQ/Nmc - (U.S. Environmental Protection Agency) for an 8-hour averaging period

Identification of the area where the impact is felt

According to the data presented in the Environmental Impact Report prepared for the project "*Construction of a hall building, concrete drainable basin, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pre-treatment station,* the **impact is insignificant and is felt over a very small area that does not go beyond the boundaries of the site, as can be seen from the dispersion maps of pollutants emitted into the atmosphere, which are included in this work.**

2.6.1.3. Emissions to soil, subsoil and groundwater

Possible sources of soil pollution are:

- possible accidental spillage of fuels or lubricants from vehicles and machinery servicing the construction activity and then from specific activities during the incinerator operation phase
- possible accidental spillage of fuel or lubricants from the vehicles and machinery servicing the incinerator's operations

Measures, facilities and arrangements for soil and subsoil protection

The following measures have been foreseen to avoid soil pollution:

- the functionality of the thermal engines of the vehicles used for construction work shall be checked in due time
- no fuel and oil depots are set up in places other than those equipped in accordance with legal requirements;
- maintenance and repair work on machinery and means of transport shall be carried out only in specially designated places;
- no washing of machinery and vehicles shall be carried out on the premises, with the exception of washing for the sanitation of means of transport of non-hazardous animal waste;
- the supply of diesel and lubricants to machinery is carried out under all conditions to avoid accidental losses and to protect the environment in specially equipped places - fuel distribution stations;
- all machinery and vehicles used in the construction work and then in the incineration work run on designated roads and are parked only on concrete platforms
- waste for incineration shall be temporarily stored only in special containers in specially designated areas
- the waste from the incineration process is collected in special containers in an appropriate area.

As the entire activity is and will be carried out on existing concrete platforms, there is no question of any negative impact on the soil caused by the implementation of the project.

2.6.2. Waste generated by the project

Waste from the construction phase

The management of waste produced during the construction phase will be subject to site organisation in accordance with the legislation in force. The following types of waste are expected:

- household or similar;
- ferrous metal - resulting from the activity of execution of metal structures
- non-ferrous metal - resulting from the work of building indoor electrical networks;
- Soil and stones - excavation/excavation results;
- concrete - from the breaking of the existing platform and the creation of foundations and platforms

According to the provisions of the Government Emergency Ordinance No 92/2021 on the waste regime, Art. 17, para. (4), "*the holder of the construction/dismantling permit issued by the local, central public administration authority or by the institutions authorized to authorize construction works of a special nature is obliged to have a waste management plan for construction and/or demolition activities, as appropriate, establishing sorting systems for waste from construction and demolition activities, at least for wood, mineral materials - concrete, brick, sandstone and ceramics, stone, metal, glass, plastic and gypsum for on-site recycling/reuse, as far as economically feasible, environmentally sound and safe construction, and to take measures to promote selective demolition to enable the safe disposal and handling of hazardous substances to facilitate high quality reuse and recycling through the disposal of non-valuable materials*".

The objectives of the waste management plan are:

1. prevention or reduction of waste generation and its harmful effects - these aspects have been taken into account in the technical design of the shopping centre and justified as efficient both in the excavation processes for the execution of the foundation works, in the processes of placing the networks and above-ground structures and in the restoration of the site in terms of environmental protection after completion of the works.
2. encouraging the recovery of waste resulting from the construction activities of the shopping centre through recycling, recovery or reuse, where this activity is environmentally viable - in this respect, a clear programme has been drawn up for waste sorting throughout the construction period, its selective collection, its channelling to authorised economic agents for recycling and/or recovery.
3. ensuring the safe disposal of waste that is not suitable for recovery and/or recycling, taking into account from the design stage the proper management of waste during the construction works - waste from construction activities will be temporarily stored in specially designed areas to prevent pollution of environmental factors (on ballasted platforms or in special containers on ballasted platforms) until it is taken over for disposal by authorised companies.

Given that there are no constructions on the site where the project is to be implemented that require demolition activity, the plan will only be carried out for the waste that will result from construction activities.

Their management, in accordance with the provisions of GEO 92/2021, are centralised in the table below:

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Table 25 - Estimated quantities of waste resulting from the construction phase

Waste type	Waste code*	Source of generation	Storage/storage method	Proposed waste disposal / recovery	Estimated quantities
Scrap metal	17 04 05	Location of metal structures for construction	Concrete platform	It is recovered by authorised economic agents	0.5 t
Waste electrical cables	17 04 11	Construction of electrical networks and connections	Concrete platform	It is recovered by authorised economic agents	0.1 t
Household waste	20 03 01	Activity of staff employed	Eurobins placed on the platform	It is eliminated by economic agents authorized by Giurgiu Local Council	2 mc
earth and stones other than those mentioned in 17 05 03	17 04 04	Excavation/ploughing, land levelling	Concrete platform	Used as backfill when levelling the ground	14 mc
Concrete	17 01 01	Breaking of existing concrete platform/building foundation, creation of foundations, concrete platforms	Concrete platform	As a filler or recovered by authorised economic operators	2.8 mc

Waste from the exploitation phase

The waste resulting from the exploitation phase is listed in the table below:

Table 26 - Waste generated in the operation phase

Waste name	Estimated quantity to be generated t/year	Waste code*	Source of generation	Storage/storage method	Proposed waste disposal / recovery
Paper - cardboard packaging	0.5	15 01 01	collective packaging resulting from the unpackaging of by-products collected from generators	Plastic bin	It is recovered by authorised economic agents
Plastic packaging	0.5	15 01 02	collective packaging resulting from the unpackaging of by-products collected from generators	Plastic bin	It is recovered by authorised economic agents
Wooden packaging	0.1	15 01 03	collective packaging resulting from the unpacking of by-products collected from shops	Concrete platform	It is recovered by authorised economic agents

Metal packaging	0.2	15 01 04	collective packaging resulting from the unpacking of by-products collected from shops	Metal container	It is recovered by authorised economic agents
Absorbents contaminated with hazardous substances	0.01	15 02 02*	cases of accidental pollution	Metal container	Disposal by authorised economic operators
Ferrous materials from combustion ashes	0.1	19 01 02	incineration of medical waste containing metals	Metal container	It is recovered by authorised economic agents
Ash	1.5	19 01 11* bottom ash and slag containing dangerous substances	incinerator		
Ash	37.5	19 01 12 flue-gas dust and slag other than those mentioned in 19 01 11*	incinerator	Containers with a capacity of 1100 l	Disposal by authorised economic operators to the authorised non-hazardous waste landfill serving the area
Household waste	12 mc/year	20 03 01	Administrative, staff activity	Eurobins placed on the platform	It is eliminated by economic agents authorized by Giurgiu Local Council

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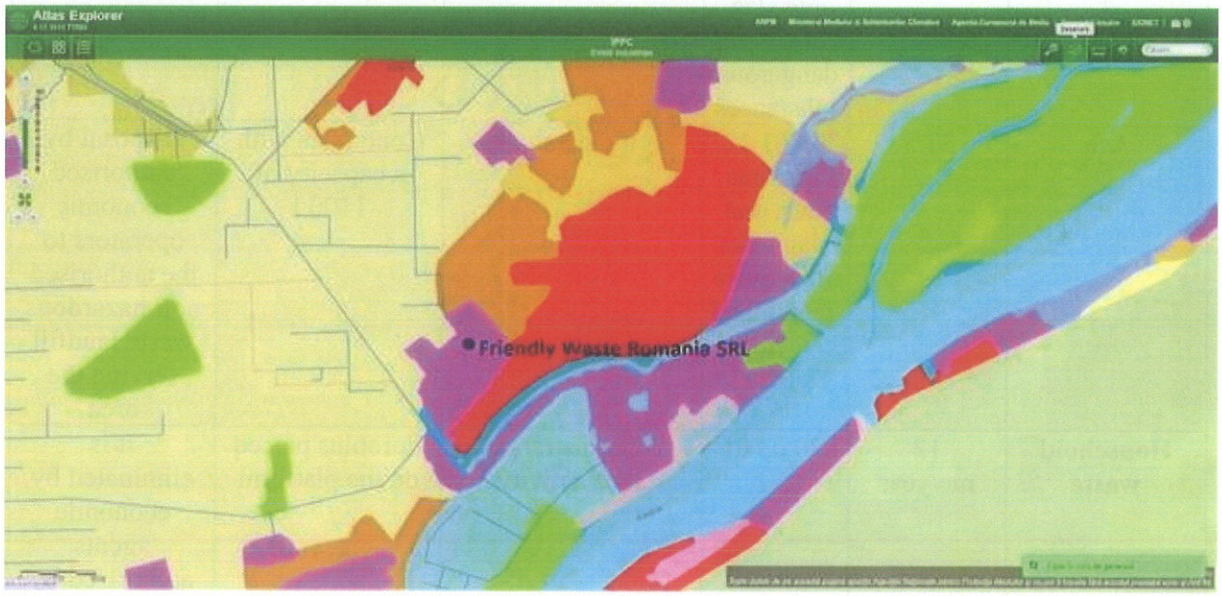
2.7. Land use requirements necessary for the implementation of the project (land use category, land areas to be temporarily/permanently occupied by the project, e.g. access roads, technological roads, road shoulders, ditches and retaining walls, drainage effects, etc.).

2.7.1. Category of land use

In order to carry out the proposed investment, the Town Planning Certificate no. 123 of 07.03.2023 was obtained, issued by the Municipality of Giurgiu. The land with a total area of 3.050 sqm is located on the administrative territory of Giurgiu Municipality, having the category of use courtyard buildings. It is a land located in zone "C" according to HCLM 173/2007. No changes to the current use regime are foreseen.

The land use categories in the study area, according to Corine Land Cover 2006, are shown in the following figure:

Figure no. 28. Land use in the study area, according to CLC 2006 (Source: atlas.anpm.ro)



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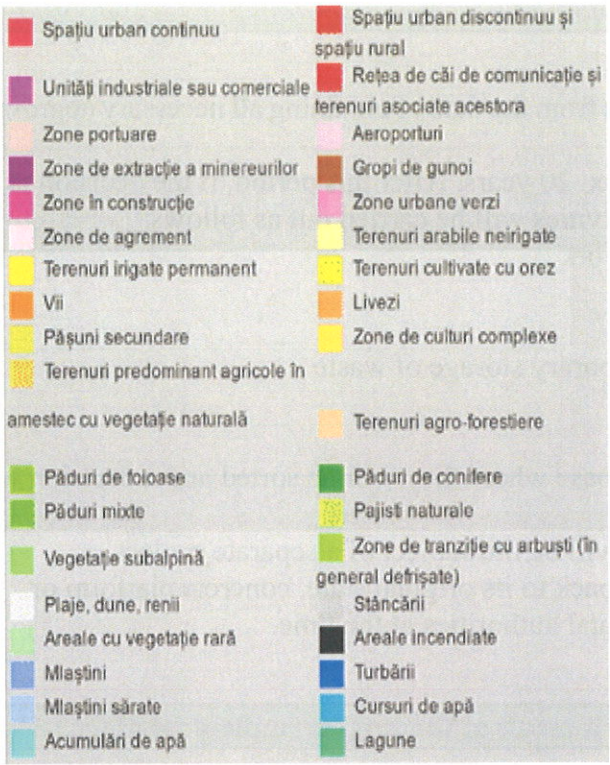

Spatiu urban continuu	Continuous urban space
Unitati industriale sau comerciale	Industrial or commercial units
Zone portuare	Port areas
Zone de extractie a minereurilor	Ore extraction areas
Zone in constructie	Areas under construction
ZOne de agrement	Recreation areas
Terenuri irigate permanent	Permanently irrigated lands
Vita de vie	Vine
Pasuni secundare	Secondary pastures
Terenuri predominant agricoel in amestecu cu vegetatie naturala	Predominantly agricultural land mixed with natural vegetation
aduri de foioase	Deciduous forests
Paduri mixte	Mixed forests
Vegetatie subalpina	Subalpine vegetation
Plaje, dune	Beaches, dunes
Areale cu vegetatie rara	Areas with rare vegetation
Mlasiti	Swamps
Mlastini sarate	Salt marshes
Acumulari de apa	Water accumulations

Spatiu urban discontinuu si spatiu rural	Discontinuous urban space and rural space
Retea de cai de comunicatie si terenuri asociate acestora	The network of communication roads and lands associated with them
Gropi de gunoi	Garbage pits
Zone urbane verzi	Green urban areas
Terenuri arabile neirigate	Non-irrigated arable land
Terenuri cultivate cu orez	Lands cultivated with rice
Livezi	orchards
Zone de culturi complexxe	Areas of complex cultures
Terenuri agro-gorestiere	Agro-forestry lands
Paduri de conifere	Coniferous forests
Pajisti naturale	Natural meadows
Zone de tranzitie cu arbusti (in general defrisate)	Transition areas with shrubs (generally deforested)
Stanci	Rocks

2.7.2. Areas of land to be occupied temporarily/permanently

The area of land temporarily occupied is represented by the area of land related to the works, i.e. 3,050 sqm.

The construction site will be set up on a concrete platform located in the premises of SC Friendly Waste Romania SRL, on an area of approx. 100 sq.m representing a temporarily occupied land area.

2.8. Additional services required for the implementation of the project (decommissioning/relocation of pipelines, power lines, construction means required) and how access to these additional services may affect the integrity of the natural area of community interest

For the implementation of the project "Construction of a hall building, concrete drainable basin, concrete platforms, fencing, lighting system, drilling and internal network for water supply and sewerage, installation of wastewater pre-treatment station, installation of medical waste incinerator with related facilities", proposed by FRIENDLY WASTE ROMANIA SRL, no additional services are foreseen (dismantling/replacement of pipelines, high voltage lines, water supply and/or sewerage).

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2.9. Duration of construction, operation, decommissioning of the project and phasing of the project implementation period

The investment will be completed within 60 days from the date of obtaining all necessary approvals and permits.

The estimated lifetime of an incinerator is approx. 20 years. After this period, if the decision is taken to decommission the incinerator, a number of activities will be carried out as follows:

1. de-energising the electricity supply network
2. dismantling electrical separators
3. dismantling of light constructions
4. decommissioning of the landfill for temporary storage of waste
5. dismantling of interior installations
6. dismantling/demolition of buildings
7. transport all the resulting materials to a base where they will be sorted and a decision will be taken on their further use

The decommissioning phase of the investment will be the subject of a separate project. Restoration works will be carried out to bring the land back to its original state, concrete platform or other state depending on the decision of the environmental authorities at the time.

2.10. Activities that will be generated as a result of the project implementation

The implementation of the proposed project was designed to develop the company's business both by increasing waste incineration capacity and by diversifying the business by incinerating both non-hazardous waste and a wide range of hazardous waste.

At the same time, it is planned to create new incineration capacities for the geographical area that includes Giurgiu county and the surrounding counties by equipping them with high performance equipment that meets the highest technical and environmental protection standards.

The activity to be carried out with the equipment to be installed is the incineration of non-hazardous animal and medical waste.

To determine the incineration capacity an analysis based on:

A. incineration capacity for non-hazardous animal waste
B. incineration capacity for medical waste

For both types of waste the combustion capacity is 300 kg/h, i.e. 7.2 t/day in continuous operation.

The incineration capacity of this type of incinerator, for the same volume of the primary combustion chamber, is given by:

- incinerator capacity
- waste feed rate
- rotation speed of the primary combustion chamber

Taking into account the technical characteristics of the incinerator analysed in this paper (according to the specifications in the technical book) its incineration capacity is 300 kg/h, i.e. 7.2 t/day.

The annual incineration capacity is calculated according to the hourly capacity, the daily capacity and the number of operating days/year:

0.3 t/h x 24 h = 7.2 t/day

7.2 t/day x 320 days/year = 2304 t/year

This represents the total maximum incineration capacity for all types of waste.

The division of this capacity by type of waste will depend on the availability of waste categories for incineration (hazardous or non-hazardous medical waste, non-hazardous or non-hazardous animal waste) and on the incineration programme to be carried out (strictly during the incinerator's operational

phase, after obtaining the environmental permit and other permits required by the legal provisions in force).

2.11. Description of the technological processes of the project (if required by the competent authority for environmental protection)

The project owner proposes to construct a metal structure hall and to purchase and install a revolving incinerator for the incineration of medical and animal waste.

Technical features

- incineration capacity - 300 kg/h respectively 7500 kg/day in continuous operation
- fuel - LPG
- fuel consumption - 24.6 ÷ 122.5 l/h
- primary combustion chamber with the characteristics
  - primary combustion chamber volume = 10,5 mc
  - primary combustion chamber temperature - 850 C°
  - 1 incinerator type P 61 on LPG
- secondary combustion chamber with the characteristics
  - primary combustion chamber volume = 9,7 mc
  - primary combustion chamber temperature - 1100 C°
  - 1 incinerator type P 61 on LPG
  - gas retention time in the secondary combustion chamber - 2 seconds
- volume of ash resulting - 3
- measured emission parameters

Table no. 17. Incinerator emission parameters

Parameter	Emission limits every 30 minutes	Measured values of incinerator type IER-1000-300
Solid particle	30 mg/m³	1.2 mg/m³
Sulphur dioxide	200 mg/m³	2.4 mg/m³
Nitrogen Dioxide*	400 mg/m³	60 mg/m³
Carbon Monoxide	100 mg/m³	78.3 mg/m³

IER 1000-300 incinerators are equipped with state-of-the-art technology both in terms of plant efficiency and environmental protection features.

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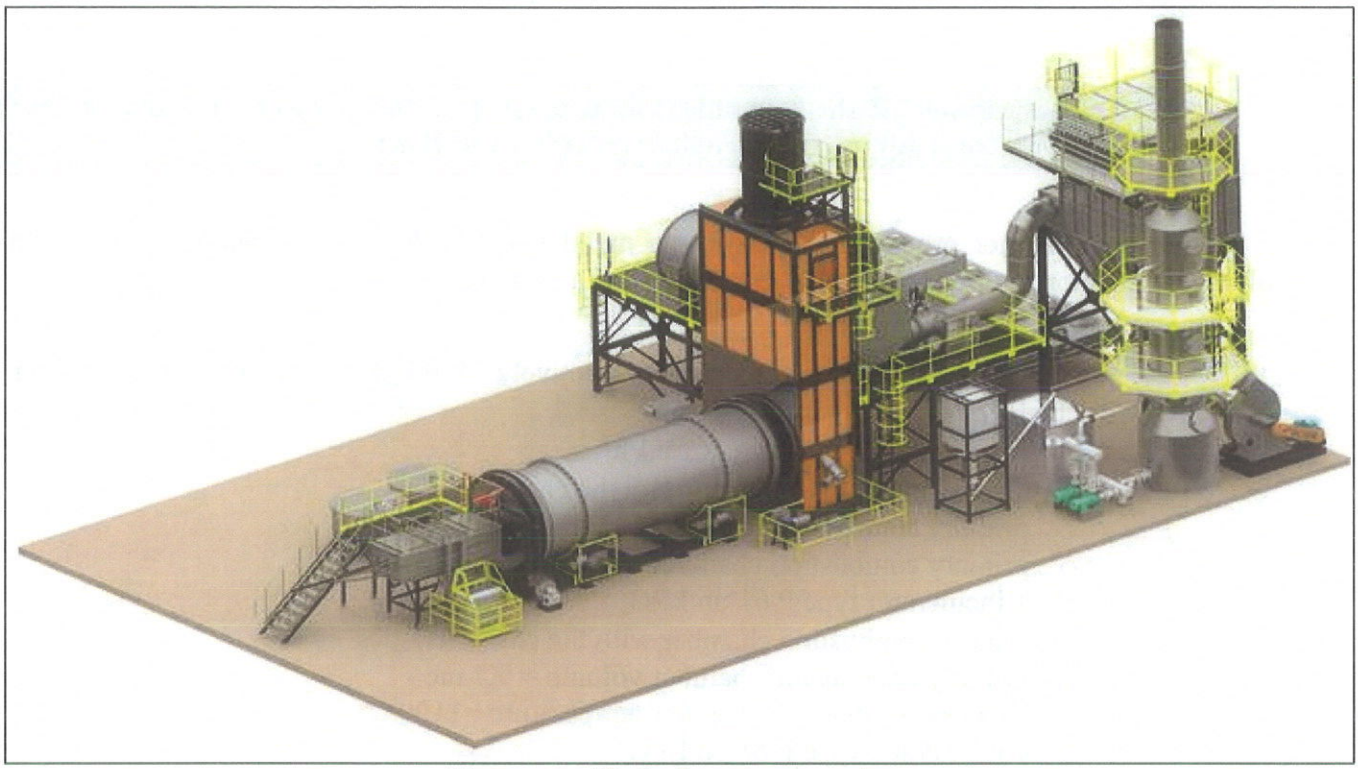

Figure no. 29. Incinerator overview

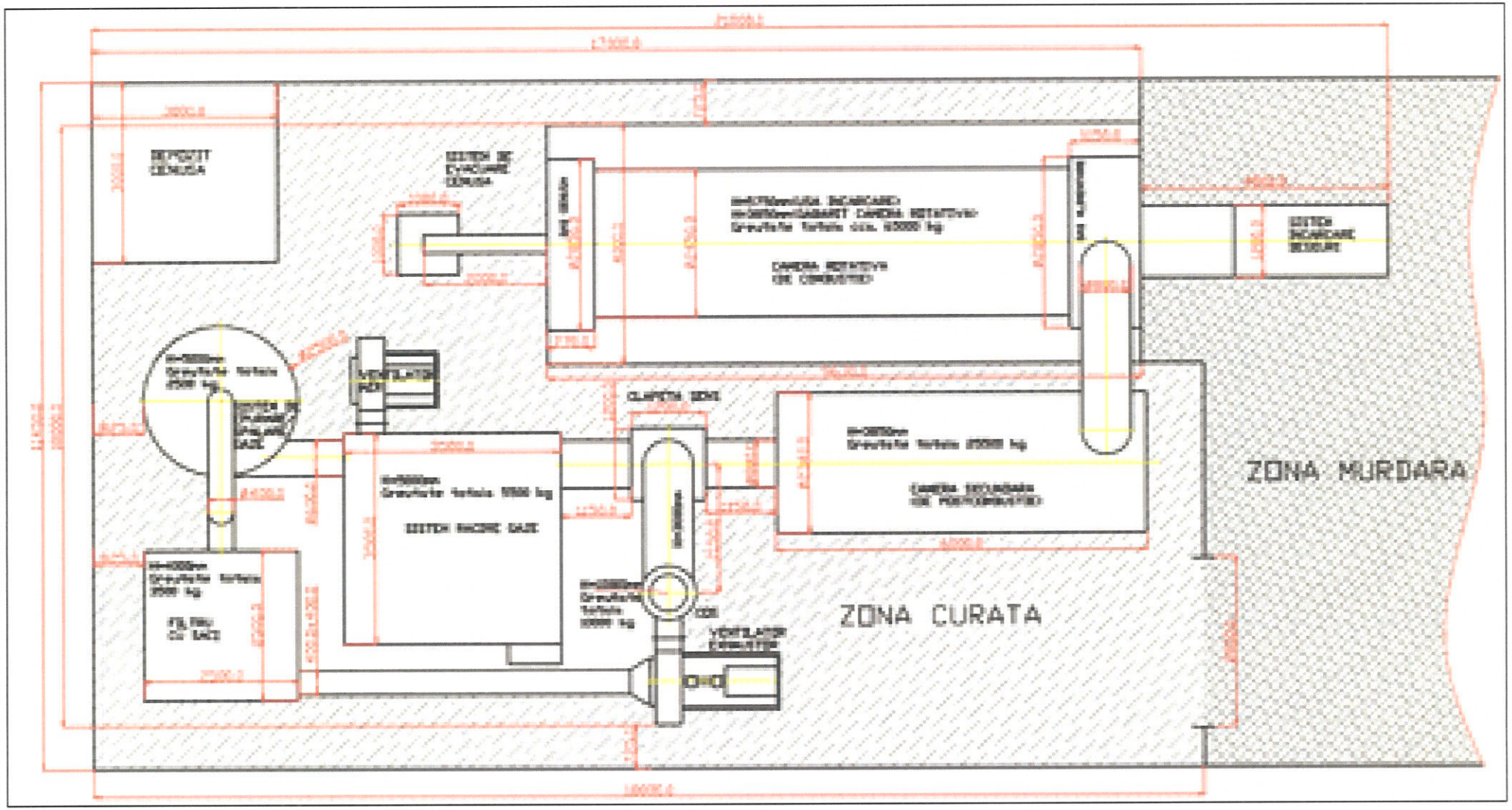

Figure no. 30. Layout of the location of the incinerator components with the gauge dimensions

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The IER 1000-300 model is modern and innovative in terms of waste incineration efficiency. It is an incinerator model equipped with a controlled air supply system designed to ensure the best conditions for incinerating a very wide range of both hazardous and non-hazardous waste.

Friendly Waste Romania SRL will use these incinerators only for the incineration of non-hazardous, animal and medical waste. Please note that medical waste is both non-hazardous and hazardous waste. Below are the lists of medical waste codes that will be incinerated:

Table no. 18. Types of non-hazardous medical waste to be incinerated in the incineration plant, classified according to Commission Decision 2014/955 /EU

18	WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCHES (except food preparation wastes from kitchens or restaurants, which do not arise directly from health care activities)
18 01	waste resulting from prevention, diagnosis and treatment activities carried out in health facilities
18 01 01	sharp objects (except 18 01 03)
18 01 02	human organs and fragments, including blood containers and preserved blood (except 18 01 03)
18 01 04	waste whose collection and disposal is not subject to special infection prevention measures (e.g. clothing, plaster casts, underwear, disposable clothing, diapers)
18 01 07	chemicals other than those mentioned in 18 01 06
18 01 09	medicines other than those specified in 18 01 08
18 02	waste from veterinary establishments for research, diagnosis, treatment and prevention of disease
18 02 01	sharp objects (except 18 02 02)
18 02 03	waste whose collection and disposal is not subject to special measures for the prevention of infection
18 02 06	chemicals other than those specified in 18 02 05
18 02 08	medicines other than those specified in 18 02 07

Table no. 19. Types of hazardous medical waste to be incinerated in the incineration plant, classified according to Commission Decision 2014/955 /EU

18	WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCHES (except food preparation wastes from kitchens or restaurants, which do not arise directly from health care activities)
18 01 03*	waste whose collection and disposal is subject to special infection prevention measures
18 01 06*	chemicals consisting of or containing dangerous substances
18 01 08*	cytotoxic and cytostatic drugs
18 02	waste from veterinary establishments for research, diagnosis, treatment and prevention of diseases
18 02 02*	to prevent infection
18 02 05*	chemicals consisting of or containing dangerous substances
18 02 07*	cytotoxic and cytostatic drugs

Presentation of the constructive elements of the incinerator type IRE 1000-300

According to the technical standards, the IER 1000-300 type environmental incinerator with 2 combustion chambers is equipped with 2 independent incinerators, so that the gases and suspended materials resulting from the primary combustion in the revolving combustion chamber pass into the fixed after incineration chamber, where any gases and suspended particles are retained and destroyed. The burners that equip the revolving environmental incinerator run on LPG and are each controlled by an electronic regulator. This ensures a residence time of the combustion gases (min. 2 s, according to the legislation in force) in the fixed afterincinerator chamber, which leads to a proper/complete combustion, and, moreover, the emission values are within the limits imposed by the requirements of the Romanian and European legislation in force.

The incinerator's resistance frame is made of carbon steel pipe by cutting, mechanical machining and electric welding. The configuration of the metal structure ensures:

- mechanical strength of the assembly during the execution and operation of the installation;
- access for waste loading and ash disposal;
- supporting the incinerator components.

The metal construction has provided locations for access to the incinerators, viewing windows and the electrical installation of the drive and automation. It is protected by painting with primer and enamel suitable for this category of machinery.

Revolving primary combustion chamber

The revolving primary combustion chamber has a volume of 10.5 m^3 and is equipped with an injector to introduce additional air, thus ensuring complete and homogeneous combustion up to a temperature of 850°C. The incinerator in this chamber, type P 61, on LPG fuel with a consumption of (24,6 ... 122,5) l/h, is controlled by an electronic microprocessor controller and is easy to use.

The combustion chamber (primary combustion) masonry is made of refractory brick or insulating concrete, outwards and at the ends of the revolving chamber.

Fixed, secondary combustion after incineration chamber

The fixed post-combustion secondary combustion chamber has a volume of 9.7 m^3, in which the complete combustion of volatile organic compounds takes place at a temperature of 1100° C, ensuring a residence time of min. 2 seconds. The incinerator in this chamber, type P 61, on LPG fuel with a consumption of (24,6 ... 122,5) l/h, is controlled by an electronic microprocessor controller and is easy to use.

The temperature in this room is programmable and monitored with a thermocouple. The measured temperature in the fixed afterincinerator chamber and the programmed temperature will be read on a digital display.

In the incineration process the gases from the primary combustion chamber will be sucked into the scrubbing area, which before being discharged, will be scrubbed and cleaned so as not to cause negative effects on the environment.

The after incineration (secondary combustion) chamber is made of brick and refractory concrete, similar to the revolving chamber.

The after incineration chamber is equipped with an emergency flue, which in the event of a fault, allows the flue gases to be removed until the incineration of the current batch has been completed.

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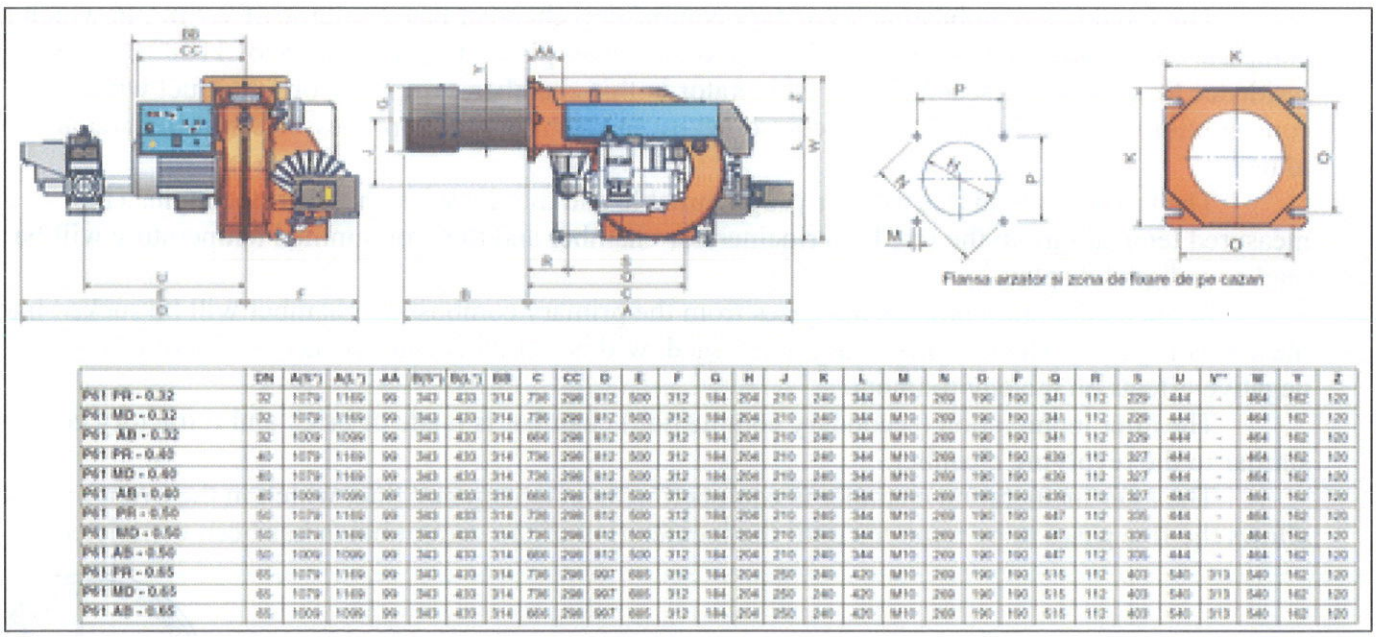
Each combustion chamber is equipped with a incinerator, which starts automatically when the flue gas temperature drops below 850° C or 1100° C after the last combustion air intake. These incinerators are also used in the start-up and shut-down phases, in order to ensure the combustion temperatures in these phases and also during the period when unburned waste is in the combustion chamber. Incinerators may not be fuelled with fuels which could produce emissions higher than those resulting from the combustion of petrol as referred to in Article 50(2). 3 of Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions (integrated pollution prevention and control) of 24 November 2010.

The technical characteristics of the incinerators used in the 2 combustion chambers are shown below:

Table no. 20. Technical characteristics of incinerators

Burner type		P61 M.....xx	P65 M-.....xx
Power	min. - max. kW	160 - 800	270 - 970
Fuel		Methane gas	Methane gas
Category		(see next paragraph)	(see next paragraph)
Deb degassing	min.- max. (Nm^3/h)	17 - 84.7	28.6 - 103
Gas pressure	min.-max. mbar	(see Note 2)	(see Note 2)
Supply voltage		230V 3- / 400V 3N - 50Hz	230V 3- / 400V 3N - 50Hz
Total power consumption	kW	1.6	2
Fan motor power	kW	1.1	1.5
Degree of protection		IP40	IP40
Weight approx.	kg	55- 70	60- 80
Operating mode		Two steps - Progressive - - Fully modulating	Two steps - Progressive - - Fully modulating
Ramp type - Gas connection - 32		1" 1/4/Rp1/	1" 1/4/Rp1/
Ramp type - Gas connection - 40		1" 1/2/Rp1/2	1" 1/2/Rp1/2
Ramp type - Gas connection - 50		2" / Rp2	2" / Rp2
Ramp type - Gas connection - 65		2"1/2/ DN65	2"1/2/ DN65
Working temperature	°c	-10÷+50	-10÷+50
Storage temperature	°c	-20÷+60	-20÷+60
Service life		Flashing	Flashing



	DN	A(5°)	A(L°)	AA	B(5°)	B(L°)	BB	C	CC	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	U	V**	W	Y	Z
P61 PR - 0.32	32	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	341	112	229	444	-	464	162	120
P61 MD - 0.32	32	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	341	112	229	444	-	464	162	120
P61 AB - 0.32	32	1009	1099	99	343	433	314	686	298	812	500	312	184	204	210	240	344	M10	269	190	190	341	112	229	444	-	464	162	120
P61 PR - 0.40	40	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	439	112	327	444	-	464	162	120
P61 MD - 0.40	40	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	439	112	327	444	-	464	162	120
P61 AB - 0.40	40	1009	1099	99	343	433	314	686	298	812	500	312	184	204	210	240	344	M10	269	190	190	439	112	327	444	-	464	162	120
P61 PR - 0.50	50	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	447	112	335	444	-	464	162	120
P61 MD - 0.50	50	1079	1169	99	343	433	314	736	298	812	500	312	184	204	210	240	344	M10	269	190	190	447	112	335	444	-	464	162	120
P61 AB - 0.50	50	1009	1099	99	343	433	314	686	298	812	500	312	184	204	210	240	344	M10	269	190	190	447	112	335	444	-	464	162	120
P61 PR - 0.65	65	1079	1169	99	343	433	314	736	298	997	685	312	184	204	250	240	420	M10	269	190	190	515	112	403	540	313	540	162	120
P61 MD - 0.65	65	1079	1169	99	343	433	314	736	298	997	685	312	184	204	250	240	420	M10	269	190	190	515	112	403	540	313	540	162	120
P61 AB - 0.65	65	1009	1099	99	343	433	314	686	298	997	685	312	184	204	250	240	420	M10	269	190	190	515	112	403	540	313	540	162	120

Figure no. 31. Incinerator gauge characteristics P 61

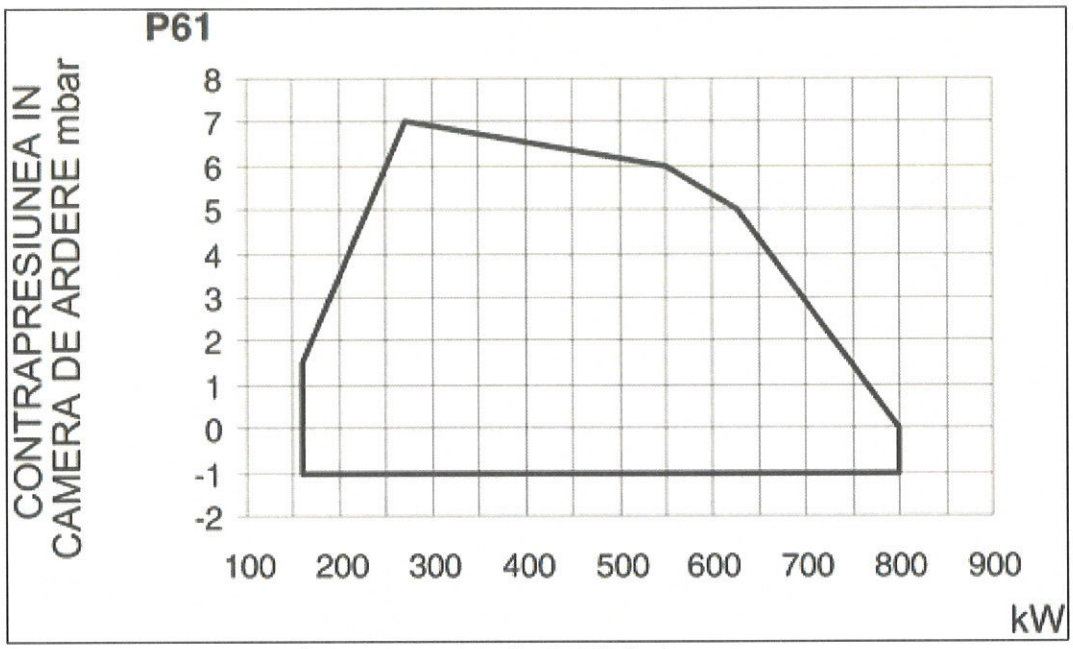


Figure no. 32. P61 incinerator performance curve for LPG fuel

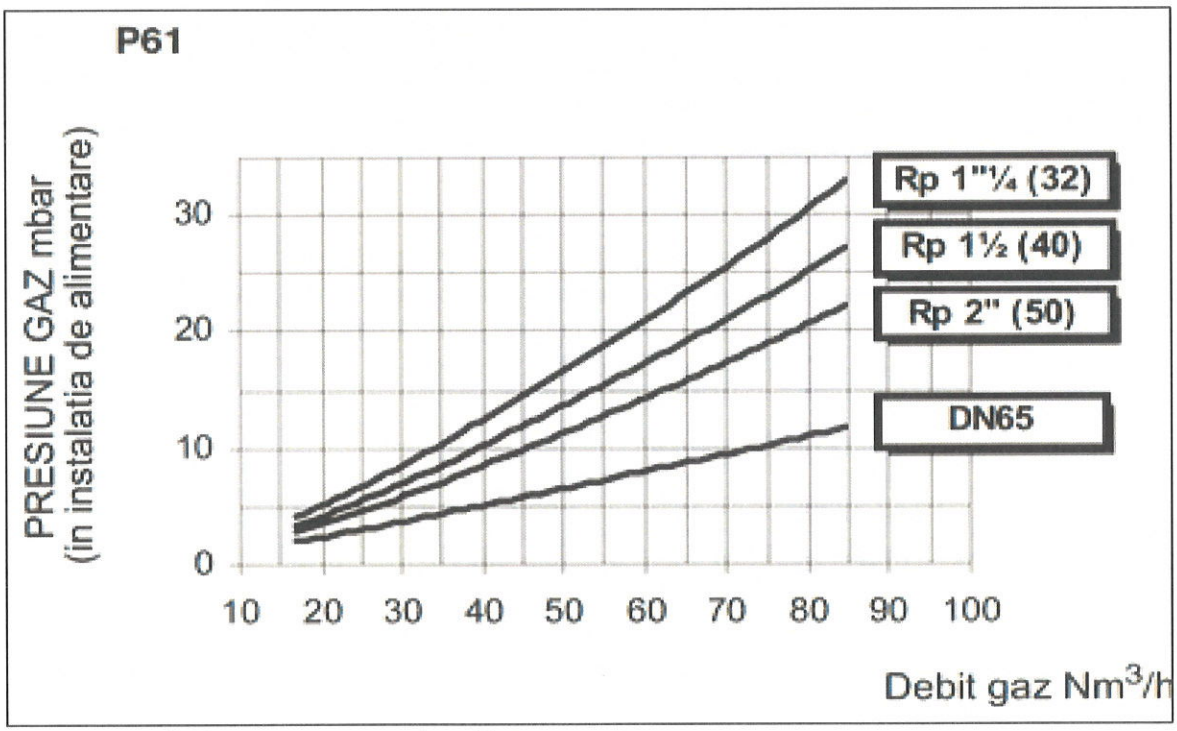


Figure no. 33. Installation gas pressure/gas flow curves

Supplementary air distribution system

The extra air is necessary for correct and complete combustion. The supplementary air distribution system consists of a general fan for supplementary combustion air, with the characteristics p = 530 mm H2O; P = 11 KW, flow rate = 5.000 Nm³/h, and with elements for automatic regulation of the air flow sections from the air conduction paths to the access points in the two combustion chambers and to the chimney connection (to ensure gas ejection and dilution in case of damage).

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Fuel distribution installation

The fuel distribution system supplies the two incinerators (the revolving combustion chamber and the fixed after incineration chamber) from the distribution network via a tap connection.

Automation installation

The automation system ensures temperature regulation to the prescribed values in the two chambers, ensures correct combustion regulation and protection of the entire installation by means of safety elements and blocking the operation of the equipment in the event of failure to comply with certain operating conditions of the incinerators or exceeding the prescribed temperatures.

The automation system independently monitors (records and prints) the following parameters:

1. oxygen (O_2): (0 ... 21) %;
2. temperature: (0 ... 1370)°C, both in the combustion chamber and in the afterincinerator chamber.

The incinerator automation plant contains its own memory recording system, which can later be downloaded to a computer, as well as the option of card extraction and portability. This offers the possibility of printing instantaneous values at a time without downloading the entire data and ensures that data can be transmitted directly if the system is connected to a computer at the time of incineration.

Continuous and automatic waste feeding system

Incineration waste is expected to be collected and brought to the incineration facility in bins. They are placed in the loading hopper, from where they are taken by a hydraulic loading system into the feed lock, where a hydraulic piston transfers them to the primary chamber of the incinerator and thus ensures the incinerator feed rate of 300 kg/h. Waste is fed continuously, provided that occupational health and safety regulations are strictly observed.

Automatic ash removal system

Since the ecological incinerator has a primary, revolving combustion chamber, the ash is continuously drained into a box and then automatically discharged through a revolving chute into another box where it is loaded into bags. The ash is inert, non-putrescible, sterile and will be analysed for carbon and heavy metal content by specialised laboratories.

Dry flue gas cleaning/washing system

This system includes:

a) - flue gas cooling system;
b) - the flue gas cleaning system, of the "dry absorbing system" type;
c) - dry particle filtration system;
d) - exhaust fan for exhausting combustion gases;
e) - flue gas chimney and chimney connection.

The flue gas is introduced, in a controlled and directed manner, into the dry absorbing system, where the Solvay-Bicar mixture (NaHCO3 mixed with activated carbon) is injected through a nozzle into a specially designed reactor. when it meets the flue gas with the sorbent in the powder phase in suspension and combines as the chemical reaction of pollutant absorption takes place, resulting in a powder which is then collected in the lower part of the reactor without the need for additional drying of the depollutant. The installation of such a system for the removal of pollutants from the flue gas by means of a dry absorbing system is designed and dimensioned to limit the discharge of pollutants and dust particles into the atmosphere in such a way as to comply with the emissions into the atmosphere according to the legislation in force (HG 128/2002, supplemented and updated with HG 268/2005).

After the flue gas cleaning system, the dry filter system and then the exhaust will be installed. The dry particle filtering system is equipped with a bag filter.

Technical features are:

- filtered flow — 5000 m /h^3
- filtered surface — 360 m^2
- type of filter material — filter bags made of FNS® (P84, glass fibre, PTFE)
- maximum operating temperature — T max.(continuous) = 190 C°
- pressure drop — 50-150 mmH $O._2$

The dry particle filtration system consists of a 144-bag filter, which is cleaned with countercurrent air, resulting in a filtered air flow of 10000 m^3/h. This flow rate is calculated to take up the load peaks that occur when the incineration process starts. At this point any volatile fractions in the waste to be incinerated ignite almost instantaneously and generate a volume of flue gas above the working flow rate of 5000 m^3 /h. The duration of the phenomenon is very short, in the order of 1 to 5 minutes, after which the normal working flow returns.

The life of a filter bag is 6000 hours after which it must be replaced.

Exhauster for gas exhaust

Technical characteristics for the exhauster to exhaust gas are:

- centrifugal fan type T_{max} = 350° C (with cooling fan) with electric motor
- Suction/discharge dimensions: Ø 406 mm / 355 x 250 mm.

The exhaust system for the flue gas discharge consists of a centrifugal fan with cooling fan, which has a flow rate of 10000 m^3/h. This flow rate has been dimensioned to take up the peak loads that occur at the start of the incineration process (see paragraph above).

The advantages of this gas cleaning solution are:

Pollutant removal efficiency

- HCl > 98.0%
- SO2 >98.0%
- HF >98.0%
- Hg >98.0%
- Dioxin>98.0%

Low investment costs

- It does not use water thus eliminating the problems of subsequent water treatment;
- Very low collateral energy consumption;
- There is no need to reheat the gas after treatment;
- It does not require a specialised sludge treatment plant.

Chimney (flue gas exhaust)

The combustion gases from the combustion chamber pass into the post-combustion chamber, which is provided at the bottom with an injector and which ensures that the temperature of the gases at the outlet is raised to 1100°C, in accordance with the applicable regulations in force concerning the ecological incineration of waste. The dwell time in the afterincinerator chamber at the above mentioned temperature ensures the destruction of the organic components in the emission within the required limits. The flue gas outlet pipe connects the incinerator to the chimney. The chimney is made of stainless steel, thermally insulated, with a diameter of Ø 500 mm and a height of 10 m above +/- 0.00.

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Cold rooms

Two cold rooms will be set up for the temporary storage of animal and medical waste. They will have the following characteristics:

- useful volume = 16 cubic metres
- dimensions 3 x 2,6 x 2 m
- working temperatures 4 ÷ 6 C°

LPG household

To provide the fuel needed to operate the incinerator, an LPG household will be built consisting of:

- 4 metal tanks with V = 5000 l
- 2 concrete wall cavities, explosion-proof and fireproof

Car park

In order to carry out its activity in good conditions, the company has purchased 4 Ford Transit trucks with a capacity of 3.5 t. They will be authorized and marked according to the legal provisions.

The only process taking place on the site under review is waste incineration. The new equipment to be installed will be used exclusively for the incineration of non-hazardous animal waste.

The incineration activity does not result in products or by-products but only in waste ash. The amount of ash resulting is a maximum of 3% of the waste incinerated.

The technological flows and facilities for complying with the legal requirements for their organisation will be described below for all types of waste entering the incineration process.

In a first phase, the common rules for all types of waste will be followed, namely:

-before acceptance of the waste at the waste incineration plant the operator shall check that the waste is accompanied by all documents required by national and European waste legislation established by Decision 2000/532/EC

-before acceptance of the waste into the waste incineration plant the operator shall determine by weighing the mass of each type of waste and check in the accompanying documents whether it has passed the waste code according to the classification of the European waste list established by Commission Decision 2014/955/EU

-the operator of the waste incineration plant is obliged to comply with internal procedures regarding the necessary precautionary measures for the delivery and reception of waste in order to prevent or limit, as far as possible, pollution of air, soil, surface water, groundwater and other negative effects on the environment, i.e. odours, noise and direct risks to human health.

Technology flow for the incineration of non-hazardous waste and the incineration of non-hazardous animal waste

1. Waste acceptance
   - on arrival of the means of transport at the site, the accompanying documents are checked as described above
   - waste is weighed
   - the input register is completed for the type of waste received
   - no sampling of waste is required
2. Unloading of waste - this is done with a forklift. The waste bins are taken from the means of transport and temporarily stored on the concrete platform intended for this purpose. This platform is partially covered with a lightweight canopy.

3. Waste storage - if non-hazardous waste does not go directly into the incineration stream, it is temporarily stored on the concrete platform specially designed for this purpose. This platform is located at the entrance to the site and has S = 35 sqm. Temporary storage will not exceed 24 to 48 hours. If the waste is of animal origin (perishable) it is temporarily stored in cold room 1. Animal waste that is packaged is only partially subjected to a tertiary or secondary packaging removal process if possible. This process takes place in the technical room located on the concrete platform next to the waste reception platform. The packaging waste resulting from this process is sorted and then deposited, by category for recycling, in the area designated for selective waste collection, i.e. on the concrete platform in front of the technical room.
4. From the unloading and/or temporary storage area the waste containers are taken by the transport machine to the incinerator area. Here the containers are unloaded into the continuous feed system of the incinerator. After unloading, the empty containers are taken to the sanitation area, i.e. the concrete platform with S = 42 m² for sanitising/disinfecting both the means of transport and the containers used to transport the waste.

From here, the sanitised containers are moved to the area at the end of the platform where they are loaded onto the transport vehicles that will take them to the waste collection points from the generators.

At least at this stage, no means of reducing the volume of packaging resulting from the unpacking of waste arriving at the site will be used. If, in the future, the need for such an operation is identified, such equipment will be purchased and installed, in compliance with the environmental procedures for both the implementation and the operating phases.

The technology flow for the incineration of non-hazardous animal waste is shown below:

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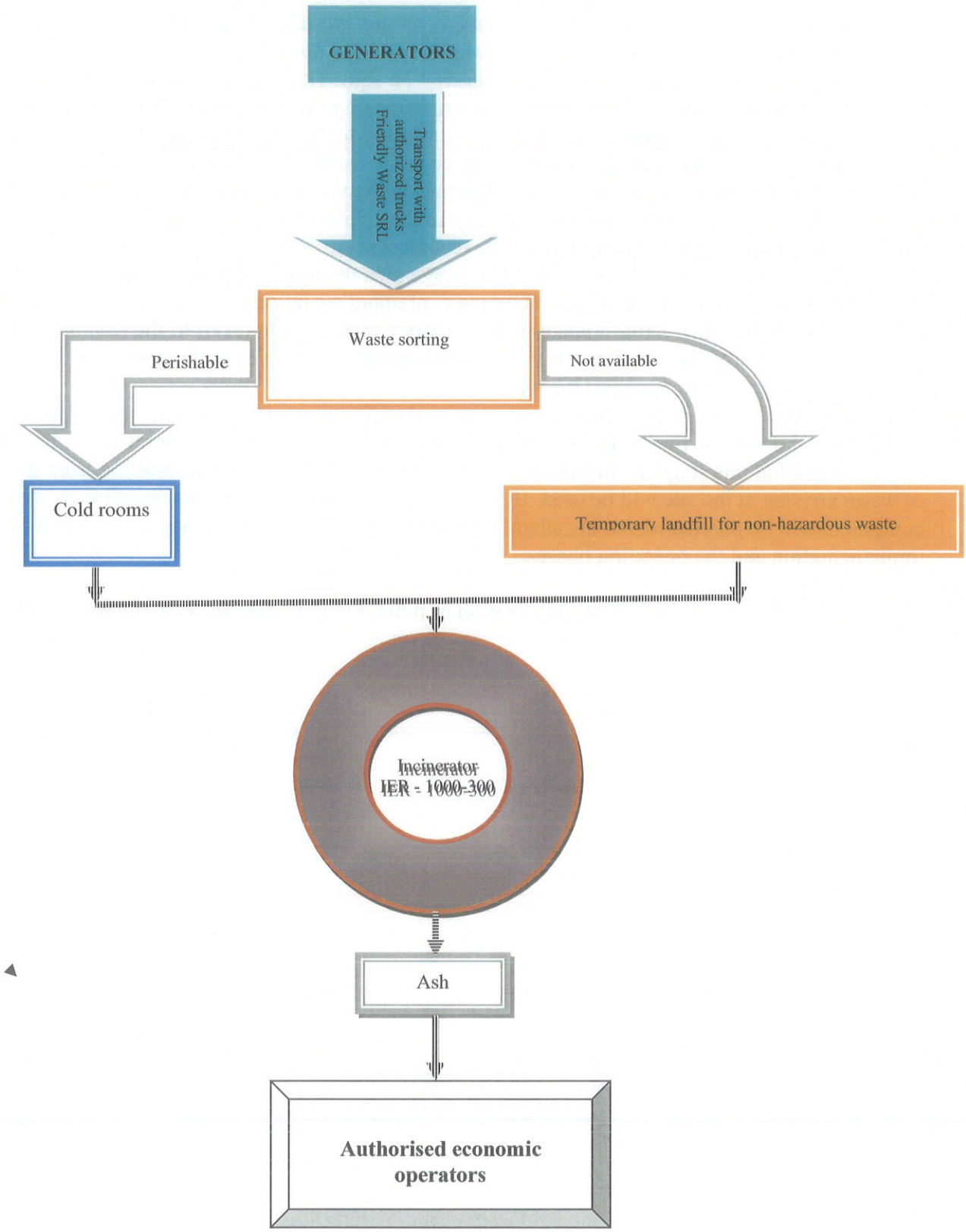

Figure no. 34. Non-hazardous waste stream

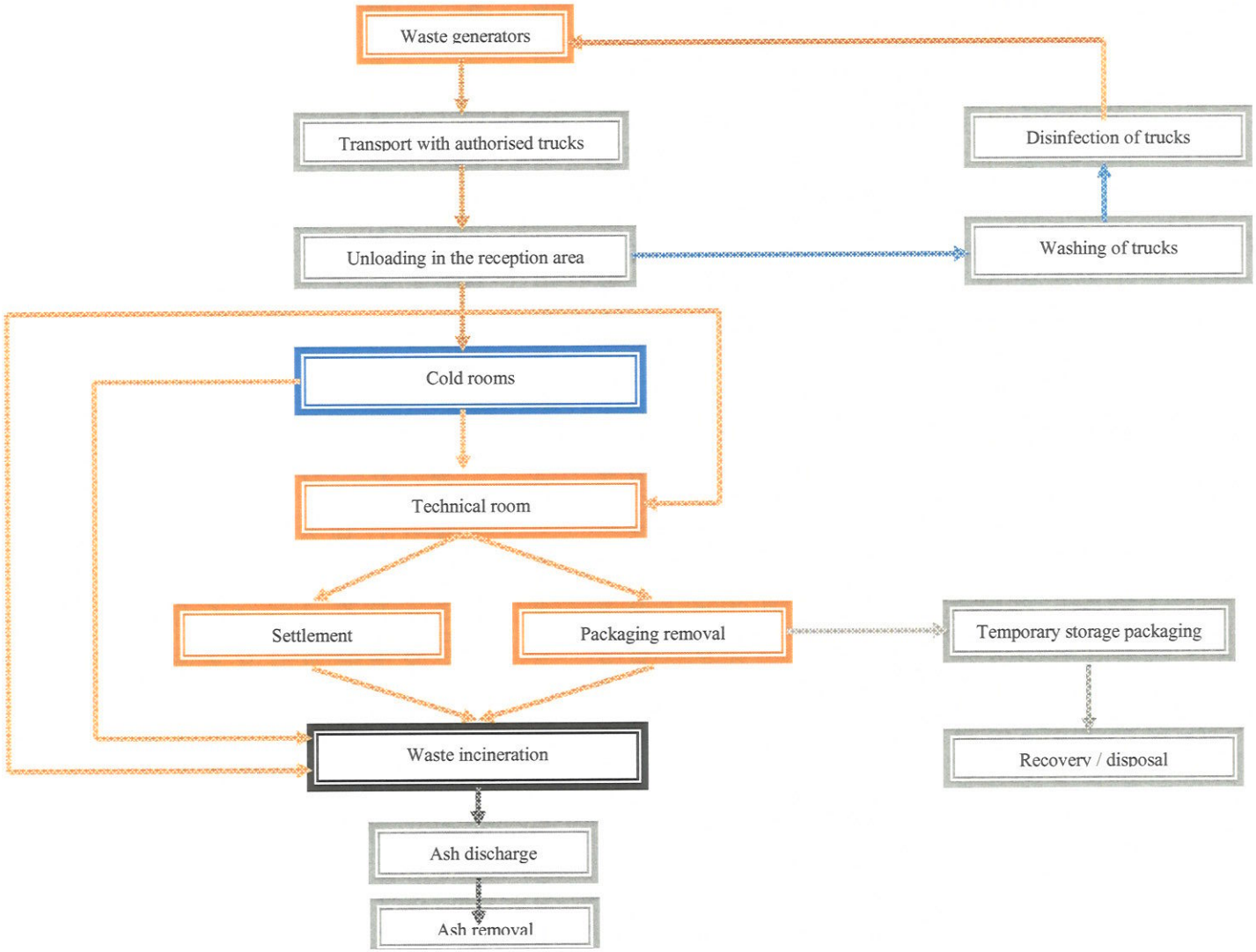

Figure no. 35. Non-hazardous animal waste stream

Technology flow for medical waste incineration

1. Waste reception
   - on arrival of the means of transport at the site, the accompanying documents are checked
   - waste is weighed
   - the input register is completed for the type of waste received
   - sampling of medical waste is neither required nor permitted
2. Unloading the waste - this is done with a forklift or manually if it is not too heavy. The waste bins are taken from the means of transport and temporarily stored on the concrete platform in the area specially designated for this purpose. This platform is partially covered with a light canopy.
3. Waste storage - for the situation where medical waste does not go directly into the incineration stream it is temporarily stored in cold room 2. Temporary storage is carried out for a maximum of 24 - 48 hours until the incinerator is released.
4. from the unloading and/or temporary storage area the waste containers are taken by the transport machine to the incinerator area. Here the containers are unloaded into the continuous feed system of the incinerator. After unloading, the empty containers are taken to the disinfection area, i.e. the concrete platform with S = 42 m² for both sanitising/disinfecting the transport means and the containers used for transporting the waste.

From here, the disinfected containers are moved to the area at the end of the platform where they are loaded onto transport vehicles that will take them to the waste collection points from the generators.

The following clarifications are made in relation to the packaging in which medical waste is brought:

1. for hazardous medical waste - this is brought in special bags or boxes and incinerated together with the packaging in which it is brought
2. for non-hazardous medical waste:

- if it is brought in special bags for this type of waste, it is incinerated together with the packaging in which it is brought
- if they are brought in special bags placed in the bins for these types of waste, then the bins are disinfected in the area specially set aside for this process (the same area is also used for disinfecting the means of transport) located on the concrete platform at the entrance to the site, which is equipped with all the means necessary for this purpose. Disinfection is carried out with Biclosol solution, using hot water pressure washers of the Kracher type or other brands.

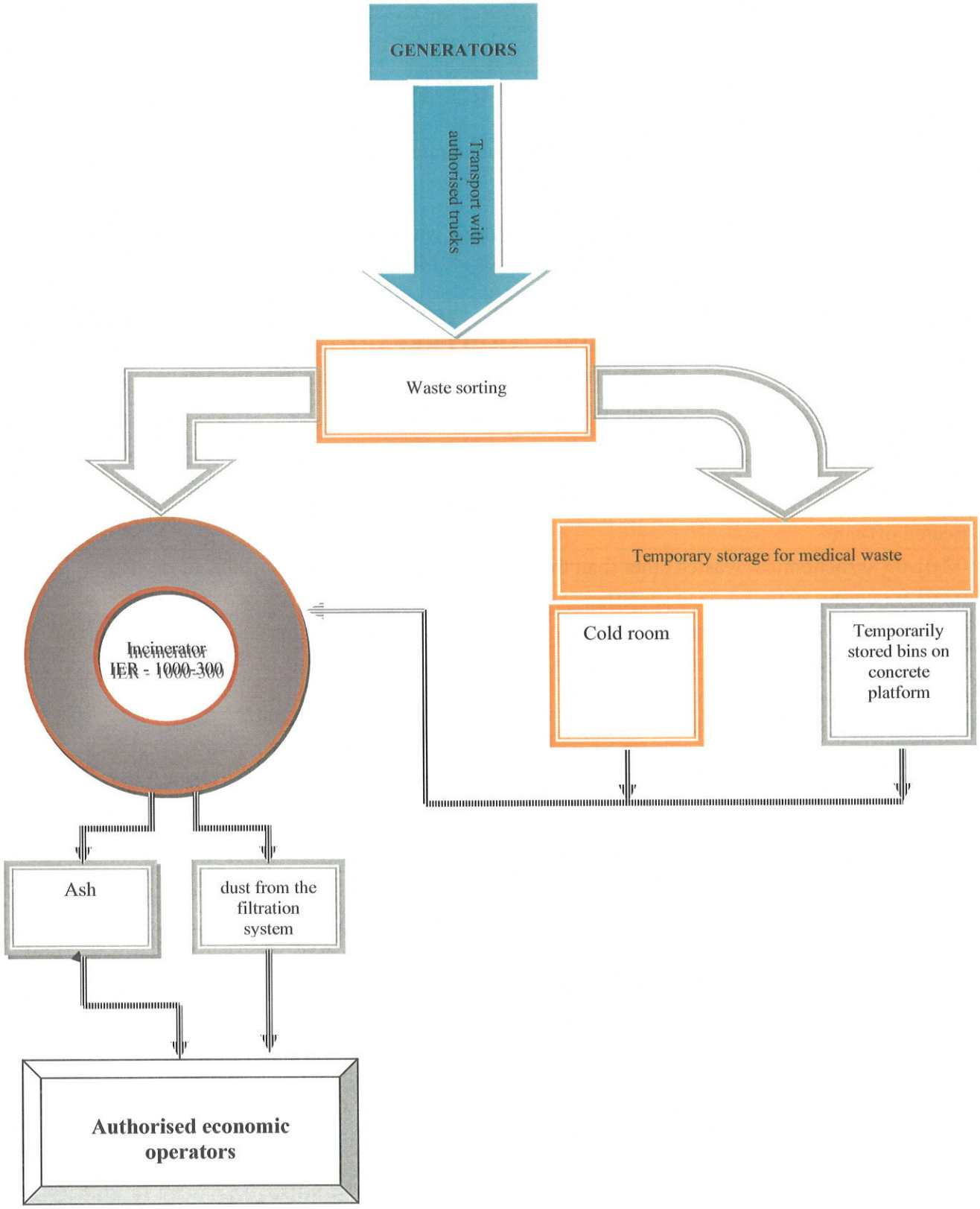

Figure no. 36. Medical waste stream

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Raw materials used in the incineration process:

- ❖ non-hazardous waste
- ❖ medical waste

The tables with all these wastes and the related codes (according to GD 856/2002) are Annex 1 and Annex 2 to this paper.

Types of non-hazardous waste to be incinerated in the incineration plant, classified according to Commission Decision 2014/955 /EU:

Table no. 21. List of types of non-hazardous waste to be incinerated in the incineration plant, classified according to Commission Decision 2014/955 /EU

02 WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING
02 01 wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing
02 01 01 sludges from washing and cleaning
02 01 02 animal tissue waste
02 01 04 plastic wastes (except packaging)
02 01 06 animal faeces, urine and manure (including straw), effluent, collected separately and treated off-site
02 01 09 agrochemical wastes other than those mentioned in 02 01 08
02 01 99 wastes not otherwise specified
02 02 wastes from the preparation and processing of meat, fish and other foods of animal origin
02 02 01 sludges from washing and cleaning
02 02 02 animal tissue waste
02 02 03 materials unsuitable for consumption or processing
02 02 04 sludges from treatment of own effluent
02 02 99 other wastes not otherwise specified
02 03 wastes from fruit, vegetables, cereals, edible oils, cocoa powder, coffee, tea and tobacco preparation and processing; cans production; yeast and yeast extract and molasses preparation and fermentation
02 03 01 sludges from washing, cleaning, peeling, centrifuging and separation
02 03 02 waste conservation agents
02 03 03 wastes from solvent extraction
02 03 04 materials unsuitable for consumption or processing
02 03 05 sludges from treatment of own effluent
02 03 99 other wastes not otherwise specified
02 04 wastes from sugar processing
02 04 01 sludges from cleaning and washing sugar beet
02 04 02 calcium carbonate waste
02 04 03 sludges from treatment of own effluent
02 04 99 other wastes not otherwise specified
02 05 wastes from the dairy products industry
02 05 01 materials unsuitable for consumption or processing
02 05 02 sludges from treatment of own effluent
02 05 99 other wastes not otherwise specified

02 06 wastes from the baking and confectionery industry
02 06 01 materials unsuitable for consumption or processing
02 06 02 waste conservation agent
02 06 03 sludges from treatment of own effluent
02 06 99 other wastes not otherwise specified
02 07 wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)
02 07 01 wastes from washing, cleaning and mechanical processing of raw materials
02 07 02 wastes from spirits distillation
02 07 03 wastes from chemical treatment
02 07 04 materials unsuitable for consumption or processing
02 07 05 sludges from on-site effluent treatment
02 07 99 other wastes not otherwise specified
03 WASTES FROM WOOD PROCESSING, WOOD AND PELLETS, PULP, PAPER AND CARDBOARD PRODUCTION
03 01 wastes from wood processing, panel manufacture and furniture production
03 01 01 bark and cork wastes
03 01 05 sawdust, shavings, chips, wood shavings, chips and veneer other than those mentioned in 03 01 04
03 01 99 wastes not otherwise specified
03 02 wastes from wood preservation
03 02 99 other wood preservatives, unspecified
03 03 wastes from pulp, paper and cardboard production and processing
03 03 01 waste wood and bark
03 03 02 green liquor sludges (from recovery of boiling liquors)
03 03 05 sludges from ink removal from paper recycling process
03 03 07 mechanical wastes from pulping of recycled paper and cardboard
03 03 08 wastes from sorting of paper and cardboard destined for recycling
03 03 09 waste caustic sludge
03 03 10 fibres, sludges from mechanical separation, containing fibres, fillers, creaming
03 03 11 sludges from treatment of own effluent other than those mentioned in 03 03 10
03 03 99 other wastes not otherwise specified

04 WASTES FROM THE LEATHER, FUR AND TEXTILE INDUSTRIES
04 01 wastes from the leather and fur industries
04 01 01 wastes from shredding
04 01 02 wastes from ashing
04 01 04 chrome tanning fleet
04 01 05 chromium-free tanning fleet
04 01 06 sludges, mainly from on-site effluent treatment containing chromium
04 01 07 sludges, mainly from on-site effluent treatment free of chromium
04 01 08 waste tanned leather (shavings, cuttings, buffing dust) containing chromium
04 01 09 wastes from pressing and finishing

04 01 99 wastes not otherwise specified
04 02 wastes from the textile industry
04 02 09 wastes from composite materials (impregnated textile, elastomer, plastomer)
04 02 10 organic matter from natural products (fat, wax)
04 02 15 wastes from finishing other than those mentioned in 04 02 14
04 02 17 dyes and pigments other than those mentioned in 04 02 16
04 02 20 sludges from on-site effluent treatment other than those mentioned in 04 02 19
04 02 21 wastes from unprocessed textile fibres
04 02 22 wastes from processed textile fibres
04 02 99 other wastes not otherwise specified
05 WASTES FROM PETROLEUM REFINING, GAS CLEANING AND PYROLYTIC TREATMENT OF COAL
05 01 wastes from petroleum refining
05 01 10 sludges from on-site effluent treatment other than those mentioned in 05 01 09
05 01 13 boiler sludges from feedwater treatment
05 01 14 wastes from cooling columns
05 01 16 sulphur-containing wastes from petroleum desulphurisation
05 01 17 bitumen
05 01 99 wastes not otherwise specified
05 06 wastes from the pyrolytic treatment of coal
05 06 04 wastes from cooling columns
05 06 99 other wastes not otherwise specified
05 07 wastes from gas purification and transportation
05 07 02 wastes containing sulphur
05 07 99 other wastes not otherwise specified
06 WASTES FROM INORGANIC CHEMICAL PROCESSES
06 01 wastes from the manufacture, preparation, supply and use (MFSU) of acids
06 01 99 wastes not otherwise specified
06 02 wastes from PPFU bases
06 02 99 other wastes not otherwise specified
06 03 wastes from PPFU of salts and their solutions and metallic oxides
06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13
06 03 16 metal oxides other than those mentioned in 06 03 15
06 03 99 other wastes not otherwise specified
06 04 metal-containing wastes other than those mentioned in 06 03
06 04 99 other wastes not otherwise specified
06 05 sludges from treatment of own effluent
06 05 03 sludges from on-site effluent treatment other than those mentioned in 06 05 02
06 06 wastes from PPFU sulphur chemicals, sulphurisation and desulphurisation processes
06 06 03 wastes containing sulphides other than those mentioned in 06 06 02
06 06 99 other wastes not otherwise specified
06 07 wastes from halogenated PPFU and halogen chemical processes
06 07 99 other wastes not otherwise specified

06 08 wastes from PPFU of silicone and silicone derivatives
06 08 99 other wastes not otherwise specified
06 09 wastes from PPFU of phosphorous chemicals and phosphorous chemical processes
06 09 04 calcium-based wastes other than those mentioned in 06 09 03
06 09 99 other wastes not otherwise specified
06 10 wastes from PPFU nitrogen chemicals, nitrogen chemical processes and fertiliser manufacture
06 10 99 other wastes not otherwise specified
06 11 wastes from the production of inorganic pigments and opacificiers
06 11 01 calcium-based wastes from titanium dioxide production
06 11 99 other wastes not otherwise specified
06 13wastes from inorganic chemical processes not otherwise specified
06 13 99 other wastes not otherwise specified
07 WASTES FROM ORGANIC CHEMICAL PROCESSES
07 01 wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals
07 01 12 sludges from on-site effluent treatment other than those mentioned in 07 01 11
07 01 99 wastes not otherwise specified
07 02 wastes from PPFU of plastics, synthetic rubber and man-made fibres
07 02 12 sludges from on-site effluent treatment other than those mentioned in 07 02 11
07 02 13 plastic wastes
07 02 15 waste additives other than those mentioned in 07 02 14
07 02 99 other wastes not otherwise specified
07 03 wastes from PPFU of organic paints and pigments (except 06 10)
07 03 12 sludges from on-site effluent treatment other than those mentioned in 07 03 11
07 03 99 other wastes not otherwise specified
07 04 wastes from PPFU plant protection products (except 02 01 08 and 02 01 09), wood preserving agents (except 03 02) and other biocides
07 04 12 sludges from on-site effluent treatment other than those mentioned in 07 04 11
07 04 99 other wastes not otherwise specified
07 05 PPFU waste pharmaceuticals
07 05 12 sludges from on-site effluent treatment other than those mentioned in 07 05 11
07 05 14 solid wastes other than those mentioned in 07 05 13
07 05 99 other wastes not otherwise specified
07 06 wastes from the MFSU of fats, grease, soaps, detergents, disinfectants and cosmetics
07 06 12 sludges from on-site effluent treatment other than those mentioned in 07 06 11
07 06 99 other wastes not otherwise specified
07 07 wastes from the MFSU of finished chemicals and chemical products not otherwise specified in the list
07 07 12 sludges from on-site effluent treatment other than those mentioned in 07 07 11
07 07 99 other wastes not otherwise specified

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08 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
08 01 wastes from PPFU paint and varnish removal and disposal
08 01 12 waste paint and varnish other than those mentioned in 08 01 11
08 01 14 sludges from paint or varnish other than those mentioned in 08 01 13
08 01 16 aqueous sludges containing paint or varnish other than those mentioned in 08 01 15
08 01 18 wastes from paint and varnish removal other than those mentioned in 08 01 17
08 01 20 aqueous suspensions containing paint or varnish other than those mentioned in 08 01 19
08 01 99 wastes not otherwise specified
08 02 wastes from PPFU other coating materials (including ceramic materials)
08 02 01 waste coating powders
08 02 02 aqueous sludges containing ceramic materials
08 02 03 aqueous suspensions containing ceramic materials
08 02 99 other wastes not otherwise specified
08 03 wastes from PPFU of printing inks
08 03 07 aqueous sludges containing ink
08 03 08 aqueous liquid waste containing ink
08 03 13 waste ink other than those mentioned in 08 03 12
08 03 15 ink sludges other than those mentioned in 08 03 14
08 03 18 waste printer toner other than those mentioned in 08 03 17
08 03 99 other wastes not otherwise specified
08 04 wastes from PPFU of adhesives and glues (including waterproofing products)
08 04 10 waste adhesives and glues other than those mentioned in 08 04 09
08 04 12 adhesive sludges and glues other than those mentioned in 08 04 11
08 04 14 aqueous sludges containing adhesives and glues other than those mentioned in 08 04 13
08 04 16 aqueous liquid waste containing adhesives and glues other than those mentioned in 08 04 15
08 04 99 other wastes not otherwise specified
08 05 other wastes not otherwise specified in 08
09 WASTE FROM THE PHOTOGRAPHIC INDUSTRY
09 01 wastes from the photographic industry
09 01 07 photographic film or paper containing silver or silver compounds
09 01 08 photographic film or paper free of silver or silver compounds
09 01 99 wastes not otherwise specified
10 WASTES FROM THERMAL PROCESSES
10 01 wastes from thermal power stations and other combustion plants (except 19)
10 01 07 calcium-based sludges from flue-gas desulphurisation
10 01 19 wastes from gas cleaning other than those mentioned in 10 01 05, 10 01 07 and 10 01 18
10 01 21 sludges from on-site effluent treatment other than those mentioned in 10 01 20
10 01 23 aqueous sludges from boiler washing other than those mentioned in 10 01 22
10 01 25 wastes from fuel storage and preparation of thermal coal
10 01 26 wastes from cooling-water treatment

10 01 99 wastes not otherwise specified
10 02 wastes from the steel industry
10 02 08 solid wastes from gas treatment other than those mentioned in 10 02 07
10 02 12 wastes from cooling-water treatment other than those mentioned in 10 02 11
10 02 14 sludges and filter cakes other than those mentioned in 10 02 13
10 02 15 other sludges and filter cakes
10 02 99 other wastes not otherwise specified
10 03 wastes from aluminium thermal metallurgy
10 03 24 solid wastes from gas treatment other than those mentioned in 10 03 23
10 03 26 sludges and filter cakes from gas treatment other than those mentioned in 10 03 25
10 03 28 wastes from cooling-water treatment other than those mentioned in 10 03 27
10 03 30 wastes from treatment of salt slags and black drosses other than those mentioned in 10 03 29
10 03 99 other wastes not otherwise specified
10 04 wastes from lead thermal metallurgy
10 04 10 wastes from cooling-water treatment other than those mentioned in 10 04 09
10 04 99 other wastes not otherwise specified
10 05waste from zinc thermal metallurgy
10 05 09 wastes from cooling-water treatment other than those mentioned in 10 05 08
10 05 99 other wastes not otherwise specified
10 06 wastes from copper thermal metallurgy
10 06 10 wastes from cooling-water treatment other than those mentioned in 10 06 09
10 06 99 other wastes not otherwise specified
10 07waste from silver, gold and platinum thermal metallurgy
10 07 03 solid wastes from gas treatment
10 07 05 sludges and filter cakes from gas treatment
10 07 08 wastes from cooling-water treatment other than those mentioned in 10 07 07
10 07 99 other wastes not otherwise specified
10 08waste from other non-ferrous thermal metallurgy
10 08 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 08 17
10 08 20 wastes from cooling-water treatment other than those mentioned in 10 08 19
10 08 99 other wastes not otherwise specified
10 09 wastes from casting of ferrous pieces
10 09 12 particulates other than those specified in 10 09 11
10 09 14 waste binders other than those mentioned in 10 09 13
10 09 16 waste crack detection agents other than those mentioned in 10 09 15
10 09 99 other wastes not otherwise specified
10 10 wastes from casting of non-ferrous pieces
10 10 12 other particulates than those specified in 10 10 11
I0 14 waste binders other than those mentioned in 10 10 13
10 10 15 waste crack detection agent containing dangerous substances
10 10 16 waste crack detection agents other than those mentioned in 10 10 15
10 10 99 other wastes not otherwise specified

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10 11 wastes from manufacture of glass and glass products
10 11 03 glass fibre waste
10 11 10 wastes from the preparation of mixtures before thermal processing other than those mentioned in 10 11 09
10 11 14 sludges from glass grinding and polishing other than those mentioned in 10 11 13
10 11 16 solid wastes from flue-gas treatment other than those mentioned in 10 11 15
10 11 18 sludges and filter cakes from flue-gas treatment other than those mentioned in 10 11 17
10 11 20 solid wastes from treatment of own effluent other than those mentioned in 10 11 19
10 11 99 other wastes not otherwise specified
10 12wastes from manufacture of ceramic materials, bricks, tiles and construction products
10 12 05 sludges and filter cakes from gas treatment
10 12 06 used moulds and mouldings
10 12 10 solid wastes from gas treatment other than those mentioned in 10 12 09
10 12 12 wastes from disposal other than those mentioned in 10 12 11
10 12 13 sludges from treatment of own effluent
10 12 99 other wastes not otherwise specified
10 13 wastes from manufacture of cement, lime and plaster and articles and products made from them
10 13 01 wastes from mixing before thermal processing
10 13 04 wastes from calcination and hydration of lime
10 13 07 sludges and filter cakes from gas treatment
10 13 13 solid wastes from gas treatment other than those mentioned in 10 13 12
10 13 99 other wastes not otherwise specified
11 WASTES RESULTING FROM CHEMICAL TREATMENT OF METAL AND OTHER MATERIALS; NON-FERROUS HYDRO-METALLURGY
11 01 wastes from chemical surface treatment and coating of metals and other materials (e.g. galvanic, galvanising, pickling, etching, engraving, phosphatising, alkaline degreasing, anode manufacture processes)
11 01 10 sludges and filter cakes other than those mentioned in 11 01 09
11 01 14 degreasing wastes other than those mentioned in 11 01 13
11 01 99 wastes not otherwise specified
11 02waste from non-ferrous hydrometallurgical processes
11 02 06 wastes from copper hydrometallurgical processes other than those mentioned in 11 02 05
11 02 99 other wastes not otherwise specified
11 03 sludges and solids from liming processes
11 05 99 other wastes not otherwise specified
12 WASTE RESULTING FROM THE MECHANICAL AND PHYSICAL SHAPING AND TREATMENT OF METAL AND PLASTIC SURFACE MATERIALS
12 01 wastes from shaping and physical and mechanical surface treatment of metals and plastic materials
12 01 05 plastics grinding and spanning
12 01 15 machine tool sludges other than those mentioned in 12 01 14
12 01 99 wastes not otherwise specified

15 PACKAGING WASTE; ABSORBENTS, POLISHING MATERIALS, FILTERING MATERIALS and PROTECTIVE WRAPS NOT OTHERWISE SPECIFIED
15 02 absorbents, filter materials, polishing materials and protective equipment
15 02 03 absorbents, filter materials, polishing and protective clothing other than those mentioned in 15 02 02
16 WASTES NOT ELSEWHERE SPECIFIED
16 01 end-of-life vehicles from various means of transport (including off-road vehicles) and wastes from dismantling, scrapping and maintenance of vehicles (except 13, 14, 16 06 and 16 08)
16 01 22 components not otherwise specified
16 01 99 wastes not otherwise specified
16 03 non-specified groups and unusual products
16 03 04 inorganic wastes other than those mentioned in 16 03 03
16 03 06 organic wastes other than those mentioned in 16 03 05
16 05 containers for gases under pressure and spent chemicals
16 05 09 spent chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
16 07 wastes from transport and storage tank cleaning (except 05 and 13)
16 07 99 other wastes not otherwise specified
18 WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCH (excluding food preparation wastes from kitchens or restaurants not arising directly from health care activities)
18 01 wastes from prevention, diagnosis and treatment activities of health care facilities
18 01 01 sharp objects (except 18 01 03)
18 01 02 human organs and fragments including blood vessels and preserved blood (except 18 01 03)
18 01 04 wastes whose collection and disposal is not subject to special measures for infection prevention (e.g. dressings, plaster casts, linen, disposable clothing, diapers)
18 01 07 chemicals other than those mentioned in 18 01 06
18 01 09 medicines other than those specified in 18 01 08
18 02 wastes from veterinary research, diagnosis, treatment and disease prevention units
18 02 01 sharp objects (except 18 02 02)
18 02 03 wastes whose collection and disposal is not subject to special measures for the prevention of infection
18 02 06 chemicals other than those mentioned in 18 02 05
18 02 08 medicines other than those specified in 18 02 07
19 WASTES FROM WASTE WATER TREATMENT PLANTS, OFF-SITE WASTE WATER TREATMENT PLANTS AND FROM THE PREPARATION OF WATER FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE
19 01 wastes from incineration or pyrolysis of waste
19 01 99 wastes not otherwise specified
19 02 wastes from physico/chemical treatment of wastes (including dechromation, decyanidation, neutralisation)
19 02 03 premixed wastes containing only non-hazardous wastes
19 02 06 sludges from physico/chemical treatment other than those mentioned in 19 02 05
19 02 10 combustible wastes other than those mentioned in 19 02 08 and 19 02 09

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19 02 99 other wastes not otherwise specified
19 05 wastes from aerobic treatment of solid wastes
19 05 01 non-composted fraction of municipal and similar wastes
19 05 02 non-composted fraction of animal and vegetable waste
19 05 99 other wastes not otherwise specified
19 06 wastes from anaerobic treatment of waste
19 06 99 other wastes not otherwise specified
19 08 wastes not otherwise specified from waste water treatment plants
19 08 01 waste retained on site
19 08 05 sludges from urban waste water treatment
19 08 09 grease and oil mixture from oil/water separation in the edible fats and oils sector
19 08 12 sludges from biological treatment of industrial waste water other than those mentioned in 19 08 11
19 08 14 sludges from other treatment processes of industrial waste water other than those mentioned in 19 08 13
19 08 99 other wastes not otherwise specified
19 09 wastes from purification of drinking water or water for industrial use
19 09 01 solid wastes from primary filtration and screen separation
19 09 02 sludges from water clarification
19 09 03 sludges from decarbonation
19 09 05 saturated or spent ion exchange resins
19 09 06 solutions and sludges from ion exchanger regeneration
19 09 99 other wastes not otherwise specified
19 11 wastes from oil regeneration
19 11 06 sludges from treatment of own effluent other than those mentioned in 19 11 05
19 11 99 other wastes not otherwise specified
19 12 wastes from mechanical treatment of waste (e.g. sorting, grinding, compacting, granulation) not otherwise specified in the catalogue
19 12 01 paper and paperboard
19 12 04 plastics and rubber materials
19 12 07 wood, other than that specified in 19 12 06
19 12 08 textile materials
19 12 10 combustible wastes (combustible by-product wastes)
19 12 12 other wastes (including mixtures of materials) from mechanical treatment of waste other than those mentioned in 19 12 11
19 13 wastes from soil and groundwater remediation works
19 13 02 solid wastes from soil remediation other than those mentioned in 19 13 01
19 13 04 sludges from soil remediation other than those mentioned in 19 13 03
19 13 06 sludges from groundwater remediation other than those mentioned in 19 13 05
19 13 08 aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07

20 MUNICIPAL WASTE (HOUSEHOLD WASTE AND SIMILAR WASTE FROM COMMERCE, INDUSTRY, INSTITUTIONS) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 separately collected fractions (except 15 01)
20 01 08 biodegradable kitchen and canteen waste
20 01 10 clothing
20 01 11 textiles
20 01 25 edible oils and fats
20 01 28 paints, inks, adhesives and resins other than those mentioned in 20 01 27
20 01 30 detergents other than those mentioned in 20 01 29
20 01 32 medicines other than those mentioned in 20 01 31
20 01 41 wastes from chimney sweeping
20 01 99 other fractions, unspecified
20 02 garden and park wastes (including cemetery waste)
20 02 03 other non-biodegradable wastes
20 03 other municipal waste
20 03 03 street litter
20 03 99 municipal wastes not otherwise specified (animal carcasses from households)

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Non-hazardous and medical waste will be collected from various generators throughout the country, depending on the contracts that will be concluded between them and S.D. Friendly Waste Romania S.R.L.

Non-hazardous animal waste (animal by-products and derived products not intended for human consumption of categories 1, 2 and 3 according to EC Regulation No 1069/2009) is collected from various generators and holders in special containers, corresponding to the requirements of ANSVSA Order No 16/16.03.2010 (240 - 1100 l bins) and transported with the trucks provided.

The classification of animal waste for the purposes of Regulation 1069/2009 is shown in the table below:

Table no. 22. Classification of animal waste according to REGULATION (EC) No 1069/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Classification according to REGULATION (EC) No 1069/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL								
Category I material			Category II material			Category III material		
waste type	Waste code according to GD 856/2002	Waste code according to GEO No 68 of 12.10.2016 and Commission Decision 2014/955/EU	waste type	Waste code according to GD 856/2002	Waste code according to GEO No 68 of 12.10.2016 and Commission Decision 2014/955/EU	waste type	Waste code according to GD 856/2002	Waste code according to GEO No 68 of 12.10.2016 and Commission Decision 2014/955/EU
pet corpses	02 01 02	02 01 02	entire bodies or parts of animals, other than those referred to in Category I, which die other than by being slaughtered for human consumption (pigs, horses, poultry, etc.)	02 01 02	02 01 02	animal tissue waste	02 01 02	02 01 02
			animal excrement, manure	02 01 06	02 01 06	animal tissue waste	02 02 02	02 02 02
All body parts, including hides and skins from animals suspected of being infected with TSE[25] , animals slaughtered as part of TSE eradication measures (cattle, sheep and goats, regardless of age), pets, zoo and circus animals, wild animals, if suspected of being infected with a disease transmissible to humans or animals						materials unsuitable for consumption or processing	02 02 03	02 02 03
						materials unsuitable for consumption or processing	02 05 01	02 05 01
						materials unsuitable for consumption or processing	02 06 01	02 06 01
wastes from research, diagnosis, treatment or prevention of disease in animals - wastes whose	18 02 03	18 02 03						

[25] transmissible spongiform encephalopathy

collection and disposal is not subject to special measures for the prevention of infection								
road kill - whole bodies or parts of animals, other than those mentioned in Category I, which die other than by being slaughtered for human consumption (pigs, dogs, cats, horses, poultry, etc.).	20 03 03	20 03 03						
other unspecified municipal waste	20 03 99	20 03 99						

The transport of this waste will be done by:

1. the vehicles in the fleet, after authorisation by the ADR. This authorisation will be carried out before the environmental permit is obtained
2. vehicles rented from authorised companies with all the necessary documents for such activity
3. trucks from companies authorised to collect waste of the category to be incinerated on the site under consideration

A. List of quantities of hazardous waste in different categories that can be treated:

- the only hazardous waste that will be incinerated on the site under consideration is hazardous medical waste. These are shown in the table below:

Table no. 23. Types of hazardous medical waste to be incinerated in the incineration plant, classified according to Commission Decision 2014/955 /EU

18	WASTES FROM HEALTH CARE AND/OR VETERINARY ACTIVITIES AND/OR RELATED RESEARCH (except food preparation wastes from kitchens or restaurants, which do not arise directly from health care activities)
18 01 03*	waste whose collection and disposal is subject to special infection prevention measures
18 01 06*	chemicals consisting of or containing dangerous substances
18 01 08*	cytotoxic and cytostatic drugs
18 02	waste from veterinary establishments for research, diagnosis, treatment and prevention of disease
18 02 02*	to prevent infection
18 02 05*	chemicals consisting of or containing dangerous substances
18 02 07*	cytotoxic and cytostatic drugs

- *the quantities of hazardous medical waste to be incinerated* - these quantities cannot be estimated at this moment because they depend on the quantities collected from different medical centres and medical practices (both human and veterinary) and on how S.C. Friendly Waste Romania S.R.L. will have access to these quantities on the basis of commercial contracts concluded with the generators. In any case, the hourly incineration capacity of 300 kg/h cannot be exceeded.

B. Calorific value and hazardous waste content:

The data available for some groups of hazardous wastes to be incinerated in the analysed plant are presented below:

Table 24. Characteristics of the types of hazardous waste to be incinerated in the analysed incinerator

Waste code	Name according to Decision 2014/955/EU	Estimated maximum quantity to be treated[26] (t/a)	Minimum mass flow[27] (kg/h)	Debit masic maxim[28] (kg/h)	Minimum calorific value Mj/kg s.u. Kcal/l Kcal/kg s.u.	Maximum calorific value Mj/kg s.u. Kcal/l Kcal/kg s.u.	Maximum content of						
							polychlorobiphenyls mg/kg s.u.	pentachlorophenol mg/kg s.u.	chlorine chloride mg/kg s.u.	fluorine fluoride mg/kg s.u.	sulphur (sulphates) mg/kg s.u	heavy metals mg/kg s.u.	
18 01 03*	waste whose collection and removal is subject to special infection prevention measures	1200	100	300	13.64 Mj/kg s.u.	26.82 Mj/kg s.u.	-	-	% s.u. = 1.95 2840	1.2	- 4831	arsenic Barium Cadmium Total chrome Copper Mercury MOLYBDENUM Nickel Lead antimony Selenium Zinc	<0.01 0.99 <0.05 0.89 0.70 0.15 1.21 0.09 0.43 0.15 0.15 21.34
18 01 06*	chemicals consisting of or containing hazardous substances	10	100	300	13.408 Mj/kg s.u.	42 Mj/kg s.u.	-	-	% s.u. = 1.95 2840	1.2	- 4831	Arsenic Barium Cadmium Total chrome Copper Mercury MOLYBDENUM Nickel Lead antimony Selenium	<0.01 0.99 <0.05 0.89 0.70 0.15 1.21 0.09 0.43 0.15 0.15

[26] **these auantities are purelly indicative** because they directly depend on the commercial contracts that the holder will conclude with the generators of these categories of waste
[27] given bt the technical characterices of the incinerator
[28] ibidem

												Zinc	21.34
18 01 08*	cytotoxic and cytostatic drugs	1	100	300	4	24	-	-	-	-	-	-	-

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18 01 10*	amalgam waste from dental treatments	0.2	100	300	-	-	-	-	-	-	-	Mercury Silver Tin Copper Zinc	50 % 35 % 10 % 4 % 1 %
18 02 02*	waste whose collection and disposal are subject to special measures to prevent infections	5	100	300	13.408 Mj/kg s.u.	42 Mj/kg s.u.	-	-	-	-	--	arsenic Barium Cadmium Total chrome Copper Mercury MOLYBDENUM Nickel Lead antimony Selenium Zinc	<0,01 0.99 <0.05 0.89 0.70 0.15 1.21 0.09 0.43 0.15 0.15 21.34
18 02 05*	chemicals consisting of or containing hazardous substances	5	100	300	13.408 Mj/kg s.u.	42 Mj/kg s.u.	-	-	79	1.2	1.7	arsenic Barium Cadmium Total chrome Copper Mercury MOLYBDENUM Nickel Lead antimony Selenium Zinc	<0.01 0.99 <0.05 0.89 0.70 0.15 1.21 0.09 0.43 0.15 0.15 21.34
18 02 07*	cytotoxic and cytostatic drugs	2	100	300	-	-	-	-	-	-	-	-	-

Electricity - the incinerator will be supplied with electricity from the existing network on the location, which in its turn is connected to the local electricity distribution network.

The maximum daily electricity consumption of the incinerator is given by the formula:

- installed electrical power x no. operating hours/day = 98 kW x 10 = 980 kW/day

For connected activities (lighting, operating incinerator feed systems, etc.) a consumption of approx. 2 kW/day.

Summing up all the potential electricity consumptions gives a maximum consumption of 982 kW/day, i.e. an estimated annual consumption given by the formula:

- no. days of operation/year x daily consumption = 320 days x 982 kW/day = 314240 kW/year = 314.24 MW/year

Used fuels

The fuels to be used are the diesel and LPG and the activities where they will be used are:

A. LPG

1. non-hazardous waste incineration activity
2. medical waste incineration activity

B. Diesel

3. waste transport process from generators to incinerator
4. the activity of handling waste by fork-lift truck

The maximum quantities of fuel that can be used are:

3. waste incineration activity - LPG:

□ hourly fuel consumption

- min. = 24.6 l/h
- max. = 122.5 l/h

□ max. daily operating hours = **10 hours** [29]

□ estimated daily fuel consumption:

- min = 10 hours x 24.6 l/hr = 246 l/day
- maximum = 10 hours x 122.5 l/hour = 1225 l/day

□ estimated annual fuel consumption

- minimum = 246 x 320 = 78720 l/year
- maximum = 1225 l/day x 320 days/year = 392000 l/year
- average = 150000 l/year

4. consumption for trucks serving the incineration of non-hazardous waste and medical waste (transport by trucks and waste transport by forklift) - approx. 5 t/year

The LPG supply to the incinerator will come from the tanks to be installed on site (with a capacity of 20000 l) through a special piping system to transport it to the incinerator and then through the systems fitted to each burner.

The LPG supply to the tanks will be done with specialised and authorised tankers from authorised suppliers. The LPG is unloaded from the tanker into the tanks on location by means of the special equipment provided.

[29] Normally in the incinerator the combustion (with LPG) is initiated when the waste is supplied to the incinerator and then the combustion is maintained by the heat input (self-sustaining combustion) from the incinerated waste. For this reason it has been calculated that for the functioning of the incinerator for a period of 24 hours/day the supply of LPG to the burners is on average only 10 hours/day.

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The supplying of the trucks that will serve the incinerator's activity will be done from authorized fuel stations.

The connection to the existing utility networks in the area is as follows:
The supply with electricity: through overhead and underground connections to the existing installation on the location belonging to SC Friendly Waste Romania SRL, respectively from the local electricity distribution network. For this supply, the project "Connection to the electricity network of the permanent consumption place - production hall" has been elaborated, for which DEI no. 10130.saaa.17.05.2022 issued by APM Giurgiu has been obtained.

Water supply:
The existing industrial water network on the site will be used. The execution of a drilling for the water supply of the site was waived because the existing water network on the site can provide all the technological water requirement.
Bottled water will be used for the consumption of the staff serving the activity.

Sewerage:
The connection to the existing sewerage network in the precincts of the former Giurgiu Chemical Combine will be made. A sewerage system will be built on the site and connected to the prefabricated drainable basin with a capacity of 10 m3 to be placed on the site, at the entrance (see situation plan), which will collect the waste water resulting from the washing of the concrete surfaces in the loading area of the incinerator and in the area of sanitization and disinfection of the bins and transport vehicles used for the collection of animal waste. From this basin the water will pass through a 417 l/h wastewater treatment plant and then be discharged into the sewage network.

The CN 2C treatment plant is designed by DAIKI from Japan and assembled by S.C. ASTEC ROMANIA S.R.L. The station operates buried up to the inspection manholes, near an outlet capable of taking the flow of treated water, and is designed to protect against very low temperatures and against the emission of unpleasant odours. In the absence of a natural receiver to take the treated water, the discharge can be into a sewerage system.

The station is located on 2 cylindrical tanks with a total usable volume of approximately 17 cubic meters.

The station consists of 2 separation and sedimentation compartments, 1 biological oxidation compartment with catalytic filters and aeration produced by the blower block, 1 sedimentation compartment.
The great advantage compared to other sewage treatment plants lies in the adaptable form from the design on the needs of the beneficiary and the easy operation which requires qualified personnel only once every 3 months

Plan view

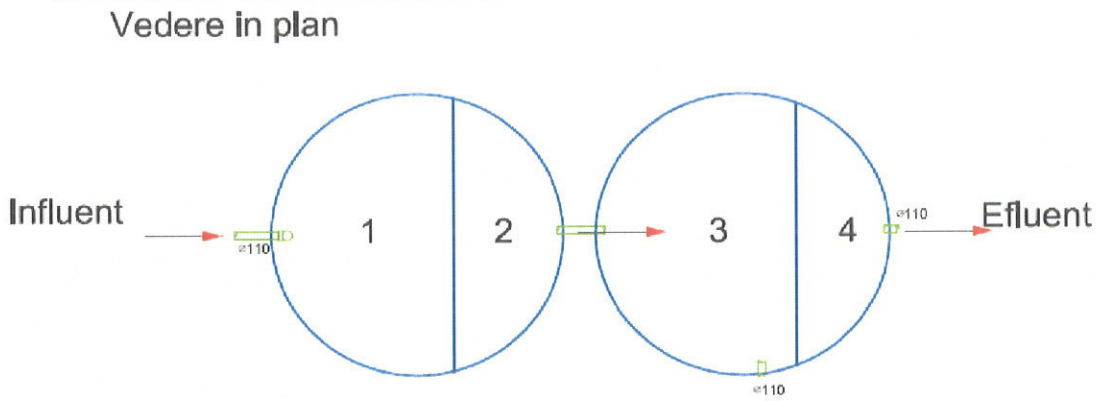

Figure 37. Wastewater treatment plant operation diagram

Legend:
1 - primary decanter no. 1
2 - primary decanter no. 1
3 – aeration tank
4 - secondary decanter

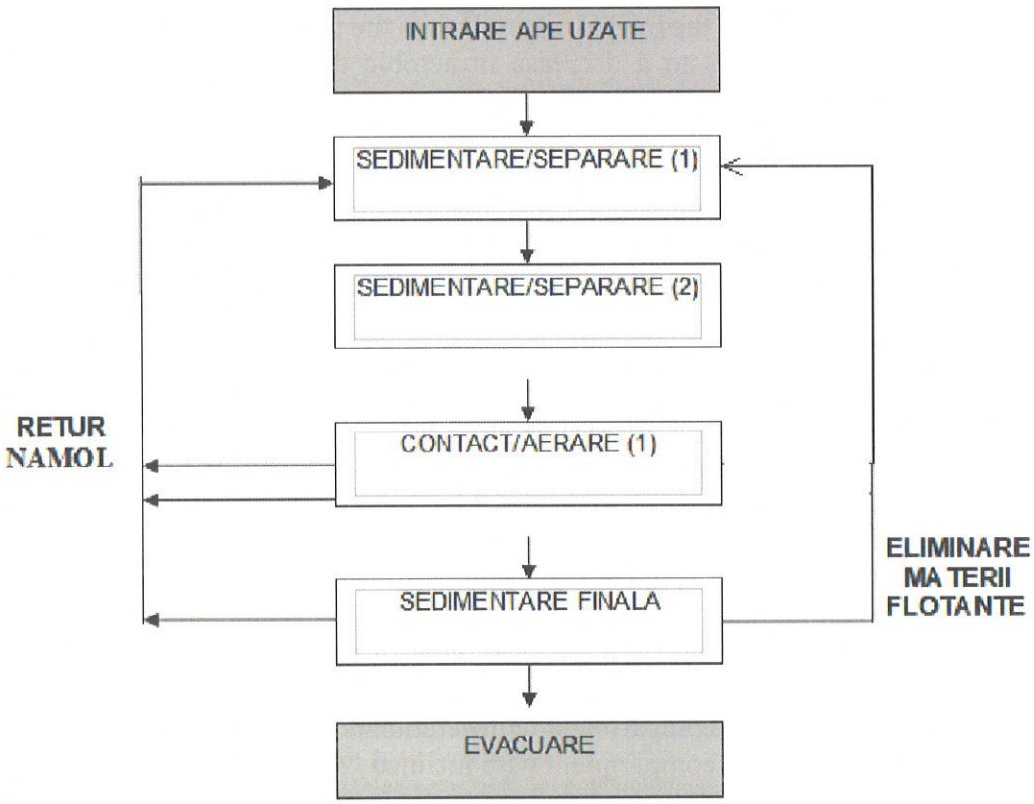

Figure 38. The principle of operation of the wastewater treatment plant

LEGEND:
INTRARE APE UZATE – INLET WASTE WATER
SEDIMENTARE – SEDIMENTATION
SEPARARE – SEPARATION
CONTACT – CONTACT
AERARE – AERATION
SEDIMENTARE FINALĂ – FINAL SEDIMENTATION
EVACUARE - EVACUATION
RETUR NĂMOL - RETURN SLUDGE
ELIMINARE MATERII FLOTANTE – ELIMINATION OF THE FLOATING MATTERS

Description of the operation:

The influence taken from the sewage network is introduced into the plant via the inlet pipe, after which it is coarse filtered to remove large bodies. The separation and the sedimentation is done gravitationally or through flotation in the separation-sedimentation compartments 1 and 2, which are also used for anaerobic digestion and denitrification of the recirculated sludge and storage of excess sludge.

The separation through decantation of the suspended solids, including the toilet paper from the residual waters discharged, promotes the anaerobic digestion and the denitrification of the recirculated sludge from the final decanter. The volume of the compartments and therefore the retention time of the wastewater is calculated to allow the sedimentation of even very fine suspensions and the storage of excess sludge for long periods of 6-12 months.

The compartment 3 with a volume equal to 0.6 - 0.8 of the average daily flow, performs aerobic digestion reduction of organic substances still in suspension through contact with microorganisms still formed on the catalytic honeycomb filters. An external blower produces aeration with an air volume large enough to optimise the biological oxidation process, proportional to the amount of BOD5 in the treated water. Due to the phenomenon of thickening of the biofilm over time, which leads to a decrease in aerobic digestion efficiency, these compartments are also equipped with systems for removing excess still by removal with pressurised air and recirculation to the separation-sedimentation compartments.

The water from the sedimentation compartments is oxygenated by means of fine air bubbles supplied by diffusers and entrained in a controlled flow that uniformly washes the still with bacteria on the honeycomb contact surface, thus ensuring optimal conditions for aerobic digestion.

The foam, which occurs mainly at the beginning of the operation due to insufficient time for the biofilm to develop, is removed by water sprayers from a shock tank located between the final decanter and the disinfection compartment, operated by an electric submersible pump whenever necessary. The sludge produced in this compartment as a result of bacteriological biodegradation, but also by regular removal of excess biofilm with the cleaning device, is recirculated by a manually operated air pump to the first sedimentation tank, where the denitrification takes place with the help of anaerobic bacteria present in the active sludge.

The sedimentation compartment performs the sedimentation of the solids from the aerobic digestion process in a volume of about 0.15 - 0.25 of the average daily flow. The sludge produced is recirculated to the primary compartments from where the cycle is restarted.

The treated water in the contact compartment with aeration is transferred gravitationally to the final Hopper-type sedimentation compartment with inclined walls, and the supernatant is transferred to the disinfection compartment over the overflow threshold of the saw-tooth spillway. Both sludge and the excess foam are recirculated to the first sedimentation tank by means of air-driven pumps controlled by an electronic timer.

The disinfection compartment

The flow of clean water, but loaded with micro-organisms, comes into contact with chlorine tablets in a device that allows the control of the contact time with the discharged water and thus the chlorine content in the effluent. During the temporary retention in the compartment, the

water is disinfected as a result of the destruction of micro-organisms by the presence of chlorine, after which it is discharged by gravity or by re-pumping into the sewage.

The only substances used are chlorine tablets (Biclosol) with an active chlorine content of 1.5 mg/tablet. Bearing in mind that 2 tablets/m3 are recommended for the disinfection of drinking water in storage tanks and 20 tablets are used for disinfection work with a maximum volume of industrial waste water of 10 m3/day, the maximum permitted values for free residual chlorine of 0.5 mg/l discharged water are not exceeded.
The indicator values in industrial wastewater will be within the limits set in H.G. 352/2005, NTPA 002.

Technical parameters:
- Maximum flow rates allowed for influent : 10 mc / day
- Discharge: into sewer
- BOD5 reduction efficiency - min. 91 %
- CCO Cr reduction efficiency - min. 88 %
- Reduction efficiency of suspended solids - min. 83
- Installed power: max. 2.5 kW, 380 V
- Service staff: 1 temporary maintenance technician

The wastewater treatment plant is equipped with a chlorine tablet disinfection system.
Thermal energy: Not applicable. The heating of spaces for staff will be provided by fan coil units powered by electricity.

2.12. The characteristics of the existing, proposed or approved projects which are likely to have a cumulative impact on the project under assessment and which may affect the protected natural area of community interest.

We have no information on other existing or planned projects in the area examined by this study.
On the site of SC Friendly Waste Romania SRL and in the surrounding area, various industrial activities are currently taking place.
Neighbourhood and activities performed:
- North - Zirom RA: the main activity of the company is the production and trading of titanium, zirconium and their alloys, as well as micro-production of non-ferrous and ferrous metals.
- South - Delta Gas COV: sale of gas cylinders
- West - Delta Gas: sale of gas cylinders
- East - Meandros Shipping & Trading SRL: company which stopped operating in 2006 and is in bankruptcy proceedings. No activities of any kind are performed on the land.

The project under review will not interact with the activities of the companies in the area.
We have no information on possible other development projects in the area adjacent to the area where the project under review is planned to be implemented.
The cumulative impact analysis has been performed within the boundaries of the project site and its surroundings, as the predicted impact does not exceed the boundaries of the proposed site, as can be seen from the air pollutant dispersion maps included in this paper.
The cumulative impact of the project with that of the existing installations in the area analysed is insignificant (even negligible) taking into account the fact that the emissions resulting from the incinerator activity are at totally negligible values.
The time scale for which the cumulative impact of the proposed project with the impact generated by the activities performed in the neighbouring sites has been considered approximately 1 year.

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Cross-border impacts are insignificant to neutral on all levels (direct, indirect, secondary, cumulative, short/medium/long term, temporary, permanent) since::
- the amounts of air pollutants emitted from the operation of the incinerator are small and within legal limits;
- there are no air pollutant propagation zones with exceedances of the permissible limit values for pollutant concentrations and the nearest boundary point is 3317 m from the flue gas stack of the incinerator under consideration;
- the wind direction towards the border with Bulgaria (from the N and NE) is for a period of approx. 23.4 % of the year but the propagation of pollutants to the border is non-existent because, according to mathematical modelling, the concentrations in the immission are very low and below VLA levels in the vicinity of the emission point (incinerator stack).
We have no information about other projects/plans that may have, alone or in combination with other projects/plans, a significant negative impact on the Natura 2000 site ROSPA0108 Vedea - Danube.

2.13. Other information required by the competent authority for environmental protection

The competent authority for the environmental protection - the Giurgiu Environmental Protection Agency - requested in the attached guideline to the Address No 1785/1480/2021/S.A.A.A./27.02.2023 that the appropriate assessment study should deal in particular with the following aspects (which are included in the present work):

I. The appropriate evaluation study includes:
(a) Information on the project subject to approval:
1. information on the project: the name, the description, the objectives of the project, information on the production that will be performed, information on the raw materials, the chemical substances or the chemical preparations used;
2. the geographical and administrative location, specifying Stereo 70 coordinates;
3. the physical changes resulting from the project (from excavation, consolidation, dredging, etc.) and which will occur during the various stages of implementation of the project;
4. the natural resources required for the implementation of the project (water abstraction, renewable resources, non-renewable resources, etc.);
5. the natural resources that will be exploited within the protected natural area of community interest that will be used to implement the project;
6. emissions and waste generated by the project (in water, in the air, on the surface where the waste is stored) and how they will be eliminated;
7. the requirements related to the use of the land necessary for the execution of the project (land use category, land areas to be temporarily/permanently occupied by the project, e.g. access roads, technological roads, the sub-bases road, ditches and retaining walls, drainage effects, etc.);
8. the additional services required by the implementation of the project (decommissioning/relocation of pipelines, power lines, etc., construction means required), i.e. how the access to these additional services may affect the integrity of the natural area of community interest;
9. the duration of construction, operation, decommissioning of the project and phasing of the project implementation period, etc.;
10. activities that will be generated as a result of the implementation of the project;
11. description of the technological processes of the project (if requested by the competent environmental protection authority);

12. the characteristics of existing, proposed or approved projects that may have a cumulative impact on the project under assessment that may affect the protected natural area of Community interest;

13. other information requested by the competent environmental protection authority.

(b) Information on the protected natural area of community interest affected by the implementation of the project:

1. data on the protected natural area of community interest: surface area, ecosystem types, habitat types and species likely to be affected by the implementation of the project, etc.;
2. data on the presence, location, population and ecology of species and/or habitats of community interest present in the area and in the immediate vicinity of the project, as referred to in the standard form of the protected natural area of community interest;
3. a description of the ecological functions of the species and habitats of community interest affected (area, location, characteristic species) and their relationship with neighbouring protected areas of community interest and their distribution;
4. the conservation status of the species and habitats of Community interest;
5. data on the structure and population dynamics of the affected species (numerical evolution of the population within the protected natural area of Community interest, estimated percentage of the population of a species affected by the implementation of the project, whether the habitat area is large enough to ensure the long-term maintenance of the species);
6. the structural and functional relationships that create and maintain the integrity of the protected natural area of community interest;
7 conservation objectives of protected natural areas of community interest, where established by management plans;
8. a description of the current conservation status of the protected natural area of community interest, including developments/changes that may occur in the future;
9. other relevant information concerning the conservation of the protected natural area of community interest, including possible changes in the natural evolution of the protected natural area of community interest;
10. other issues relevant to the protected natural area of community interest.

The appropriate assessment study shall properly assess the impact on each species and habitat of community interest in each protected natural area of community interest potentially affected by the implementation of the project in order to ensure its conservation objectives and the integrity of the Natura 2000 network.

The conservation objectives of a protected natural area of community interest aim to maintain and restore the favourable conservation status of species and the habitats of community interest. The conservation objectives will be set by taking into account the characteristics of each protected natural area of community interest (representativeness, relative size, population, conservation status, etc.), through the management plans for the protected natural areas of community interest.

In the event that conservation goals have not yet been set for a site and until this is achieved, the appropriate assessment should consider that the objective is to ensure that the habitat types or habitats of the species present do not deteriorate significantly below current levels or that the species are not affected by significant disturbance, in accordance with the requirements of Article 6(6). (2) and without prejudice to the effectiveness of the conservation measures necessary to meet the requirements of Article 6(2). (1) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive).

The integrity of the protected natural area of community interest is affected if the project can:

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1. to reduce the area of habitats and/or the number of specimens of species of community interest;
2. lead to the fragmentation of habitats of community interest;
3. to have a negative impact on the factors that determine the maintenance of the favorable state of conservation of the natural area protected by community interest;
4. to produce changes in the dynamics of relationships that define the structure and/or function of the natural area protected by community interest.

a) **Identification and impact assessment**

In the appropriate assessment study, all types of negative impact of the project likely to significantly affect the protected natural area of community interest are identified and evaluated.

The study will identify the following types of impact:

1. direct and indirect;
2. short or long term;
3. during construction, operation and decommissioning;
4. residual;
5. cumulative.

A forecast will be made of the magnitude/size of the cumulative impacts identified and their significance. The analysis and the assessment of the various types of impact will be made in relation to the integrity of the protected natural area of community interest, taking into account its structure, ecological functions and vulnerability to change (noise, the reduction of water resources, the chemical emissions, etc.), as well as its conservation objectives.

The assessment of the significance of the impact

The correct interpretation of the significance of the impact is the most important part of the whole process and can be considered crucial for the whole assessment. The significance of impacts must be assessed at the level of each protected natural area of community interest, taking into account the conservation status of the species and habitats in the biogeographical region.

The assessment of the significance of impact in the study is based on the following key quantifiable indicators:

1. the percentage of habitat area that will be lost;
2. the percentage of habitat area that will be lost that is used for the feeding, resting and breeding needs of species of community interest;
3. the fragmentation of the habitats of community interest (expressed as a percentage);
4. the duration or the persistence of fragmentation;
5. the duration or the persistence of disturbance of species of community interest, distance from the protected natural area of community interest;
6. changes in population density (no. of individuals/area);
7. timescale for replacement of species/habitats affected by the implementation of the PP;
8. key chemical indicators that may lead to changes in water or other natural resources that may lead to changes in the ecological functions of a protected natural area of community interest.

On the basis of these key indicators, the EA study will determine the expected impact of the project on species and habitats of community interest.

Any loss of protected area area area or reduction in species population numbers will be quantified and assessed in terms of the impact on the conservation objectives of the protected area and the conservation status of key habitats and species.

The assessment of the significance of the impact of a project in the study is done by taking the following steps:

A. The assessment of the impact of the proposed project:

(a) the assessment of the impact caused by the project without consideration of mitigation measures;

b) the assessment of the residual impact that will remain after the implementation of measures to reduce the impact.

B. The assessment of the cumulative impact of the proposed project with other existing, ongoing or proposed projects in the perimeter or vicinity of the area:

(a) the assessment of the cumulative impact of the project with other projects without consideration of measures to reduce impacts;

b) assessment of the residual impact remaining after implementation of the measures to reduce the impact for the proposed project and other projects.

d) The measures to reduce the impact

Following the identification and the assessment of all types of negative impacts of the project which are likely to significantly affect the protected natural area of community interest, measures to reduce the negative impacts on the integrity of the protected natural area of community interest shall be established as follows:

the identification and the description of the reduction measures that will be implemented for each species and/or habitat type affected by the project and how they will reduce/eliminate the negative impact on the protected natural area of community interest. As examples of measures we mention: the adequate planning of construction activities to avoid or reduce the disturbance of the species or the destruction of nests and shelters, sound-absorbing panels, protection panels, to prevent the electrocution and the striking of the birds, planting of trees, etc.;

2. the presentation of the schedule for the implementation and for the monitoring of the measures to reduce impacts;

3. any other issues relevant to the conservation of species and/or habitats of community interest.

The measures to reduce impacts must:

1. be an integral part of the proposed project;
2. directly address the impact;
3. be presented in detail with an explanation based on scientific evidence of how they will eliminate or reduce the identified adverse effects;
4. be functional at the time of the adverse impact;
5. be based on the latest scientific evidence in the field.

They are not measures to reduce impacts:

measures to maintain and to restore the favourable conservation status of the species and the habitats of community importance (these are a "normal" implementation of the provisions of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive));

2. compensatory measures.

The study should also include a clear evidence of the financial amount needed to ensure that the measures of reduction can be ensured for the short-term, medium-term and long-term. The project holder is responsible for the monitoring of the implementation of the measures of reduction until they become operational and for the submission of a report on the implementation and functioning of these measures to the competent authority for the protection of the environment.

The study must also include a plan of the measures to reduce the impact in terms of the timetable for the implementation schedule and the legal or natural person responsible for the follow-up and implementation of the measures to reduce the impact. If new elements occur during the monitoring of the implementation of the impact reduction measures that were not initially considered, actions will be undertaken to remedy these issues.

II. Alternative solutions

The appropriate assessment study will include alternative solutions where appropriate.

The alternative solutions identified in this stage will be evaluated separately, using the same criteria used in the evaluation of the original project option. Alternative solutions shall be identified, including 'zero alternative', which means that no intervention is performed. The assessment of the alternatives of a project shall be made taking into account the species and/or habitats of community interest for which the protected area of community interest has been designated, the costs, the delays or other aspects of the alternative solution.

Types of alternatives:

a) alternative locations (e.g. new locations for wind turbines, alternatives for a road, etc.). An alternative location consists of implementing the same project in different locations than originally planned. The result must be a reduction in the impact on the protected natural area of community interest. For example: the change of the alternative location/route of the PP will result in the reduction/elimination of impacts on species and/or habitats of community interest, loss of their areas, etc.;

alternative solutions for the implementation of the project (e.g. railway instead of motorway, underground cables instead of above ground cables, irregular watercourses instead of regularised watercourses, resizing of the project, noise barriers, modification of the timing of the works, etc.).

The assessment of alternative solutions consists of:

(a) description of the alternative solution(s) that lead to the elimination or reduction of significant impacts on the protected natural area of community importance. Alternative solutions must be examined in comparison with the original proposal, against the same scientific criteria and the same standard;

b) each alternative solution identified will be assessed separately in order to choose the alternative with the least impact on the protected natural area of community interest; the justification of the decision to propose an alternative project by highlighting the additional positive aspects compared to the other alternatives. In this stage, economic or other assessment criteria cannot prevail over environmental criteria.

III. Compensatory measures - where appropriate

Additional information requested from the holder in this stage should be based on the best scientific evidence in the field and include:

(a) the description of compensatory measures, which must address both the maintenance of the favourable conservation status of species and habitats and the integrity of the protected natural area of community interest;

(b) a description of how the compensatory measures contribute to maintaining the coherence of the Natura 2000 network;

(c) the location established for the implementation of the compensatory measures, which must occupy the same biogeographical region; it is advisable to implement them as close as possible to the protected natural area of community interest which will be adversely affected by the project, so as to ensure its integrity;

(d) how the compensatory measures will ensure the same ecological functions as those for which the protected natural area of community interest was designated;

(e) a description of the relationship between the conservation objectives of the protected natural area of community interest and the overriding public interest invoked;

(f) the legal status of the land on which the compensatory measure is to be implemented;

g) monitoring the implementation of compensatory measures. The PP holder shall be responsible for monitoring the implementation of the compensatory measures until they become operational and for submitting a report on the implementation and functioning of these measures to the competent authority for environmental protection;

h) other relevant information.

The European Commission accepts reasons of overriding public interest that are consistent with EU policies. The public interest can only be considered " priority " if it is a long-term interest; short-term economic interests are not sufficient to counterbalance long-term conservation interests as defined in the Habitats Directive. The following are considered as "social or economic reasons": creation of a large number of long-term jobs, ensuring global and regional economic competitiveness, technological development, use of "environmentally friendly" technology.

The following situations where the project demonstrates that they are indispensable constitute 'reasons of major public interest, including those of a social or economic nature':

(a) as part of actions or policies aimed at protecting health, safety and the environment;

(b) in the framework of fundamental policies for the country or society;

(c) in the context of social or economic activities, fulfilling specific public service obligations.

Human health, public safety and environmental benefits" are considered to be grounds justifying the adoption of nationally restrictive measures on the free movement of goods, workers and services. Also, beneficial consequences of major importance for the environment are a category that is included in the fundamental objectives of environmental policy. It is the responsibility of the competent environmental protection authority to verify when these grounds are justified. The European Commission can examine these cases in line with its role of controlling the correct application of Community legislation.

For the "human health", the prevention of epidemics, accidents or other life-threatening actions may be considered as a priority.

As far as "public security" the protection against natural disasters is a strong enough reason to be invoked.

Any deterioration of a protected natural area of community interest can only be justified for certain reasons corresponding to a superior general interest in relation to the conservation objectives of the protected natural area of community interest. Taking into account the principle of subsidiarity, the competent authority for environmental protection decides what these reasons of major public interest are and the justifications will be examined by the European Commission.

The compensatory measures necessary to protect and maintain the coherence of the Natura 2000 network will refer to the structure, functions and conservation objectives of the protected natural area of community interest, the habitats and/or species adversely affected and the other species and/or habitats of community interest in the site concerned. The maintenance of the general coherence of the Natura 2000 network results from the fact that a protected natural area of community interest should not be irreversibly affected by a project before the compensatory measure is already in place. If there are negative effects of the project on rare natural habitat types or on natural habitats, which make it necessary for a long period of time to ensure the same ecological functionality, the "zero option" should be considered.

The compensatory measures may relate to:

(a) the restoration of the habitat to maintain its conservation values, and the compliance with the conservation objectives of the site or the improvement of the remaining habitat in proportion to the loss caused to the protected natural area of community interest by a project;

(b) the restoration of the habitat by recreating a habitat in a new area or by extending an existing protected natural area of community interest;

(c) the reintroduction of the species;

(d) the restoration and the maintenance of species to a favourable conservation status;

(e) the elements, including those of a financial nature, necessary to achieve the objective of maintenance of the negative impact of a project and of the maintenance of the general coherence

of the Natura 2000 network, and their feasibility. According to the polluter pays principle, the holder of the PP must bear the cost of compensatory measures.

The compensatory measures implementation plan must include the following:

(a) clear objectives and target values in accordance with the conservation objectives of the protected natural area of Community interest;

(b) the time period over which the conservation objectives will be achieved;

c) the timetable/programme for implementation and its coordination with the timetable established for the project;

d) the stages of public information and/or consultation;

(e) specific monitoring and reporting timetable based on progress indicators, taking into account the specification of the appropriate budget to ensure successful completion of the measures.

The implementation plan for compensatory measures must include detailed monitoring during implementation to ensure long-term effectiveness.

They do not constitute compensatory measures:

(a) maintenance and restoration measures (these constitute 'normal' implementation of the provisions of the Birds Directive and the Habitats Directive);

b) measures to reduce negative impacts on the protected natural area of community interest;

c) compensatory payments.

Compensatory measures must also be assessed to determine whether:

(a) they are appropriate to the protected natural area of community interest and succeed in reducing the impact caused by the implementation of the project;

b) they have the capacity to maintain the coherence of the Natura 2000 network;

(c) are feasible and functional at the time when the impact on the protected natural area of community interest occurs.

Location for the implementation of compensatory measures

A. Compensatory measures should be located so as to be most effective in maintaining the overall coherence of the Natura 2000 network. This makes it necessary to establish preconditions that any compensatory measure should meet:

the area selected for compensation must be within the same biogeographical region (for Sites of community importance designated under the Habitats Directive) or within the same range, migration route or wintering area for wild birds (for Special Protection Areas for birds designated under the Birds Directive). Furthermore, the area must provide functions comparable to those that validated the criteria for the selection of the originally declared nature protection area of community interest, in particular those relating to appropriate geographical distribution;

b) the area selected for compensation must have - or must be able to develop - specific features of the ecological functions and structures necessary for the habitats and species;

c) the compensatory measures must not jeopardise the conservation of the integrity of any other protected natural areas of community interest. When applied in existing protected natural areas, compensatory measures must be compatible with the conservation objectives of the protected area and must not be understood as a general form of management.

B. Implementation of compensatory measures:

(a) the first option that should be considered is to implement compensatory measures in the affected protected area of community interest;

b) the second option would be to enlarge the protected natural area of community interest and implement the corresponding compensatory measures. If the conditions in a protected natural area of community interest do not allow the implementation of compensatory measures, the next possibility is to extend it. Any extension must be integrated into the Natura 2000 network;

c) the third option would be to implement compensatory measures in another protected natural area of community interest, but in the same biogeographical region and ecosystem type. In

exceptional cases, it is possible to designate a new protected natural area of community interest which must fulfil the same ecological requirements and functions of the Natura 2000 network. The extension or designation of a new protected area of community interest without the implementation of compensatory measures is not sufficient. The designation of a new nature protection area of community interest can only be considered sufficient when the conservation status of the affected species and/or habitats is favourable at biogeographical region or national level.

The implementation of compensatory measures through the designation of a new protected area must follow the same procedure for the designation of a protected natural area of community interest, which will be submitted to the European Commission after the approval of the project, but before its implementation.

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

In preparing the appropriate assessment study, the information used may be:

(a) management plans/conservation measures for the protected natural area of community interest;

b) the Natura 2000 baseline studies and/or standard forms;

c) information from institutions and organisations relevant to nature conservation;

(d) plans, maps, material on the geology, hydrology and ecology of the area;

e) reports on the state of the environment;

f) annual reports of the administrators of protected natural areas;

g) land use plans and other relevant existing plans;

h) other sources of information.

The appropriate assessment study must follow the following steps:

The initial analysis stage: establishes the initial state of the ecosystems on the project area, without considering the project. This study is the pillar of the assessment, so the holder should consult specialists in the field from the outset. The study must take into account the description of the project and it is necessary to identify those elements of the project which alone or in combination with other projects may have a significant effect on a Natura 2000 site:

(i) the characteristics of the project that may affect the site;

(ii) the size of the project;

(iii) characteristics of projects approved or in the process of being approved which may have cumulative effects on the Natura 2000 site;

(iv) the relationship between the project and the site (e.g. distance);

(v) regulatory information (information provided by competent environmental authorities);

(vi) physical parameters (exposure, geology, topography), including their relation to habitat types and species of community interest.

The field study stage: this should include data on the habitat types and species of community interest for which the site has been designated. The number of field trips depends on the ecological characteristics of the habitats and species of community interest and the complexity of the project. The assessment of the species and habitats present on the site will be carried out at all periods of their life cycles. Data obtained from the field will form the basis for carrying out the appropriate assessment study as follows:

(i) description of the Natura 2000 site (each individual site potentially affected will be described);

(ii) conservation objectives and factors contributing to conservation (including restoration, development objectives where appropriate, including the current conservation status of habitats and species of community interest);

(iii) physical and chemical characteristics of the biotope;

(iv) dynamics of habitats and species of community interest and their ecology;

(v) description of the structural and functional relationships that maintain the integrity of the site;

(vi) seasonal influences on habitats and species of community interest;

(vii) other issues related to the conservation of the site;

(viii) description of ecological systems outside the site that play a key role in ensuring the ecological coherence of the site.

The Appropriate Assessment Study submitted to the competent environmental protection authority is accompanied by a list of organisations/institutions/specialists involved/involved in providing information on species and habitats of community interest affected by the implementation of the project, with details of them (experience, work in the field, CVs of the persons involved, etc.). The appropriate assessment study will be prepared on a mandatory basis by specialists for each taxonomic group, taking into account the conservation objectives of the Natura 2000 site and the species and habitats of community interest for which the site has been designated.

The appropriate assessment study has been drawn up taking into account the above-mentioned aspects and in accordance with the Methodological Guide on the appropriate assessment of the potential effects of plans or projects on protected natural areas of community interest, approved by M.M.P. Order no. 19/13.01. 2010, with subsequent amendments and additions, in order to issue the environmental consent for the project "Construction of building hall, concrete basin drainable, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pre-treatment station, location of medical waste incinerator with related facilities", being registered at the Agency for Environmental Protection Giurgiu with no. 3618/28.03.2023.

The competent authority for environmental protection - Giurgiu Environmental Protection Agency - requested, by address no. 1480/S.A.A./15.06.2023 that the appropriate assessment study be amended/completed with:

- analysis of the pollutants emitted into the atmosphere and the air currents contributing to their dispersion in relation to the protected natural area of community interest - this information can be found in Chapter 2.6.1.2 Air emissions;
- description of aspects of the propagation distances of pollutants emitted into the atmosphere as a function of wind direction, taking into account the highest speed - this information is given in Chapter 2.6.1.2;
- identification of the area where the impact is felt - this information can be found in Chapter 2.6.1.2;
- assessment of the impact on bird species of Community interest in the territory of the Natura 2000 site ROSPA0108 Vedea - Danube based on chemical indicators - pollutants emitted into the atmosphere - this information is given in Chapter 4.2;
- presentation of dispersion maps of pollutants emitted into the atmosphere, in relation to the natural protected area of community interest ROSPA0108 Vedea - Danube - this information can be found in Chapter 2.6.1.2;
- all projects/plans that may have, alone or in combination with other projects/plans, a significant negative impact on the Natura 2000 site - this information can be found in Chapter 2.12. Characteristics of existing, proposed or approved projects that may have a cumulative impact on the project under assessment and that may affect the protected area of community interest;
- the boundaries within which cumulative impacts will be identified - this information can be found in Chapter 2.12. Characteristics of existing, proposed or approved projects likely to have

a cumulative impact on the project under assessment and likely to affect the protected area of community interest;
- the time scale for which the cumulative effects of the project have been taken into account, i.e. the possible pathways of cumulative impacts - this information can be found in Chapter 2.12. Characteristics of existing, proposed or approved projects likely to have cumulative impacts with the project under assessment which may affect the protected natural area of community interest;

- developments/changes that may occur in the future regarding the conservation status of the protected natural area - this information can be found in Chapter 3.8. Description of the current conservation status of the protected natural area of community interest, including developments/changes that may occur in the future;
- presentation of the specific objectives/minimum set of special protection and conservation measures established and approved by the custodian of the protected natural area of community interest - ANANP and analysis of the impact on them, according to related parameters - this information is attached to this work, in tabular format, on electronic support - CD;
- analysis of the impact of the project on bird species of Community interest based on dispersion maps of pollutants emitted into the atmosphere - this information is included in Chapter 4.2;
- impact assessment based on quantifiable key indicators (especially chemical - air pollutants) - this information can be found in Chapter 4.2;
- analysis and justification of impacts (direct, indirect, short term, long term, construction phase, operation, decommissioning, cumulative, residual) on bird species of community interest - this information can be found in Chapter 4.1;
- impact mitigation measures - this information is provided in Chap. 5. Impact mitigation measures;
- timetable for implementation and monitoring of impact mitigation measures - this information is provided in Chap. 5. Impact reduction measures;
- the natural and legal person responsible for the implementation of the impact mitigation measures - this information can be found in Chap. 5. Impact reduction measures;
- clarification of issues concerning:
o incinerator operating schedule (10 h/day - page 29 or 24 h/day - pages 10, 17, 55);
o types of waste to be incinerated (e.g. hazardous and non-hazardous medical waste as well as non-hazardous waste from various industries - p. 17-29 or only medical and animal waste as mentioned in the final conclusions);
o the way waste water is treated on the site (pre-treatment plant and discharge into the existing sewage network in the area belonging to SC DELTA GAS SRL - page 34 or treatment plant with discharge into the city sewerage network - page 88);
o the type of activity for which the abatement measures apply (the subject of the project is not the extraction of mineral aggregates - page 294);
- information contained in the body of this document.

3.INFORMATION ON THE PROTECTED NATURAL AREA OF COMMUNITY INTEREST AFFECTED BY THE IMPLEMENTATION OF THE PROJECT

3.1. Data on the protected natural area of community interest: area, ecosystem types, habitat types and species likely to be affected by the implementation of the project

The project proposed by FRIENDY WASTE ROMANIA SRL does not overlap and is not in the vicinity of protected natural areas of community interest.
The nearest protected natural areas of community interest are:

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- Special Protection Area for Birds ROSPA0108 Vedea - Danube, being located at a distance of 1,430 m from the site of the proposed project.
- Site of Communitarian Importance ROSCI0088 Gura Vedei - Şaica - Slobozia, being located at a distance of 2,870 m from the site of the proposed project
- Special Protection Area for Birds ROSPA0090 Ostrovu Lung - Gostinu, located at a distance of 12,110 m from the site of the proposed project

The location of the project in relation to the three protected natural areas is represented graphically in the following images:

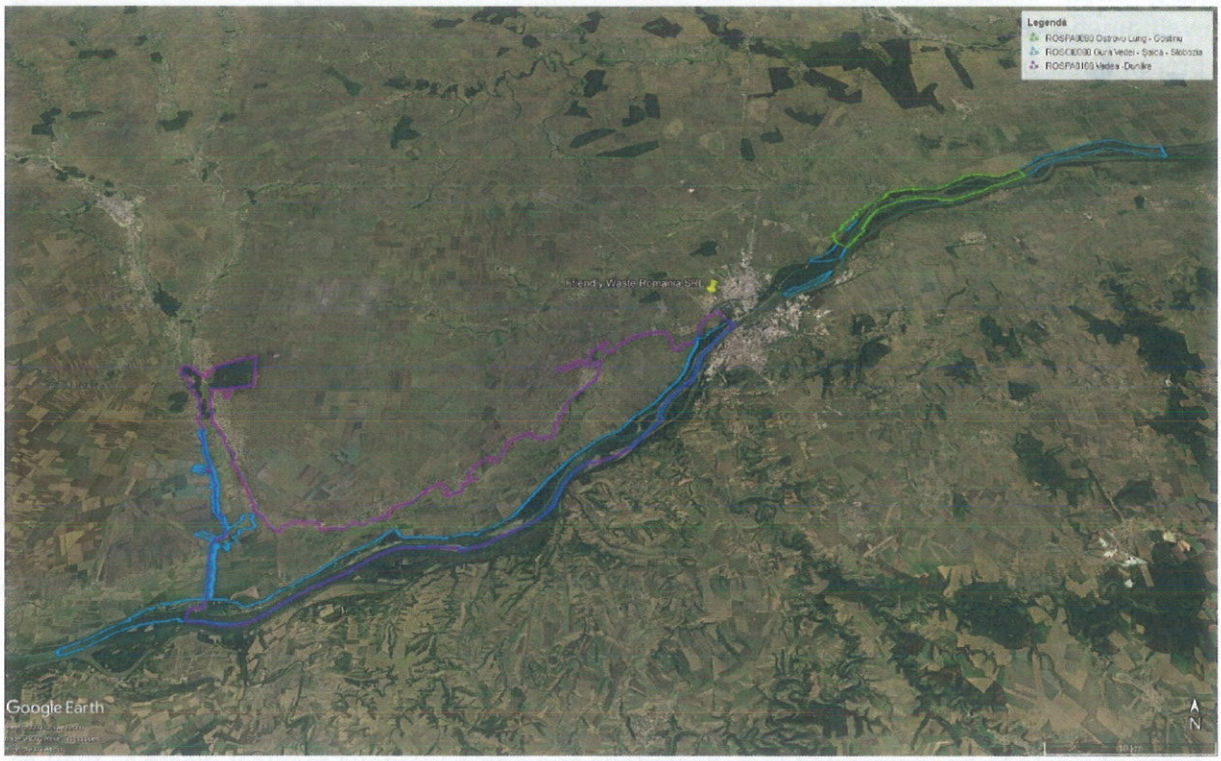

Figure 39. The location of the project in relation to the nearest protected natural areas of community interest

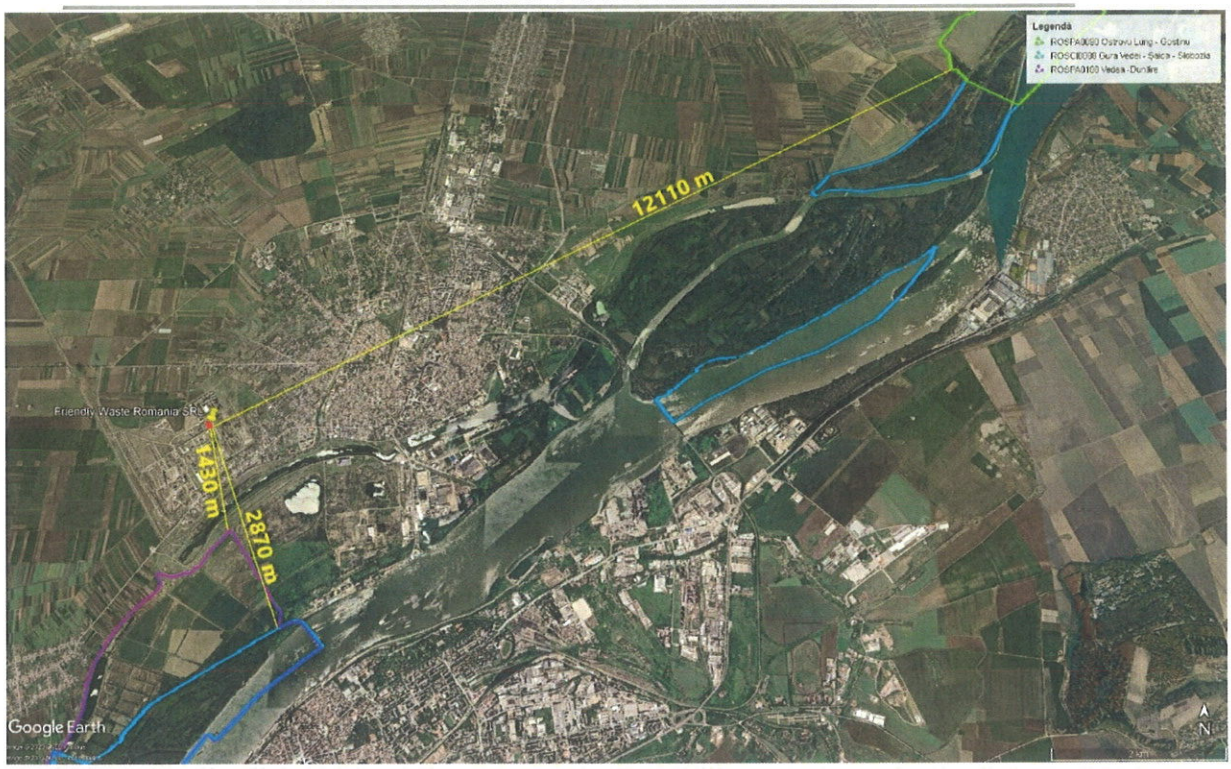

Figure 40. Distance between the location of the project and the nearest protected areas of community interest

The special protection areas for birds aim to conserve, maintain and, where appropriate, to restore to a favourable conservation status the bird species and specific habitats designated for the protection of wild migratory bird species of community interest in accordance with the Birds Directive. Their designation in Romania was made by H.G. no. 1284/2007 regarding the declaration of special protection areas for birds as an integral part of the European ecological network Natura 2000 in Romania.
The sites of community importance aim to conserve, maintain and, where appropriate, to restore to a state of conservation the natural habitats and/or populations of the species for which the site has been designated under the Habitats Directive (92/43/EEC).
Considering the very large distances between the location of the project proposed by FRIENDLY WASTE ROMANIA SRL and the protected natural areas of community interest ROSCI0088 Gura Vedei - Şaica - Slobozia (being located at a distance of 2,870 m from the location), respectively ROSPA0090 Ostrovu Lung - Gostinu (being located at a distance of 12. 110 m from the location), we consider that the implementation of the project "Building of a hall, ,drainable concrete tank, concreted platforms, enclosure, lighting system, drilling execution, internal network for water supply and sewerage, location of wastewater pre-treatment station, location of medical waste incinerator with connected installations" will not have adverse consequences on the biological diversity characteristic of the two NATURA 2000 sites.
Next, we will present data on the protected natural area of community interest that is the closest to the site of the proposed property, namely ROSPA0108 Vedea - Danube, also located at a considerable distance from the analyzed location (1430 m).

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SPECIAL PROTECTION AREA FOR BIRDS ROSPA0108 VEDEA - DANUBE

The special protection area for birds ROSPA0108 Vedea - Danube was declared by H.G. 1284 of 31st October 2007 regarding the declaration of natural areas for the protection of birds as part of the European ecological network Natura 2000 in Romania, with subsequent amendments and additions.

The protected natural area of community interest ROSPA0108 Vedea - Danube is located in the lower basin of the river Vedea and is part of the Lower Danube Plain. The site includes both the area of the lower basin of the river Vedea and the stretch of the Danube, from Năsturelu to near Giurgiu together with its plain. The special protection area for birds ROSPA0108 Vedea - Danube is important for the conservation of a rich bird fauna, as species nest, winter or just transit the site due to its position close to the Central European-Bulgarian migration route. During the migration period the area is transited by very large flocks of water-related bird species, feeding or resting in the site.

The DN5C road (Giurgiu-Zimnicea) forms the northern boundary of the site, passing through several neighbouring localities, from which you can follow the local roads to the Danube shore. The site area, which includes the course of the Vedea River, can be reached from DJ506 (Bujoru- Smârdioasa) which follows the eastern boundary of the site and even passes through its northern extremity.

The site is located in the lower Danube plain, including its confluence with the river Vedea, and is important for the conservation of a very rich bird fauna. Some 25 species are protected in Europe, nesting, wintering or just passing through the site due to its position close to the Central European-Bulgarian migration route. The area is important for nesting of the

Eurasian spoonbil, little egret, night heron, Squacco Heron, ferruginous duck , black-winged stilt, common tern, *the little tern* , white-tailed eagle. During the migration period, the area is crossed by very large flocks of water-related bird species that feed or rest at the site, such as ferruginous duck, pygmy cormorant , common tern and many species of ducks and shorebirds. Also during the passages, large numbers of Red-footed Falcon , western marsh harrier, and white-tailed wagle are observed. In winter, birds such as western marsh harrier, *the hen harrier*, great egrets, little cormorants, white-tailed eagle and various species of ducks find the site suitable for resting and feeding, most of them being quartered on water surfaces that do not freeze during the season.

The site is located in the lower basin of the river Vedea and is part of the lower Danube Plain. The relief of this area is a succession of sand dunes (mostly fixed by plantations) and valleys, in some of which pools of different sizes are installed.

The site includes both the area of the lower basin of the river Vedea and the stretch of the Danube, from Năsturelu to near Giurgiu together with its plain. The forest vegetation within the site occupies 18% of the site area and consists of water meadows and willows planted in the lower areas and clumps of white poplar on the higher but floodable levees . These habitats are important nesting habitats for a pair of white-tailed eagle and several pairs of levant sparrowhawk Also nesting here are 20-30 pairs of the European roller and 1-2 pairs of black stork. In the seed crow colonies set up in the acacia plantations on the sand dunes, the Red-footed falcon breeds its chicken, with between five and ten pairs of this gregarious raptor species. The wetland habitats of the site represented by the course of the river Vedea, a multitude of marshy areas, puddles, the banks of the Danube and several islets are important for the conservation of some of the European protected bird species that nest here.

We mention colonial species that build their nests on reeds or in low willows such as the Squacco Heron (50-60 pairs), the little bittern (20-24 pairs), purple heron (5-10 pairs), little egret (45-80 pairs), a few pairs of great egret, the Eurasian spoonbill (18-24 pairs) and night heron (40-60 pairs). The common kingfisher nests on the banks of the river Vedea or the

Danube, the population within the site is estimated at more than 12 pairs. The Ferruginous Duck (25-34 pairs) and the western marsh harrier (2-4 pairs) nest in reed beds or in dry places near wetlands rich in vegetation. Between 30 and 80 pairs of common terns. nest at the site, forming colonies on the water lily, water lily, floating fern, fringed water lily or duckweed vegetation. Between 15 and 27 pairs of black-winged stilt nest in the marshy areas of the site, and between four and eight pairs of the little tern in the shallow areas. Depending on the climatic conditions each year, up to 40 pairs of pied avocet may nest at the site. All of the species listed above are of European conservation interest, and common species nesting in these wetlands on the site are also frequently seen, such as the great crested grebe, the little grebe, common coot, wild duck, the common pochard, the penduline tit, Great Reed Warbler, Savi's warbler, Sedge Warbler, the common reed warble, Ferruginous Duck, the pygmy cormorant , the purple heron, common tern, Little Tern,

During spring and autumn migration the site provides excellent feeding and resting conditions for many species of community conservation importance such as red duck (300-400 individuals), little cormorant (over 1000 individuals), black stork (40-60 individuals), little egret (300-500 individuals), purple heron (up to 100 individuals), white stork (up to 1000 individuals), common terns (up to 1500 individuals) and little terns (50-70 individuals). Migrating shovelers and even glossy ibis are also found. Rarely, common pelicans and up to 11 crested pelicans come to rest or even feed on the site's waters. Migration is also extensive in the species of day waders, with impressive numbers of the following species of Community conservation interest: marsh harrier (80-100 individuals), black-crowned night harrier (20-30 individuals), and red-footed falcon (200-300 individuals) and white-tailed eagle (up to ten individuals).

Apart from the red-footed falcon, all of these raptor species can also be seen in the cold season because they find sufficient food in the form of small and medium-sized birds, as well as many mammals that remain active during this period. Protected shorebirds with large flocks in the passage are the stilt bird and the pied avocet, of both species up to 150 birds can be seen. Shorebird migration also includes other species that can be seen in their thousands, such as the northern lapwing ,dunlin, common redshank and the black-tailed Godwit , as well as species that can be seen in their hundreds, such as the little ringed plover , the dunlin, common curlew, spotted redshank, marsh sandpiper , great snipe *and* common greenshank.

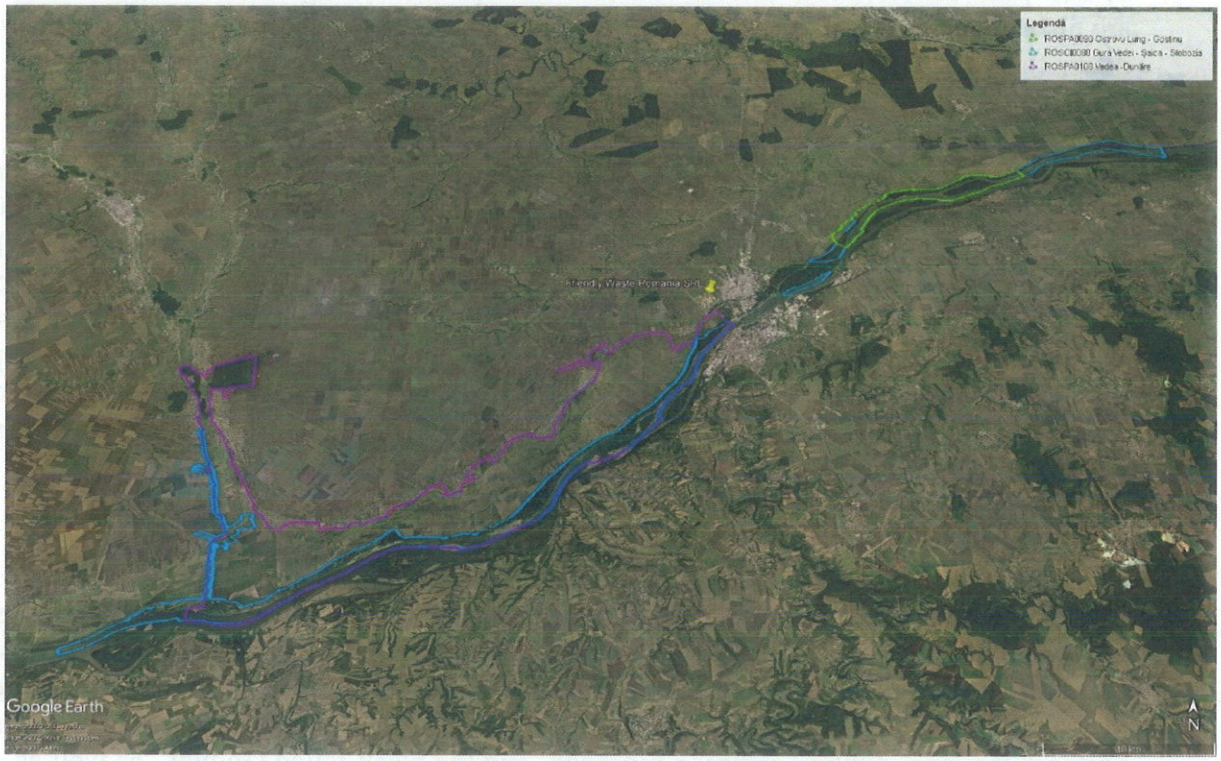
Lesser numbers of common sandpiper and green sandpiper appear in the passage, and only rarely thenc, common ringed plover, curlew sandpiper, grey plover, Romanian loach, temminck's stint. Flocks of up to 4,500 large ducks and up to 1,500 small ducks are also seen during migration. Various bird species are also present at the site during winter due to the favourable feeding and resting conditions provided mainly by large areas of unfrozen water. Protected species include the little cormorant (over 240 individuals) and the great egret (20-30 individuals). Many common species such as the great cormorant, great duck, little duck, common coot, northern pintail and grey heron are also seen in the cold season.

Logging and the replacement of fences with hybrid poplar plantations are a threat to colonial and raptor bird species, which are affected by the loss of nesting habitat. The extraction of sand and gravel has a negative impact by disturbing birds at feeding and resting sites. Sport fishing has negative impacts when it is carried out in places frequented by birds for resting and feeding, especially during passage. Hunting and poaching reduce populations of some species and cause disturbance throughout the community. Agriculture (through the use of pesticides) has a negative impact on crop-feeding birds (raptors and roller).

The site has several entry points, warning/recall signs, information boards and maps for orientation, several information points in communities within the site area, bird observatories,

barriers, paths and roads for visitation, themed trails, campsites with waste collection facilities and fireplaces are needed.

The location of the Special Protection Area ROSPA0108 Vedea - Danube is represented in the following image:



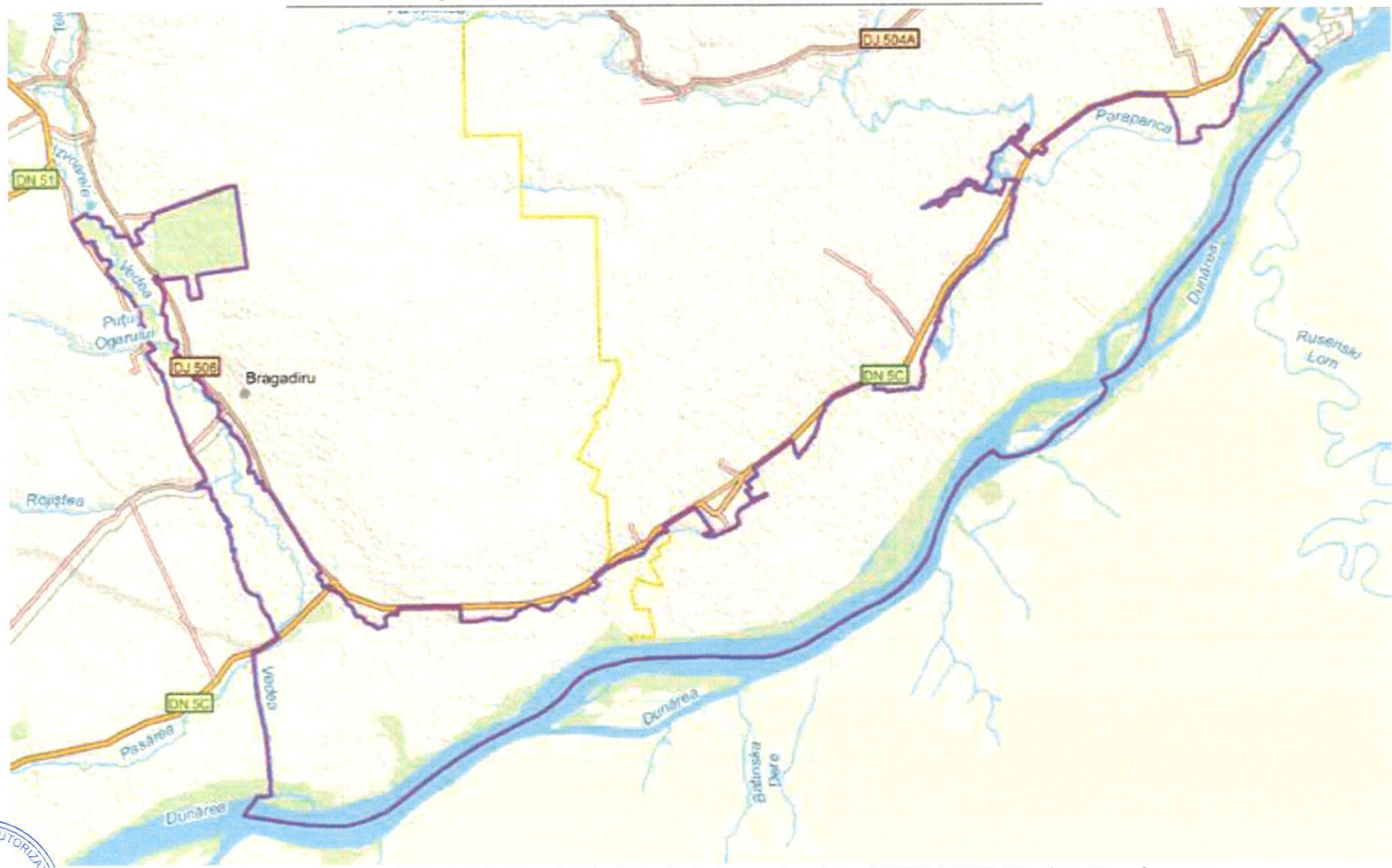


Figure no. 41. Limits of the Special Avifaunistic Protection Area ROSPA0108 Veeda – Danube
(Source: Catalog of Natura2000 habitats, species and sites in Romania)

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TABLE 25. Species referred to in Article 4 of Directive 2009/147/EC, species listed in Annex II to Directive 92/43/EEC and site assessment for them

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ. C | R | V | P	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.				Pop.	Conserv	Isolation	Global
1	B	A402	*Accipiter brevipes* Levant Sparrowhawk			R	1	2	p	C		C	B	C	B
2	B	A086	*Accipiter nisus* Sparrowhawk			W	1		i	C		D			
3	B	A298	*Acrocephalus arundinaceus* Great Reed Warbler			R				C		D			
4	B	A295	*Acrocephalus schoenobaneus* Sedge Warbler			R				C		D			
5	B	A295	*Acrocephalus scirpaceus* common reed warbler			R				C		D			
6	B	A168	*Actitis hypoleucos* common sandpiper			C	60		i	P		D			
7	B	A247	*Alauda arvensis* Skylark			C				C		D			
8	B	A229	*Alcedo atthis* common kingfisher			R	12		p	C		D			
9	B	A054	*Anas acuta* northern pintail			W	10		i	R		D			
10	B	A056	*Anas Clypeata* northern shoveler			C	500		i	R		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
11	B	A052	*Anas crecca* Eurasian teal			C	1200	1500	i	C		D			
12	B	A052	*Anas crecca* Eurasian teal			W	300		i	C		D			
13	B	A053	*Anas platyrhynchos* Mallard			R	20		p	C		D			
14	B	A053	*Anas platyrhynchos* Mallard			C	3000	4500	i	C		D			
15	B	A053	*Anas platyrhynchos* (Rață mare)			W	250		i	C		D			
16	B	A043	*Anser anser* greylag goose			C	30		i	C		D			
17	B	A028	*Ardea Cinerea* grey heron			C	30		i	C		D			
18	B	A028	*Ardea Cinerea* grey heron			W	11		i	C		D			
19	B	A029	*Ardea purpurea* purple heron			R	5	10	p	R		C	B	C	B
20	B	A029	*Ardea purpurea* purple heron			C	70	100	i	R		C	B	C	B
21	B	A024	*Ardeola ralloides* Squacco Heron			R	50	60	p	C		C	B	C	B
22	B	A221	*Asio otus* long-eared owl			R				R		D			
23	B	A059	*Aythya ferina* common pochard			R	90	120	p	P		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
24	B	A060	*Aythya nyroca* Ferruginous Duck			R	25	34	p	P		C	B	C	B
25	B	A060	*Aythya nyroca* Ferruginous Duck			C	300	400	i	P		C	B	C	B
26	B	A087	*Buteo buteo* common buzzard			W	3		i	P		D			
27	B	A144	*Calidris alba* sanderling			C				R		C	B	C	B
28	B	A149	*Calidris alpina* dunlin			C	1400		i	P		C	B	C	B
29	B	A147	*Calidris ferruginea* curlew sandpiper			C				R		C	B	C	B
30	B	A145	*Calidris minuta* little stint			C	332	404	i	C		C	B	C	B
31	B	A146	*Calidris temminckii* Temminck's stint			C				R		C	B	C	B
32	B	A366	*Carduelis cannabina* Common Linnet			C				C		D			
33	B	A364	*Carduelis carduelis* European goldfinch			R				C		D			
34	B	A364	*Carduelis carduelis* European goldfinch			C				C		D			
35	B	A363	*Carduelis chloris* Greenfinch			R				C		D			
36	B	A363	*Carduelis chloris* Greenfinch			C				C		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
37	B	A136	*Charadrius dubius* Little Ringed Plover			C	240	300	i	C		C	B	C	B
38	B	A137	*Charadrius hiaticula* Common Ringed Plover			C				R		C	B	C	B
39	B	A031	*Ciconia ciconia* White Stork			R				P		C	B	C	B
40	B	A031	*Ciconia ciconia* White Stork			C	500	1000	i	P		C	B	C	B
41	B	A030	*Ciconia nigra* Black Stork			R	1	2	p	R		C	B	C	B
42	B	A030	*Ciconia nigra* Black Stork			C	40	60	i	R		C	B	C	B
43	B	A081	*Circus aeruginosus* western marsh harrier			R	2	4	P	R		C	B	C	B
44	B	A081	*Circus aeruginosus* western marsh harrier			C	80	100	i	R		C	B	C	B
45	B	A081	*Circus aeruginosus* western marsh harrier			W	10	15	i	R		C	B	C	B
46	B	A082	*Circus cyaneus* hen harrier			C	20	30	i	R		C	B	C	B
47	B	A082	*Circus cyaneus* hen harrier			W	4	6	i	R		C	B	C	B
48	B	A231	*Coracias garrulus* European roller			R	20	30	p	C		C	B	C	B
49	B	A212	*Cuculus canorus* common cuckoo			R				C		D			

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No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
50	B	A036	*Cygnus olor* mute swan			C	8		i	C		D			
51	B	A253	*Delichon urbica* House Martin			C				C		D			
52	B	A027	*Egretta alba* Great White Egret			R	1	3	p	P		C	B	C	B
53	B	A027	*Egretta alba* Great White Egret			W	20	30	i	P		C	B	C	B
54	B	A026	*Egretta garzetta* little egret			R	45	80	p	P		C	B	C	B
55	B	A026	*Egretta garzetta* little egret			C	300	500	i	P		C	B	C	B
56	B	A269	*Erithacus rubecula* European robin			C				C		D			
57	B	A096	*Falco tinnunculus* common kestrel			W	1		i	P		D			
58	B	A097	*Falco vespertinus* Red-footed Falcon			R	5	10	p	C		C	B	C	B
59	B	A097	*Falco vespertinus* Red-footed Falcon			C	200	300	i	C		C	B	C	B
60	B	A359	*Fringilla coelebs* Common Chaffinch			C				C		D			
61	B	A125	*Fulică atra* Eurasian coot			R	250		p	R		D			
62	B	A125	*Fulică atra* Eurasian coot			W	57		i	R		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
63	B	A153	*Gallinago gallinago* common snipe			C	90	200	i	V		C	B	C	B
64	B	A075	*Haliaeetus albicilla* white-tailed eagle			R	1	1	p	C		C	B	C	B
65	B	A075	*Haliaeetus albicilla* white-tailed eagle			C	5	10	i	C		C	B	C	B
66	B	A075	*Haliaeetus albicilla* white-tailed eagle			W	4	6	i	C		C	B	C	B
67	B	A131	*Himantopus himantopus* Black-winged Stilt			R	15	27	p	P		C	B	C	B
68	B	A131	*Himantopus himantopus* Black-winged Stilt			C	70	150	i	P		C	B	C	B
69	B	A251	*Hirundo rustica* Barn Swallow			C				C		C	B	C	B
70	B	A022	*Ixobrychus minutus* Common Little Bittern			R	20	24	p	P		C	B	C	B
71	B	A022	*Ixobrychus minutus* Common Little Bittern			C	20		i	P		C	B	C	B
72	B	A459	*Larus cachinnanis* (Pescăruș pontic)			C	600	2500	i	R		C	B	C	B
73	B	A182	*Larus canus* common gull			C	180	300	i	R		D			
74	B	A156	*Limosa limosa*			C	450	3000	i	P		C	B	C	B
75	B	A292	*Locustella luscinioides* Savi's Warbler			R				C		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ. C | R | V | P	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.				Pop.	Conserv	Isolation	Global
76	B	A271	*Luscinia megarhynchos* Common Nightingale			R				R		D			
77	B	A271	*Luscinia megarhynchos* Common Nightingale			C				C		D			
78	B	A230	*Merops apiaster* European bee-eater			R				C		D			
79	B	A383	*Miliaria calandra* Corn Bunting			C				C		D			
80	B	A262	*Motacilla alba* white wagtail			R				C		D			
81	B	A260	*Motacilla flava* Yellow Wagtail			R				C		D			
82	B	A319	*Muscicapa striata* Spotted Flycatcher			C				C		D			
83	B	A160	*Numenius arquata* Curlew			C	120	600	i	V		C	B	C	B
84	B	A023	*Nycticorax nycticorax* Night Heron			R	40	60	p	C		C	B	C	B
85	B	A020	*Pelecanus crispus* Dalmatian pelican			C	3	11	i	P		C	B	C	B
86	B	A019	*Pelecanus onocrotalus* White Pelican			C				R		C	B	C	B
87	B	A017	*Phalacrocorax carbo* great cormorant			C	1500		i	C		C	B	C	B
88	B	A017	*Phalacrocorax carbo* great cormorant			W	500		i	C		C	B	C	B

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
89	B	A393	*Phalacrocorax pygmeus* pygmy cormorant			C	1000		i	R		C	A	C	A
90	B	A393	*Phalacrocorax pygmeus* pygmy cormorant			W	240		i	R		C	A	C	A
91	B	A034	*Platalea leucorodia* Eurasian spoonbill			R	18	24	p	P		C	B	C	B
92	B	A034	*Platalea leucorodia* Eurasian spoonbill			C				C		C	B	C	B
93	B	A032	*Plegadis falcinellus* glossy ibis			C				C		D			
94	B	A141	*Pluvialis squatarola* grey plover			C				R		C	B	C	B
95	B	A005	*Podiceps cristatus* Great Crested Grebe			R	50		p	C		D			
96	B	A008	*Podiceps nigricollis* black-necked grebe			C	24		i	P		D			
97	B	A118	*Rallus aquaticus* water rail			W	2		i	V		D			
98	B	A132	*Recurvirostra avosetta* pied avocet			R		40	p	C		C	B	C	B
99	B	A132	*Recurvirostra avosetta* pied avocet			C	50	150	i	C		C	B	C	B
100	B	A336	*Remiz pendulinus*			R				C		D			
101	B	A249	*Riparia riparia* sand martin			R				C		D			

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No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
102	B	A249	*Riparia riparia* sand martin			C				C		D			
103	B	A276	*Saxicola torquata* **Common** stonechat			C				C		D			
104	B	A195	*Sterna albifrons* Little Tern			R	4	8	p	C		C	B	C	B
105	B	A195	*Sterna albifrons* Little Tern			C	50	70	i	C		C	B	C	B
106	B	A193	*Sterna hirundo* common tern			R	30	80	p	C		C	B	C	B
107	B	A193	*Sterna hirundo* common tern			C	800	1500	i	C		C	B	C	B
108	B	A351	*Sturnus vulgaris* common starling			C				C		D			
109	B	A004	*Tachybaptus ruficollis* little grebe			R	4		p	C		D			
110	B	A004	*Tachybaptus ruficollis* little grebe			C	30		i	C		D			
111	B	A161	*Tringa erythropus* spotted redshank			C	440	600	i	P		C	B	B	B
112	B	A164	*Tringa nebularia* common greenshank			C	200		i	P		D			
113	B	A165	*Tringa ochropus* green sandpiper			C	90		i	P		D			
114	B	A163	*Tringa stagnatilis* marsh sandpiper			C	120	130	i	P		D			

No crt.	Species					Population						Sit			
	Group	Code	Scientific name	S	NP	Type	Size		Unit. measure	Categ.	Quality. date	A | B | C | D	A | B | C		
							Min.	Max.		C | R | V | P		Pop.	Conserv	Isolation	Global
115	B	A162	*Tringa totanus* common redshank			C	1200	2000	i	C		C	B	C	B
116	B	A283	*Turdus merula* Common Blackbird			C				C		D			
117	B	A285	*Turdus philomelos* song thrush			C				C		D			
118	B	A232	*Upupa epops* Eurasian hoopoe			C				C		D			
119	B	A142	*Vanellus vanellus* northern lapwing			C	2100	3000	i	R		C	B	C	B

□ Group:
□ A = Amphibians
□ B = Birds
□ F = Fish
□ I = Nevertebrates
□ M = Mammals
□ P = Plants
□ R = Reptiles
□ Code = Four-character sequential code for each species
□ S = Confidentiality
□ NP = Not present
Population
ϖ Type:
♣ (P) - Permanent: found at the site throughout the year (non-migratory species or plants, resident populations of some migratory species);
♣ (R) - Reproductive: use the site for rearing young (e.g. for breeding, nesting);
♣ (C) - Concentration: the site is used as a staging point, nesting area, stopover during migration or for nesting outside breeding areas, excluding wintering;
♣ (W) - Wintering: the site is used during winter.
ϖ Size: known population data, in terms of abundance, if available
ϖ Unit of measure: i = individuals, p = pairs
ϖ Abundance category:
♣ (C) - Common;
♣ (R) - Rare;
♣ (V) - Very rare;
♣ (P) - Present.
ϖ Data quality:
♣ G - "Good" (e.g., based on studies);
♣ M - "Average" (based on partial data, extrapolated to some extent);
♣ P - "Poor" (e.g. based on estimates);
♣ DD - "Insufficient data".

ϖ Population size and density of the species present in the site, in relation to the populations present on the national territory:
♣ A - the population present on the territory of the site represents at least 15% of the populations
present on the national territory
♣ B - the population present on the territory of the site is between 2-15% of the national populations.
present on the national territory
♣ C - the population present on the territory of the site represents less than 2% of the national population.
populations present on the national territory
♣ D - the population present on the territory of the site is insignificant
ϖ Conservation - degree of conservation of habitat features that are important for the species:
♣ A - excellent conservation
♣ B - good conservation
♣ C - medium or low conservation
ϖ Isolation - degree of isolation of the population present at the site from the normal range of the species:
♣ A - (almost) isolated population
♣ B - population not isolated, but at the limit of its distribution
♣ C - non-isolated population with an extended distribution
ϖ Global assessment - overall assessment of the value of the site for the conservation of the species:
♣ A - excellent value
♣ B - good value
♣ C - significant value

Conservation importance of the site
The site, located in the lower Danube valley, including its confluence with the Vedea river, is important for the conservation of a very rich avifauna. Some 25 species are protected in the European area, nesting, wintering or just passing through the site due to its position close to the Central European-Bulgarian migration route. The area is important for the nesting of the shoveller, Little Egret, Night Heron, Yellow Heron, Red Duck, stilts, common terns, Littleterns and raptor. During the migration period the area is crossed by very large flocks of water-related bird species that feed or roost on the site such as red duck, little cormorant, common terns and many species of ducks and shorebirds. Also during the passages large flocks of Red-Footed Falconv, marsh harrier, and harrier and raptor are observed.

In winter, birds such as marsh harrier, harrier, great egrets, little cormorants, raptor and various species of ducks find the site suitable conditions for resting and feeding, most of them being confined to water areas that do not freeze during the season.
The main habitat classes present within the site are:

Table 1. Habitat classes present in ROSPA0108 Vedea - Danube
Code Habitat classes Coverage (%)
N04 Sandy beaches 0.13
N06 Rivers, lakes 12.73
N07 Marshes, peat bogs 3.76
N12 Crops (arable land) 51.86
N14 Grassland 13.68
N15 Other arable land 1.16
N16 Deciduous forests 14.3
N21 Vineyards and orchards 0.93
N23 Other artificial land (settlements, mines..) 0.2
N26 Forest habitats (forests in transition) 1.24
Vulnerability
Logging and replacement of fences with hybrid poplar plantations is a threat to colonial and raptor bird species, which are affected by the loss of nesting habitat. The extraction of sand and gravel has a negative impact by disturbing birds at feeding and resting sites. Sport fishing has negative impacts when it is carried out in places frequented by birds for resting and feeding, especially during passage. Hunting and poaching reduce populations of some species and cause disturbance throughout the community. Agriculture (through the use of pesticides) has a negative impact on crop-feeding birds (raptors and roller).

Table 26. Bird species listed in Annex I of Council Directive 2009/147/EC that are reported in the Standard Form of ROSPA0108 Vedea – Danube

Species	Information/Attribute	Description	
Bird species listed in Annex I to Council Directive 2009/147/EC			

Accipiter brevipes	Code Species	A 402
	Scientific name	*Accipiter brevipes, (Severtzov, 1850)*
	Popular name	Levant Sparrowhawk
	Species description	The short-legged hawk is a characteristic species of low-lying woodlands near water. Body length is 30-37 cm and weight 169 g for males and 215 g for females. The wingspan ranges from 63-76 cm. The male is blue-grey on the back with blackish wing tips. The female is grey-brown with blackish wing tips. Feeds on insects, lizards, birds and small mammals.
	Habitat requirements	it is a species found in south-eastern Europe. It reaches sexual maturity in the first year of life. It nests at the edge of forests in trees. The nest is built every year and sometimes occupies abandoned nests of crows or magpies. Although it usually hunts by day, it also catches bats at dusk. It migrates in large flocks and leaves Europe through the Bosphorus. It winters in Africa.

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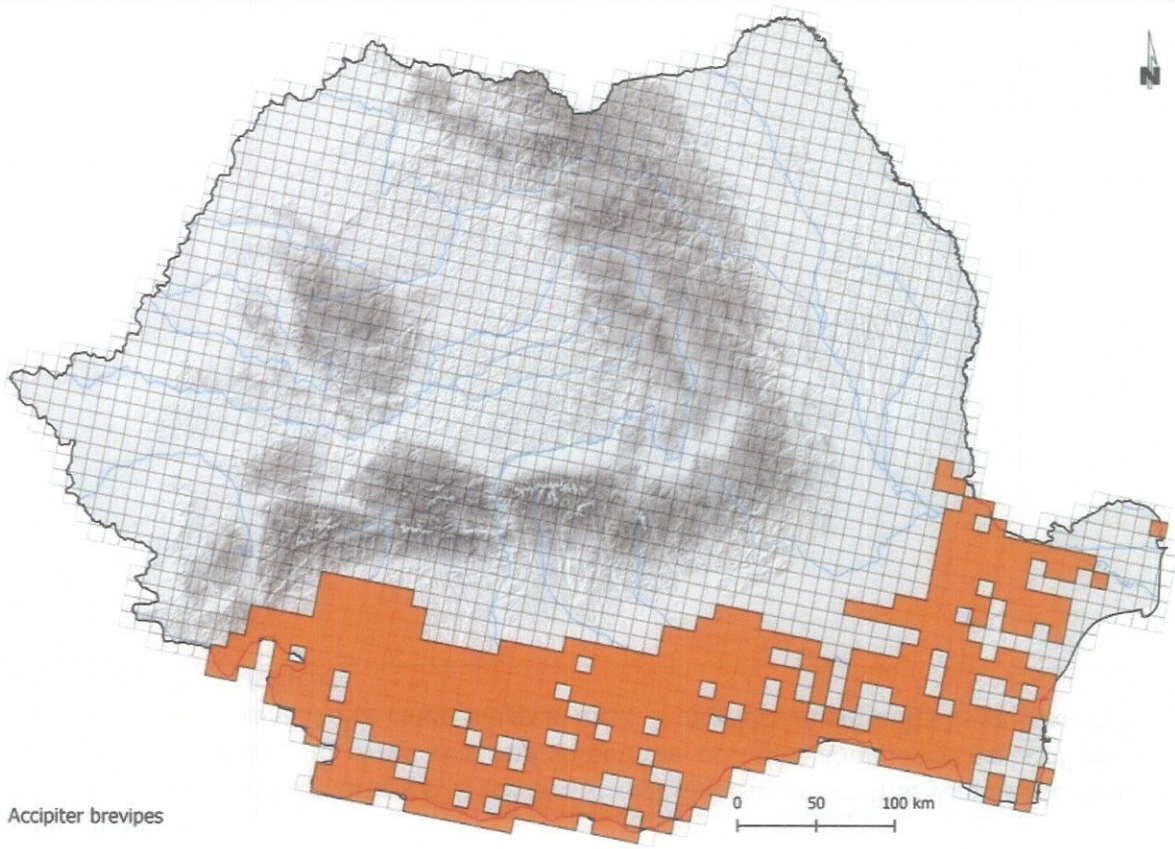
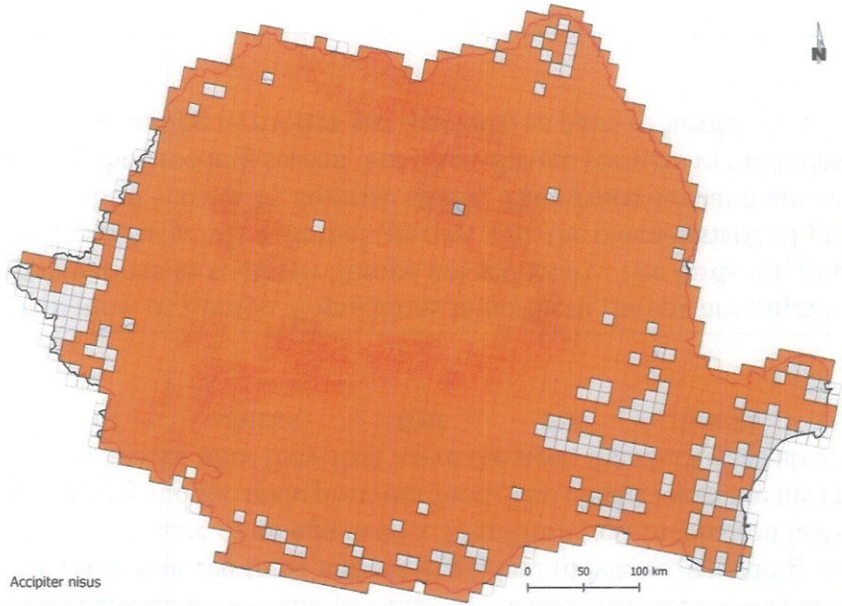
	The habitat of the species	 Distribution of the species Accipiter brevipes (source www.pasaridinromania.sor.ro)
	Population	The European population of the species is small, ranging between 3200-7700 pairs. It remained stable between 1970-1990. Although the population remained stable over most of the territory between 1990 and 2000, in Russia it has shown a moderate decline, resulting in a general downward trend. In Romania, the estimated population is 60-100 pairs. The highest numbers are found in Russia, Greece and Turkey.

	Threats and conservation measures	The intensification of agriculture and the development of recreational activities along rivers are the main threats to the species.
Accipiter nisus	Code Species	A 086
	Scientific name	*Accipiter nisus, (Linnaeus, 1758)*
	Popular name	Sparrowhawk
	Species description	It lives in woodland areas, but prefers to hunt in open spaces, such as woodlands, parks and gardens in areas close to towns. It is a small bird of prey with a length of 28-38 centimetres and a wingspan of 58-80 centimetres. The female weighs between 185 and 342 grams and is 25% larger than the male, which can weigh between 110 and 196 grams. The short, broad wings have rounded tips and the tail is long. The male has a reddish-brown breast and grey back. The female is brownish with a whitish breast streaked with grey stripes. Both have yellow eyes and legs. They hunt small birds and sometimes small mammals. In the wild, life span is seven years. Usually, the passerine hawk has between three and six eggs, laid in May. Depending on the area, hawks may lay eggs from April to August. The average size of an egg is 40 x 32 millimetres. Incubation lasts between 32 and 34 days, after which the female feeds the young and the male provides food. The chicks leave the nest after another 27 or 31 days, but return to be fed. Three to four weeks after they first leave the nest, the chicks are able to feed themselves. This is the only generation of chicks that the hawks raise each year.
	Habitat requirements	It is a widespread species in most of Europe. Populations in northern Europe are migratory, those in central Europe are partly migratory, while populations in southern Europe are sedentary. The birds migrate over winter to Africa, as well as to southern and south-eastern Asia. It is a diurnal species, with the characteristic of gliding flight and with the help of its wings, hunts other diurnal bird species by surprise attack. They reach sexual maturity in the first three years of life. Pairs are monogamous during the breeding season, but often change partners in the following year. Nests are built at the junction of tree branches, and breeding territories are spacious, as pairs of hawks do not tolerate other nests in the area.

	Habitat of the species	
	Population	The total European population is between 340,000 and 450,000 pairs of chickens. Their numbers increased between 1970 and 1990, and despite the current decline in several countries, the key population has remained stable.
	Threats and conservation measures	Although several organochlorine pesticides caused declines in hawk populations in the 1950s and 1960s and were banned, the use of legal pesticides in agriculture still has a negative effect. Either the hawks themselves are affected or the bird populations on which the hawks feed are reduced. Forestry work often results in the destruction of nests. In conclusion, tree felling should take place outside the breeding season and pesticide levels should be closely monitored.
Acrocephalus arundinaceus	Code Species	A298
	Scientific name	*Acrocephalus arundinaceus, (Temminck & Schlegel, 1847)*
	Popular name	Great Reed Warbler

	Species description	It lives in areas with aquatic vegetation, especially in reed and cane thickets at low water. Europe's largest wader has a body length of 19-20 centimetres, a wing span of 25-29 centimetres and a weight of 22-31 grams. It is light brown on the upperparts, white on the underparts, with whitish sides and a dark stripe at eye level. The beak is long and heavy and the tail is also long. There is no great difference between male and female. The diet consists mainly of insects and other invertebrates, occasionally small vertebrates, and in autumn it also eats fruit. The longest-lived bird in the wild reaches the age of 10 years. They mate between March and July, depending on the area. The female lays between three and six eggs which she incubates for two weeks. Both parents feed the young, which leave the nest 12-14 days after hatching. Rarely, females also produce a second litter of young per year (www.sor.ro).
	Habitat requirements	It is a summer visitor to Europe. The birds spend the winter in sub-Saharan Africa, leaving their nesting sites in August and arriving back in Europe in March, or April at the latest. It is a diurnal species, catching insects as it burrows through low vegetation. Each spring, the male attracts a female by singing as loudly as he can, and once he has found her, he sings to protect and mark his territory. Sometimes it is monogamous, but some males also have two or three mates. The female braids a nest of leaves around reed stems about a metre above the water. (www.sor.ro)

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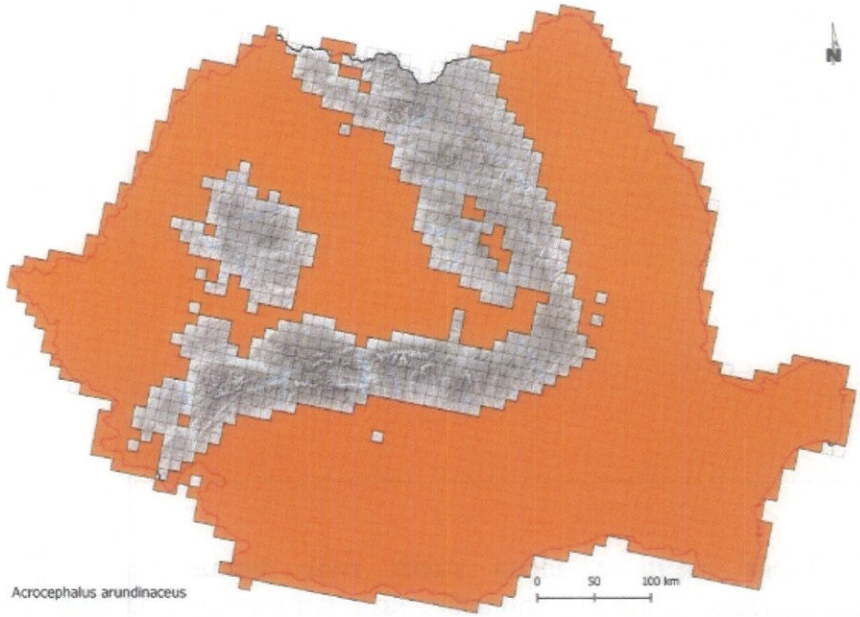
	Habitat of the species	Distribution of Acrocephalus arundinaceus (Source: www.sor.ro) 
	Population	The breeding population in Europe is very large, numbering between 1.5 and 2.9 million pairs. Some western bird populations declined between 1990 and 2000, but key populations in eastern areas, including Romania, have remained stable (www.sor.ro) In the Natura 2000 form the population of the species is marked D, which means that the site has a low population density compared to the national average (not significant).
	Threats and conservation measures	The decline of the species has been blamed on habitat loss and the decline of reed-covered areas. The species nests in reed beds, so it is important that such areas are conserved. Habitat loss is due to the draining of ponds and the conversion of these locations to agricultural land (www.sor.ro).
Acrocephalus schoenobaenus	Code Species	A295

	Scientific name	*Acrocephalus schoenobaenus, (Linnaeus, 1758)*
	Popular name	sedge warbler
	Species description	Upper body strongly streaked, with spots more extensive than in Acrocephalus melanopogon (in worn plumage, they fade). Distinct, long, light cream brow (not white as in the figure). Similar to pipirigus lacewing and pond warbler (see in these species). Unbranched, yellowish-brown tarantula. Grey legs. Juveniles may have faintly striped breast and a faint creamy stripe on crest, though never so conspicuous as the pipirig's sandpiper. Raucous alarm call: tcerr. Often sings in the middle of the night (the reed warbler prefers dusk and dawn). During the day it often performs a short, almost vertical flight over the reed, accompanied by song. Varied song, with many imitative sounds and harsh, angry calls. It is similar to that of the reed warbler, but with a more hurried and varied tempo, giving it a feverish, agitated tone (remember the basic rule: little warbler - temperamental singer, reed warbler - relaxed singer). Often recognizable by the fast crescendo, accelerated by nervous notes that turn into melodic whistles. Similar in alternating 1-2 high-pitched sounds with several caroused (ragged) sounds, often with a finale of high-pitched sounds. Food consists of insects and their larvae, but it also eats spiders, grasshoppers or small snails; outside the breeding season it may also eat earthworms or plants. It also feeds on elderberries and berries. It hunts insects in the low part of dense vegetation, standing with its feet hanging on two stalks of reeds with the performance of an acrobat, sometimes upside down. (https://www.chettusia.com/ro/birds/lacar-mic-acrocephalus-schoenobaenus)
	Habitat requirements	Nests in a variety of dense, low-lying vegetation, often close to water or in wet depressions, including vegetation at the edge of pools, streams and canals, marshes with reed beds, reeds, but avoiding reeds in standing water. It also breeds in drier habitats such as abandoned orchards, hedgerows, dense scrub, agricultural crops, which are no more than 500 m from the aquatic habitat. (https://www.chettusia.com/ro/birds/lacar-mic-acrocephalus-schoenobaenus)

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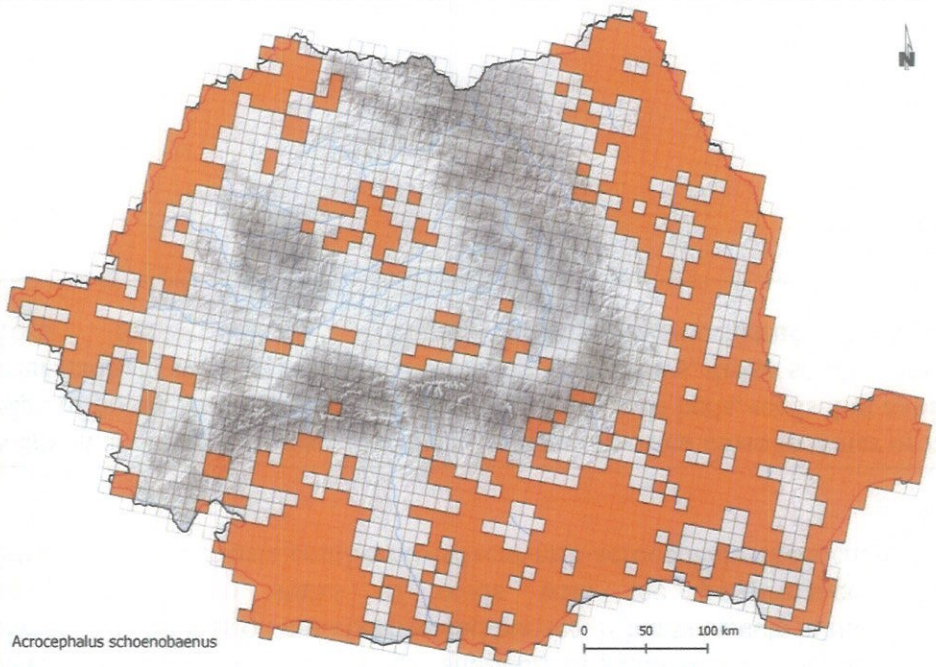
	Habitat of the species	 Distribution of Acrocephalus schoenobaenus (source www.sor.ro)
	Population	In Europe, the breeding population is estimated at 3,830,000-6,440,000 pairs. (www.iucnredlist.org) In the Natura 2000 form the population of the species is marked with D which means that the site has a low population density compared to the national average (not significant).
	Threats and conservation measures	The decline of this species in Europe has been attributed to severe droughts. (www.iucnredlist.org)
Acrocephalus scirpaceus	Code Species	A297
	Scientific name	*Acrocephalus scirpaceus, (Hermann, 1804)*
	Popular name	common reed warbler

	Species description	The common reed warbler, *Acrocephalus scirpaceus* occupies old reed habitats along lakes, rivers, marshes and canals, often foraging in nearby open reed habitats. Rarely occurs on agricultural land. It forages on vegetation or in the air in the territories around the nest; occasionally it hunts in nearby farmland or scrub. It consumes insects and their larvae, especially diptera and leaf lice, but also spiders, worms and snails. Occasionally it also chooses plant food (fruits, seeds and flowers). The species is monogamous in principle, but occasionally bigamy can be encountered. The nest is placed between 2-8 reed stems, above the water, at a height of 15-200 cm, and is usually built by the female. During a breeding season the nest is raised 40-90 cm due to the growth of the reed stems between which it is trapped. The clutch consists of 3-5 eggs, which are hatched by both sexes for 8-13 days. The chicks become independent 10-14 days after leaving the nest.The species is frequently parasitized by the cuckoo (Cuculus canorus).Like other wrens, it can mimic the calls of other bird species.
	Habitat requirements	It is frequently found in reedbeds; it may also visit dense bushes or bushy gardens.

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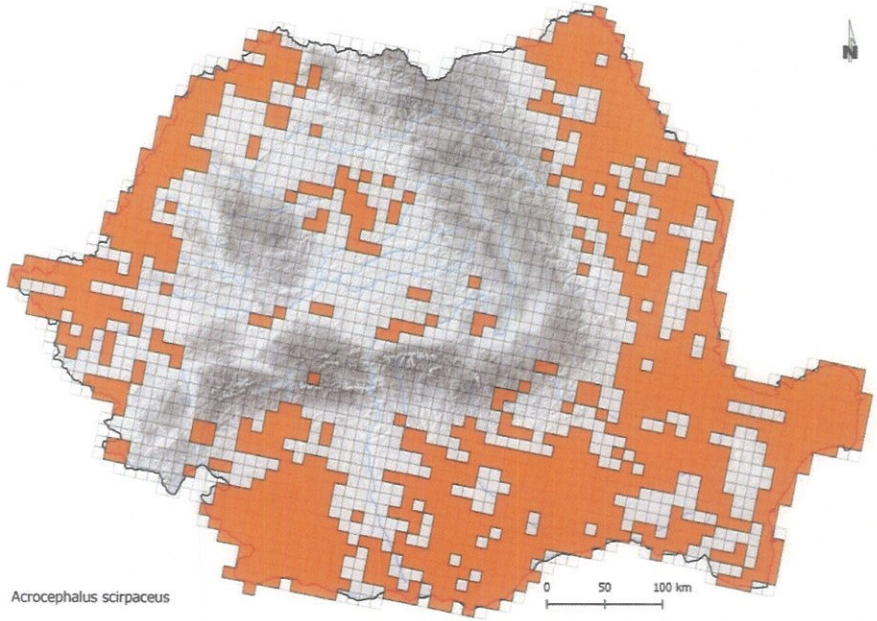
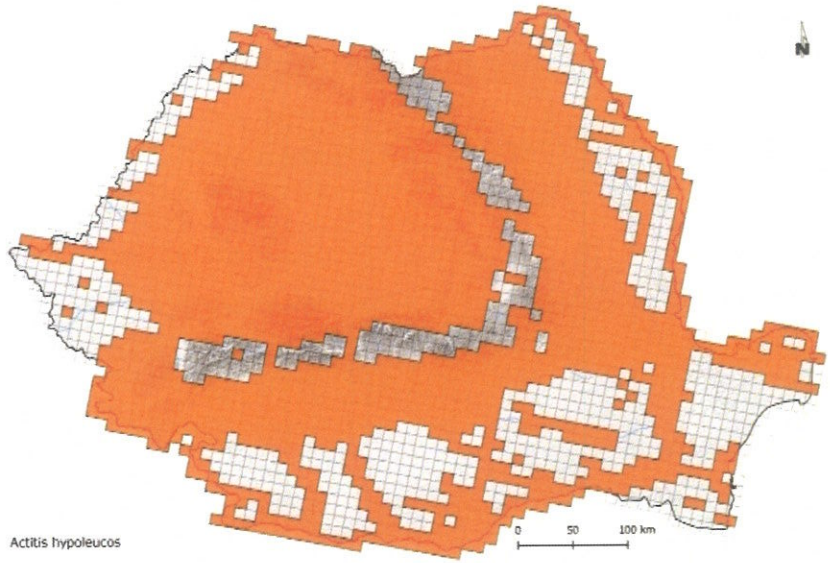
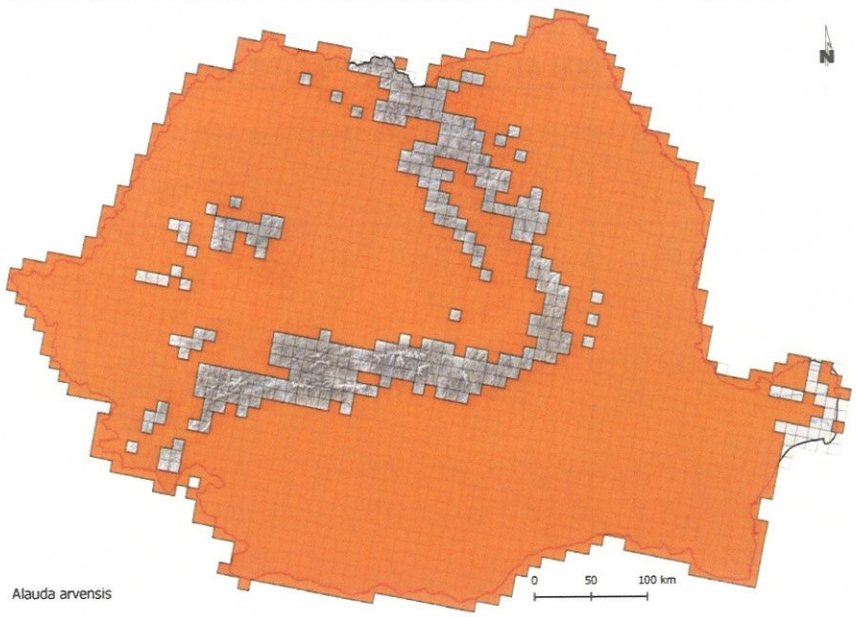
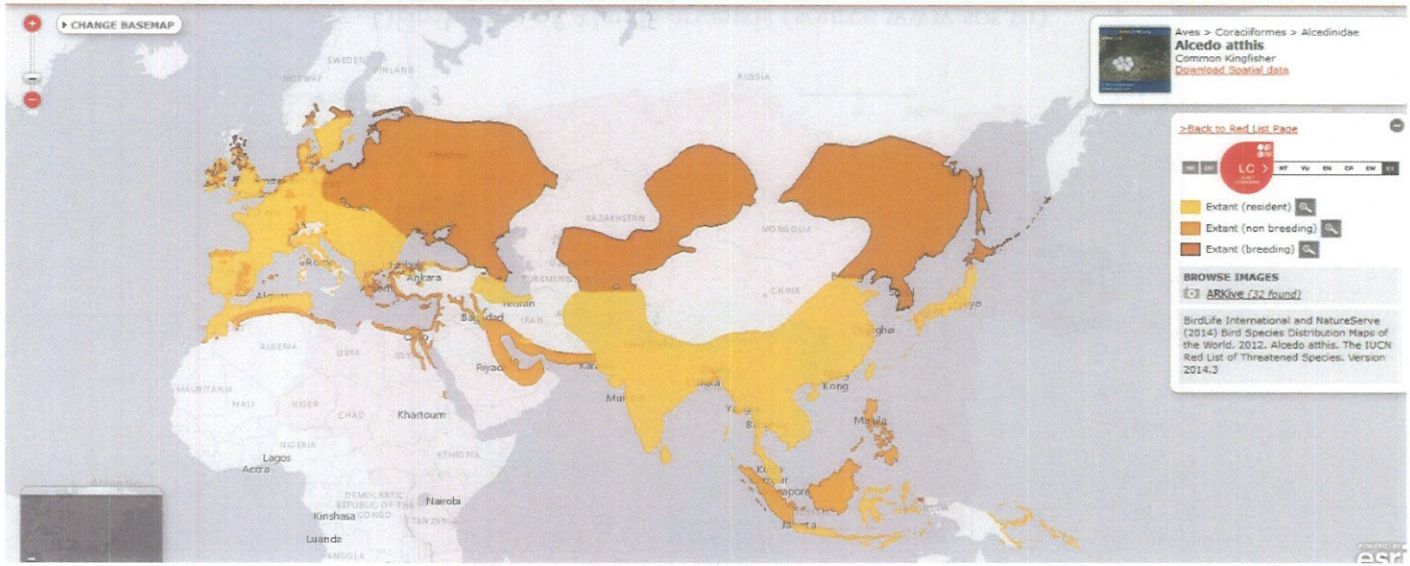
	Habitat of the species	 Distribution of Acrocephalus scirpaceus (source www.sor.ro)
	Population	In Europe, the breeding population is estimated at 2 120 000-3 880 000 pairs. (www.iucnredlist.org) In the Natura 2000 form the population of the species is marked with D which means that the site has a low population density compared to the national average (not significant).
	Threats and conservation measures	Species have declined in some areas due to habitat destruction and eutrophication. (www.iucnredlist.org)
Actitis hypoleuco	Code Species	
	Scientific name	
	Popular name	
	Habitat requirements	

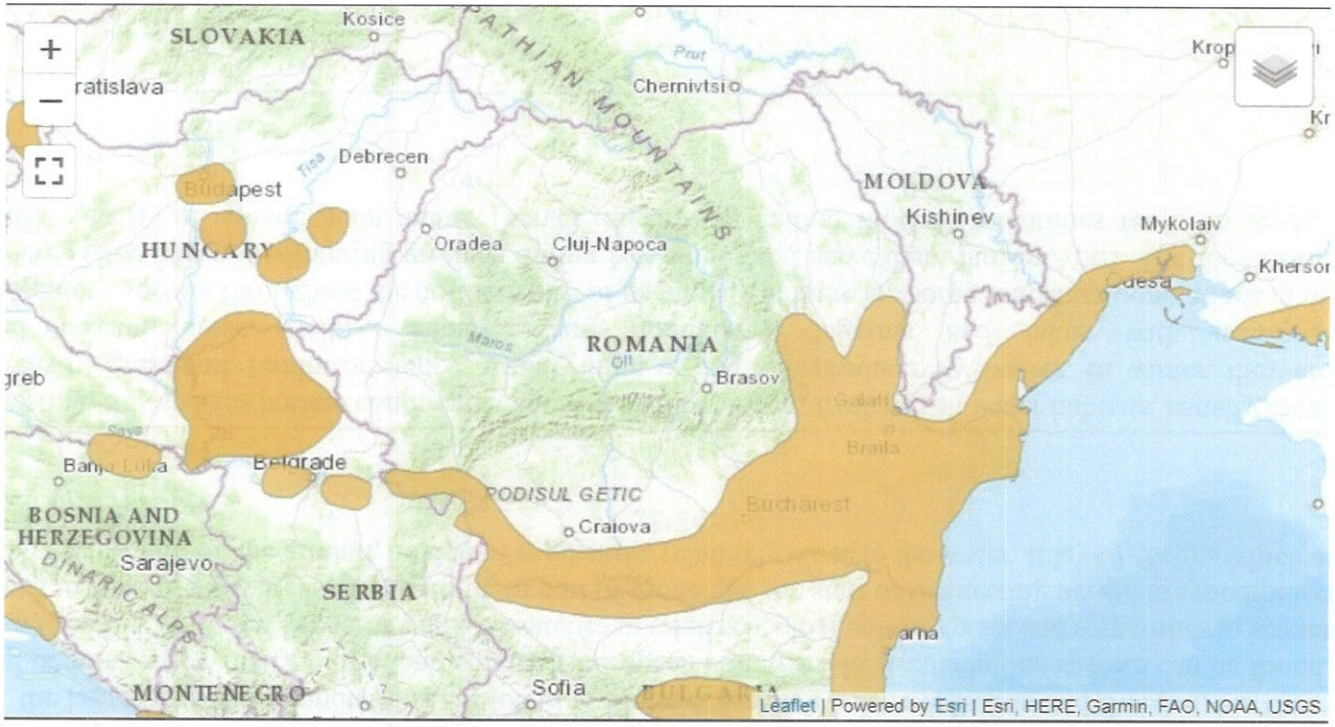
	Habitat of the species	 Distribution of Actiytis hypoleucos (source www.sor.ro)
	Population	The European population consists of about 720,000 to 1.6 million pairs, although the species suffered a decline between 1990 and 2000.
	Threats and conservation measures	Some populations have experienced declines due to human intervention in nesting areas, one example being fishermen.
	Code Species	A 247
	Scientific name	*Alauda arvensis,* (Linnaeus, 1758)
	Popular name	Skylark
	Species description	The woodpecker is a widespread species throughout Europe and Asia. Central and northern European populations, those of the Balkan Peninsula, northern Africa, as well as those of Russia, Kazakhstan and southern Asia are entirely migratory, while those of western, southern and south-western as well as south-eastern Europe and the south-central region of Asia as far east as the continent are sedentary populations. There is also a small population of skylarks in southeastern Australia and New Zealand, where the species has been introduced according to studies. They prefer steppe and lowland habitats with abundant grassy vegetation. The colouring is generally light brown with dense dark patches, white abdomen and

		whitish hindwing margin. It has a small crest on the head compared to the lark whose crest is much more pronounced. The body length is 18-19 cm and the wing span is 30-36 cm, with a body mass of 45-55 g. Maximum longevity in the wild is 10-11 years. Females lay 3-5 eggs in May-June, incubation is 11-15 days. The chicks are fed by both parents until 8-10 days of age, leaving the nest and becoming independent after about 25 days. Pairs have only one clutch per year.
	Habitat requirements	The central, northern and eastern European migratory population of the skylark migrates seasonally, moving south during the winter months of September-October and returning to nest in March-April of the following year. Nesting takes place between June and August, with monogamous pairs forming relatively early in April-May. When forming pairs both partners rise from the ground, reaching up to 50-100 m, pirouetting around each other and following each other singing at the same time on different tracks, then descending to the ground with pauses to hover in the air. The nest is built directly on the ground in a recess lined with leaves and straw, the inner part also having finer material such as hair and spider webs. Both partners care for the chicks, feeding them insects and seeds. In autumn they become silent, gathering in small flocks, mostly on the heaths, with very few remaining in winter. The birds become active for breeding in their second year of life.

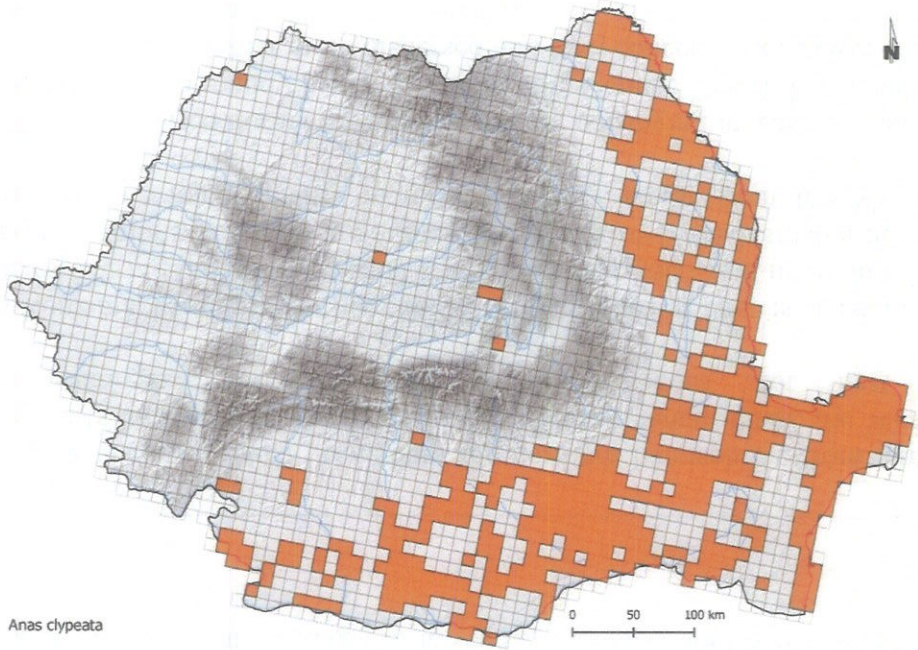
	Habitat of the species	 Distribution of Alauda arvensis (source www.sor.ro)
	Population	The European population is relatively large, numbering between 40,000,000 and 80,000,000 breeding pairs, and has been declining between 1970 and 1990. Although the European population suffered declines between 1990 and 2000 in some countries, it remained stable in Eastern Europe, but suffered declines overall. In Romania the population of the species numbers about 460,000-850,000 breeding pairs.
	Threats and conservation measures	The species is threatened by degradation and loss of suitable habitat, as well as over-hunting in some eastern European countries.
	Code Species	A 229
	Scientific name	*Alcedo atthis, (Linnaeus, 1758)*
	Popular name	common kingfisher
	Species description	The common kingfisher is characteristic of wetlands, represented by rivers, canals, freshwater lakes and brackish coastal areas. Body length is 17 - 19.5 cm and weight 34 - 46 g. The wingspan is about 24 - 28 cm. Adults are similar in appearance with one exception, the female having a red spot at the base of the mandible. The plumage on the back, depending on the

		direction of the light rays, is bright blue or green, and is an impressive sight. On the breast and abdomen it is orange-reddish. Feeds on fish and invertebrates. The maximum known longevity in the wild is 21 years, but only a quarter of adults live more than one season. It is present where the water is clean and provides a good view of the fish and is an indicator species of water quality. It hunts by standing on the branches of bushes or trees overhanging the water and dives into the water catching its prey, or flies at close range over the water. It is monogamous and territorial, requiring a daily food intake equivalent to 60% of its weight, which means it controls a territory of 1 to 3.5 km along the water course. The mating ritual is initiated by the male chasing and feeding the female. It nests in the riverbank, where the pair digs a 60 - 90 cm long tunnel ending in a round chamber.
	Habitat requirements	They inhabit the beds of rivers and streams with clear, slow-flowing water and lakes with abundant vegetation along their banks. In winter it prefers more open shores, feeding in estuaries and areas of prundice.
	Habitat of the species	
	Population	The European population is relatively small and ranges between 79 000 - 160 000 pairs. It has seen a moderate decline between 1970 and 1990. Although the population fluctuated or even increased between 1990 and 2000, it has not yet

		recovered from the previous decline (www.sor.ro). According to the standard form, the population of the species is marked with a D, which means that the corridor has a low population density compared to the national average (15 - 25 pairs).
	Threats and conservation measures	Habitat degradation and riverbank development lead to loss of nesting sites. Severe winters when river waters freeze cause high mortality in this species because it cannot feed. Flooding in spring can destroy nests or reduce the feeding potential of young. The creation of vertical earth walls along river banks helps to increase nesting territories.
	Code Species	A 054
	Scientific name	*Anas acuta,* (Linnaeus, 1758)
	Popular name	northern pintail
	Species description	A migratory species that nests mainly in northern Europe, Asia and North America, in Arctic and sub-Arctic areas. In Europe, the largest breeding populations are found in Finland, Iceland, Norway, Russia and Sweden, but there are small breeding populations in many central and southern European countries. In Romania this species can be found mainly in winter and passage, with few breeding pairs. It watches in relatively close solitary pairs and sometimes in scattered groups from April to June in most areas. In the northern part of the range, the start of the nesting period is synchronised with the thaw. The nest is built on the ground, hidden in vegetation, relatively close to the water. It lays 7-9 eggs which are hatched for 22-24 days.
	Habitat requirements	When nesting, this species prefers continental, aquatic, shallow, open, fresh or salt water habitats, usually located in low-lying areas of grassland, tundra or steppe, usually high or medium productivity waters. In winter, they are found in sheltered coastal areas, deltas, estuaries and floodplains, lagoons and lakes with nearby farmland. It is a migratory species throughout the northern part of its range, but there are some sedentary populations in the southern hemisphere. They arrive in wintering grounds during November and leave them during April. The food of the common merganser consists of aquatic plant matter (leaves, algae) and animal food. It sometimes feeds on seeds, roots and rhizomes on the ground.

	Habitat of the species	 Distribution of Anas acuta (source www.iucnredlist.org)
	Population	Worldwide, the species is estimated at 5 300 000 - 5 400 000 individuals, with a decreasing trend. In Europe the breeding population is 320 000 - 360 000 pairs, with a moderate decline, and the wintering population in Europe is about 120 000 individuals.
	Threats and conservation measures	The main threat to this species is the loss of aquatic nesting and wintering habitats due to anthropogenic influence. Other threats include water pollution, disturbance from human presence and activities, burning of aquatic vegetation, hunting. Conservation measures directly target threats to the species and include effective wetland management, limiting disturbance and pollution.
	Code Species	A 056
	Scientific name	*Anas clypeata,* (Linnaeus, 1758)
	Popular name	northern shoveler

	Species description	It is a medium-sized duck species. As with all duck species, sexual dimorphism is pronounced. The female has an overall brownish, marbled colouring, perfect for camouflage during egg laying. The male is brightly coloured, head green, breast and side outline white, central flanks chestnut, back and butt black. The male has a light blue mirror (group of coloured wing feathers) and the female green. Characteristic of both sexes is the large beak, very broad at the tip. The body length is 44-52 cm and the average weight is 410-1100 g. Wing span is between 73-82 cm. The genus name (Spatula) is the Latin word for spoon - referring to the shape of the beak, and the species name comes from the Latin word clypeata, meaning shield bearer (from clypeus - shield, also referring to the shape of the beak). The breeding season begins in April and egg-laying takes place from the first part of this month. The female usually lays 9-11 eggs, which she hatches alone. The male usually defends the territory of the pair. Incubation lasts 22-27 days. The chicks become fledglings at 36-45 days. Birds nest singly, sometimes in loose groups, placing nests a few metres apart. Nests are placed near water, directly on the ground, hidden in vegetation; nests singly or in scattered groups, not necessarily in aquatic vegetation (sometimes wet meadows).
	Habitat requirements	Distribution The species nests over a very wide area throughout the northern hemisphere, from temperate to boreal climates. In Romania, the species nests locally in lowland areas of the Transylvanian Plain, the Western Plain, along the Olt, the wetlands of the Bărăgan or along the coast. It does not nest in the Danube Delta. Phenology The species nests in Romania, being present here all year round. The presence is constant, but in much smaller numbers than other duck species. During the nesting period it is widely dispersed, and in autumn it gathers in larger numbers in lowland areas on aquatic habitats. Numbers are highest in autumn, with much smaller numbers remaining in the country over winter, as the species winters mainly in more southerly areas (from the Mediterranean to central Africa). Habitats In Romania it is relatively localised during the nesting season, occupying extensive aquatic habitats in low-lying areas, rich in marsh vegetation and with muddy banks (excluding the Danube Delta). In the autumn season it gathers in large numbers on open water surfaces, at first more dispersed and then concentrated. Fewer individuals remain in the winter season, with most wintering in Mediterranean areas. Food The Merganser is omnivorous but predominantly carnivorous, with much of its diet consisting of aquatic invertebrate species (molluscs, crustaceans, insects, worms) which it consumes in muddy areas of shore and shallow water. They also consume plant matter, especially parts of floating plants.

		Other information The special system of blades inside its beak helps it filter out slime to retain invertebrates on which it feeds.
	Habitat of the species	 Distribution of Anas clypeata (source www.sor.ro)
	Population	The global population is estimated at more than 6 500 000 - 7 000 000 individuals. The European population is estimated at 170 000 - 233 000 pairs. In Romania, estimates show a population of around 300 - 1800 breeding pairs. With such a large population and a huge range, the species is classified as 'Low Risk'. The population trend in Europe is considered stable, although globally the population is declining. In Romania the population trend is as yet unknown.
	Threats and conservation measures	It is threatened by wetland degradation/disappearance, and habitat pollution. Additionally, in some areas of its range, it is threatened by nest predation by invasive species, lead pollution (due to hunting, although this species is not of major concern).

	Species Code	A 052
	Scientific name	*Anas crecca,* (Linnaeus, 1758)
	Popular name	*wild duck*
	Species description	*The wild duck* is a very wide-ranging species, its range includes all of Europe, North America and Asia. It breeds in the northern and temperate parts of its range. In Romania, it can be found especially in the passage and winter period, in a variety of aquatic habitats: shallow coastal waters, natural and artificial lakes, ponds, estuaries, deltas, lagoons and marshes. In the nesting season there are small populations in Transylvania and northern Moldavia, in mountain, depression and coastal aquatic areas. Except for the nesting period, the grebes gather in small flocks. Pairs form in winter, nesting starting in April. The nest is built on the ground in dense vegetation near water. They lay 8-11 eggs which are incubated for 21-23 days.
	Habitat requirements	The preferred nesting habitats for this species are shallow, permanent waters with dense, grassy vegetation, especially those in the vicinity of forests and woodlands. Adjacent vegetation should form a kind of dense plant layer. Prefers small waters, alone or as part of a larger aquatic area, such as ponds, lakes and ponds, slow-flowing rivers. In winter it can also be found on open water, lakes, deltas, flooded fields. Predominantly migratory species, especially northern populations. In the southern part of the range there are small sedentary populations. The tomana migration starts in July for individuals that have failed to breed but peaks in October-November. They return from wintering quarters in March-April. The little duck is an omnivorous species. During the nesting period the food is predominantly small invertebrates, molluscs, crustaceans, larvae. In winter it also feeds on seeds of aquatic plants, plant debris, seeds from farmland.

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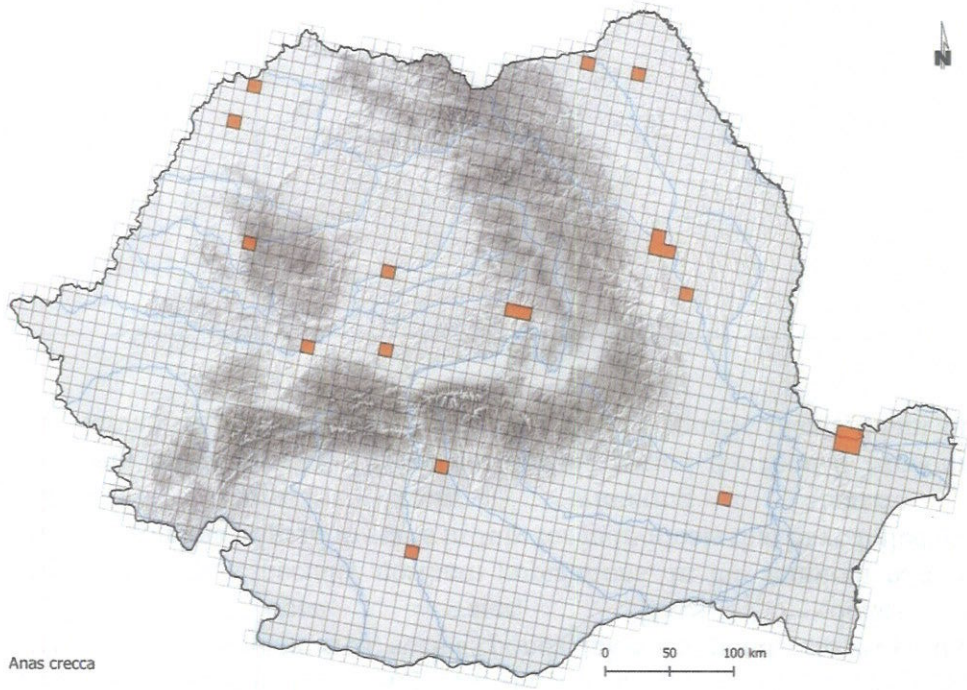
	Habitat of the species	 Distribution of Anas crecca (source www.sor.ro)
	Population	The European breeding population of the Lesser Spotted Duck is estimated at 920,000 - 1,200,000 pairs, the countries with the highest concentrations being Russia, Finland, Norway, Sweden The wintering population in Europe is about 730 000 individuals.
	Threats and conservation measures	This species is threatened by the loss of habitat through the modification of wetlands, the deforestation of the forests adjacent to these areas, the disturbance caused by recreational and industrial activities, pollution and hunting. For the conservation of this species, it is recommended to restrict human activities in aquatic areas, their efficient management, a forest management that also takes into account the conservation of the habitat specific to the small rate and the reduction of pollution.
	Species Code	A 053
	Scientific name	*Anas platyrhynchos,* (Linnaeus, 1758)

	Popular name	wild duck
	Description of the species	It is a species of large duck. As in all species of ducks, sexual dimorphism is accentuated. The female has an overall brown, marbled coloration, perfect for camouflage during egg hatching. The male is brightly colored, metallic green head and neck, thin white ring at the base of the neck, chestnut chest. The body with shades of gray, darker dorsally, and the feathers around the tail, black. Both sexes have the mirror (the colored group of feathers in the wing) of a dark blue color framed by two white stripes. The body length is 50-60 cm and has an average weight of 735-1800 g. The wingspan is between 81-95 cm. The genus name (Anas) is the Latin name for ducks, and the species name comes from the Greek words platys – wide and rinhos – beak/snout, referring to the bird's broad beak feet. The breeding season can start early, even in February, and egg laying takes place from the second part of March - the beginning of April. The female usually lays 9-13 eggs, which the male incubates alone, sometimes defending the territory. Incubation lasts 26-28 days. Chicks become fliers at 50-60 days. Birds nest singly, sometimes in loose groups, placing the nests several meters apart. The nests are located near the water, directly on the ground, hidden in the vegetation; sometimes it can also nest in hollows or on buildings.
	Habitat requirements	Distribution The species nests over a very wide area, throughout the northern hemisphere, from the Mediterranean climate to the boreal areas. In Romania, the species nests throughout the country, from the Danube Delta area to the submontane areas. Phenology The species nests in Romania, being present here all year round. The presence is constant, but it differs in distribution and numbers. During the nesting period it is widely dispersed, and in autumn and winter it gathers in large groups on water surfaces that do not freeze. The number of specimens is higher, being supplemented by northern ducks that come to spend the winter in Romania. habitats It is very widespread and unpretentious, during the nesting period it occupies any kind of aquatic habitat available, from large water expanses (Danube Delta), isolated lakes or river banks, to canals or recreational lakes in cities. Sometimes it also nests at greater distances from water surfaces. In the winter season, it gathers in large numbers, on open water surfaces, at first much more dispersed, and then, concentrated on those surfaces that do not freeze (generally large dam lakes). Food Mallard is omnivorous and opportunistic. It feeds both on the surface of the water, searching with its beak for aquatic plants or invertebrates (insects, molluscs, crustaceans and occasionally small fish) in muddy areas or shallow water, and on land with plant or invertebrate material that it can catch. Other information

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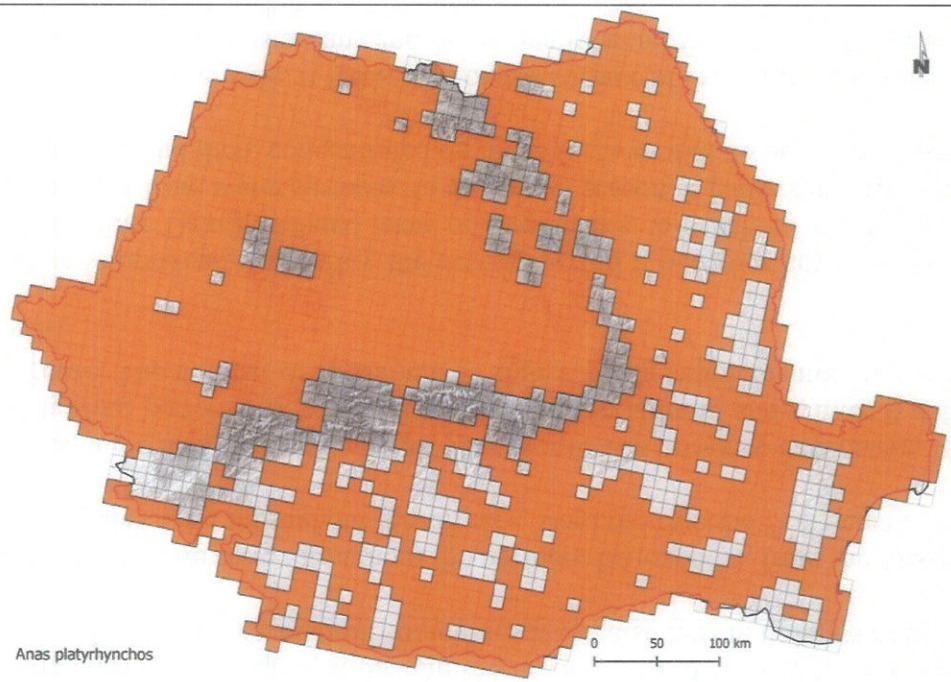
		Most breeds of domestic ducks come from this species. The first domestications took place in Southeast Asia in the Neolithic. Interbreeding often occurs between wild populations and domestic specimens, so there is continuous gene flow between the two categories.
	Habitat of the species	
	Population	The global population is estimated at over 19,000,000 individuals. The European one is estimated at 2,850,000 - 4,610,000 pairs. In Romania, estimates show a population of approximately 61,000 - 75,000 breeding pairs. With such a large population and a huge distribution territory, the species is classified as "Low Risk". The population trend in Europe is considered stable. In Romania, for now, the population trend is unknown.
	Threats and conservation measures	It is threatened by the degradation and disappearance of wetlands, habitat pollution. Burning the reeds or harvesting them at inappropriate times are also serious threats. Being an abundant species, it is heavily hunted, with shooting and lead poisoning also being causes of mortality.
	Species Code	A 043

	Scientific name	*Anser anser,* (Linnaeus, 1758)
	Popular name	greylag goose
	Description of the species	It is a large goose species. The plumage is mostly gray to brown with the upperparts defined by the white edges of the flight feathers. The chest and abdomen are lighter and relatively evenly colored. The legs are pink. The body length is 74-84 cm and has an average weight of 2070-4560 g. The wingspan is between 149-168 cm. Both the genus name and the species name come from Anser, which is the Latin name for geese. The breeding season starts in late March/early April. The female usually lays 4-6 eggs, which she incubates alone, while the male defends the territory. Incubation lasts 27-28 days. Chicks become fliers at 50-60 days. Pairs nest in isolation or in loose colonies. Nests are placed directly on the ground in vegetation, often in swampy areas near water, but sometimes they can also be placed in trees.
	Habitat requirements	Distribution It is distributed throughout the Palearctic region, nesting from Iceland to Kamceatka, in temperate latitudes. It is the only species of goose that also nests in Romania. It winters in Europe in about the same territories, but it migrates further south in difficult winter conditions. Phenology The species nests in Romania, being present here all year round. The presence is constant, but the distribution differs. During the nesting season it is widely dispersed, and starting from summer it gathers in larger groups, at first for raising young and moulting, and later for wintering. habitats During the nesting period, it prefers vast wetlands, associated with large rivers in lowland areas. The highest density is found in the Danube Delta and the lagoon system. In winter, it prefers low-lying, plain areas rich in autumn agricultural crops or areas with natural grassy vegetation. Food The species is herbivorous, consuming very diverse plant matter: herbs, buds, roots, etc. During the nesting period they feed mainly on plant material from agricultural crops, such as the emerging leaves of wheat, rape or other autumn agricultural crops. Other information During the pre-migration period, birds gather in large groups for moulting - usually in different water areas. During this period, which lasts up to a month, the birds are unable to fly, being thus very vulnerable.
	Habitat of the species	

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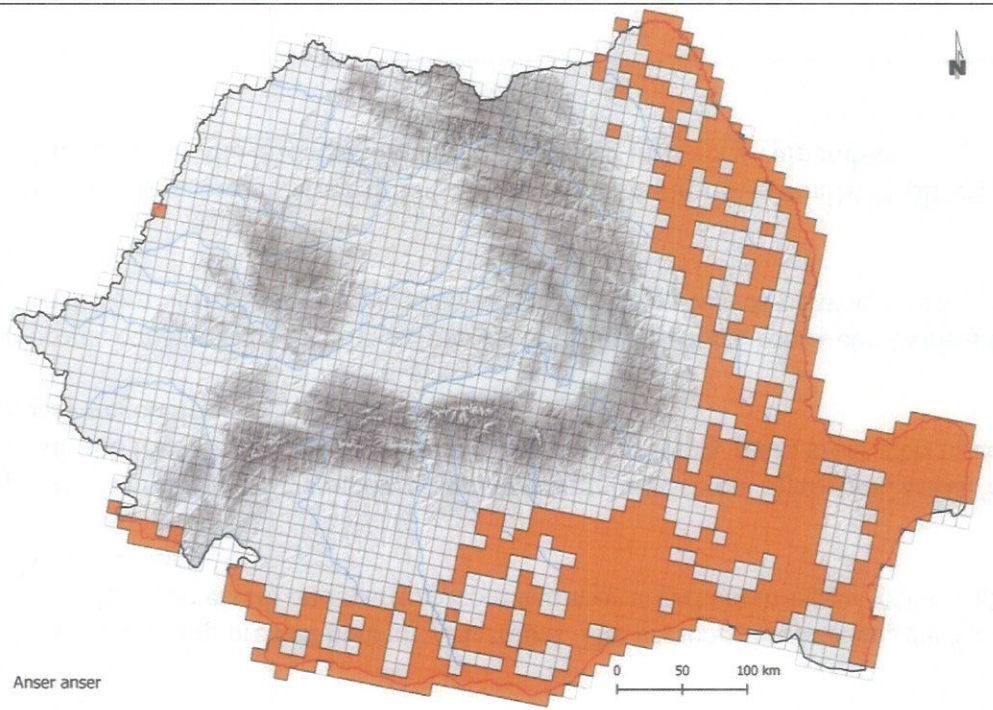
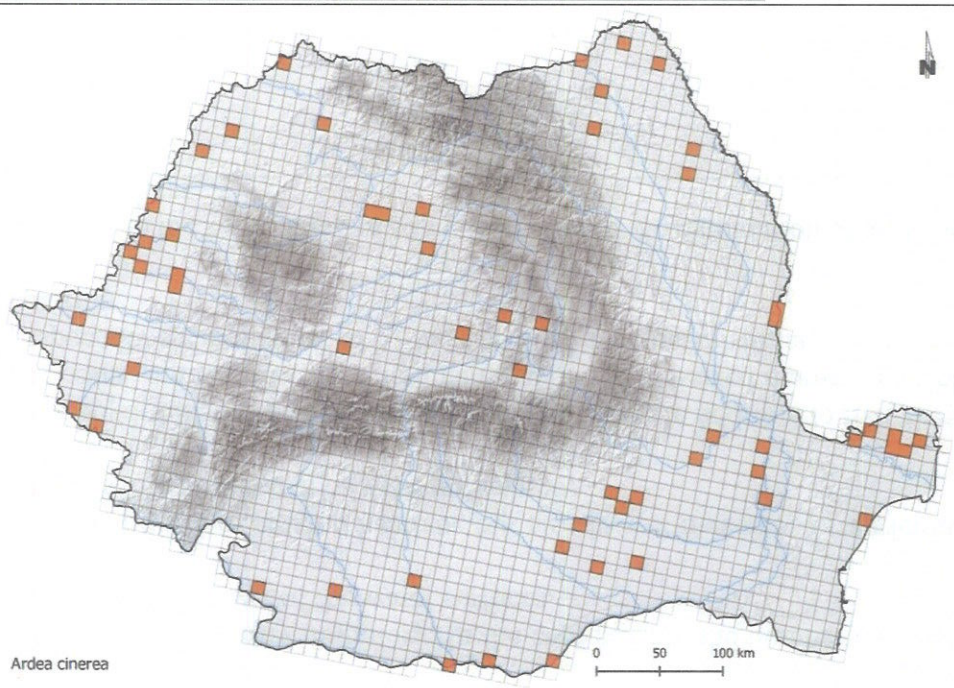
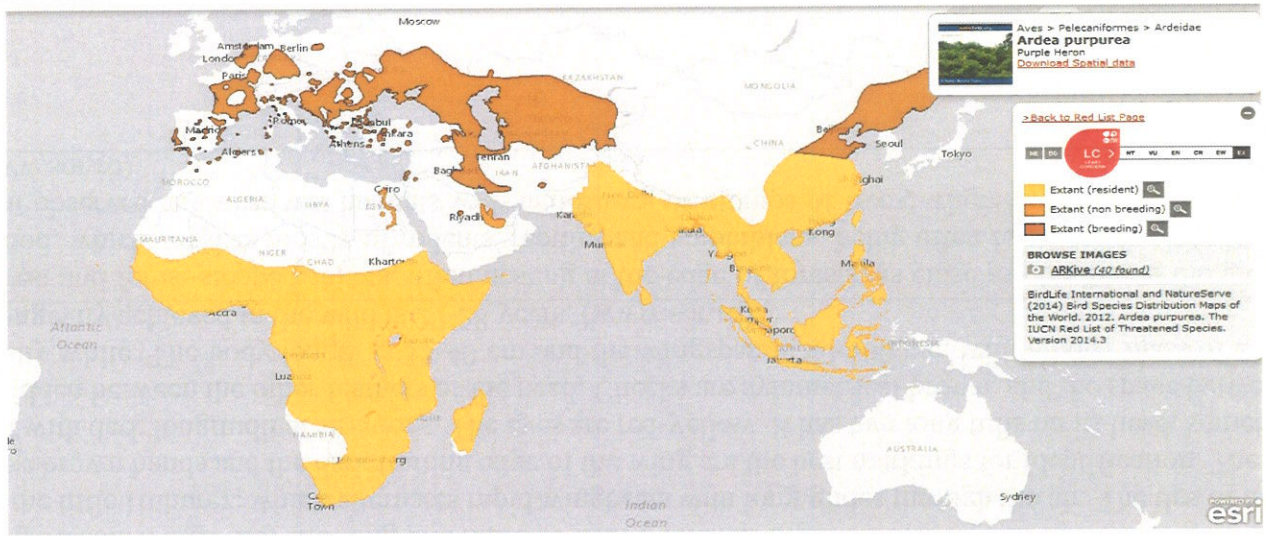
		 Distribution of the species Anser anser (source www.sor.ro)
	Population	The global population is estimated at 1,000,000 - 1,100,000 individuals. The European one is estimated at 259,000 - 427,000 pairs. In Romania, estimates show a population of approximately 3,100 - 6,700 breeding pairs. With such a large population and a huge distribution territory, the species is classified as "Low Risk". The population trend in Europe is considered to be increasing. In Romania, for now, the population trend is unknown.
	Threats and conservation measures	The species is threatened by hunting, being susceptible to lead poisoning (from alice). Other disruptive factors are the degradation of wetland habitat, removed to make way for agriculture and industrial development. As a species that feeds on agricultural crops, there is an ongoing conflict with farmers.
	Species Code	A 028
	Scientific name	grey heron
	Popular name	grey heron

	Description of the species	It is a species of large heron. Sexual dimorphism is low, with males being on average larger than females. The overall plumage is gray of various shades, with the flight feathers darker, the crest, forehead and sides of the head are whitish, contrasting with the black brow which extends to the back of the head in long, elegant plumes. Ventrally, the plumage is whitish, with blackish spots organized in rows on the neck and chest. Body length is 90 - 98 cm, weight 1020 - 2073 g and wingspan 175 - 195 cm. The genus name comes from the Latin word ardea, meaning heron, and the species name comes from the Latin word cinerea, meaning gray. The breeding season takes place between January and June. The clutch consists of 1 - 10 eggs (usually 4 - 6 eggs in Europe), which are incubated for a period of 23 - 32 days by both parents. Chicken are capable of flight after 42 - 55 days after hatching, but use the nest for another 10 - 20 days. Nests colonially, often in mixed colonies with other heron species. The nest is located in trees and is built from twigs and other dry plant material, and is often used for several years in a row, sometimes being used by raptors. (source www.sor.ro)
	Habitat requirements	Distribution The species breeds in almost all of Europe (except some southern areas), the southern half of Asia (including the Indo-Malay Archipelago) and Africa. Populations in western Europe, southern Asia and Africa are resident. It winters in southern Europe and Asia. In Romania, the gray heron nests fragmented in all regions of the country, except for the mountain floor. Phenology The species nests in Romania, being partly migratory. In the cold season, the number and distribution of individuals may vary depending on the degree of ice cover of the water surfaces. habitats The species is present in most types of aquatic habitats, but also in wet meadows or agricultural areas. For nesting, they prefer tall trees near wetlands, but also marsh habitats with shrubs. Food It is a mainly carnivorous, opportunistic species, feeding mainly on fish. In addition to fish, they also consume: amphibians, reptiles, mollusks, crustaceans, aquatic insects, micromammals, medium-sized mammals (rabbits, squirrels, etc.) but also birds and their young, especially species attached by their ecology to aquatic habitats. It consumes smaller amounts of plant matter and sometimes carrion. Other information Competition between chicken in the same nest can sometimes lead to the elimination of younger and less developed chicks, sometimes resorting to cannibalism.

	Habitat of the species	 Distribution of the species Ardea cinerea (source www.sor.ro)
	Population	The global population is estimated at 790,000 - 3,700,000 individuals. The European population is estimated at 223,000 - 391,000 pairs, the population trend at the European level being considered moderately-increasing in the period 1980 - 2013, but slightly declining in the period 2000 - 2012. The population in Romania is estimated at 4500 - 6000 pairs, the population trend being considered stable.
	Threats and conservation measures	The main threats to the species are related to its persecution due to the consumption of fish, being considered antagonistic in fish farming, often resorting to poaching or fighting by shooting, poisoning, drowning or fighting at the nest. Other threats to the species are: poor management of forest habitats adjacent to wetlands, disturbance within colonies and severe winters.
	Species Code	A029
	Scientific name	*Ardea purpurea*, Linnaeus, 1766
	Popular name	purple heron

	Description of the species	it is a species specific to "puddles with large reeds", and in the middle of the 20th century it was the most widespread and numerous species among the herons in Romania. The length of the body is 70-90 cm measured with the neck extended and a weight of 500-1,350 g. The wingspan is between 120-138 cm. Adults have a similar appearance, with a plumage that combines red-brown with gray tones. In the back of the head it has 2 long and narrow ornamental feathers, black in color. It feeds on fish, aquatic insects, frogs, chicks of other bird species, mice and even chicks of guinea fowl (www.sor.ro).
	Habitat requirements	The red heron prefers areas with reeds and abundant vegetation near water and marshy regions and marshes.
	Habitat of the species	 Distribution of the species Ardea purpurea (source www.iucnredlist.org)
	Population	The estimated European population of the species is relatively small and between 29,000 - 42,000 pairs. The population registered a sharp decline in the period 1970-1990. Although in the period 1990-2000 the species showed an increasing trend or remained stable, in many countries in western and central Europe it is in decline. A reduction in livestock continued in the Eastern European area (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 5-12 nesting pairs, being marked with D, which means that at the level of the corridor there is a nesting population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	Degradation of habitats by reducing the surface of wetlands, burning old reeds, cutting willows in winter as firewood by locals and disturbing colonies are the main threats to the species. As conservation measures, it is encouraged to reduce

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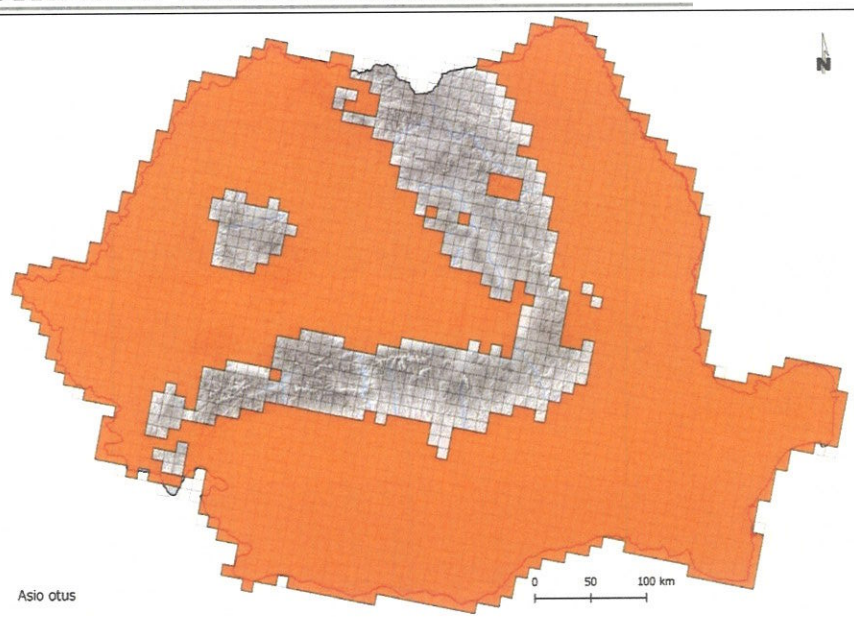
		disturbance by protecting colonies from visitors and banning hunting. The ecological reconstruction of the wetlands in the Danube Delta and on the lower course of the Danube remains a priority (www.sor.ro).
	Species Code	A221
	The scientific name	*Asio otus, (Linnaeus, 1758)*
	Popular name	long-eared owl
	Description of the species	It is one of the most common species of night birds in Europe, Asia and North America. There are two distinct populations of woodpeckers, one sedentary and one migratory, the former occupying the central, eastern and western regions of the three continents, and the migratory population occupying the northern regions of the continents, migrating southwards at the end of the nesting season.Wings they are long and narrow, with a relaxed flight similar to that of a lesser gull, quite different from that of the little Huhurez, which alternates rapid wingbeats with long glides through the air. The tips of the wings have fine and dense brown bands and the dark trailing edge of the wing are the best markings for identification. The general color is cream-rust with dark longitudinal striations. The eyes are red-yellow. It has two long tufts on its head, sometimes held up, sometimes hidden between the other feathers of the head. Cheeks are symmetrical brown, and the space between the eyes is chromosomally white. The body length is 35-40 cm and the wingspan is 90-100 cm, with a body mass of 220-435 g. The maximum longevity achieved in the wild is 27-28 years. (www.sor.ro).
	Habitat requirements	It prefers forest and forest-steppe habitats, often nesting at the edge of forests, as close as possible to the ground, where it obtains its food, which consists mostly of rodents, reptiles and amphibians, being often found up to altitudes of over 2000 m. It is often observed and near wet habitats with understory or clumps of trees, where they occupy abandoned nests of corvids. (www.sor.ro)

	Habitat of the species	
	Population	The European population is relatively large, totaling between 380,000 - 810,000 breeding pairs, being stable during the period 1970-1990. Although the European population experienced small declines between 1990 and 2000 in some countries, it remained stable overall. In Romania, the species numbers approximately 70,000-120,000 nesting pairs. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a low density compared to the national average (insignificant).
	Threats and conservation measures	The species is threatened by degradation and loss of suitable habitat through deforestation near agricultural areas and wetlands. The protection of this species depends on the prohibition of the cutting of forest curtains on the roadside, as well as the preservation in a favorable state of conservation of the forest habitats in which the species nests. (www.sor.ro)
	Species Code	A059
	The scientific name	*Aythya ferina, (Linnaeus, 1758)*
	Popular name	common pochard
	Description of the species	Species with a large area, which includes a large part of Europe and Asia. In the last 150 years, an expansion of the area towards the west and north was recorded. The species has a large area that includes during the nesting period central and

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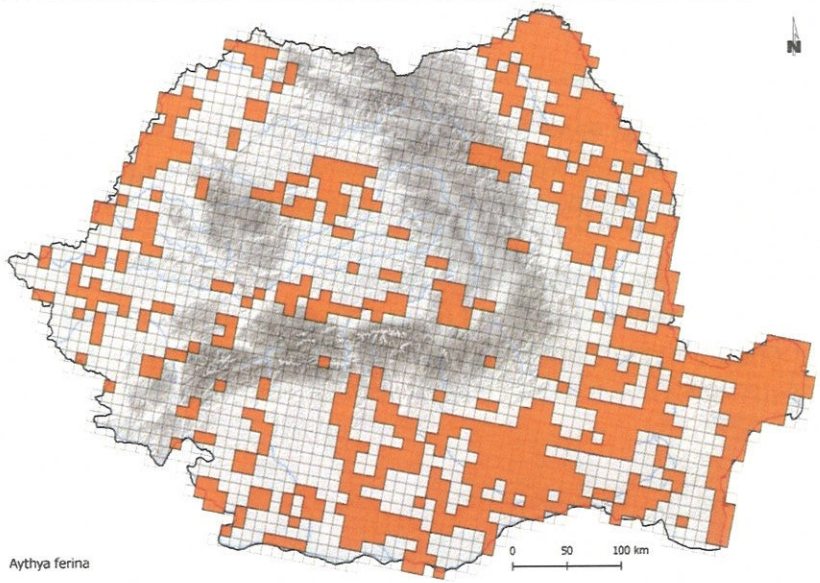
		southern Europe, western and central Asia. It winters in southern Europe, Asia Minor, northern Africa and southern Asia. In Romania it is a relatively frequent nesting species in areas with optimal habitat, it is found in Dobrogea, Muntenia, Oltenia, Banat, Moldova and Transylvania. In winter, large numbers are camped in the delta and on the course of the Danube and on the courses and lakes bordering the large rivers in the country (Olt, Siret, Prut, etc.). Strongly gregarious species outside the nesting season. The males start to associate in small flocks, from the second part of May, when the females are still on the nest. The chestnut-headed duck installs its nest near the water, (max. 5 m) on the ground in dense vegetation. It can also nest on the extension of the wet zone, in the favorable areas with abundant emergent swamp vegetation, the nest being located above the water level, on the solid substrate formed by lying reed stalks. The nesting period lasts from mid-April/early May to mid-June. The clutch consists of 8-10 eggs that are incubated by the female for 25 days. The cubs are nestless and are cared for by the female. (www.sor.ro)
	Habitat requirements	The species can be found in a wide variety of wetlands. It prefers sweet or brackish lakes of at least a few hectares, with a depth of 1.5-2 m with rich underwater vegetation and food resources and surrounded by dense areas of reeds. During the winter and in migration, it can also be found on reservoirs, sea waters. It is an omnivorous species and consumes, in particular, submerged vegetation (seeds and vegetative parts). It can also consume aquatic insects and microcrustaceans. The food is obtained by diving in 1.5-2m water. (www.sor.ro)

	The areal of the species	 **Distribution of the species_*Aythya ferina* (sursa www.sor.ro)**
	Population	The nesting population in Europe is estimated at 210,000 - 440,000 pairs, the population trend being unknown. The number of the species is increasing or stable in most European countries. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 20,000 - 50,000 nesting pairs and was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	Threats to the species are related to the destruction of wet habitats, hunting (direct mortality and lead poisoning by alice) and unregulated tourism in wet areas. The necessary conservation measures identified refer to the protection of the remaining wetlands that are still the subject of dams and drains, but also the development of sets of rules for the use of land adjacent to lakes. With regard to hunting, it is necessary to ban the lead alices and an effective control mechanism regarding their use. (www.sor.ro)
Aythya nyroca	Code of the species	A060
	The scientifical name	*Aythya nyroca,* (Güldenstädt, 1770)

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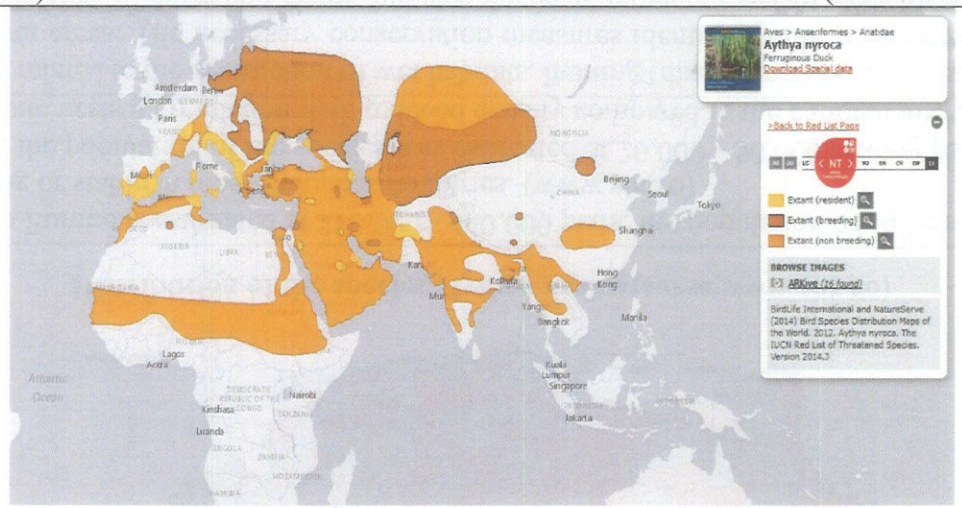
	The common name	The ferruginous duck
	Description of the species	The red duck, also known as the white-eyed duck, is a species characteristic of wetlands with reeds. The body length is 38-42 cm and the average weight is about 580 g for males and 520 g for females. The wingspan is between 60-67 cm. Differences are difficult to see between adults, but females have a dark iris compared to the male, which has a white iris. It feeds on aquatic plants, molluscs, insects and fish.
	Habitat requirements	It is a species present on most of the European continent except for the northern areas. Although it is a diving duck, it prefers shallow waters (30-100 cm) and lives rather hidden in waterholes left free in thick reeds (dev.adworks.ro).
	The Areal of the Species	 Distribution of the species _*Aythya nyroca* (sursa www.iucnredlist.org)
	Population	The European population of the species is relatively small and between 12,000 - 18,000 pairs. It registered a significant decline between 1970 and 1990 (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 20-25 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of wetlands, introduction of exotic fish species, burning and cutting of reeds and poaching are the main dangers affecting the species. A National Action Plan is being prepared in Romania. Ecological reconstruction activities are necessary throughout the lower Danube meadow, and poaching must be controlled, even if this also means stopping the hunting of other common species (www.sor.ro).
Bueo buteo	Code of the species	A087

	Scientifical name	*Bueo buteo*
	The common name	Common buzzard
	Description of the species	It can be found in a variety of habitats. It needs trees or forests to nest, but with access to open areas such as farmland or meadows, to hunt. It is a medium-sized bird of prey with several variations of plumage. It can be easily recognized for its wide wings, short neck and rounded tail. It has a light colored band across the chest, black wingtips and a striped tail. Body length of 50-57 cm, wingspan of 110-130 cm, average body mass of 1 kg in females and 780 g in males. It eats small mammals, birds, thieves, but does not refuse frames and large insects. In the wild, the average lifespan is eight years. Two or four eggs measuring 55 x 44 mm are laid in March-May and are incubated by the female for 33-38 days. Chicks can fly after 50-60 days after hatching, but they stay with their parents for another six to eight weeks. They produce only one row of chickens per year. (www.sor.ro)
	Habitat requirements	It nests throughout Europe, and migrates from some areas. Western populations tend to become sedentary or migrate short distances. Those from the center, east and north of the continent migrate south for the winter. A diurnal bird of prey, it is often seen perching on poles or gliding in circles. It reaches sexual maturity at the age of three. Males have a spectacular courtship ritual. They climb higher and higher, in flight, and then descend into a dive and roll to catch the female's attention. The nest is solid, made of sticks, built at the bifurcation of two solid tree branches. They mate for life. (www.sor.ro)

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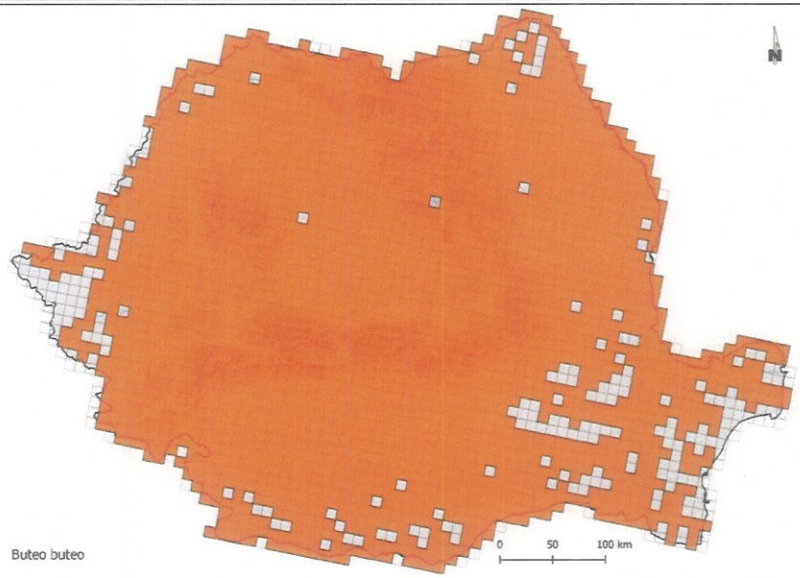
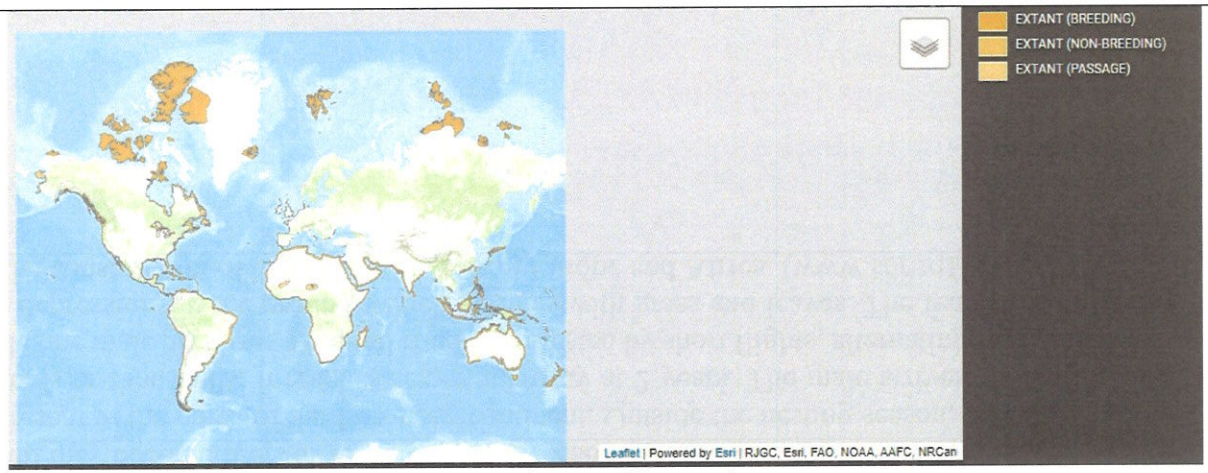
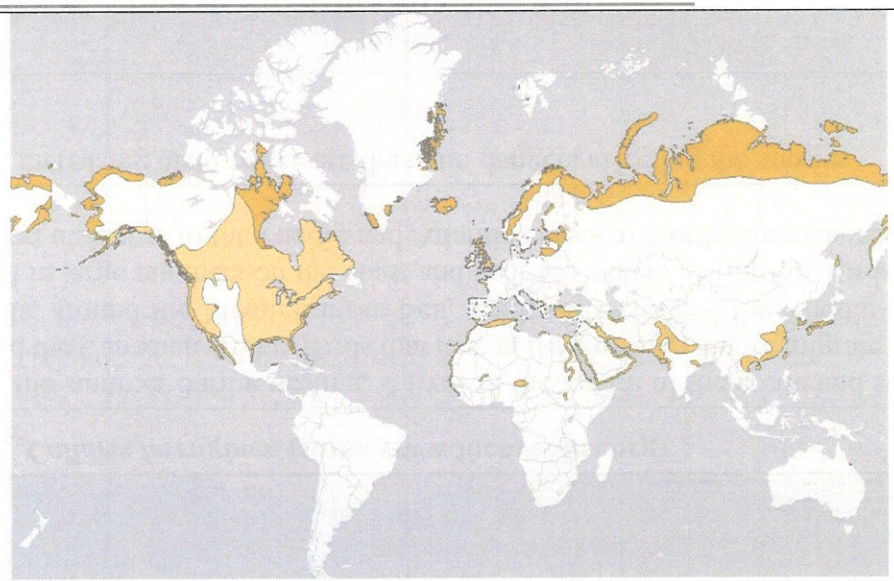
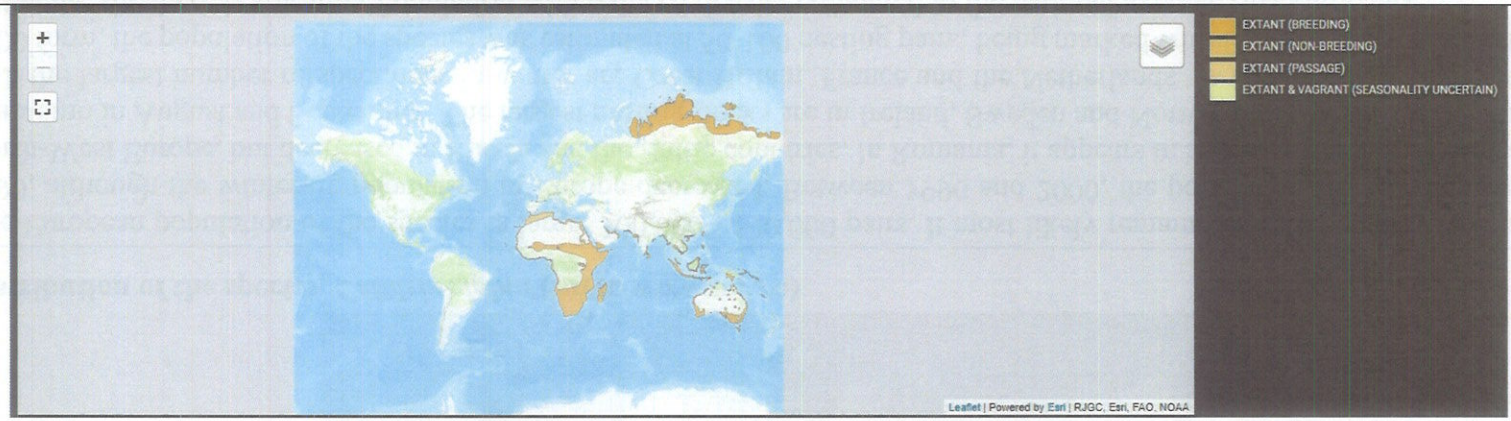
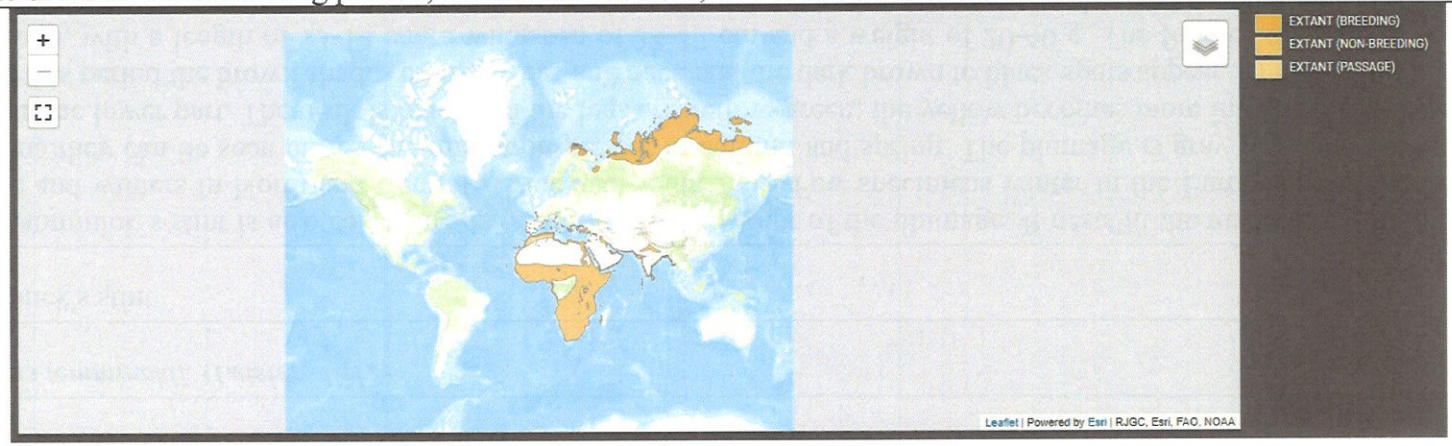
	The Areal of the Species	 **Distribution of the species_*Bueo buteo* (www.sor.ro)**
	Population	The total nesting population in Europe is between 710,000 and 1,200,000 pairs. Despite the decline in several countries in the period 1990-2000, the key population remained stable, and the species increased its numbers in most of Europe. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 30-50 nesting pairs, being marked with D, which means that the site nests Population with low density (5-10 individuals) compared to the national average (insignificant).
	Threats and conservation measures	Like many daytime raptors, the sorecar remains a species threatened by hunting and poisoning, and conservation measures include legislative measures and measures to prevent persecution. Excessive disturbance in the mating areas leads to the abandonment of the nests or the loss of the brood. (www.sor.ro)
Calidris alba	Code of the species	A144
	Scientifical name	*Calidris alba, (Pallas, 1764)*
	The common name	The sanderling

	Description of the species	It is a small bird of 18 cm. It is part of the systematic group of wading birds, adapted to the areas of mud and small water in the shore area, as well as sandy beaches. Like other related species, called fugitives, they run quickly and nibble small creatures from the mud or sand. In winter, the adults have a light plumage, with the lower part white, the back and partially the wing light gray. The beak and legs are black. The juvenile is darker on the crest, back and wing. In flight, a wide white stripe can be seen on the wing. It is a rather rare bird inside the Carpathian chain, more frequent in the south, east and especially Dobrogea. It appears here in autumn and migrates further south. It returns in the spring to the nesting places located in the north of the polar circle, in the tundras of Greenland and Spitzberg.
	Habitat requirements	In winter found on sandy shores, often in mixed flocks. Specialist in flights above the sea slopes.
	The Areal of the Species	 **Distribution of the species_*Calidris alba* (sursa www.iucnredlist.org)**
	Population	According to the NATURA 2000 standard form, the site is used as a crossing point, nesting area, stopover during migration or for moulting outside the mating areas, excluding wintering.
	Threats and conservation measures	Degradation of habitats and increasing disturbance are the main dangers affecting the species.
Calidris alpina	Code of the species	A149
	Scientifical name	*Calidris alpina, (Linnaeus, 1758)*

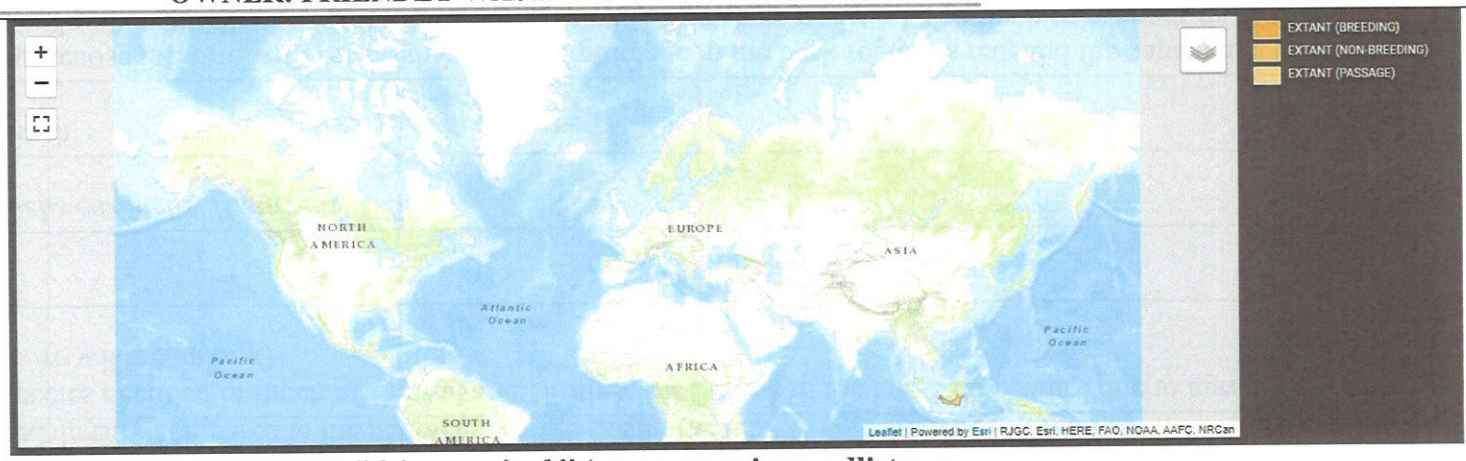
	The common name	The dunlin
	Description of the species	The shore fugaci is a characteristic species of tundra areas, with wet meadows and lakes with brackish and salty water. During migration and in the winter quarters, it appears in lagoon and coastal areas with brackish or salty water. In size, it is similar to the starling (Sturnus vulgaris). The length of the body is 16-22 cm and a weight of 48-64 g. The wingspan is about 32-36 cm. The average lifespan is about 5 years, and the maximum recorded longevity is 19 years. Adults have a similar appearance, the male having more intense plumage colors. The back and head have a rust color, and the abdomen is black. It feeds on insects and their larvae, worms, snails, plant debris and fish. It arrives from its winter quarters in the second part of March and the beginning of April. The female usually lays 4 eggs, with an average size of 35 x 24 mm and an average weight of 10.2 g. Incubation lasts 20-22 days and is ensured by both partners. After hatching, the chicks soon leave the nest and are cared for in the first week by both parents, after which, usually, the female leaves the family. The male continues to take care of the chicks until they become fliers at 19-21 days. (www.sor.ro)
	Habitat requirements	It is a species present in the north of the European continent. Outside the nesting season, it is a gregarious bird, traveling in groups of hundreds or thousands. It reaches sexual maturity at 2 years. The male arrives first in the nesting territories. To attract the female, the male performs a nuptial ritual manifested by short flights, alternating with fluttering of the wings. Then he makes some depressions in the ground, which he lines with grass and leaves. The female chooses one of these recesses and completes the construction of the nest. It winters in Europe and Africa. (www.sor.ro)

	The Areal of the Species	 **Distribution of the species_*Calidris alpina* (sursa www.sor.ro)**
	Population	The European population of the species is large, 300,000 - 570,000 pairs. It most likely remained stable between 1970 and 1990, although the wintering population in Europe decreased. Between 1990 and 2000, the population remained stable in North-West Europe, but decreased in Russia and the Baltic countries. In Romania, it appears in spring in April and May, and in autumn in August and September. The largest nesting flocks are in Ireland, Sweden and Norway. In Europe, the countries with the largest number of specimens in winter are Great Britain, France and the Netherlands. (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 50-100 nesting pairs, being marked with D, which signifies the fact that at the site there is a nesting Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	Degradation of habitats and increasing disturbance are the main dangers affecting the species. (www.sor.ro)
Calidris ferruginea	Code of the species	A147
	Scientifical name	*Calidris ferruginea, (Vieillot, 1816)*

	The common name	The curlew sandpiper
	Description of the species	They have a length of 19-21 cm, wingspan 32-36 cm, weight 40-60 g. In summer, they have a red-brown abdomen, a reddish-rust back with black striations. In winter, the abdomen becomes white, back gray. In flight there is a white band on the wing and a dark tail with white root sides. The fairly long beak is black and slightly curved towards the tip. The medium length legs are brown. Males and females look the same.
	Habitat requirements	In Romania it is a bird of passage found especially on the coast and near the fresh waters of Dobrogea, coming from the Eurasian tundra, where it nests. Some specimens can also be observed over the summer, but they do not hatch here. Small flocks also remain on the Romanian coast in winter.
	The Areal of the Species	 **Distribution of the species_*Calidris ferruginea* (sursa www.iucnredlist.org)**
	Population	It is spread circumpolar. In the summer during nesting, it lives in the tundra of the arctic and subarctic regions of northern Europe and Asia, Alaska and the Canadian Arctic. Birds that nest in the Eurasian tundra migrate long distances and winter in Africa, the Iberian Peninsula, around the Mediterranean Sea, southwest Asia and the Middle East. During the southward migration they can be found in large numbers on the coast and near the waters of Europe. Birds that nest in Alaska and the Canadian Arctic migrate short distances to the Pacific and Atlantic coasts of North America, and those that nest in northern Alaska also winter in Asia.
	Threats and conservation measures	Degradation of habitats and increasing disturbance are the main dangers affecting the species.

Calidris minuta	Code of the species	A145
	Scientifical name	*Calidris minuta, (Leislers, 1812)*
	The common name	Little stint
	Description of the species	It is a migratory bird that breeds in the tundra areas of Northern Europe. From autumn to spring it can be seen all over Europe in coastal areas. Inside the continent, it appears in autumn and spring on the migration routes, located mainly in Eastern Europe. The small fugaci has a grey-brown plumage in the upper parts and white in the lower parts. The beak and legs are black. The feathers on the back and wings have the appearance of scales with the edges in light shades. The brown color is much more intense in the spring, during the reproduction period. The length of the small fugaci is 12-14 cm, the wingspan is 34-37 cm and the weight is 20-40 g. The food is made up of small creatures from the water banks.
	Habitat requirements	The nest is built on dry land, protected from possible floods but in the immediate vicinity of water bodies and marshy lands. The reproductive behavior is quite strange, the little fugitive is both monogamous and polygamous. In the case of monogamous pairs, both partners participate in the hatching of the 3-4 eggs for 20-21 days and in raising the chicks. In some cases, both the male and the female leave the first clutch, while the partner is hatching, to build another nest with another female or male. The remaining partner, be it female or male, will continue to hatch and raise the chicks alone.
	The Areal of the Species	 **Distribution of the species_*Calidris minuta* (sursa www.iucnredlist.org)**
	Population	According to the NATURA2000 standard form, at the site the population is estimated at 332-404 individuals.

	Threats and conservation measures	Degradation of habitats and increasing disturbance are the main dangers affecting the species.
Calidris temminckii	Code of the species	A146
	Scientifical name	*Calidris temminckii, (Leisler, 1812)*
	The common name	Temminck's stint
	Description of the species	The Temminick's stint is also called the gray stint due to the color of the plumage. It nests in the tundra areas of Northern Europe and winters in North and Central Africa and South Asia. Few specimens winter in the European coastal areas. In Romania they can be seen during the migration period, in autumn and spring. The plumage is gray in the upper parts and white in the lower part. The beak is black and the legs are yellow-green; the yellow becomes more intense in the spring and also in this period the brown shades on the wings and back and the dark brown to black spots appear. The pygmy fugaci is a small bird, with a length of 13-14 cm, a wingspan of 34-37 cm and a weight of 20-40 g. The food of the pygmy fugaci is made up of small invertebrates found on the banks of the water, both in the vegetation on the shore as well as in slightly deep waters. Reproductive behavior is typical for fugitives. Both parents can hatch the 2-4 eggs for 21-22 days, but it is also possible for one of the partners to leave the first clutch to mate again. The remaining partner, whether male or female, will incubate and raise the chicks alone.
	Habitat requirements	Few specimens winter in the European coastal areas. In Romania they can be seen during the migration period, in autumn and spring

	The Areal of the Species	 **Distribution of the species_*Calidris temminckii* (sursa www.iucnredlist.org**
	Population	According to the NATURA 2000 standard form, the site is used as a crossing point, nesting area, stopover during migration or for moulting outside the mating areas, excluding wintering.
	Threats and conservation measures	Degradation of habitats and increasing disturbance are the main dangers affecting the species.
Carduelis cannabina	Code of the species	A366
	Scientifical name	*Carduelis cannabina, (Linnaeus, 1758)*
	The common name	The common linnet
	Description of the species	The male is easily identified by the brown head, with a raspberry red forehead and chest, brown back, with white on the edges of the primary rumps and rectrices. Gray beak. In autumn the red is more subdued. Female and Juv. they don't have red, they have a striped chest, a less homogeneous coloration, thus being able to be confused with the yellow-billed heron. They differ from this by the gray bill, the lack of whitish stripes on the wings, the back and chest with more faded stripes, the throat is grayish white (with fine stripes on the center). In addition, the different coloring of the cheeks. It is voluble and has many calls. In flight, a rather nasal tit or tit-it, often repeated, sometimes combined with short trills or thin, soft whistles, eg gheighec and tsi-it. It has a pleasant chirping song, very varied. Hang from the top of a tree, bush.

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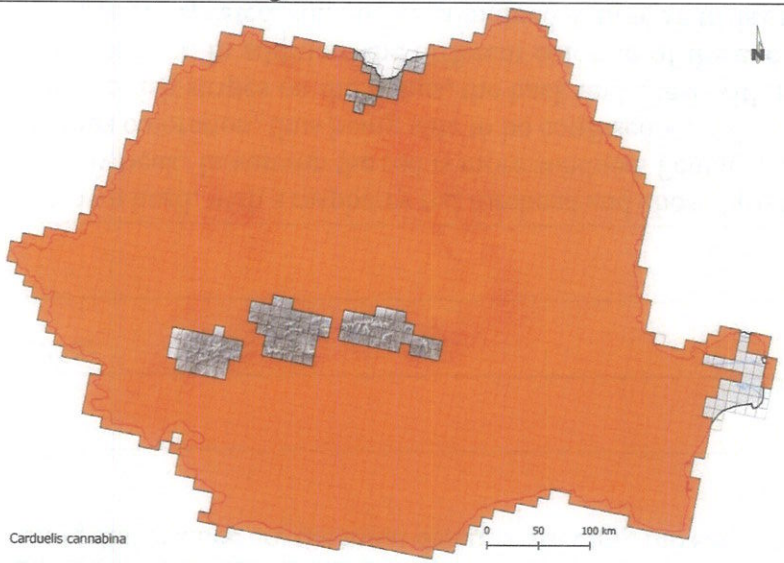
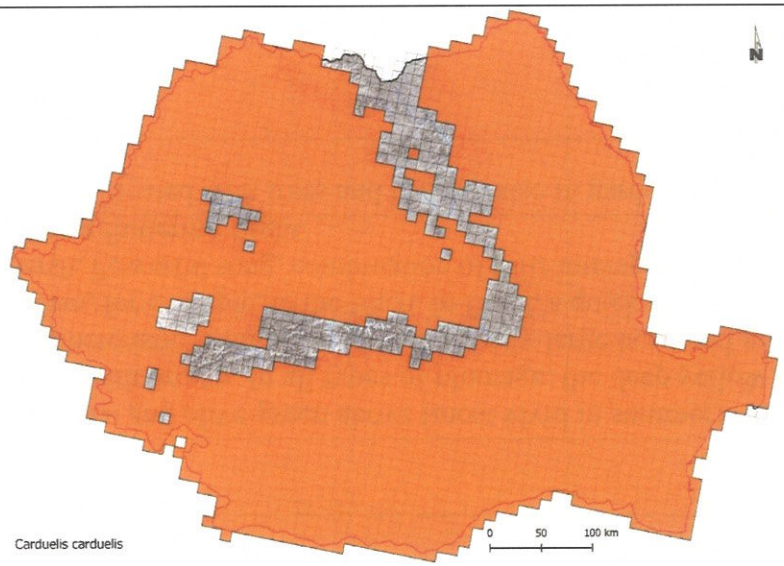
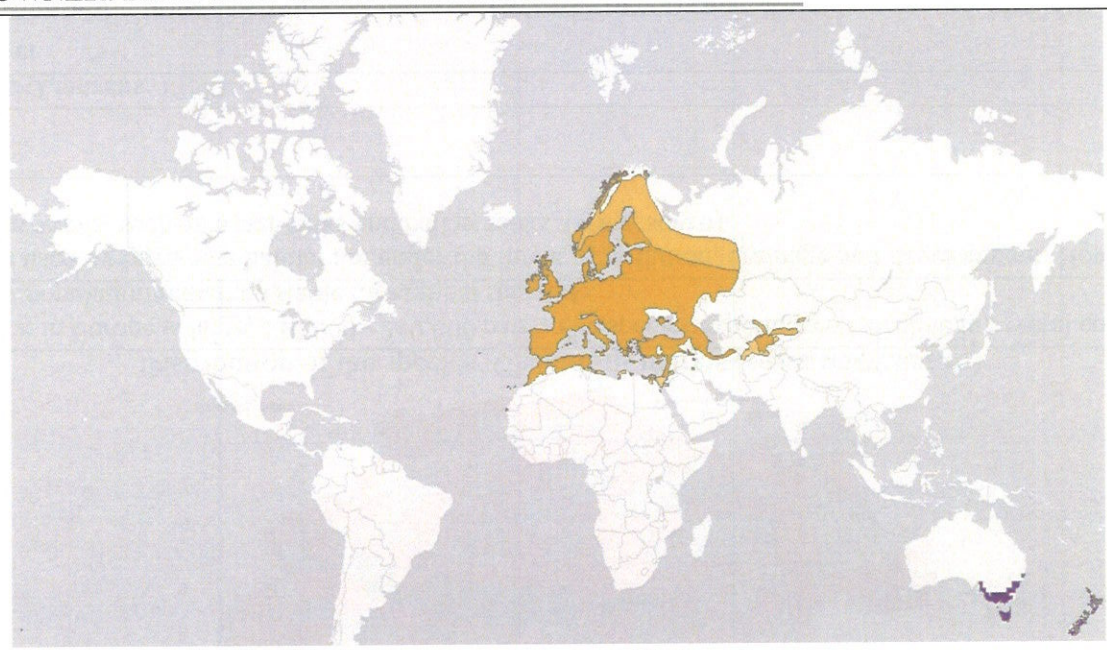
	Habitat requirements	It frequently nests in open regions with brambles and bushes, in parks and gardens. Often found in pairs. In autumn they gather in large flocks on fields and stubbles, often together with florins.
	The Areal of the Species	 **Distribution of the species_*Carduelis cannabina* (sursa www.sor.ro)**
	Population	In Europe, the nesting population is estimated at 17,600,000-31,900,000 pairs. (https://ro.wikipedia.org/) In the Natura 2000 form, the population of the species was marked with D, which means that at the level of the site nests a Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	The species declined in much of Central and North-West Europe in the late 20th century due to agricultural intensification. (https://ro.wikipedia.org/)
Carduelis carduelis	Code of the species	A364
	Scientifical name	*Carduelis carduelis, (Linnaeus, 1758)*
	The common name	Goldfinch
	Description of the species	The bottlenose is a bird with the brightly colored plumage in the beak region is red, and the nape, tail and wings are colored black and yellow, while the rest of the body is brown. This characteristic helps the bird to mark its territory, and to ensure

		success in nesting. For this purpose she chooses a dry bare branch where she can be easily noticed by her song and the color of her plumage. In general, as with all small bird species, chicks reach sexual maturity within a few months. Bottlenose dolphins generally hatch in lowlands, but also in mountain valleys. The nest is small, with a number of 4-5 bluish eggs dotted with red. It is placed in trees of medium height, most often on acacias. After about 13 - 14 days they hatch, the female giving birth to 2 - 3 rows of chicks during the summer. The bottlenose dolphin is sedentary, wintering in the country, to which are added populations of northern bottlenose dolphins, some of which winter in North Africa and Southwest Asia. The food of the bottlenose dolphins is seeds from bushes, heather or meadows. It is an unpretentious bird, being in the past the symbol of spring, fecundity and patience. (www.iucnredlist.org)
	Habitat requirements	This species lives in mixed deciduous and coniferous forests. This species generally nests on forest edges, valleys, hedgerows, but also meadows, riverine areas and marshes, with bushes and trees, steppe pastures, orchards, parks and gardens. (www.iucnredlist.org)
	The Areal of the Species	 **. Distribution of the species_*Carduelis carduelis* (sursa www.sor.ro)**
	Population	In Europe, the nesting population is estimated at 27,800,000-42,700,000 pairs (www.iucnredlist.org). In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).

	Threats and conservation measures	The species is caught and kept in captivity as a pet bird. Currently, no conservation measures are required for this species. (www.iucnredlist.org)
Carduelis chloris	Code of the species	A363
	Scientifical name	*Carduelis chloris (Linnaeus, 1758)*
	The common name	The European greenfinch
	Description of the species	The adult male is yellowish-green below and olive-green above (most vivid in summer). The female has a duller color, with brown, and juv. it is heavily streaked with brown. In all types of plumage, the deep yellow on the outer rectrices and on the edges of the primary remiges is characteristic. Robust build with a fairly large head and massive beak. They fly quickly, in undulating lines longer and wider than, for example, in the finch. In flight, a quick djururut or a short djup cry. At rest it often emits a tsuii or djuii, long, quite harsh. Powerful song, combination of trills interspersed with a characteristic long and hissing djriii. Sing from a high stand or during fluttering flight.
	Habitat requirements	Fairly common bird in open regions cultivated with trees and bushes; also in gardens and parks.

	The Areal of the Species	 **Distribution of the species_*Carduelis chloris* (sursa www.iucnredlist.org)**
	Population	In Europe, the nesting population is estimated at 21,600,000-33,100,000 pairs. (source www.iucnredlist.org) In the Natura 2000 form, the population of the species was marked with D, which means that at the level of the site there is a population nesting with a reduced density compared to the national average (insignificant).
Charadrius dubius	Code of the species	A 136
	Scientifical name	*Charadrius dubius,* (Scopoli, 1786)
	The common name	The little ringed plover
	Description of the species	A coastal species, it can be found on long and sandy shores, on the banks of slow flowing waters, or on the banks of lakes, but also in marshes, during migration. Adults have brown upperparts, with a white abdomen and chest and a black band across the chest. The girl is white with a brown cap, black eye mask, yellow eye circle and black beak. The legs and toes are flesh-colored. It has a body length of 15-18 cm, wingspan of 32-35 cm, average body weight of 40 g. The male and female look very similar. They feed on insects, spiders, worms and other invertebrates. In the wild, the average lifespan is four years.

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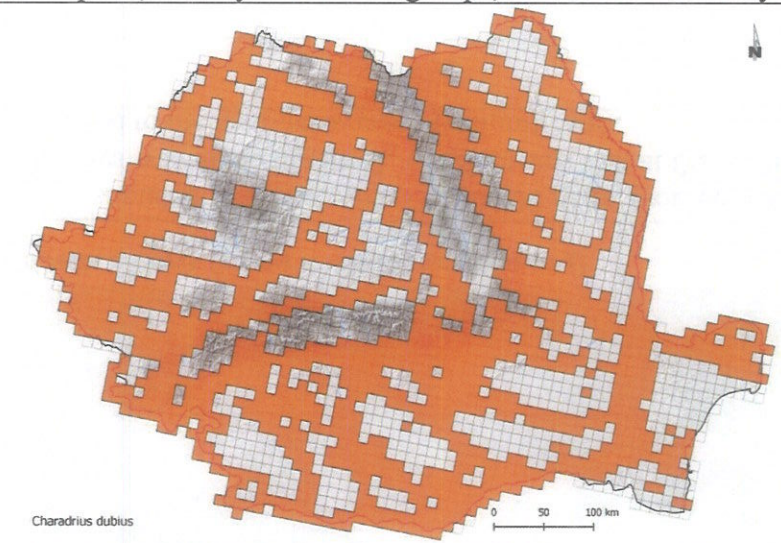
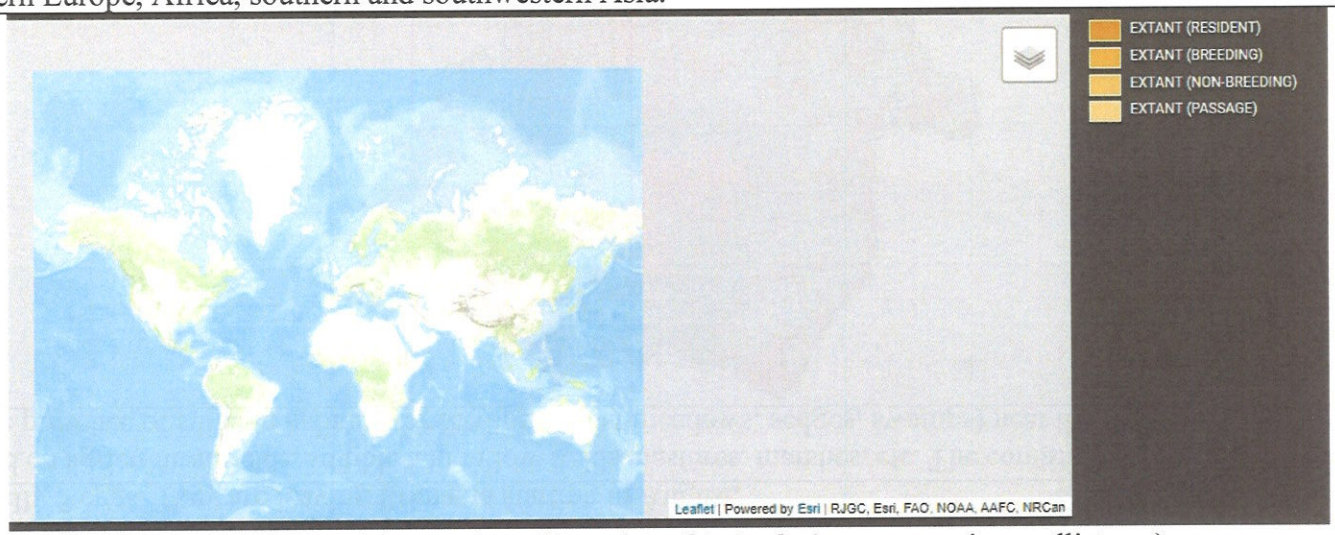
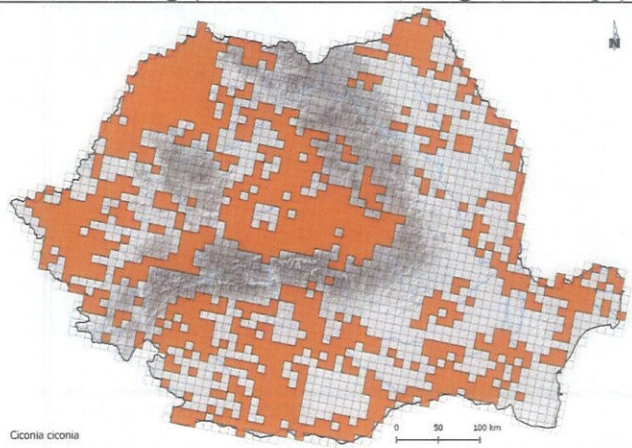
		The nesting population in Europe is large, 110,000 - 240,000 pairs. The species experienced a decline in several countries between 1990 and 2000, but the key population remained stable throughout this time.
	Habitat requirements	Summer visitor in most of Europe, winters in Mediterranean and central Africa, south of the Sahara. It leaves the nesting places between July and September, but returns in March. It feeds during the day, in swampy areas and occasionally in small waters. At two years, he reaches sexual maturity. The species is monogamous for the mating season and sometimes the bonds last for several years. When returning to the nesting territories, the males create small nests on the ground, and while courting their partner, they lean in front of her and spread their feathers. The female decides which nest she will use. Pairs return to the same nest year after year, nest in pairs, solitary or in small groups, defend their territory aggressively.
	The Areal of the Species	 Distribution of the species_Charadrius dubius (sursa www.sor.ro)
	Population	The nesting population in Europe is large, 110,000 - 240,000 pairs. The species experienced a decline in several countries between 1990 and 2000, but the key population remained stable throughout this time.
	Threats and conservation measures	Most of the wetlands used by birds as a habitat are under the threat of pollution, drainage and development. However, the species has benefited from human works, such as water tanks and ballast tanks. (www.sor.ro).
Charadrius hiaticula	Code of the species	A 137
	Scientifical name	*Charadrius hiaticula,* (Linnaeus, 1758)
	The common name	Common ringed plover

	Description of the species	It is a small wading bird species. Adults have orange legs, beak with orange base and black tip, the plumage is relatively complex, grey-brown dorsally, white ventrally, with a full black collar and black mask with a white spot on the forehead. The species shows slightly pronounced sexual dimorphism, the shades of black being much darker in the male and brownish in the female. In flight, it shows a white stripe on the black wings. The body length is 17 - 19.5 cm, and the weight is 42 - 78 grams.
	Habitat requirements	The species nests in northern Europe, throughout northern Asia, Greenland and northeastern Canada. Some populations in western and northwestern Europe (especially those on the coast) are sedentary, the rest are migratory. It winters in western and southern Europe, Africa, southern and southwestern Asia.
	The Areal of the Species	 Distribution of the species *Charadrius hiaticula* (sursa www.iucnredlist.org)
	Population	The world population of the species is estimated at 415 000 - 1 400 000 individuals. The European one is estimated at 140,000 - 213,000 pairs. In Europe, the population trend is downward.
	Threats and conservation measures	The main threats to the species are related to wetland management: drainage works, water course development works, wetland pollution and land use change. Another important threat is the high rate of predation by the American mink (Neovison vison), especially in the nesting areas around the Baltic Sea.
Ciconia ciconia	Code of the species	A031
	Scientifical name	*Ciconia ciconia* , (Pallas, 1773)

	The common name	The white stork
	Description of the species	Description: It is an easy bird to spot due to its predilection to build its nests near people. The plumage is predominantly white, with black remiges. It has a long neck and legs. The beak is long and red. The underwings feature a characteristic black and white pattern with white underwings and black remiges. Young birds have a characteristic coloration identical to that of adults, but have a black beak tip. The body length is 95-110 cm and it weighs 2300-4400 g. The wingspan is between 180-218 cm. Adults have a similar appearance and are distinguished from the black stork by their white head and neck. It feeds on frogs, mice, insects, moles, baby birds and rabbits, snails, snakes and lizards. Reproduction: it nests almost exclusively in humanized areas - houses, chimneys, poles of low-voltage electrical networks. Nowadays, fewer and fewer nests are placed on buildings and extremely few on trees. Summer guest, arrives in Romania starting in March. They nest between April and July. The litter is represented by 3-4, exceptionally 5 eggs. They are leaving Romania starting in August.
	Habitat requirements	Storks feed on agricultural fields, stubble and fallow fields, pastures, marshes, etc. The condition for the presence of hatching pairs is the presence of suitable habitats for feeding (moist meadows, sedges, swamps) near the nests.
	The Areal of the Species	 Distribution of the species _*Ciconia ciconia* (sursa www.sor.ro)
	Population	The estimated population of the species is significant, between 180,000-220,000 pairs. In the period 1970-1990, the white stork population showed a considerable decline. Although in the period 1990-2000 the species marked an increasing trend, it has not yet returned to the numbers existing before the mentioned decline. The estimated population in Romania is 4000-5000 pairs. The largest numbers appear in Poland, Ukraine and Spain. (source www.sor.ro) It is widespread in Romania, nesting in localities (rarely outside them). It occurs in small numbers in upland areas. They migrate in large numbers through

		Transylvania, Dobrogea and Moldova. Most nests are located in villages near wetlands. In the Natura 2000 form, the population of the species was estimated at 770 - 820 pairs and was marked with C, which means that at the level of the site there is a population nesting that represents less than 2% of the population present on the national territory.
	Threats and conservation measures	Electrocution of birds and desiccation of wetlands are the main threats affecting the species in nesting areas in Europe. The installation of artificial platforms on the poles of medium voltage networks and the isolation of electrical networks can considerably reduce the mortality of this species. (source www.sor.ro)
Ciconia nigra	Code of the species	A030
	Scientifical name	*Ciconia nigra* , (Linnaeus, 1758)
	The common name	The black stork
	Description of the species	It is a large bird species. There is no sexual dimorphism, both the female and the male having a black head, chest, neck and back, with greenish-purple metallic iridescence, contrasting with the white abdomen. Adults have red beaks and legs, and juveniles are gray-green. The body length is 90-105 cm and has an average weight of 2900-3000 g. The wingspan is between 173-205 cm.
	Habitat requirements	The species nests throughout the Palearctic, from Spain to the Far East (China). In the north it is spread to the Baltic countries and southern Siberia. It winters in the south of the African continent. The species nests in Romania, being present here only during nesting periods. Arrives beginning in March and departs back to wintering quarters in late September - early October. It is an elusive, reclusive species, nesting in undisturbed habitats. It prefers open, old forests that have water sources nearby (ponds, swamps, streams). It is more abundant in old forests in lowland, meadow areas. It is a predominantly ichthyophage species, it consumes a very wide range of fish. In addition, it also feeds on other living things: micromammals (mice, shrews), lizards, snakes, amphibians, small birds (especially chickens, sometimes eggs), large insects, aquatic invertebrates (molluscs, crustaceans). It is a much rarer and more secluded species compared to the white stork. They completely avoid human presence, so even the smallest interventions (especially activities in the nest area) at the beginning of the nesting season (but not only), can have catastrophic effects on nesting success.

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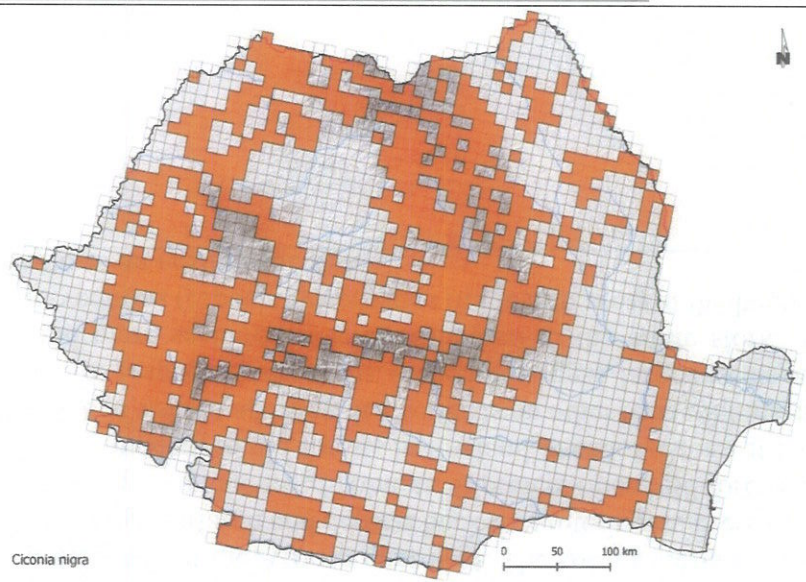
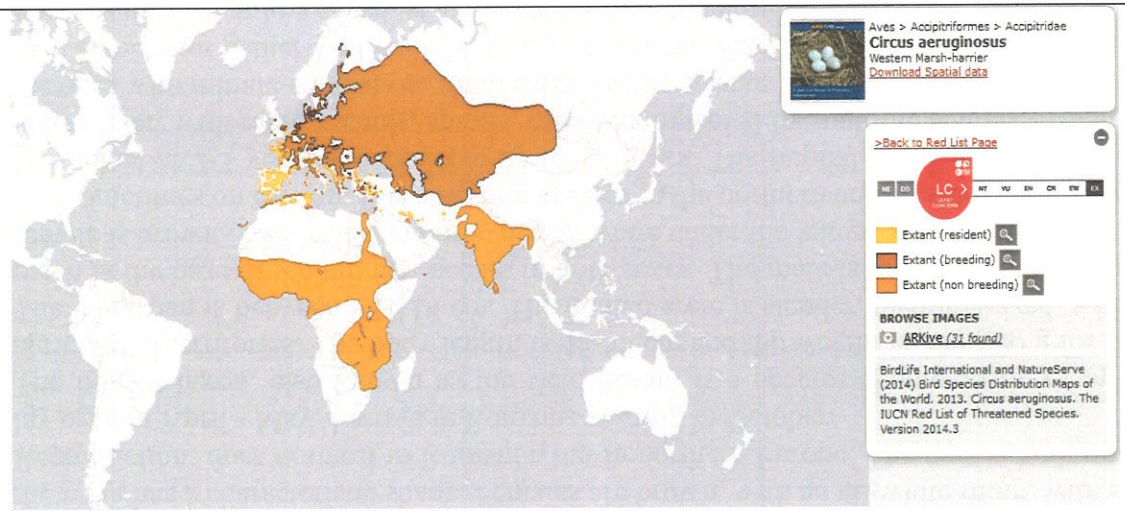
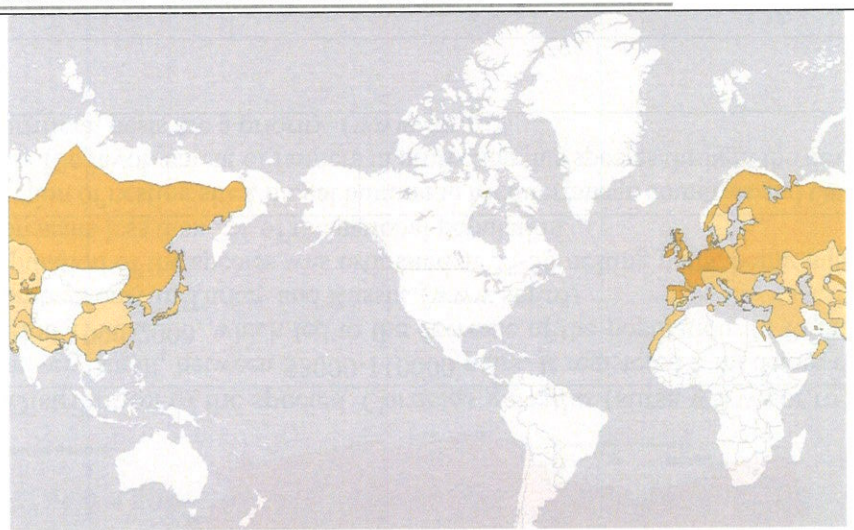
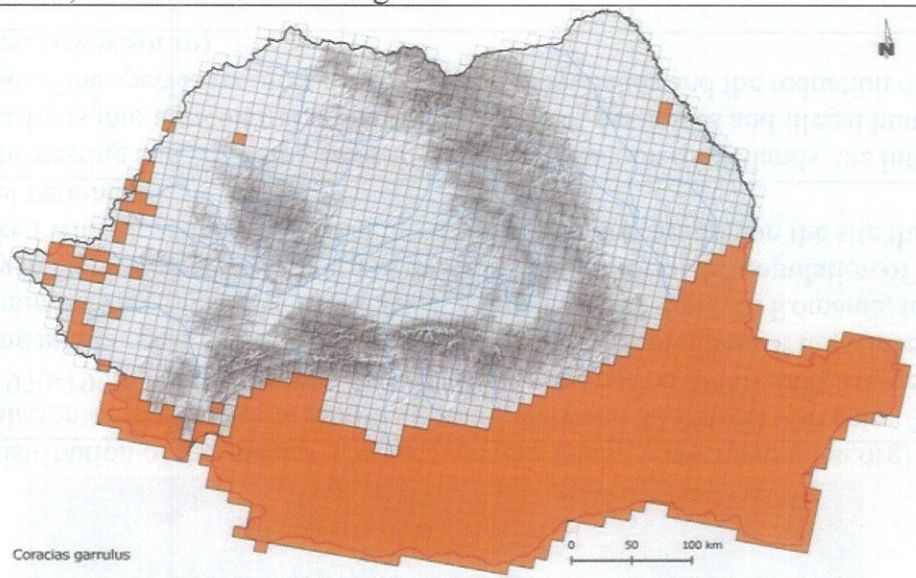
	The Areal of the Species	 Distribution of the species _ *Ciconia nigra* (sursa www.sor.ro)
	Population	The global population is estimated at 24,000 - 44,000 individuals. The nesting European is estimated at 9,800 - 13,900 pairs. In Romania, estimates show a population of approximately 415 - 800 nesting pairs. For now, due to a huge distribution territory, the species is classified as "Low Risk". The population trend in Europe is unknown. And in Romania the population trend is unknown.
	Threats and conservation measures	The main threat is the disappearance of old, undisturbed forests. Any type of forestry work aimed at extracting mature and old trees has a significant negative effect on the population of the species. The black stork is vulnerable precisely because the forests that the species prefers - old open forests, undisturbed by meadows - have undergone the most severe changes over time - their surface area has been reduced to extinction. Another threat is represented by the modification of water courses through catchments - which reduce the flow and implicitly the abundance of ichthyofauna - the main source of food for the species. (source www.sor.ro)
Circus aeruginosus	Code of the species	A081
	Scientifical name	*Circus aeruginosus,* (Linnaeus, 1758)
	The common name	Western marsh harrier

	Description of the species	The reed erete is a characteristic species of wetlands where reeds abound. Body length is 43-55 cm and weight 500-700 g, females being larger. The wingspan is between 115 - 140 cm, being the largest of the hereti. The male has black wing tips, silver-gray wings and tail, and a rusty abdomen. The female is brown - dark chocolate, with a yellowish-white head and neck. It feeds on birds and eggs, baby rabbits, small rodents, frogs, larger insects and sometimes fish. The nest, which can reach the size of 80 cm in diameter, is made by the female, from branches, reeds and is lined inside with grass. The female lays 3-8 eggs in the second part of April, with an average size of about 48.6 x 37.7 mm. Incubation lasts 31-38 days and is provided by both parents. Chicks become fliers at 35-40 days. However, they remain close to their parents for another 25-30 days, after which they become independent (www.sor.ro).
	Habitat requirements	Wet areas where reeds abound.
	The Areal of the Species	 Distribution of the species_*Circus aeruginosus* (sursa www.iucnredlist.org)
	Population	The European population of the species is relatively small and between 93,000 - 140,000 pairs. It grew between 1970 and 1990. Although between 1990 and 2000 it registered a decline in South-Eastern Europe, it remained stable in the rest of the continent and grew in Ukraine and Russia, registering an overall increase. The largest numbers are in Russia, Ukraine, Poland and Belarus (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 6-12 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of habitats, illegal hunting, disturbance caused by human activities by cutting or burning reeds and poisoning, are the main dangers for the species. The preservation of the species requires the restoration of the

		amount of pesticides that reach the water from the agricultural lands through rainfall, the control of illegal practices such as burning and cutting the reeds in inappropriate periods and stopping hunting (www.sor.ro).
Circus cyaneus	Code of the species	A082
	Scientifical name	*Circus cyaneus,* (Linnaeus, 1766)
	The common name	Hen harrier
	Description of the species	Description: medium-sized birds of prey with long wings and tail. Males have a white rump and the black spot on the tip of the wing has a characteristic shape. Females are brown, with an all-white rump, with shorter and more rounded wings. Reproduction: does not nest in Romania, but in northern Europe. The nest is built on the ground, in thick vegetation. They lay eggs in April - May. I arrive in Romania starting in October. The hunted heron, also known as the field heron, is a species characteristic of open areas, with pastures, marshes and agricultural territories. The body length is 45-55 cm and the weight is 290-400 g for the male and 370-708 g for the female. The wingspan is between 97-118 cm. The hunted erete is slender, medium-sized, with a long tail and a characteristic white patch at the base of the tail that occurs in both sexes. The male is gray on the back and the tips of the wings are black. The female is brown on the back and brown with white under the wings. It feeds on small mammals, birds, reptiles, frogs, insects and sometimes on carrion. It is a nesting species in the northern and western part of the European continent. Sexual maturity is reached at 2-3 years and can live up to 17 years. The nuptial ritual performed by the male is a real dance in the sky, spectacular, with rapid ascents, spirals, rolls accompanied by multiple sounds. A pair can last several seasons. Females are the ones who initiate copulation. Frequently, in this species the male mates with several females. Outside the nesting period, they sometimes gather for the night in large numbers. They spend the night in trees and even on the ground. When hunting, it glides in flight at low speed, at a low height from the ground. Unlike other heretics, it relies heavily on sound to detect prey hidden in vegetation, although it also uses sight. It winters in the central and eastern part of the European continent and in Africa. The nest is placed on the ground, often near water, in thick and tall vegetation. The construction of the nest is started by both parents, but the female contributes more. It is made of twigs, grass and lined inside with feathers. The female lays 3-6 eggs in the second part of April. Incubation lasts 29-31 days and is ensured by the female, who is fed by the male throughout this time. For about two weeks after the chicks hatch from the eggs, the male continues to bring food, both for the female and for the chicks. The chicks become fliers at 29-42 days, but remain dependent on their parents for a few more weeks. (www.sor.ro)
	Habitat requirements	Habitat: in migration and in winter it is found on meadows, arable land and marshes. They feed on passerines and small mammals.

	The Areal of the Species	 Distribution of the species_*Circus cygnaeus* (sursa www.iucnredlist.org)
	Population	The European nesting population of the species is relatively small, between 32,000-59,000 pairs. The population decreased significantly in the period 1970-1990, but this decline was reduced in the period 1990-2000. However, overall the species is in decline. The largest nesting numbers are in Russia, France and Finland. The numbers of the wintering population in Europe are over 8,500. The largest numbers are registered in Slovakia, Hungary and Poland. In Romania, it appears in migration and during the winter, especially in Dobrogea. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 20-40 pairs and was marked with C, which means that there is a population nesting on the site that represents less than 2% of the population at the level national.
	Threats and conservation measures	Degradation of habitats in the nesting and wintering areas through the reduction of wetlands, the intensification of agriculture and the transformation of pastures into agricultural crops, the presence of pesticides and illegal hunting are the main dangers for the species. Conservation of the species requires the restoration of wetlands and the reduction of the amount of pesticides used in agricultural activities. (www.sor.ro)
Coracias garrulus	Code of the species	A231
	Scientifical name	*Coracias garrulus,* Linnaeus, 1758
	The common name	The European Roller

	Description of the species	The roller is characteristic of dry, warm areas represented by the rare meadow forests around the meadows. It has similar dimensions to that of the rock corvus (Corvus monedula). The body length is 29-32 cm and it weighs 127-160 g. The wingspan is about 52-57 cm. Adults have a similar appearance. The plumage is stunning, azure blue covering the head, neck and chest, while the back is brown-rust. It feeds on rodents, frogs, lizards, snakes, birds and insects. (www.sor.ro)
	Habitat requirements	The roller usually uses old burrows left by woodpeckers for nesting, sometimes she also hatches in burrows. He lines his nest with all kinds of plant fragments, feathers and blades of grass.
	The Areal of the Species	 Distribution of the species_ *Coracias garrulus* (sursa www.sor.ro)
	Population	The European population is relatively small, between 53000-110000 pairs. It registered a moderate decline in the period 1970-1990. This trend accelerated in the period 1990-2000, which led to the decrease of the population. In Romania, the presence of 4600-6500 pairs is estimated, with larger numbers only in Turkey and Russia. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 25-50 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of habitats and reduction of nesting sites, illegal hunting in Mediterranean countries and Oman, widespread use of pesticides are the main threats to the species. The involvement of farmers in protecting this species through the development of agro-environmental measures and the placement of artificial nests are a priority. (www.sor.ro)
Cuculus canorus	Code of the species	A212

	Scientifical name	*Cuculus canorus,* Linnaeus, 1758
	The common name	Coockoo
	Description of the species	It can be found in forests or in areas with trees, meadows and thickets. A bird the size of pigeons, it resembles the bird owl in shape and color. The length of the body is 32-36 cm, the wingspan is 54-60 cm and it has a body mass of 130 g for the male and 110 g for the female. The upper parts are grey-blue, the chest is white with dark horizontal stripes. The wings are sharp, the tail is long and the iris is yellow. The female usually has the same color, but it can also be rust colored. It feeds on insects, caterpillars in particular, and sometimes on the eggs and chicks of other small birds. In the wild, the average lifespan is six years. Between one and 25 eggs are laid between April and May. The female selects several nests that belong to the species she likes, waits until the eggs are in the right stage, removes one of the eggs of the host species and replaces it with her own. The average size of a cuckoo egg is 22x17 mm. The host bird will also hatch the cuckoo egg for 11-12 days and will feed the chick that will leave the nest after another 17 days. (www.sor.ro)
	Habitat requirements	A summer visitor throughout Europe, it migrates to southern Africa in August and returns in April. A diurnal and generally solitary bird, it is often seen with its wings lowered below the level of its tail. At two years, he reaches sexual maturity. Both partners participate in the nuptial ritual: the female calls out to approach the male, he spreads his wings and tail, bends in front of her and turns. A true "parasite", the female cuckoo, lays her eggs in the nests of other birds, leaving the hatching and rearing of the chicks to the host birds. (www.sor.ro)

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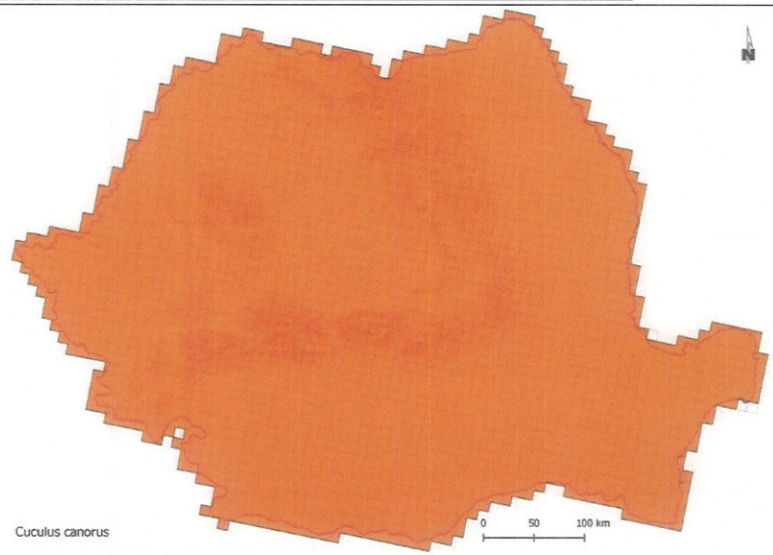
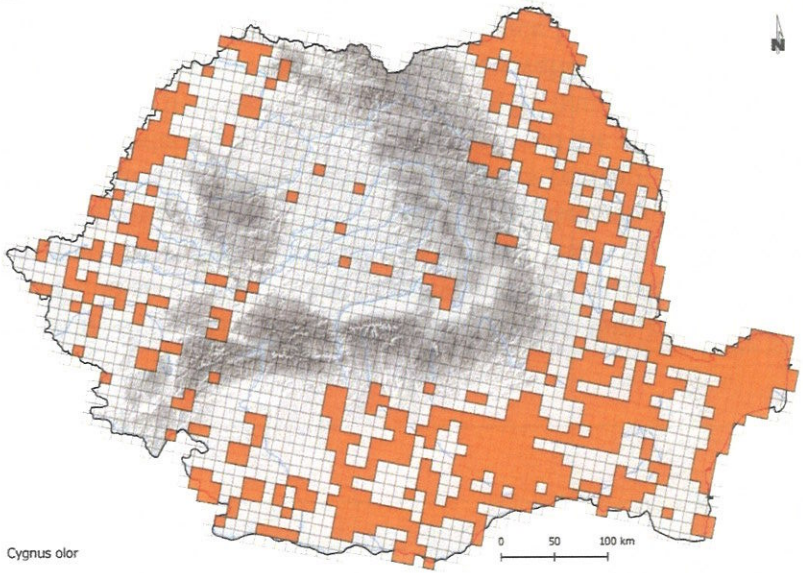
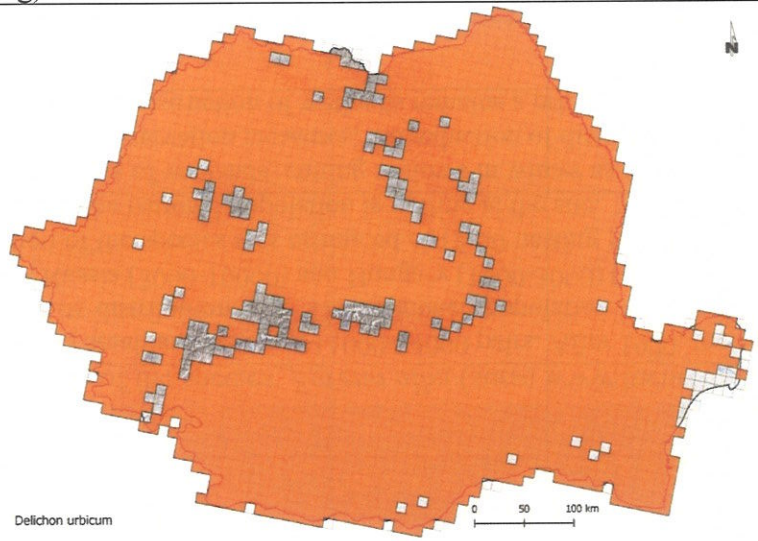
	The Areal of the Species	 **Distribution of the species_*Cuculus canorus* (sursa www.sor.ro)**
	Population	The total nesting population in Europe is very large, between 4.2 and 8.6 million pairs. Many European populations regressed in the period 1990-2000, but the key populations in Russia and Romania remained stable. Russia is the European country with the largest population of cuckoos. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	It is believed that the decline of cuckoo populations in some parts of Europe is due to the decline suffered by the host species for the eggs, whose habitat is destroyed. Conservation efforts must also include monitoring the host species for cuckoo eggs and protecting their habitat. (www.sor.ro)
Cygnus olor	Code of the species	A036
	Scientifical name	*Cygnus olor, (Gmelin, 1789)*
	The common name	The summer swan
	Description of the species	It lives in areas with fresh or salt water: lakes, ponds, rivers, coastal waters, lagoons, estuaries, swamps. It can often be found in urban areas, in almost all of Europe, but in rather limited areas. Several populations are sedentary, but those from the north

		and east can move to southwest Europe and the Middle East during severe winters. The birds leave their nesting territories in September, depending on the area, and return in March of the following year. It feeds by partially submerging in the water, or by swimming on the surface. At the age of four, he reaches sexual maturity. Couples often stay together for life, although sometimes they divorce. In the nuptial ritual, the partners touch their beaks and chests or coil their necks one after the other. The male aggressively defends the territory, and the female builds the solitary nest: a high mound of vegetation on the shore or among the reeds, a nest to which they will return in the following years. They lay eggs around mid-April. The four-nine eggs, with the size of 113x74 mm, are hatched for a period of 35-41 days by the female in particular, but the male helps her. Both parents take care of the chicks, which can leave the nest after 120-150 days. The cubs stay with their parents during the first winter of their life. They produce only one row of chickens per year. It lives in areas with fresh or salt water: lakes, ponds, rivers, coastal waters, lagoons, estuaries, swamps. It can often be found in urban areas. (www.sor.ro)
	Habitat requirements	It lives in areas with fresh or salt water: lakes, ponds, rivers, coastal waters, lagoons, estuaries, swamps. It can often be found in urban areas. (www.sor.ro)
	The Areal of the Species	 **Distribuția specie *Cygnus olor*(www.sor.ro)**
	Population	The nesting population in Europe is relatively small: 86,000-120,000 pairs. Declines were recorded in several countries in the period 1990-2000, but were compensated by other populations that increased or remained stable. (www.sor.ro) In the

		Natura 2000 form, the population of the species was estimated at 790-950 nesting species and was marked with D, which means that a Population with low density compared to the national average is nesting on the site (insignificant).
	Amenințări si masuri de conservare	The decline in the past is due to lead poisoning, as a result of fishing with lead weights. Since the banning of this material as casting weight on fishing rods, the populations have recovered. (www.sor.ro)
Delichon urbica	Code of the species	A253
	Scientifical name	*Delichon urbica*, (Linnaeus, 1758)
	The common name	Common house martin
	Description of the species	The body constitution does not differ from that of other representatives of the family: elongated body, long and narrow wings, scissored tail, slightly flattened head and short beak. It has slightly smaller dimensions than sparrows: the body length is 12–17 cm, the wingspan is 20–33 cm, and the weight is 18–19 g. The back, head and upper part of the wings are bluish-black with bluish tints; the rest of the body is covered with white down. Tail moderately forked. The legs are covered with feathers and down. Males do not differ much externally from females. Juveniles resemble adults, but have a black-gray, lackluster back and a brownish-white underbelly. Goats molt only once a year, instead the process is long, spanning between the months of August and March. In the fall it changes its down, and in the spring it changes its feathers. Within the limits of its habitat, the swallow can be confused with the swallows and with other representatives of this family – the house swallow, the bank swallow, the red swallow. The difference lies in the white belly of the house locust, visible during flight. In Africa it closely resembles the gray swallow (Pseudhirundo griseopyga). This one, however, has a darker belly, the upper part of the tail is grey, and the tail is strongly forked. The house swallow flies fast and agile, but more easily than the house swallow. In flight it flaps its wings an average of 5.3 times per second. It is a communicative bird, but with a rather weak voice. (www.wikipedia.org)
	Habitat requirements	In the wild, the house locust usually makes its nest in light caves or cracks in sedimentary rocks, most often on the banks of mountain rivers. They rarely occupy the nests of the shore wagtails. With the appearance of the cities, the swallows began to build their nests under eaves and eaves, preferring stone or brick walls; because of this they are found more in cities than in villages. Gradually, these birds became anthropophilic, being seen less and less outside human settlements. The maximum altitude at which grasshoppers live is 2,200 m above sea level. Grasshoppers hunt insects in large spaces with herbaceous vegetation: meadows, pastures, agricultural land; usually near rivers or lakes. Compared to other swallows, they stay more near trees to rest. In their wintering grounds they are found on similar landscapes, but lead a nomadic way of life, being seen

		less often than house swallows and flying at high altitudes. In tropical regions such as East Africa and Thailand, it prefers elevated sites.(www.wikipedia.org)
	The Areal of the Species	 **Distribuția speciie *Delichon urbica* (www.sor.ro)**
	Population	In Europe, the nesting population is estimated at 11,200,000-23,600,000 pairs (www.iucnredlist.org). In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Amenințări si masuri de conservare	The species is affected by adverse weather, which can have a significant negative impact during nesting and migration. Although the species is not threatened, populations should be monitored to detect changes in numbers. Continued reductions in air pollution could benefit the species. (www.iucnredlist.org)
Egretta alba	Code of the species	A027
	Scientifical name	*Egretta alba,,* Linnaeus, 1758
	The common name	The white great egret
	Description of the species	It is a bird superior in size to the small egret, having 90 cm. The body shape is characteristic of long-necked storks. The beak is also relatively long and straight, the legs are also long. The beak has a dark color during the nesting period, with a yellow base, but it becomes completely yellow outside the nesting period (www.benny-photo.com). The legs are completely

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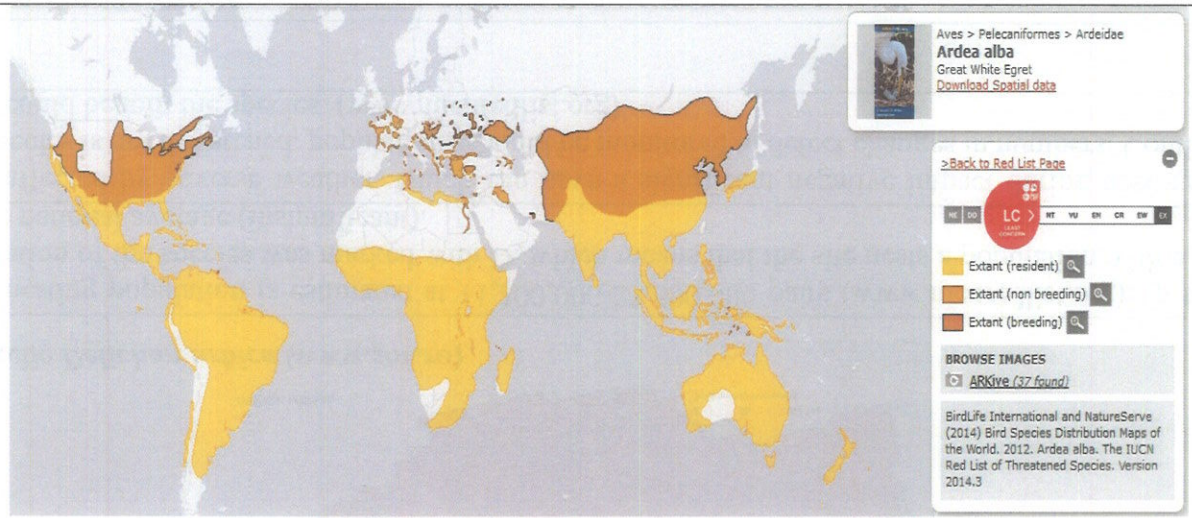
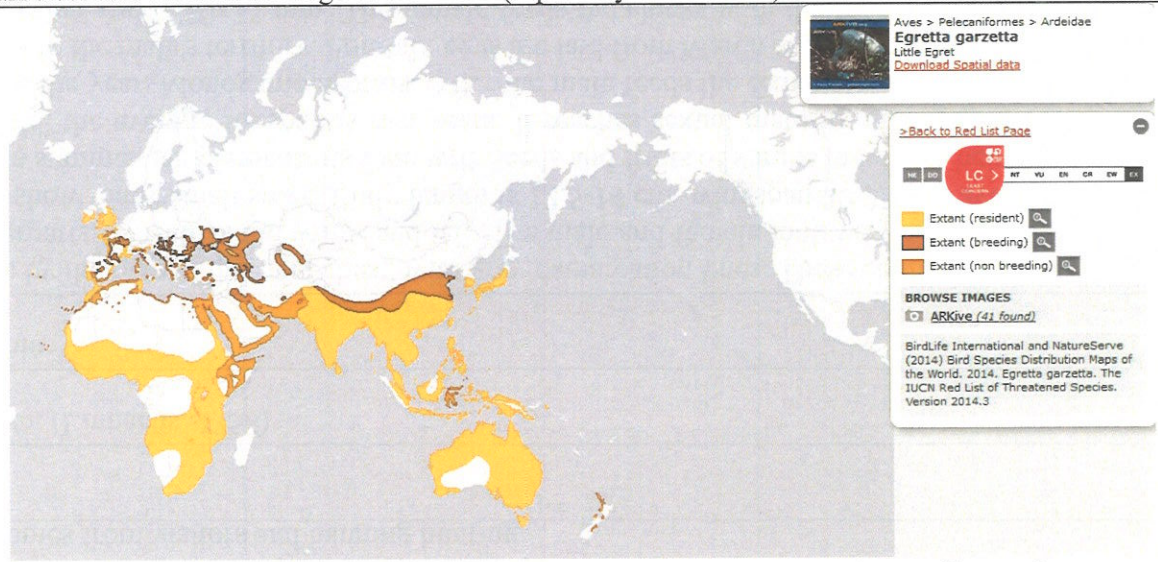
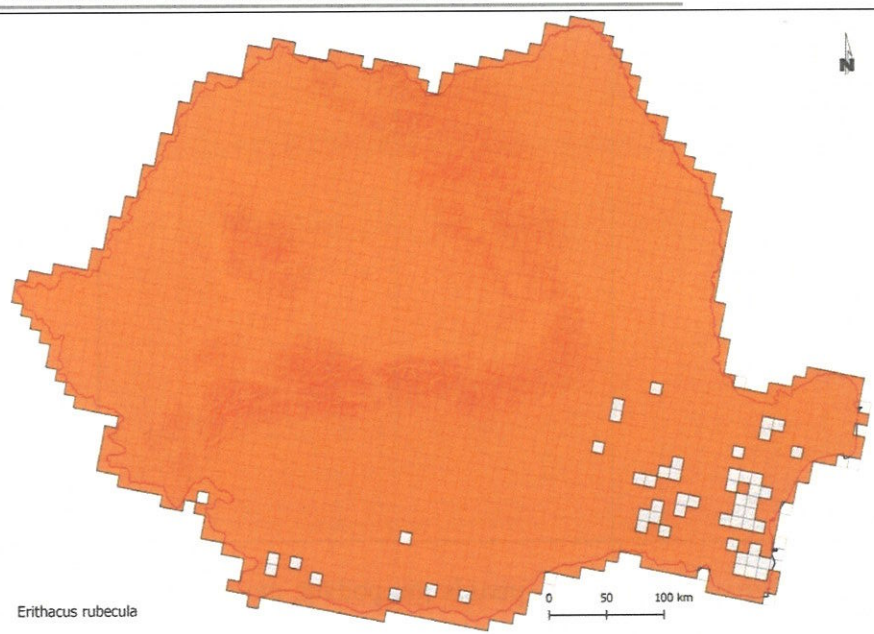
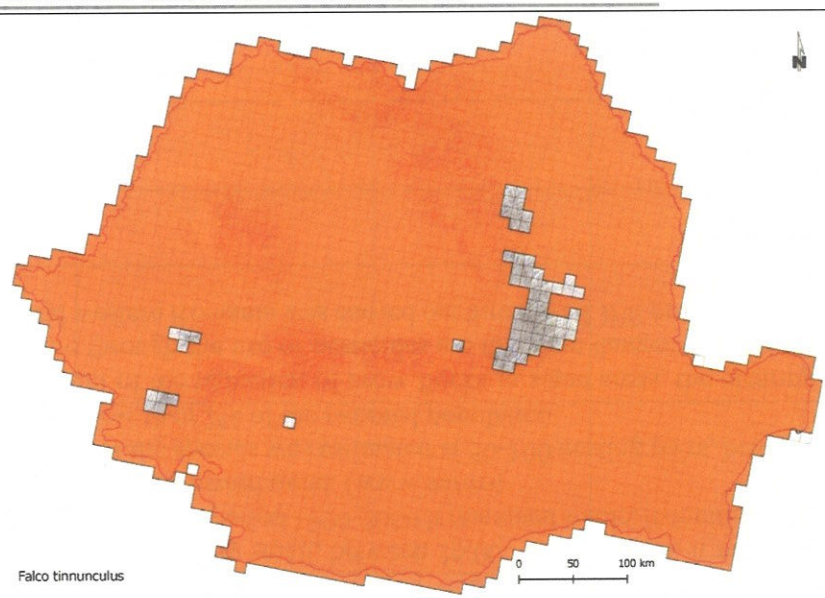
		blackish, including the toes. The plumage is characterized by a completely white color. During the nuptial period, it shows some long ornamental feathers on its back, which create a very pleasant appearance.
	Habitat requirements	Like the other representatives of the stork family, it is found in various wet areas, such as: the edges of lakes, marshes, ponds and ponds, canals. It nests either singly or in colonies that vary in number of hatching pairs. It can form mixed colonies with other species, such as: gray stork, red stork, etc. The preferred places for placing the nests are the stoves (www.benny-photo.com).
	The Areal of the Species	 Distribution of the species_*Egretta alba* (sursa www.iucnredlist.org)
	Population	The European population of the species is small and between 11000-24000 pairs. After 1970, the species began to recover numerically and showed a general positive trend in its distribution area. The estimated population in Romania is 900-1000 pairs, larger numbers being present in Ukraine (4500-7300), Russia (3000-10000) and Hungary (1800-3000) (dev.adworks.ro). In the Natura 2000 form, the population of the species was estimated at 15-30 nesting pairs, being marked with C, which means that a Population that represents less than 2% of the national population is nesting at the site.
	Threats and conservation measures	Degradation of habitats by reducing the areas of wetlands, cutting willows in winter as firewood by locals and disturbing colonies are the main dangers affecting the species. As conservation measures, the reduction of disturbance by protecting colonies from visitors and banning hunting is encouraged. Ecological reconstruction of wetlands remains a priority.
Egretta garzetta	Code of the species	A026
	Scientifical name	*Egretta garzetta,* (Linnaeus, 1766)

	The common name	The small egret
	Description of the species	The little egret is a species specific to wetlands with stands of trees. It is slender and elegant, with a body length of 55-65 cm and a weight of 350-550 g, being similar in size to the herd starling (Bubulcus ibis). The wingspan is between 88 - 106 cm. Adults have a similar appearance. The plumage is completely white. The yellow toes that contrast with the black legs and the black beak are the distinguishing marks that distinguish it from the great egret. In the back of the head it has 2-3 long and narrow ornamental feathers, which in the 19th century were sold to fashion houses to decorate hats. It feeds on fish, frogs and small aquatic animals. It arrives at the beginning of April from its winter quarters. The nest is located on willows and sometimes in reeds or thick shoots near ponds. The two parents participate in building the nest, made of branches and reeds. The female lays 3 - 4 eggs between the second half of May and the first half of June, with an average size of 46.54 x 33.67 mm. Incubation is ensured by both parents. After 21-25 days the chicks hatch and stay in the nest for around 30 days, but continue to be fed by their parents until 40 days when they become independent (www.sor.ro).
	Habitat requirements	The little egret prefers marshy areas, with clear and slightly deep water where it can fish freely. It can also be found on the banks of rivers, lakes, etc. The lifestyle is closely related to the presence of water. When it is not fishing, the egret rests on the beams, in the stove areas or in the dwarf trees and even on the edge of the water (especially the willows).
	The Areal of the Species	 Distribution of the species _*Egretta garzetta* (sursa www.iucnredlist.org)
	Population	The estimated European population of the species is relatively small, being between 68,000 - 94,000 pairs. Between 1970 and 1990, the population recorded an increasing trend (www.sor.ro). In the Natura 2000 form, the population of the species

		was estimated at 20-45 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of habitats by reducing the surface of wetlands, cutting willows in winter as firewood by locals and disturbing the colonies, represent the main threats affecting the species. As conservation measures, it is encouraged to reduce disturbance by protecting colonies from visitors and banning hunting.
Erithacus rubecula	Code of the species	A269
	Scientifical name	*Erithacus rubecula,* (Linnaeus, 1758)
	The common name	The European robin
	Description of the species	Easy to recognize by the orange face and chest, with gray demarcation lines. These contrast with the white abdomen and the olive-brown upperparts, as well as the wings and tail. The male and female look very similar, but the juveniles do not have the red chest and show many small spots. Body length is 12.5-14 cm, wingspan 20-23 cm, average body mass 18 g. It feeds on invertebrates in summer, supplements its food with seeds and fruits of shrubs in winter, being a frequent visitor to garden feeders. In the wild, the average lifespan is two years. It reaches sexual maturity at the age of one year. It is a territorial species throughout the year. Monogamous birds. After the male feeds the female to court her, she builds a cup-shaped nest of leaves and moss in the male's territory. Four-six eggs are laid from March and are incubated by the female for 13-15 days. The average size of an egg is 20x15 mm. The female feeds the chicks with the food brought to the nest by the male. The chicks leave the nest 11-17 days after hatching and are completely independent a week later. Each pair brings out two or three rows of young per year. (www.sor.ro)
	Habitat requirements	It lives in forests, parks and gardens and is often found in urban areas. It nests all over Europe. Birds from the north and east of the continent migrate to the southwest in winter. The wintering area extends from Great Britain to Spain and Morocco, as well as to the south-east of Europe. Migrating birds arrive for the winter in September-October and return in February for nesting. A diurnal species, it also feeds at night where there are artificial light sources, or where the moonlight is very strong. (www.sor.ro)

	The Areal of the Species	 **Distribution of the species_*Erithacus rubecula*(www.sor.ro)**
	Population	The nesting population in Europe constitutes 75% of the world's population of grebes and is estimated at 43-83 million pairs. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with a reduced density compared to the national average (insignificant).
	Amenințări si masuri de conservare	The species benefits fully from the garden feeders, but it must be taken into account that they need a constant amount of food all year round, especially in the winter months, when a strong cold can have a negative impact on the species. They also use artificial nests. (www.sor.ro)
Falco tinnunculus	Code of the species	A 096
	Scientifical name	*Falco tinnunculus,* Linnaeus 1758
	The common name	The common kerstel
	Description of the species	Small bird of prey. The sexes have a similar general coloration, the back being brownish-reddish, but in the male the colors are more intense, and the head is blue-gray (brownish in the female). On the belly, the coloring is much lighter, with dense, dark spots. The body length is 31-37 cm and has an average weight of 136-314 g. The wingspan is between 68-78 cm. The genus name (Falco) is the Latin name for falcons, which comes from the Latin flectere - to bend (probably referring to the talons), and the species name - tinnunculus -

		comes from the Latin word tinnulus, which sounds, or chirps. The nesting season starts in Europe usually in March - April. Egg laying takes place starting in April, with the female laying 3-6 eggs, which the females incubate for 27-31 days. The chicks leave the nest after 27-35 days. Pairs nest in isolation. Occupies nests abandoned by other species, especially Corvids. It also often nests on ledge-type supports (on walls, buildings, ledges, towers, rocks). (www.sor.ro)
	Habitat requirements	Distribution The species has a wide distribution in the Palearctic, from western Europe to eastern Asia, including Japan. In the north it goes up to northern Scandinavia and central Siberia. In the south it is present throughout Africa (except the Sahara), India and the Philippines. In Romania, the species nests over a wide area, from the Danube Delta and Lunca, to the high mountain areas (alpine meadows). Phenology It is a generally sedentary or partially migratory species in Romania. Specimens from northern regions descend to the south in winter, depending on the thickness of the snow cover. habitats It is very widespread, being present throughout the country. Nests especially in open habitats such as meadows/pastures or traditional agricultural mosaics with mature trees, orchards, hedgerows, heaths. It can also nest in towns and parks. Food It feeds mainly on rodents (but also reptiles, small birds or insects), which it hunts by flying to a fixed point, at a height of several meters. In northern and central Europe, the predominant food is micromammals, while in southern and northern Africa, large insects dominate the diet.Alte informații When hunting, it flies to a fixed point with its fan-shaped tail spread out and rapid wing beats - a fact that also earned it the popular name: windfly. (www.sor.ro)

	The Areal of the Species	 Distribution of the species_*Falco tinnunculus* (sursa www.sor.ro)
	Population	The world population of the species is preliminarily estimated at 4,300,000 - 6,370,000 individuals. The European one is estimated at 409,000 – 603,000 pairs. The trend at European level is decreasing. In Romania, the estimated population is 20,000 – 50,000 pairs. The population trend is also decreasing.
	Threats and conservation measures	The main threat is represented by the widespread use of pesticides in agriculture, which result in the depletion of food resources (micromammals and large insects). Agricultural intensification, through conversion to monoculture, has a negative long-term effect, representing the most likely reason for the long-term decline. (www.sor.ro)
Falco vespertinus	Code of the species	A097
	Scientifical name	*Falco vespertinus,* Linnaeus 1758
	The common name	Red-footed falcon
	Description of the species	The evening hawk, also known as the evening hawk, is a species characteristic of open areas with forest patches such as steppes, pastures, agricultural areas with low altitude, although in Asia it is also present at 1500 m. The body length is 28-34 cm and has an average weight of 130-197 g. The wingspan is between 65-76 cm. It is a falcon of medium to small size, with a silhouette close to the red kestrel (Falco tinnunculus) and the swallow falcon (Falco subbuteo). Attains full adult plumage in third year. The male has a unique combination of dark blue-grey (slate) on the body and rusty red on the legs and undertail

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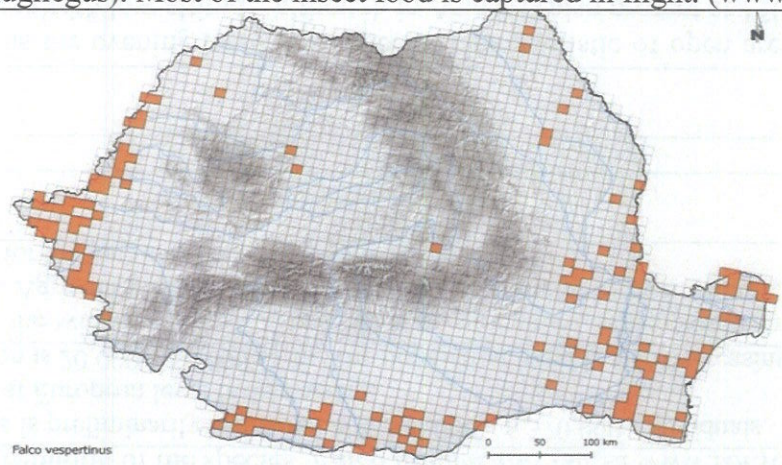
		feathers. The female is larger and has gray-blue plumage on the back and rust on the body. It feeds mainly on insects, small mammals, frogs and snakes. (www.sor.ro)
	Habitat requirements	It is a social bird that nests in colonies. For this, they occupy old nests of raptors or corvids, being in this way dependent on the colonies of crows (Corvus frugilegus). Most of the insect food is captured in flight. (www.sor.ro)
	The Areal of the Species	 Distribution of the species _*Falco vespertinus* (sursa www.sor.ro)
	Population	The European population of the species is relatively small, between 26,000-39,000 pairs. It marked a significant decline in the period 1970-1990. Although in some countries during the period 1990-2000 it remained stable, it continued to decrease in Russia and throughout the east of the continent, causing an overall downward trend. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 50-100 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	The absence of nesting places as a result of the reduction of crow flocks in some areas, the clearing of clumps of trees in the nesting areas, the intensification of agriculture through the use of pesticides are the main dangers for the species. A conservation program for the nesting population in Hungary and western Romania was carried out through a LIFE project in which the Milvus Group was a partner in Romania. (www.sor.ro)
Fringilla coelebs	Code of the species	A359
	Scientifical name	*Fringilla coelebs Linnaeus, 1758*
	The common name	Common chaffinch

	Description of the species	The chaffinch is a species with a wide distribution throughout Europe, with migratory flocks nesting in northern and northeastern Europe. It is found in all types of forest habitats both in plain and hill areas, as well as in mountain areas, reaching altitudes of over 1,500 m. The male is brightly colored, gray head, brown cheeks, neck and back, reddish chest, tail black with a greenish tail base, and black wings with two white bands towards the top. The female is predominantly greenish, the wings being the same as the male's. The body length is 14-16 cm, and the wingspan is 25-29 cm, with a body mass of 18-29 g. The maximum longevity achieved in the wild is 15-16 years. Males attract females to their territory with their very shrill song. The nest is built in the canopy of trees, a few meters from the ground, or in the dense shrub layer. The nest is deepened and consists of roots, straw and feathers on the inside and reinforced on the outside with lichen, cobwebs and moss. The chicks are fed by both parents until they learn to fly. They feed mainly on insects and seeds they find at ground level, rarely being observed feeding in the crowns of trees. It can often be seen feeding and in parks and gardens in urban and rural areas, where there are artificial feeders or where people give them seeds, being recognized as a sociable species, along with sparrows and titmouses. Birds become active for reproduction from the second year of life. Females lay 4-5 eggs in the months of May-June, the incubation being 10-16 days. The chicks are fed by both parents until they are 12-18 days old, leaving the nest after this period, being further fed by the parents for another 3 weeks. Pairs usually have 2-3 clutches per year, with the second clutch often being laid between June and July. (www.sor.ro)
	Habitat requirements	The species is generally sedentary throughout Europe, with flocks migrating to northern and northeastern Europe to breed, reaching as far as central Asia. Migratory flocks start their autumn migration in September-October, returning to the nesting territories in March-April. The nesting season takes place between May and July, with monogamous pairs forming as early as March. (www.sor.ro)

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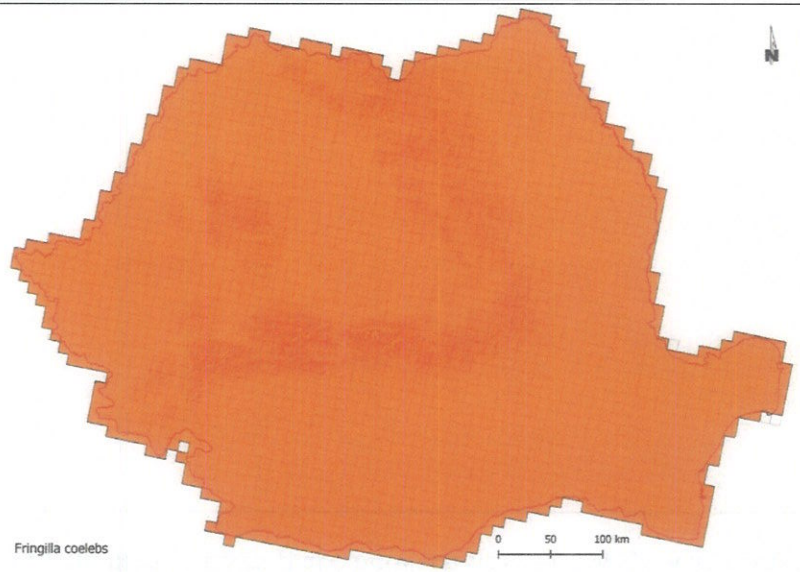
	The Areal of the Species	 **Distribution of the species_*Fringilla coelebs*(www.sor.ro)**
	Population	The European population is very large, amounting to between 130,000,000 – 240,000,000 nesting pairs, remaining stable in the period 1970-1990. Although the European population experienced small declines between 1990 and 2000 in some countries, it remained stable overall. In Romania, the species numbers approximately 2,450,000-6,300,000 nesting pairs. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with a reduced density compared to the national average (insignificant).
	Amenințări si masuri de conservare	The species is threatened by degradation and loss of suitable habitat through deforestation. Protecting this species depends only on banning deforestation or keeping forest nesting areas in a favorable state of conservation. (www.sor.ro)
Fulica atra	Code of the species	A125
	Scientifical name	*Fulica atra, Linnaeus, 1758*
	The common name	Eurasian coot

	Description of the species	It lives in areas with small, quiet waters, lakes, ponds, irrigation canals, storage dams, swamps and ballast tanks. It can often be found in the estuaries during the winter. The male and female have a black head, black body with gray feathers, white beak with a small white facial shield. The eyes are red, the legs are green-yellow, and the paw is partially webbed and gray. Body length is 36-39 cm, wingspan 65-75 cm, average body weight 800 g. The male and female look very similar, although the female is a little smaller. It feeds mainly on aquatic plants, but does not refuse invertebrates, bird eggs, amphibians, fish or small mammals. In the wild, they live, on average, five years. Eggs are laid in mid-March. Both parents hatch between six and 10 eggs, 53x36 mm in size, for 21-24 days. The two take care of the chicks until they are independent, 55-60 days after hatching. They have two or three litters a year. (www.sor.ro)
	Habitat requirements	It nests in almost all of Europe. It is a sedentary species in areas with a temperate climate, but populations from the north and east of the continent migrate to the center, west and south during the winter. Some even reach North Africa. The departure to the wintering areas takes place in September, and the return journey begins in February. It obtains its food by diving under water and by picking it from the ground. It is a diurnal species, but it can sometimes feed during the nights when the moonlight is strong. It reaches sexual maturity at the age of two. Monogamous species, extremely territorial in the mating season, aggressive both towards its own species and towards other species. The mating ritual is simple and involves a mutual cleaning with the help of the beak, after which the partners choose a place to nest. Here they will build their nest from dry leaves and grass, like a structure, either on ground vegetation or on floating vegetation. (www.sor.ro)

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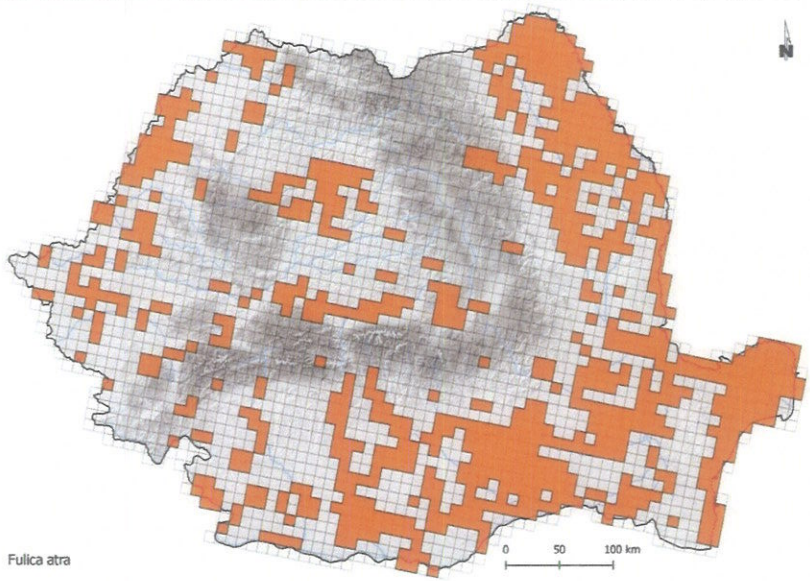
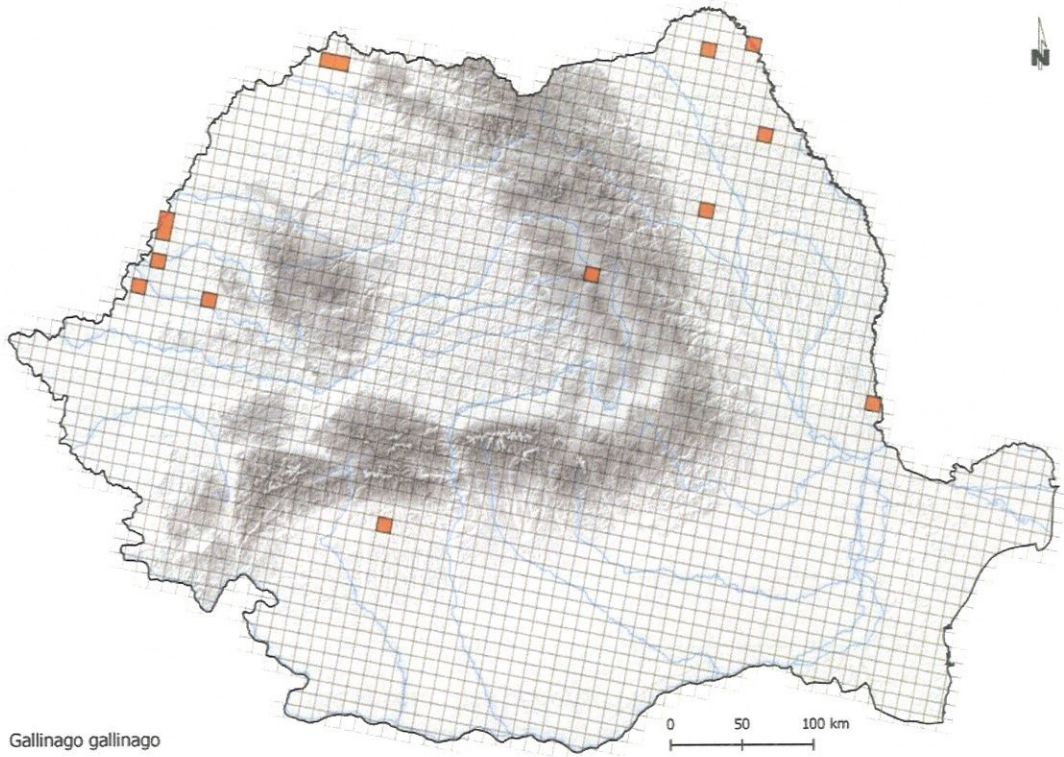
	The Areal of the Species	 **Distribution of the species_ *Fulica atra* (www.sor.ro)**
	Population	The nesting population in Europe is very large, between 1.3 and 2.3 million pairs. Some key populations experienced declines in the 1990-2000 period, but other populations remained stable. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 60,000 - 100,000 nesting pairs and was marked with D, which means that a Population with low density compared to the average nests at the level of the site national (insignificant).
	Amenințări si masuri de conservare	It is a common species in all habitats, it adapts very well to the urban environment. In some areas where the water is polluted, dirty with garbage or full of oil, populations have experienced declines. (www.sor.ro)
Gallinago gallinago	Code of the species	A0 153
	Scientifical name	*Gallinago gallinago,* (Linnaeus, 1758)
	The common name	The common snipe
	Description of the species	It nests in swamps and wet areas, often on the edge of lakes and rivers. In winter it stays in coastal or marshy areas. The upper parts are brown with lighter spots, the lower parts are pale, with black stripes on the chest, and the eye band is dark and bordered by two lighter bands. Short legs, long wings, and the distinctive beak is much elongated. The male resembles the

		female very well, although she has a slightly longer beak. Body length is 25-27 cm, wingspan 44-47 cm, average body weight 110 g. It feeds on invertebrates and plants. In the wild, the average longevity is three years. Three to five eggs of 40x29 mm are laid between April and June. The female incubates them for 18-20 days, and each parent takes care of half of the chicks. They leave the nest after 19-20 days. One tip per year. (www.sor.ro)
	Habitat requirements	It nests in almost all of Europe. Populations from the north and the extreme east migrate to the southwest to winter, but also reach Africa. They leave the nesting places in July and return the following year in March-May. They feed at sunrise and sunset, probing with their long beaks in the mud. It reaches sexual maturity at the age of two. Males are the first to reach the nesting sites and establish the territories. The females select a nest site and the bond between the birds is strengthened by a nuptial ritual in which the male flies in a circle, then dives and produces a drum sound while his tail vibrates in the air. Both partners prefer a life without many complications, and their nest is a small depression in the ground.
	The Areal of the Species	 Distribution of the species_*Gallinago gallinago* (sursa www.sor.ro)

	Population	The nesting population in Europe is large: between 930,000 and 1,900,000 pairs. Despite a decline in several countries between 1990 and 2000, several European populations have remained stable throughout this time.
	Threats and conservation measures	The declines have been attributed to wetland reclamation, which has led to loss of habitat and prey, in addition to declines caused by overhunting. In several countries, the species has benefited from wetland management measures, by regulating the water level, because snipe need little water.
Haliaeetus albicilla	Code of the species	A075
	Scientifical name	*Haliaeetus albicilla*
	The common name	White-tailed eagle
	Description of the species	The buzzard, also known as the white-tailed eagle, is a diurnal bird of prey, characteristic of open areas in the area of sea coasts and freshwater lakes near which there are old trees or rocky islands. The body length is 76-92 cm and it weighs 4100 g for the male and 5500 g for the female. The wingspan is between 190-240 cm. Adults have a similar appearance, yellow beak, yellow iris, white tail and brown body. They reach the characteristic plumage of the adult in 5-6 years. The tail becomes completely white only after eight years. The young have a dark beak, iris, tail and body. It feeds mainly on fish, waterfowl, small mammals and sometimes carrion. (www.sor.ro)
	Habitat requirements	It is a bird related to the aquatic environment (sea coasts, large rivers, lakes), living on land or at the edge of the sea. On land, the wagtail prefers the edges of lakes and rivers in tundra, forests or near forests, which are suitable for finding prey. On the sea coast, he lives on steep rocky cliffs.

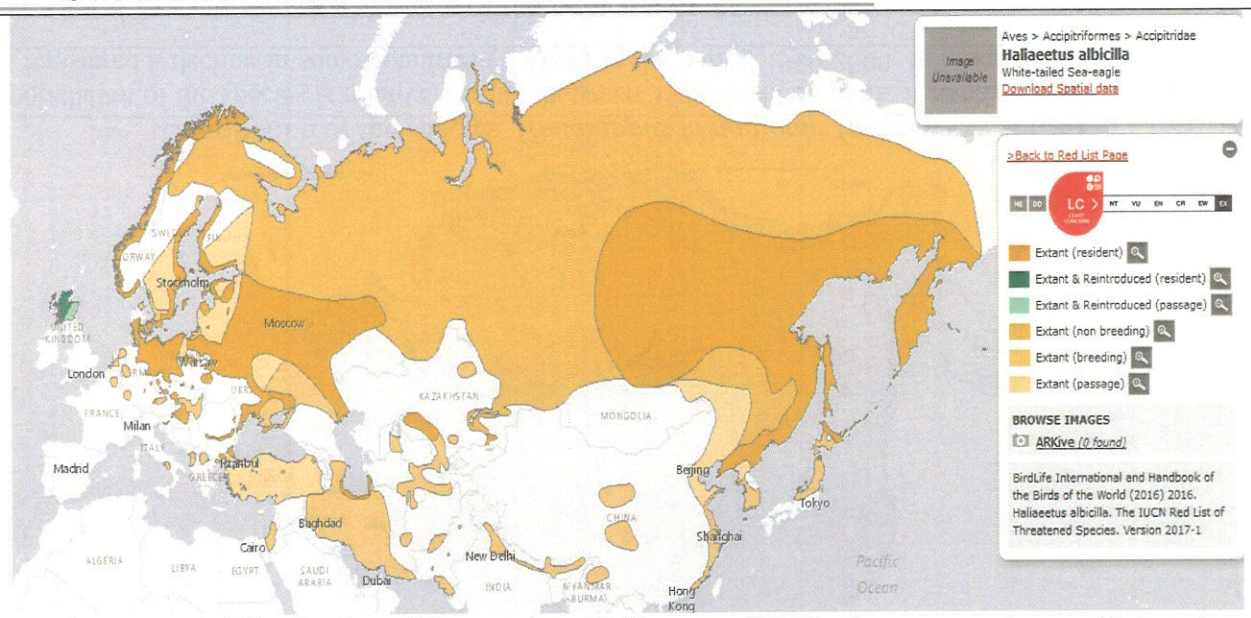
	The Areal of the Species	
	Population	The European population of the species is small, between 5000-6600 pairs. An increase in the population was noted between 1970-1990, a trend that was maintained during the period 1990-2000. In Romania, the estimated population is 28-33 pairs, but in the past it was a common presence. The largest numbers are in Norway, Russia and Poland. (www.sor.ro). In the Natura 2000 form, the population of the species is marked with D, which means that a Population with low density (5-10 individuals) nests in the corridor compared to the national average (insignificant).
	Threats and conservation measures	Destruction of wet habitats, cutting of forests, increasing disturbance caused by human activities, accidental poisoning and collision with wind turbine blades are the main dangers affecting the species. An International Action Plan was developed for the conservation of the species. (www.sor.ro)
Himantopus himantopus	Code of the species	A 131
	Scientifical name	*Himantopus himantopus,* (Linnaeus, 1758)
	The common name	The black-necked stilt
	Description of the species	The black-necked stilt is a species characteristic of areas with shallow waters, inland waters and sea coasts. The length of the body is 33-36 cm and it has an average weight of 180 g. The wingspan is about 75 cm. Proportional to the waist, it is the species with the longest legs among the birds present here. Adults have a similar appearance, with the male having more

Figura nr. 1. Distribution of the species *Haliaeetus albicilla (sursa www.iucnredlist.org)*

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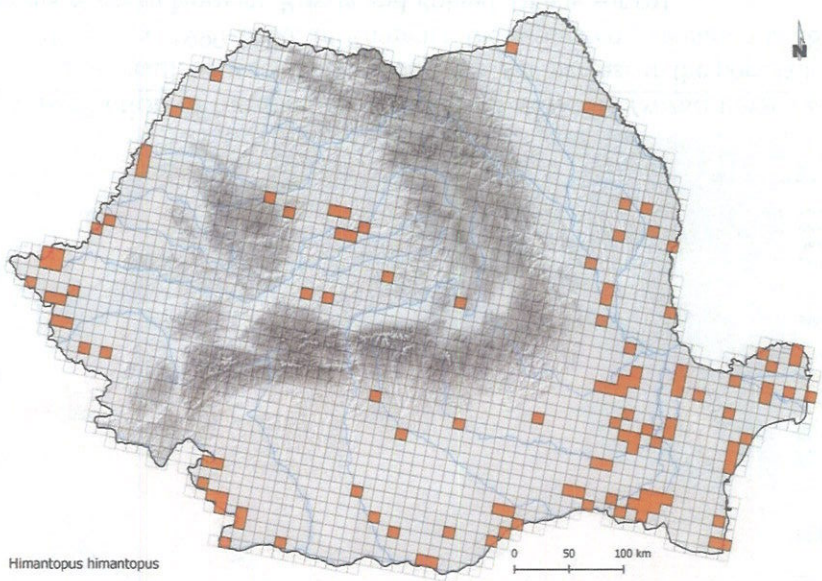
		black on the head. It is an elegant bird, with long red legs, and the plumage is black and white. It feeds on insects, molluscs, crustaceans, spiders, small fish and seeds. The genus and species names come from the Greek words ymantos - rope and pous - foot, referring to the long legs of the bird. They arrive from winter quarters in April. The female usually lays 3-4 eggs in May and early June, measuring 43.3 x 29.4 mm. Incubation lasts 25-26 days and is ensured by both partners. Shortly after hatching, the chicks leave the nest, but continue to be fed by their parents. They become fliers at 28-32 days.
	Habitat requirements	The black-necked stilt is a species characteristic of areas with shallow waters, inland waters and sea coasts. The length of the body is 33-36 cm and it has an average weight of 180 g. The wingspan is about 75 cm. Proportional to the waist, it is the species with the longest legs among the birds present here. Adults have a similar appearance, with the male having more black on the head. It is an elegant bird, with long red legs, and the plumage is black and white. It feeds on insects, molluscs, crustaceans, spiders, small fish and seeds. The genus and species names come from the Greek words ymantos - rope and pous - foot, referring to the long legs of the bird. They arrive from winter quarters in April. The female usually lays 3-4 eggs in May and early June, measuring 43.3 x 29.4 mm. Incubation lasts 25-26 days and is ensured by both partners. Shortly after hatching, the chicks leave the nest, but continue to be fed by their parents. They become fliers at 28-32 days.
	The Areal of the Species	 Distribution of the species *Himantopus himantopus* (sursa www.sor.ro)
	Population	The European population of the species is relatively small, between 37,000-64,000 pairs. It remained stable in the period 1970-1990 and although it registered a decline in some countries (Turkey) in the period 1990-2000, in other countries it increased in the same

		period (Spain), so the population remained stable overall. In Romania, the estimated population is 400-600 pairs. The largest numbers are present in Spain, Turkey and Russia.
	Threats and conservation measures	Degradation and destruction of habitats, disturbance caused by tourist activity, urbanization are the main dangers affecting the species. Preserving the habitats necessary for the species and reducing disturbance in the nesting areas are priorities for conservation.
Hirundo rustica	*Code of the species*	A251
	Scientifical name	Hirundo rustica Linnaeus, 1758
	The common name	The swallow
	Description of the species	Rândunica este un zburător excelent, având corpul turtit și alungit, aerodinamic, cu aripile înguste și ascuțite. Rândunelele au ciocul mic, dar gura prezintă o deschidere largă pentru a putea captura din zbor insectele, singura lor hrană. Picioarele, mici, sunt folosite mai ales la cățăratul pe ziduri, mai rar pentru a sta pe ramuri. The swallow is an excellent flyer, having a flattened and elongated aerodynamic body with narrow and pointed wings. Swallows have small beaks, but their mouths have a wide opening to catch insects in flight, their only food. The small legs are used mostly for climbing walls, less often for standing on branches. It is the largest swallow in Romania and Moldova. It has a length of 16.8-24.0 cm (average 18 cm) and a weight of 16-24 g (extreme 13-28 g). Wing length = 115-140 mm; beak length = 10-12 mm; median rectrices = 34-48 mm; lateral rectrices = 92-152 mm; tarsus length = 10-13 mm. The swallow is easily recognized by its deeply forked (V-shaped) tail with very long lateral rectrices and distinctive plumage coloration: metallic dark blue upperparts, reddish-brown (brick-red) forehead and chin, but from a distance appear dark , the chest with a dark blue stripe, the rest of the underparts yellowish white. She has a graceful and slender figure, long, triangular and tapering wings, a slightly pronounced neck. The male of the nominate subspecies has the crest and upperparts uniformly dark blue with metallic reflections. The forehead, chin and lower part of the neck are reddish-brown (brick-red), characters difficult to distinguish in flight and from a distance. On the chest a wide dark blue collar forming a transverse pectoral stripe with metallic reflections, sometimes with a few chestnut feathers; this stripe clearly contrasts with the whitish or reddish chest. Rest of underparts, including subcaudal and subalar tectrices, whitish, yellowish-white or brownish-white. The wings and tail are black or black-brown with weaker metallic reflections. The tail is clearly bifurcated with very elongated lateral rectrices. In the male, the lateral rectrices vary between 95 and 152 mm. The distance between the tip of the longest rectrices compared to the shortest is from 51 mm to 99 mm. On the inner flag of the rectrices (except the middle pair) there are small, oval or wedge-shaped white spots, the size of which increases towards the side of the tail, these spots are clearly visible when the bird displays its rectrices. The beak is short and blackish, widened at the base. The legs are short, weak, blackish. The iris is dark brown. The sexes are difficult to determine by the color of the plumage. The female is less shiny, has a less colorful plumage, with less pronounced blue reflections than the male. The lateral rectrices of the tail are shorter; the pectoral stripe is washed out in color with faint metallic reflections. In the female, the lateral rectrices are 95-121 mm; the tip of the lateral rectrices exceeds the rest of the tail by

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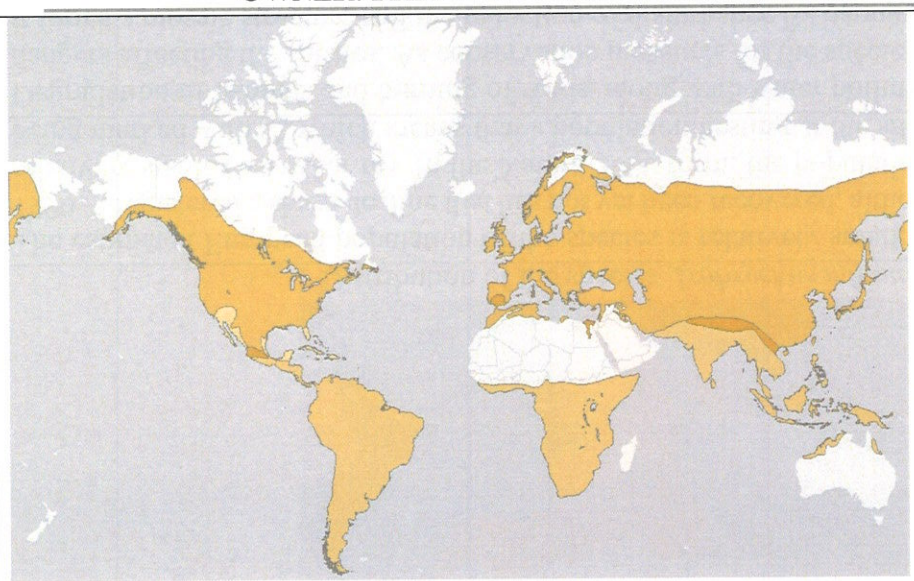
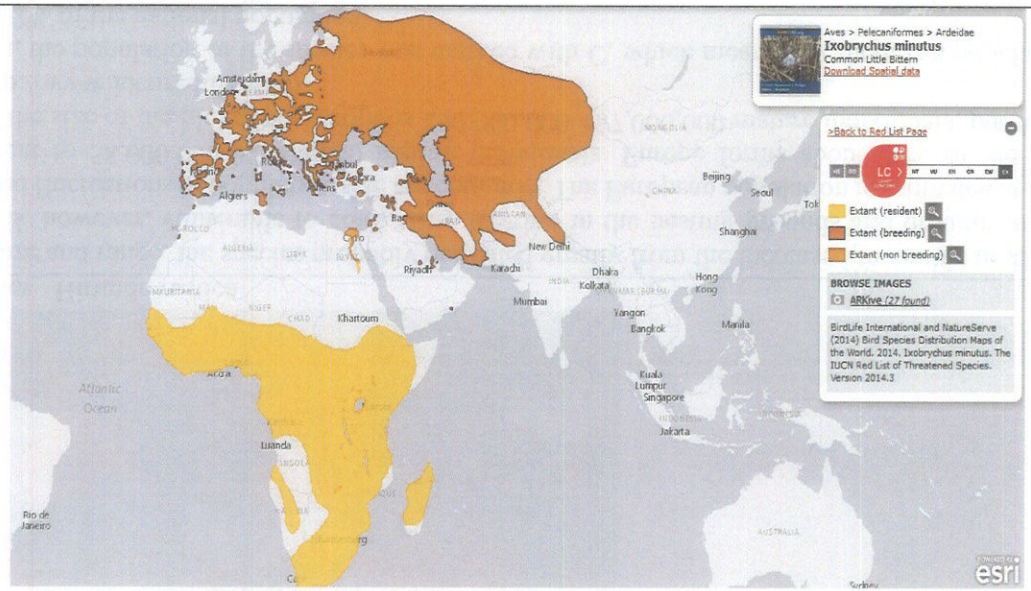
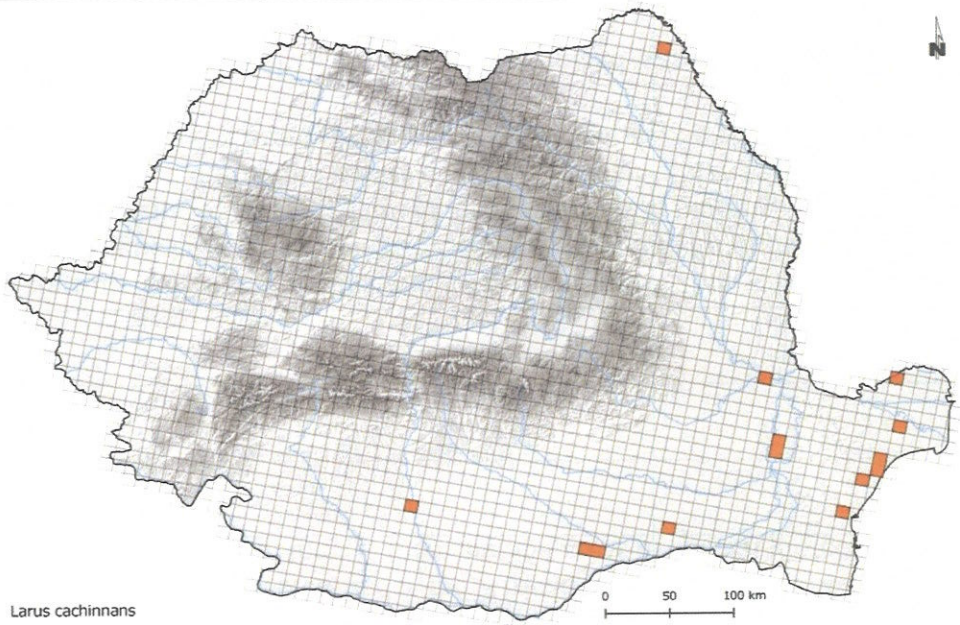
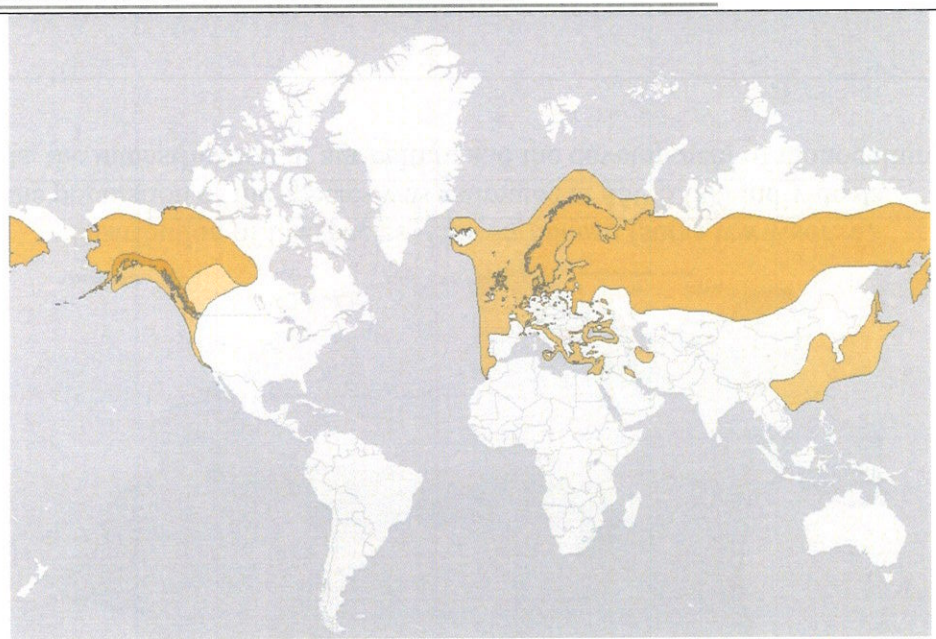
		54-73 mm. The female can be determined by the hatching area on the abdomen and chest which is almost free of flakes, sometimes there is a little fluff on the side of the abdomen; because of the blood vessels the area is red. The juvenile is more washed out, has a paler light chestnut on the forehead and lower part of the neck, the color also extends above the eyes. Pectoral stripe dark brown without reflections. Tail short, lateral rectrices short, a little beyond the edge of the tail.
	Habitat requirements	The swallow is mainly found in rural areas, especially in villages where cattle are raised. It is less common in large cities with sufficient green spaces and areas with cereal monocultures. It lives in open regions, farmland, human habitations, often near water. It usually avoids extensive forests and very dry areas. In Europe and North America it is mainly a rural bird, preferring to nest on farms with livestock (especially cattle) in northern and central Europe. The most important densities of swallow populations are generally located in farms and hamlets, where extensive livestock farming is still practiced. Preferential nesting on farms is favored not only by the presence of farm animals, but also by the architecture of farm buildings and their accessibility. In all cases, its abundance is related to the presence of habitats rich in aerial insects (natural meadows, hedges, forests, swamps, ponds, etc.) In northern Africa and Asia, it often nests in small and large cities. The swallow has now become strictly anthropophilic, existing almost only in localities. Probably a long time ago it nested in the mountainous area, coastal areas with hollows, gorges and gnarled trees; with time, however, it adapted to the human environment. It is one of the most common nesting species in localities. Its appearance largely depends on the nesting of domestic animals. Thus, the swallow can be found on agricultural land, in towns, along roads, wherever it finds suitable places to nest and gather food, often preferring areas near water. It is common especially in the lowlands, but it can also climb to the higher lands, where it has nesting conditions. It occurs from sea level to about 3000 m, usually below 1000 m in Europe. In France it nests up to 1500 m in the Gard, 1600 m in the Pyrenees and above 1800 m in the Alps. It is absent in arctic regions and high mountains. In Romania and the Republic of Moldova it is a summer guest, frequently found in all areas preferring the vicinity of humans. It can be found up to the upper mountain areas (even 2000 m in the Carpathians); lives in localities (mainly in rural ones), nesting under the eaves of houses, inside buildings (warehouses, stables, garages, etc.).

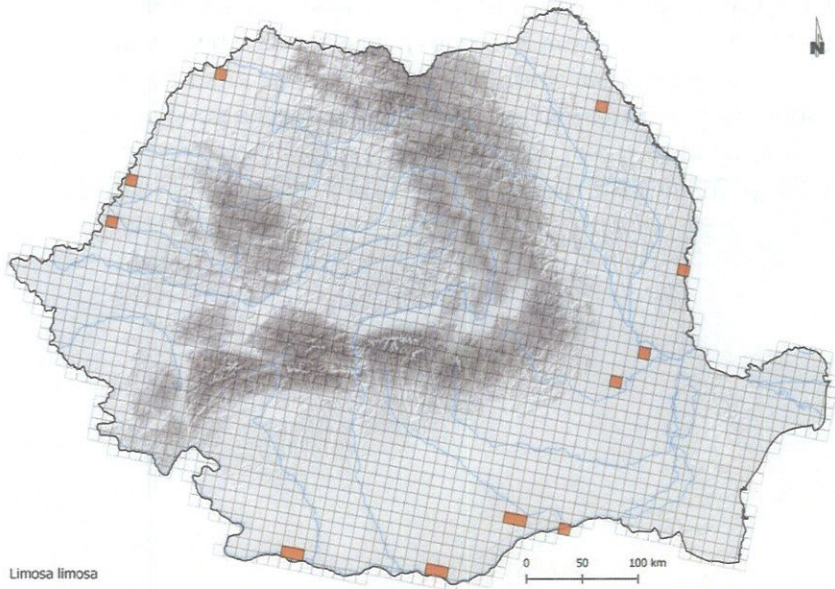
	The Areal of the Species	 Distribution of the species_ Hirundo rustica
	Population	In terms of population size and range, the species probably benefited greatly from the increased favorable nesting conditions provided by human activities; it is, however, vulnerable to cold, rainy weather in the nesting grounds and drought in the wintering grounds (especially in Africa), and fluctuations in population size are common. The European population is estimated at 29,000,000-48,700,000 pairs, which is equivalent to 58,000,000-97,400,000 mature individuals. Europe forms about 20% of the global area, so a very preliminary estimate of the size of the global population is 290,000,000-487,000,000 mature individuals, but further validation of this estimate is needed. (http://www.iucnredlist. org) In the Natura 2000 form, the population of the species was marked with C, which means that there is a population nesting on the site that represents less than 2% of the national population.
	Amenințări si masuri de conservare	The swallow is one of the most widespread summer guests in Europe. The species is not threatened with extinction at the global level (LC according to IUCN criteria). It is generally very common and widespread, but there are significant numerical declines in some regions. In order to stop the decline of swallow populations, it is necessary to implement measures to encourage polyculture and extensive nesting of animals. (http://www.iucnredlist.org)
Ixobrychus minutus	Code of the species	A022
	Scientifical name	*Ixobrychus minutus, (Linnaeus, 1766)*
	The common name	Little heron

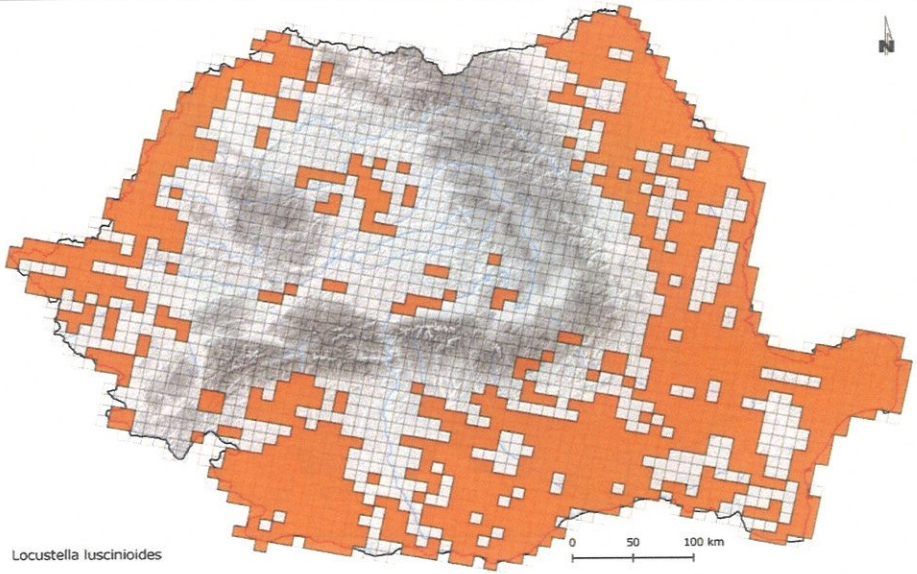
	Description of the species	Shy bird, generally difficult to observe. It populates places with dense vegetation in marshy regions, preferably thickets, where it nests in isolated pairs. Adults have a body length of 33 - 58 cm, being somewhat smaller than the pond grebe and have a weight of 140 - 150 g. The wingspan is between 49 - 58 cm. Adults have a different appearance. In the male, the contrast is stronger than in the female: black back and yellow-white spots on the wings; the female is brown with stripes on the back, with a more streaked chest, the spots on the wings are lighter. Juv. it is spotted with brown and ochre; spot on wing present. Sometimes it sits motionless in the reeds, as if paralyzed. Avoid danger by running rather than flying. Characteristic flight: rapid wingbeats with broad glides. It rarely rises above the sufaris for short distances. The mating cry is a kind of suppressed moan/growl, rhythmic "oor", repeated every two or three seconds, in very long series. He also has a nasal cry, agitated and strong "chechecheche".
	Habitat requirements	It is a species specific to wet areas with banks covered with reeds and wicks.
	The Areal of the Species	 Distribution of the species_ *Ixobrychus minutus* (sursa www.iucnredlist.org)
	Population	The estimated European population of the species is relatively small, between 60,000 - 120,000 pairs. In the period 1970 - 1990, it registered a sharp decline that has not yet been recovered, although in the period 1990 - 2000 the population remained relatively stable (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 10-15 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of habitats and burning of reeds, along with water pollution and predation of nests by wild boars, are the main dangers affecting the species. As conservation measures for the species, the successive cutting of reeds is encouraged, so that it forms a mosaic structure and the reduction of disturbance by banning hunting (www.sor.ro)

Larus cachinnans	Code of the species	A459
	Scientifical name	*Larus cachinnans* Pallas, 1811
	The common name	Pontic gull
	Description of the species	The pontic pescarus is a large pelican, 59-67 cm and 680-1330 g. The legs, wings and neck are longer than those of the silver pescarus. The back and wings are a slightly darker (silver) gray than the herring gull, but paler than the yellow-legged gull, the tips of the wings are black, and the rest of the body is white. The beak is yellow, with a red spot near the tip. The color of the legs varies from pale pink to pale yellow.
	Habitat requirements	It nests on old reed debris, on sandy beaches, both in the Danube Delta and along the coast, near reed-fringed lakes and grassy river islands, forming colonies on cliffs, rocky and sandy islands.
	The Areal of the Species	 Distribution of the species _*Larus cachinnans*(www.sor.ro)
	Population	The European population is estimated at 54,100-87,500 pairs, which equates to 108,000-175,000 mature individuals (BirdLife International 2015). (source www.iucnredlist.org)

		In the Natura 2000 form, the population of the species was estimated at 5,000-6,000 nesting pairs and was marked with D, which means that there is a population nesting at the site with a low density compared to the national average (insignificant).
	Threats and conservation measures	This species is vulnerable to oil pollution and is hunted for sport in the Ukraine. In the Black Sea area, many nests were destroyed and adults shot during the 1940s to reduce their predation on L. melanocephalus. It is a frequent victim of oil pollution in certain areas. The species is covered under the African Eurasian Waterfowl Agreement. Within the EU it is included in Annex II to the Birds Directive. In the EU there are 354 areas of special protection for this species.
Larus canus	Code of the species	A182
	Scientifical name	*Larus canus* Linnaeus, 1758
	The common name	The common seagull
	Description of the species	The adult is similar to the Herring Gull, but is smaller and narrower-winged, flies with faster and more vigorous wingbeats, has dark hazel eyes and a more fragile beak, greenish-yellow (no red spot), mantle slightly more dark, green legs. The juvenile has a black, narrow, well-defined stripe on the tail, a brown back which after molting - with the fall - turns blue-gray, brown alar tectrices which are also preserved during the winter and pink, gray or bluish legs. The calls are higher and more shrill than those of the herring gull, strong, often heard, for example: chi-à, chi-à…; a che-che-che shriek and also a persistent cry of alarm chi-ii, chi-ii.
	Habitat requirements	It nests quite often in isolated pairs or colonially, along coastal and inland waters, mainly in NE Europe. It often feeds on the plains, in flocks.

	The Areal of the Species	 Distribution of the species _ *Larus canus* (sursa www.iucnredlist.org)
	Population	The global population is estimated at 2,500,000-3,700,000 individuals. The European population is estimated at 640,000-1,080,000 pairs, which equates to 1,280,000-2,160,000 mature individuals (BirdLife International 2015). National population sizes were estimated at 100–10,000 nesting pairs and 50–1,000 wintering individuals in China, and 10,000–100,000 nesting pairs and 1,000–10,000 migrating individuals in Russia. (source www.iucnredlist.org) In the Natura 2000 form, the population of the species was estimated at 500-1000 nesting pairs and was marked with D, which means that the site nests a Population with low density compared to the national average (insignificant).
	Threats and conservation measures	In northern and western Europe the species is threatened in nesting colonies by ground predators such as the American mink (Neovison vison). It is threatened by tourism, fishing and research activities during the spawning period. Near rivers they are also vulnerable to outbreaks of black flies (Simuliidae). The species is listed under the African Eurasian Agreement of Waterbirds. In the EU it is included in Annex II to the Birds Directive and is listed in 381 special protection areas. (source www.iucnredlist.org)
Limosa limosa	Code of the species	A156
	Scientifical name	*Limosa limosa, Linnaeus, 1758*

	The common name	Black-tailed godwit
	Description of the species	It is spread all over the European continent, but as a rather rare presence. The preferred nesting areas are the N-W of Europe. In our country it is found as a bird of passage and as a summer guest in the Danube Delta. It can rarely be seen near the ponds in the interior of the country. The shorebird has a much more specular plumage in the spring during the mating season. The head, neck and chest have a red-brick color, on the back and wings it is mottled, dark brown with white and on the abdomen it is white-grey. The beak is long and thin, with a pink base and a black tip, and the legs are relatively long and black. In winter, the plumage loses its brick shades and gives way to gray ones.
	Habitat requirements	Fairly common as a deltaic species, it is usually found along canals with marshy beaches.
	The Areal of the Species	 Distribution of the species _*Limosa Limosa* (sursa www.sor.ro)
	Population	In the Natura 2000 form, the population of the species was estimated at 450-3,000 individuals.
	Threats and conservation measures	The degradation of habitats, the intensification of agriculture and the development of monocultures have a significant effect on the population.
Locustella luscinioides	Code of the species	A292

Scientifical name	*Locustella luscinioides* (Savi, 1824)
The common name	Savi's warbler
Description of the species	It has a uniform brownish-reddish coloring and a rounded tail. It hides very well and can be rarely seen. Hunts small insects of 2-4 mm, near water, clinging to reed stems. Sometimes they also eat small snails.
Habitat requirements	This species inhabits marshes, lake edges and reedbeds over shallow water. It nests in reeds and marshy meadows with rushes, sedges, willows, anions. The nest is located near the water, in the low part of the reed stalks.
The Areal of the Species	 Distribution of the species_ Locustella luscinioides(ww.sor.ro)
Population	In Europe, the nesting population is estimated at 281,000-474,000 pairs, which equates to 561,000-949,000 mature individuals (BirdLife International 2015). Europe contains about 65% of the world's population, so an estimate of the global population size is 860,000-1,460,000 mature individuals. (source www.iucnredlist.org) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with a reduced density compared to the national average (insignificant).
Threats and conservation measures	The species is well-known for short-term population fluctuations. These probably result from changes in habitats, such as drainage and natural changes in water levels, as well as weather conditions. There are currently no known conservation measures for this species in Europe.

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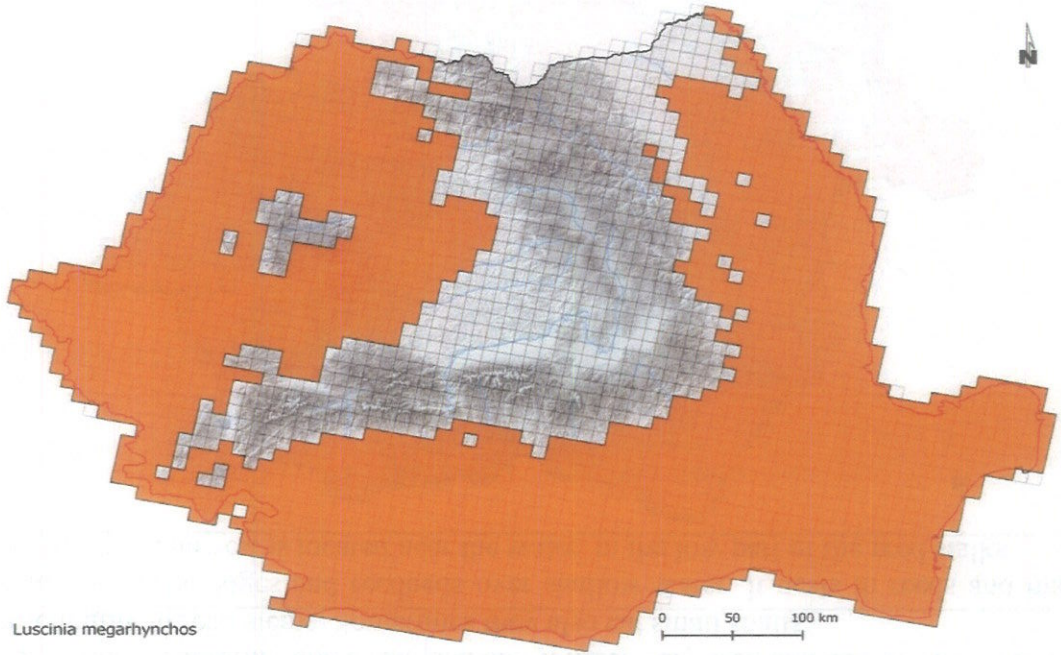
Luscinia megarhynchos	Code of the species	A271
	Scientifical name	*Luscinia megarhynchos* (Brehm, 1831)
	The common name	Red-headed Nightingale
	Description of the species	The plumage is very simple; in the shadow of the leaves we usually see only the reddish color of the tail. They look for their food composed of ants and beetles, on the ground, between dry leaves.
	Habitat requirements	It can be found in forests with a developed shrub layer, in parks, in meadows, thickets.
	The Areal of the Species	 Distribution of the species_Luscinia megarhynchos(www.sor.ro)
	Population	In Europe, the nesting population is estimated at 10,700,000-20,300,000 pairs, which equates to 21,500,000-40,500,000 mature individuals (BirdLife International 2015). In Europe exiated c.50% of the worldwide range, so that globally the population is c.43,000,000-81,000,000 mature individuals. (source www.iucnredlist.org)

		In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	Population declines started from 1950, with the development of modern agriculture, but not in significant numbers. There are currently no known conservation measures for this species in the European range.
Merops apiaster	Code of the species	A230
	Scientifical name	*Merops apiaster* Linnaeus, 1758
	The common name	The European bee-eater
	Description of the species	The species with the most colors in our bird fauna. Food is caught in the air or starting from an ambush site.
	Habitat requirements	With the exception of closed forests and mountains, we meet it in places where it finds vertical loess walls or walls formed by landslides, suitable for digging the gallery. When they start digging the gallery, they use only the beak, and after the formation of a threshold, the legs are also used for digging and sweeping. The tunnel of medium length, about one meter, ends with a more spacious niche for the nest. The nests are used for years. The chicks can develop in stable conditions in the gallery dug deep in the ground, not being affected at all by the atmospheric conditions. It nests colonially, but the presence of solitary pairs is not exceptional either. Submit only one tip per year. Flocks of guinea fowl leave our country in September, heading for the southern parts of Africa.

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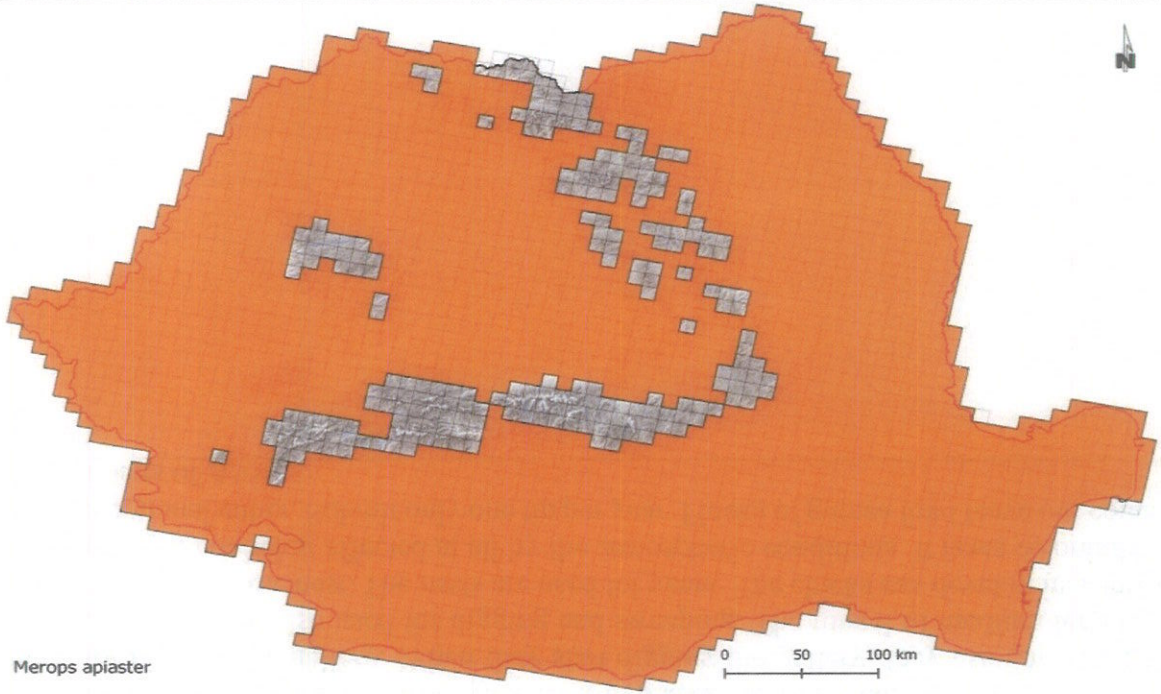
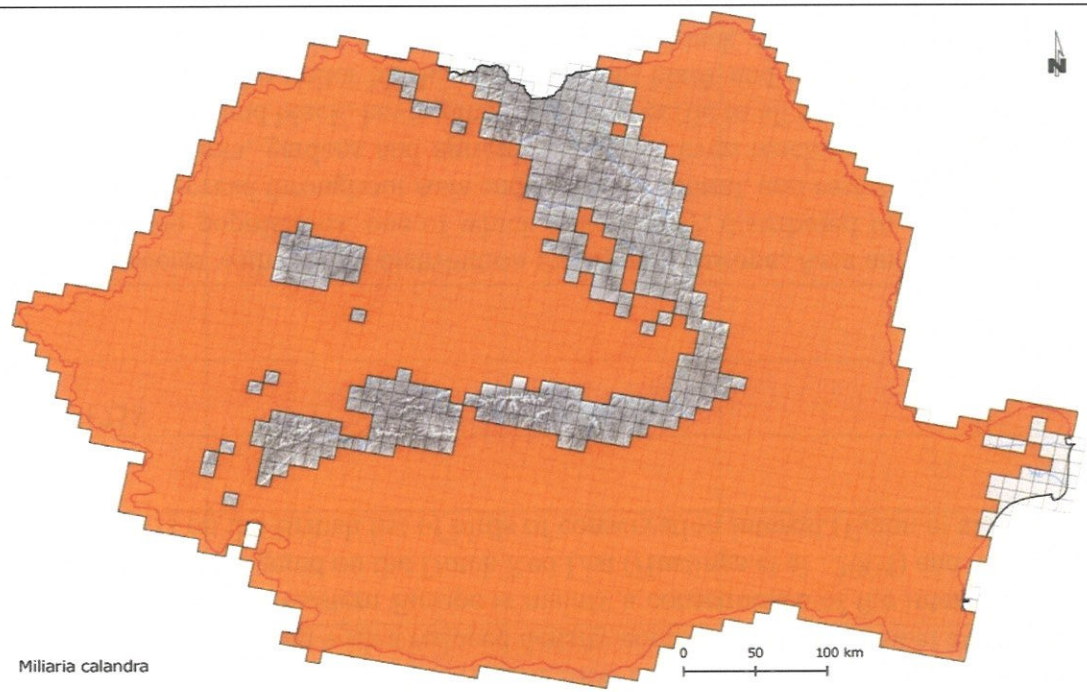
	The Areal of the Species	 Distribution of the species _*Merops apiaster(www.sor.ro)*
	Population	In Europe, the nesting population is estimated at 2,800,000-5,050,000 pairs, which equates to 5,600,000-10,100,000 mature individuals (BirdLife International 2015). Europe has about 40% of the world's population, so that the global population is 14,000,000-25,250,000 mature individuals. In the Natura 2000 form, the population of the species was estimated at 10-15 nesting pairs of the species and was marked with D, which means that at the site there is a Population nesting with reduced density compared to the national average (insignificant).
	Threats and conservation measures	There are currently no known, specific conservation measures for this species in Europe.
Miliaria calandra	Code of the species	A383
	Scientifical name	*Miliaria calandra* Linnaeus, 1758 *Emberiza calandra* AERC TAC (2003)

	The common name	The corn bunting
	Description of the species	The plumage does not contain very obvious elements, but fortunately it usually lies in exposed places where it can be observed in detail. The sexes are similar. Males are polygamous, usually 2-3 females nest in one male's territory, but a case with 18 females in one territory has been noted. The male's contribution to feeding the chicks can vary between 0-50%. food consists of seeds (mostly grains) or other parts of plants; in the summer it eats insects. The population in the country does not migrate, forming flocks in the winter. The mating season starts relatively late, at the end of May. The nest is placed on the ground, hidden among the vegetation. It is built entirely by the female, who usually lays four to six eggs. The incubation period is 12-14 days. Chicks leave the nest after 9-13 days often before they can fly. The diet of the species consists mainly of plant seeds, but during the mating season includes a high percentage of invertebrates, primarily small insects.
	Habitat requirements	Lives in open habitats, grain fields, pastures, hayfields.
	The Areal of the Species	 Distribution of the species_Miliaria calandra(www.sor.ro)

	Population	In Europe, the nesting population is estimated at 18,300,000-31,300,000 pairs, which equates to 36,700,000-62,600,000 adults (BirdLife International 2015). Europe holds c.20% of the worldwide population, so a global estimate of the population is 183,500,000-313,000,000 mature individuals. In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	The sharp decline of the species in northwestern Europe is mainly a consequence of the intensification of agriculture. The species is classified as Critically Endangered on the Dutch Red List (Hustings et al . 2004) and Vulnerable on the Swiss Red List (Keller 2010). The species is on the British list of birds of conservation interest (Eaton et al . 2009).
Motacilla alba	Code of the species	A262
	Scientifical name	*Motacilla alba* Linnaeus, 1758
	The common name	The white wagtail
	Description of the species	The white woodpecker is a species with a wide distribution throughout Europe, Asia and the Balkan Peninsula, as well as partially in Africa. There are two populations, one of which is sedentary, distributed in southern and western Europe and Turkey, and the other migratory, spread throughout Asia and northern, central, and eastern Europe. It prefers habitats located near water, being also found in parks, gardens and agricultural lands, even reaching urban and rural areas. It is the only species of bird colored in light, gray and black, having the long tail specific to all cormorants. The coloration is simple, with a gray back, crest, nape and nape to the goiter black, wings and tail black and edged with white. By autumn molting, the black color is reduced. The lower part is white, up to the chest which is black. It is mainly observed at ground level, where it captures insects, rarely observed catching prey in the air. The body length is 17-19 cm and the wingspan is 25-30 cm, with a body mass of 17-25 g. The maximum longevity achieved in the wild is 13-14 years. (www.sor.ro)
	Habitat requirements	This species inhabits a wide variety of wet and dry non-forested habitats, including the seashore, rocky or sandy mountain streams and slow rivers, farmland, gardens, parks, short grasslands such as those near factories in cities. It is also often found in towns and villages. The Asian and European migratory population of white-tailed godwits carry out seasonal migrations, moving to southern Asia and northern Africa, respectively, in the months of September-October, for the wintering period, then returning for nesting in the months of March-April of the following year. Nesting takes place between May and July, with monogamous pairs forming in March and April. The birds got its name because of its behavior of swinging its tail when standing still. The nest consists of dry twigs, leaves and grass, being often placed in cracks in rocks, dirt banks, house eaves, but near lakes or rivers. Both partners care for the young, feeding them insects and seeds, often caught or found at ground level, less often in the air. Birds become active for reproduction from the second year of life. (www.sor.ro)

	The Areal of the Species	 Distribution of the species_*Motacilla alba*(sursa www.iucnredlist.org)
	Population	The European population is relatively large, totaling between 13,000,000 – 26,000,000 nesting pairs, being stable during the period 1970-1990. Although the European population declined between 1990 and 2000 in some countries, it remained stable in the rest of Europe as a whole. In Romania, the species numbers approximately 1,500,000-1,900,000 nesting pairs. In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	The species is threatened by degradation and loss of suitable habitat, which has caused the reduction of herds in some countries. The protection of wetlands and adjacent habitats specific to the white cod is a priority for keeping the parameters of this species within favorable limits.
Motacilla flava	Code of the species	A260
	Scientifical name	*Motacilla flava* Linnaeus, 1758
	The common name	The western yellow wagtail
	Description of the species	It is slightly smaller and has a shorter tail than the white cod. The yellow coloring of the body on the underside is typical. It has several subspecies that differ mainly in the color of the head. In the southern part of the country we can easily recognize

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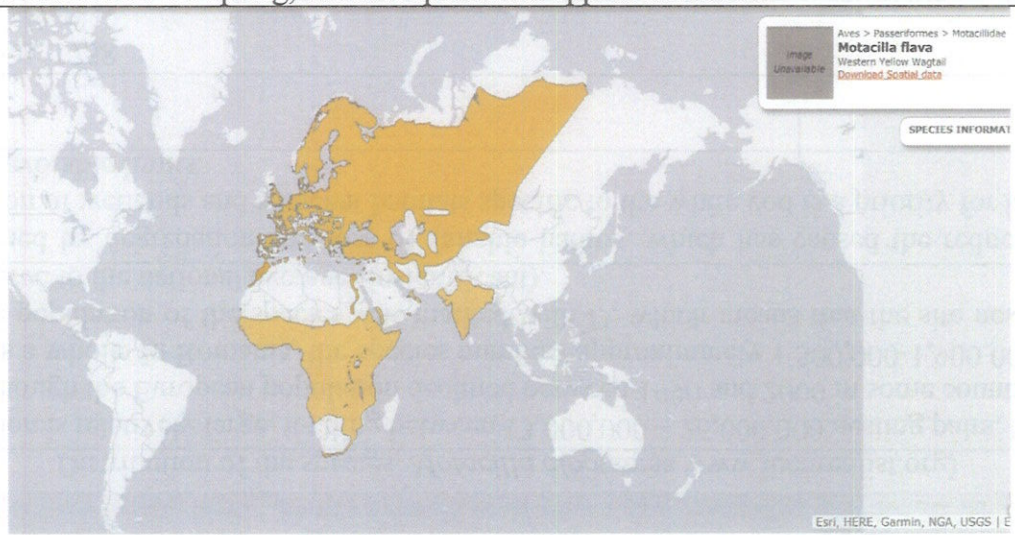
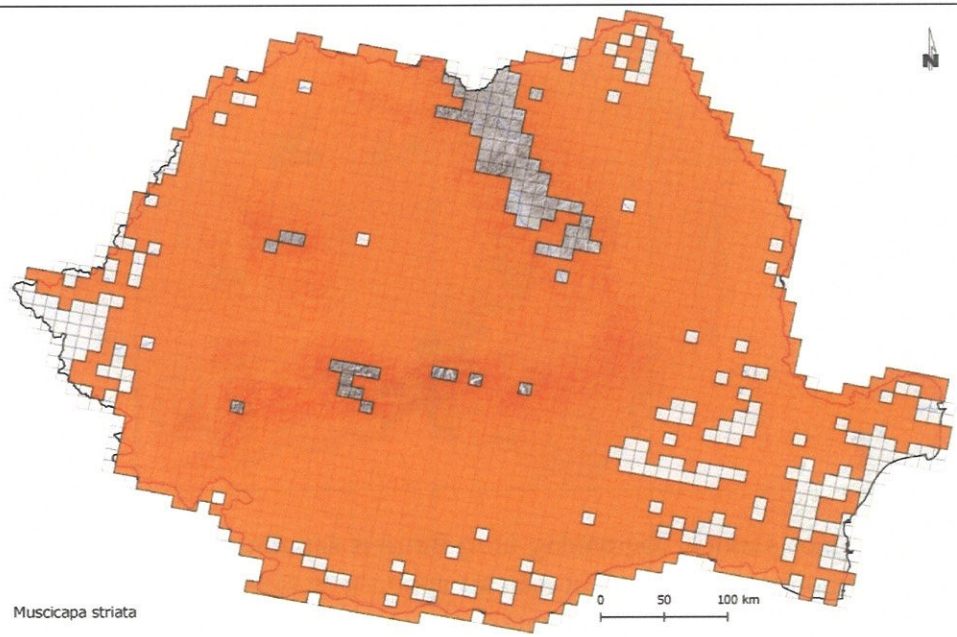
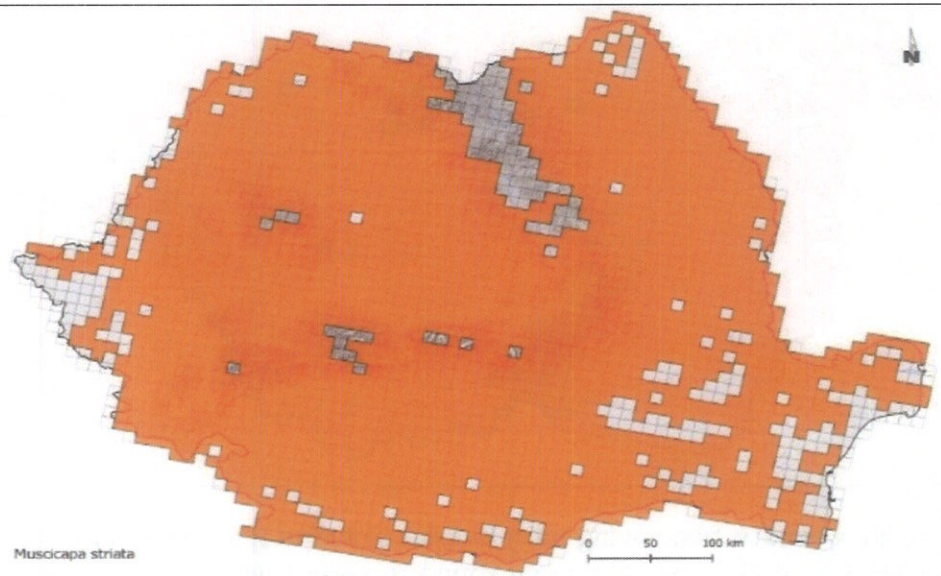
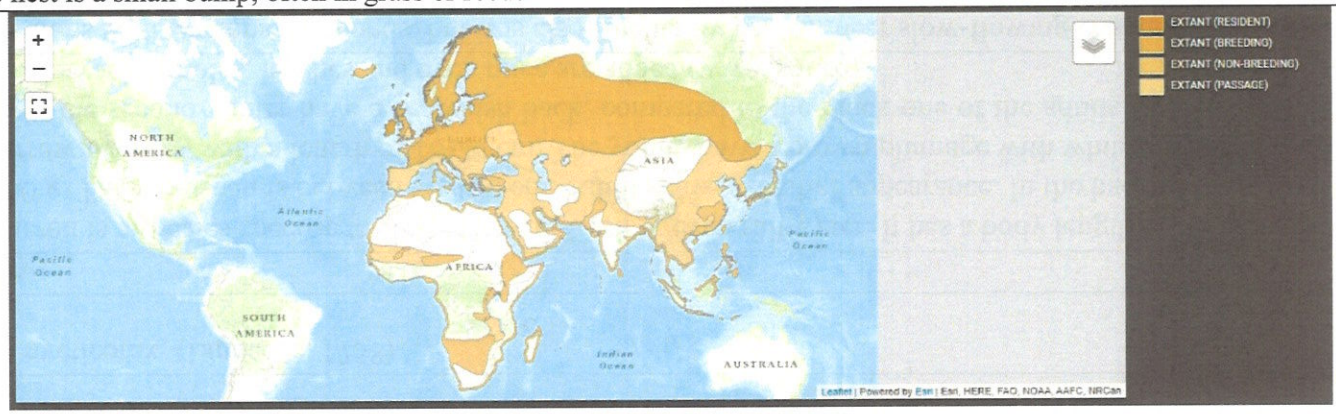
		the black-headed subspecies. The sexes are similar. It nests twice a year, the nest being placed on the ground. It is insectivorous, follows grazing animals and hunts insects disturbed by them.
	Habitat requirements	Lives in open habitats, pastures, hayfields, arable land. Migrate long distances; birds from Romania probably winter in the Sahel area, south of the Sahara. In the spring, the first specimens appear in March
	The Areal of the Species	 Distribution of the species_*Motacilla flava*(sursa www.iucnredlist.org)
	Population	In Europe, the nesting population is estimated at 9,630,000-16,000,000 pairs, which equates to 19,300,000-32,100,000 adults (BirdLife International 2015). Europe holds c.30% of the worldwide population, so that globally, the population is c.64,000,000-107,000,000 mature individuals. In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	The species is threatened by degradation and loss of suitable habitat, which has caused the reduction of herds in some countries. The protection of wetlands and adjacent habitats specific to the codobatur is a priority for keeping the parameters of this species within favorable limits.
Muscicapa striata	Code of the species	A319
	Scientifical name	*Muscicapa striata* (Pallas, 1764)
	The common name	The spotted flycatcher

	Description of the species	Common species in light forests, parks and gardens. It nests not only in hollows, but also in other, less common, tight places. It sits on a branch at the edge of the tree crowns from where it launches in short flights to catch insects. He has a straight demeanor and flaps his wings with every shout. Simple gray-brown plumage with striations on the chest and specific on the forehead. The juvenile is more variegated. Simple song, consisting of three or four rushed notes.
	Habitat requirements	The most common flycatcher in Romania, it is considered a common species in parks, gardens, agricultural lands, natural habitats ranging from swamps to riparian forests. It builds its nest in the forks of branches, in the crevices of walls or in artificial hollows with a wide entrance. It migrates starting from September, winters south of the Sahara and arrives in our country in mid-April.
	The Areal of the Species	 Distribution of the species *Muscicarpa striata*(www.sor.ro)
	Population	In Europe, the nesting population is estimated at 14,900,000–22,700,000 pairs, which equates to 29,700,000–45,500,000 adults (BirdLife International 2015). Europe holds c.55% of the global population; global population is 54,000,000-83,000,000 mature individuals. In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).

	Threats and conservation measures	The population is declining in Northern and Central Europe due to habitat conversion, cold summers, and declining insect populations caused by pollution and insecticides.
	Description of the species	Common species nest in light forests, parks and gardens. It nests not only in hollows, but also in other, less common, tight places. It sits on a branch at the edge of the tree crowns from where it launches in short flights to catch insects. He has a straight demeanor and flaps his wings with every shout. Simple grey-brown plumage with striations on the chest and specific on the forehead. The juvenile is more variegated. Simple song, consisting of three or four rushed notes.
	Habitat requirements	The most common flycatcher in Romania, it is considered a common species in parks, gardens, agricultural lands, natural habitats ranging from swamps to riparian forests. It builds its nest in the forks of branches, in the crevices of walls or in artificial hollows with a wide entrance. It migrates starting from September, winters south of the Sahara and arrives in our country in mid-April.
	The range of the species	 Distribution of the species *Muscicarpa striata*(www.sor.ro)
	Population	In Europe, the breeding population is estimated at 14,900,000–22,700,000 pairs, which equates to 29,700,000–45,500,000 adults (BirdLife International 2015). Europe holds approximately 55% of the world population; global population is 54,000,000-83,000,000 mature individuals.

		In the Natura 2000 form, the population of the species was marked with D, which means that a population nests at the site with a low density compared to the national average (insignificant).
	Threats and conservation measures	The population is declining in Northern and Central Europe due to habitat conversion, cold summers, and declining insect populations caused by pollution and insecticides.
Numenius arquata	Species Code	A160
	The scientific name	*Numenius arquata, (Linnaeus, 1758)*
	Popular name	Big curlew
	Description of the species	About the size of a pheasant, it has a body length of 50-57 cm, wingspan of 80-100 cm, average body mass 770 g (male) and 1000 g (female). Gray-brown bird, with black spots on the head, neck, chest and upper parts, pale yellow on the abdomen and with a white rump. The long, downward-curving beak is pink on the underside, and the long legs are blue-grey. The sexes are similar. (www.sor.ro).
	Habitat requirements	It nests in the northern half of Europe and the central regions of Asia. It winters in southern Europe, Africa and South Asia. They leave the nesting areas in June-August and return starting in February. In Romania, the species does not nest, being present only in migration, especially in the wet areas of the low regions. It feeds on insects, worms, crustaceans, molluscs, sometimes also on small vertebrates, probing with its beak in the mud. Pairs are solitary and territorial. In the nuptial ritual, the male sings in flight, soars as high as possible and then glides towards the ground with outstretched wings. The nest is a small bump, often in grass or reeds.
	The range of the species	 *Distribution of the species Numenius arquata* (source: www.iucnredlist.org)
	Population	The breeding population in Europe is large: 212,000 - 292,000 pairs. The population trend experienced a sharp decline, which led to the classification of the species by the IUCN as Near Threatened.

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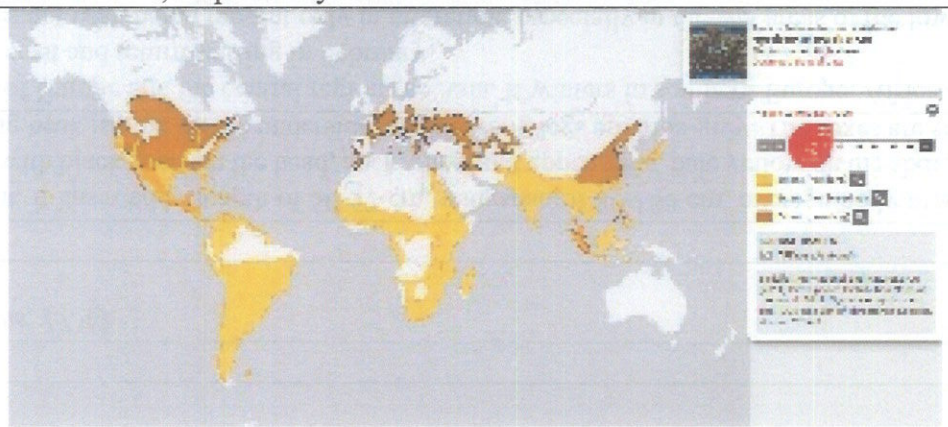
	Threats and conservation measures	Globally, the species is in decline, as a direct result of habitat loss through swamp clearing and agricultural intensification. Studies have shown that nest predation by mammals has an essential role in this decline. (www.sor.ro).
Nycticorax nycticorax	Species Code	A023
	The scientific name	Nycticorax nycticorax, (Linnaeus, 1758)
	Popular name	Night heron
	Description of the species	The night heron is a species specific to wetlands with fresh or even salt water. It has a body length of 58-65 cm and a weight of about 800 g. The wingspan is between 90-100 cm. Adults have a similar appearance. In the back of the head they have 3-4 white, narrow feathers, with a length of 18-20 cm. The young have a brown plumage with white streaks in the first winter. The young in the second winter have a brownish back, compared to the black one of the adults. It feeds mainly on fish to which insect larvae, tadpoles, leeches and even mice are added (www.sor.ro).
	Habitat requirements	It prefers regions with swamps and ponds, but it is also frequently present near slow-flowing waters (rivers, canals). It nests in small colonies, in trees (willow, alder), sometimes with other herons. It feeds on fish, insects, amphibians. In migration, it often feeds on agricultural land. It inhabits open areas with shrubs and rare trees, hedgerows, groves and groves. It prefers areas with a characteristic microrelief, respectively with a warm microclimate.
	The range of the species	 *Distribution of the species Nycticorax nycticorax* (source: www.iucnredlist.org)
	Population	The estimated European population of the species is relatively small, being between 63,000 - 87,000 pairs. Between 1970 and 1990, it recorded a moderate decline. Although the population remained stable or fluctuated between 1990 and 2000, the population level prior

		to the period of decline was not recovered. In the Natura 2000 form, the population of the species was estimated at 20-30 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	Degradation of habitats by reducing wet surfaces, cutting willows in winter as firewood by locals and disturbing colonies are the main dangers affecting the species. As conservation measures, it is encouraged to reduce disturbance by protecting colonies from visitors and banning hunting. The ecological reconstruction of the wetlands in the Danube Delta and on the lower course of the Danube remains a priority (www.sor.ro).
Pelecanus crispus	Species Code	A 020
	The scientific name	*Pelecanus crispus,* Bruch, 1832
	Popular name	Curly pelican
	Description of the species	The curly pelican is a close relative of the common pelican. It is only slightly larger than its relative and reaches a weight of 10,000-12,000 g. The plumage is dark white. In nuptial plumage, a tuft of curly and soft feathers appears on the head, which in very old birds reaches a length of 14-16 cm, and the gorse is intensely coloured in coral red. It feeds similarly to the common pelican. She sheds in July-October. The genus name comes from the Greek word *pelekanos* - pelican. The name of the species comes from the Latin word crispus – curly, wavy, referring to the curly hair on the top. They return from their winter quarters earlier than common pelicans, in early March. The nest is more elaborate, made of reed rhizomes and other plant debris. Nesting takes place in a similar way to the other species, in the months of March-April. The female lays 2-4 eggs whose incubation period lasts about 31 days. The chicks are ready to fly after 75-85 days and reach sexual maturity at 3-4 years. (www.sor.ro).
	Habitat requirements	Its population is distributed in southeastern Europe, especially in Greece, Romania and Russia. In Romania, it nests in the Danube Delta alongside the common pelican, but also isolated, in small colonies of a few dozen pairs, in the southern area of the Danube Delta and the Razim-Sinoe lagoon complex. At least some of the specimens of this species winter in the lower corridor of the Danube, but Greece and Turkey represent the most important wintering areas. He is more cautious and more fearful than his relative.

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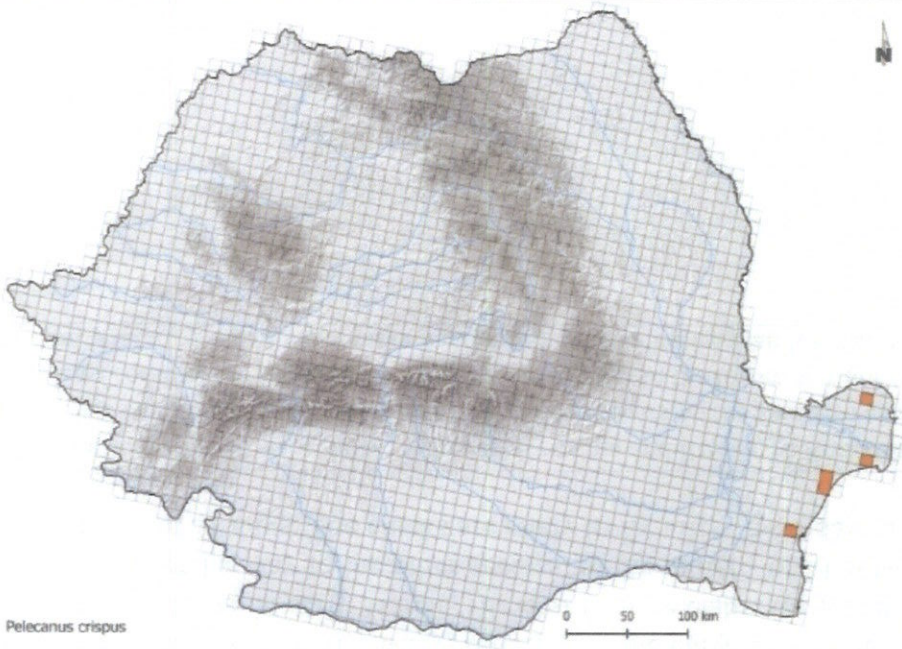
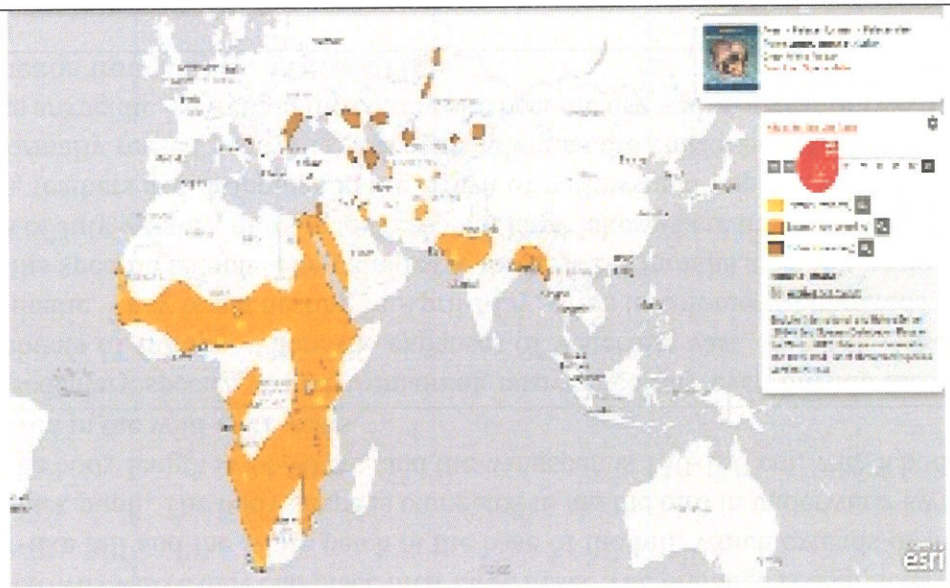
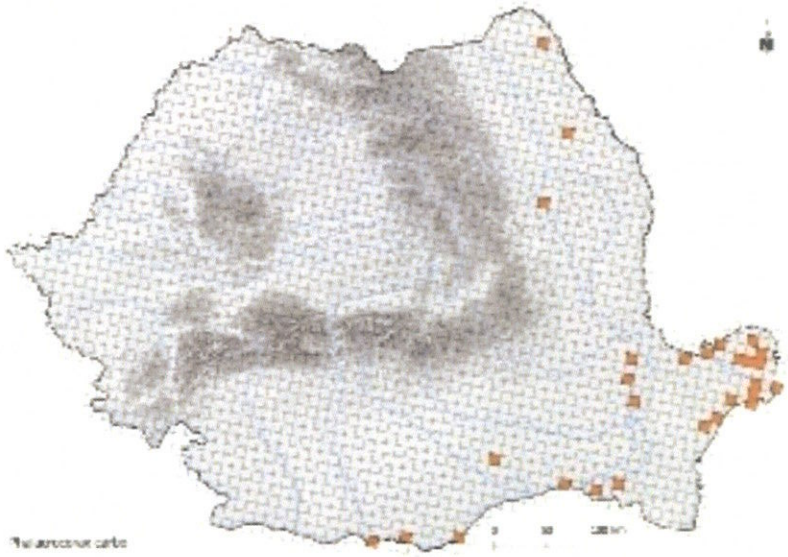
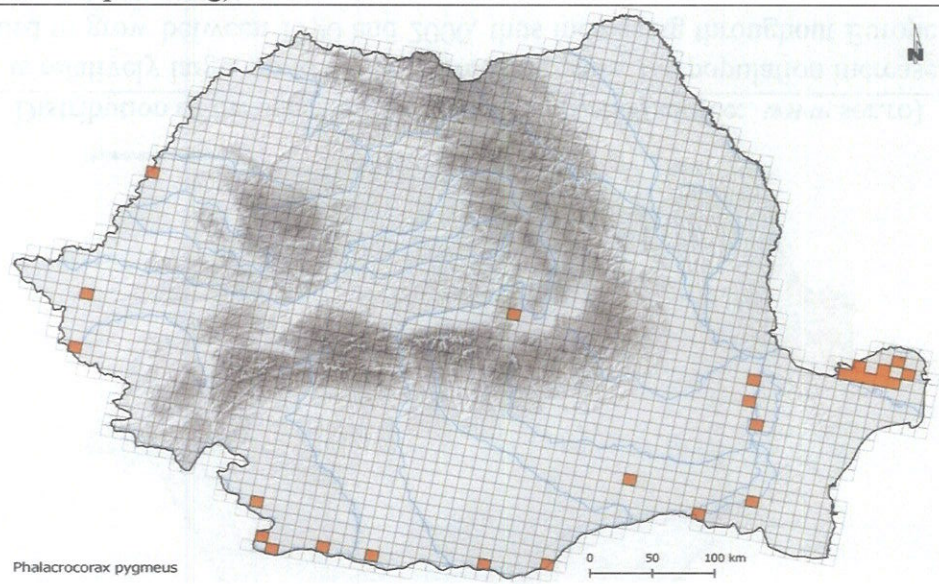
	The range of the species	 Distribution of the species *Pelecanus crispus* (source: www.sor.ro)
	Population	The European population of the species is estimated at up to 2000 nesting pairs. Due to the small numbers and the continuous degradation of the nesting conditions, this species is considered threatened. Together with the common pelican, they represent the symbol species of the Danube Delta.
	Threats and conservation measures	Disturbance and poaching, associated with wetland degradation and loss of nesting territories, are the main threats. For the curly pelican, a National Action Plan was developed that regulates the necessary measures for the conservation of the species (Danube Delta Biosphere Administration together with SOR/BirdLife Romania). Also, the artificial platforms installed in the Razim-Sinoe lagoon complex have proven their effectiveness through their occupation by Cretan pelicans.
Pelecanus onocrotalus	Species Code	A019
	The scientific name	*Pelecanus onocrotalus,* Linnaeus, 1758
	Popular name	Common pelican
	Description of the species	The "Great White Pelican" is a massive aquatic species that appears completely white when sitting on the ground. In flight, the black colour on the lower part of the wings is easily distinguished. It has a wide and long beak from which hangs "a yellow gorse pierced with

		red vines". Adults have a body length between 160 - 180 cm and a weight of 8,000 - 10,000 g. The wingspan is between 270 - 320 cm. Adults have a similar appearance. They feed on fish in shallow waters (1.5 - 2.5 m) because they cannot dive in a way similar to cormorants. The "fully adult" coat is visible from the fourth year when it becomes mature, and the plumage is coloured from April in a "beautiful salmon pink". From July, it begins to molt and the pink-reddish colour is lost (www.sor.ro). It can be found in lake areas and in coastal areas and bays.
	Habitat requirements	It can be found in lake areas and in coastal areas and bays.
	The range of the species	 Distribution of the species *Pelecanus onocrotalus* (source: www.iucnredlist.org)
	Population	The European population of the common pelican (Great White Pelican) is estimated at up to 5,100 pairs. The Danube Delta Biosphere Reserve is the traditional nesting place for the common pelican. 60-100 years ago, it was a nesting species common throughout the lower course of the Danube. Between 1990 and 2000, the population remained stable in Romania, being a symbolic species for the Danube Delta, protected by the measures taken by the Administration of the Danube Delta Reserve (www.sor.ro). In the Natura 2000 form, the population of the species was marked with C, which means that a population nesting on the site represents less than 2% of the national population.

	Threats and conservation measures	Disturbance and poaching, associated with the degradation of wetlands and the loss of nesting territories, are the main threats. The installation of artificial nesting platforms and the development of a National Action Plan for the "Great White Pelican" must be a priority for the Administration of the Danube Delta Biosphere Reserve.
Phalacrocorax carbo	Species Code	A017
	The scientific name	*Phalacrocorax carbo,* (Linnaeus, 1758)
	Popular name	The great Cormorant
	Description of the species	The great cormorant is a species with a wide distribution on all continents. It prefers wet habitats with large stretches of water where it obtains its food consisting of fish of all sizes, the species being completely ichthyophage. Nests in willows and white or black poplars with rich crowns where they can place their large nests. The plumage is completely black, with the exception of the sharp yellow raptor-like bill and the white patch at the base of the bill, which extends down the cheek. The eyes are yellow with a prominent black pupil. The body shape is elongated to aid the bird in underwater swimming. The fish captures it exclusively by diving. The body length is 84-90 cm, and the wingspan is 130-160 cm, with a body mass of 2.6-3.7 kg. The maximum longevity achieved in the wild is 22 years.
	Habitat requirements	The great cormorant is a sedentary species, usually remaining near the colony even outside the nesting season. It is found everywhere in the wet habitats of Europe, where the expanses of water are vast. In North America it prefers the coastal habitats of the Western Atlantic. They begin nesting in April-May, often in colonies of hundreds or even thousands of pairs depending on the area of the specific habitat. The pairs leave the nest 2-3 months after the beginning of the nesting period, respectively in the months of July-August, moving to areas with large lakes where they can dive in search of fish. The nest is assembled from dry twigs, feathers and droppings in the crown of willows and poplars, trees can even count up to 20 nests per trunk. Colonies are normally reused year after year, expanding as the chicks become adults and begin nesting in turn. Great cormorant droppings are acidic, so trees at the colony site become dry within a year or two of the colony site. Juveniles become active for reproduction from the second year of life.

	The range of the species	 Distribution of the species *Phalacrocorax carbo* (source: www.sor.ro)
	Population	The European population is relatively large, up to 310,000 breeding pairs, the population increases during the period 1970-1990. Populations continued to grow between 1990 and 2000, thus increasing throughout Europe. In Romania, the species has a population of approximately 18,000-20,000 nesting pairs.
	Threats and conservation measures	Loss or degradation of wetlands, associated with fragmentation or loss of nesting (trees, shrubs, reeds) and foraging habitats, together with inland water pollution, poaching and drowning of birds in fishing nets are the main threats. Ecological reconstruction activities are needed throughout the lower Danube plain.
Phalacrocorax pygmeus	Species Code	A393
	The scientific name	*Phalacrocorax pygmeus,* (Pallas, 1773)
	Popular name	The little cormorant
	Description of the species	The little cormorant *(Phalacrocorax pygmeus)* is an aquatic, semi-migratory bird belonging to the family Phalacrocoracidae [1], with a short waist (45–55 cm) and a wingspan of 75–90 cm. During mating season, adults have a dark brown head and neck, and the body has a metallic green sheen with small, white spots (present in both sexes). During the rest of the season, the white spots disappear and the chest becomes dark red-brown. It has a small head with round dark brown eyes. It has a crest on the forehead and a dispersion of white filoplume feathers that descend on the neck, back, tail and underparts. The

		beak of the adult small cormorant is short, black in colour, the neck is thin, equipped with a throat sac. Juveniles have a yellowish beak; their plumage is dark brown on the back and the abdomen and chin have a whitish tint. Cormorants do not have uropygial glands (glands that are found in most water birds in the tail area and have the role of secreting an oily substance that has the role of preventing the feathers from soaking in water), for this reason after each dive into the water they have to and spread the wings to dry. It spends a lot of time submerged in the water in search of food, sometimes more than a minute, after which it takes refuge on various supports (branches) with its wings wide open to dry its plumage. (www.wikipedia.org)
	Habitat requirements	Prefers vegetated ponds, lakes and river deltas. Avoid mountainous regions and cold, dry regions. Loves rice fields or other flooded areas where bushes and trees are present. In winter, they also frequent waters with higher salinity, in estuaries or reservoirs. It is a bird that can live solitary or in groups and is somewhat familiar with human presence. It builds its nest of sticks and reeds, in thick vegetation, in trees, bushes, willows and rarely in reeds (especially on small floating islands). At the end of May, the beginning of June, she lays between 4-6 eggs in the nest whose incubation period lasts 28 days. The young are fed small fish and other aquatic animals (Kiss and Rekasi, 2002). It often shares the same type of habitat with egrets, herons and shovelers. (www.wikipedia.org)
	The range of the species	 Distribution of the species *Phalacrocorax pygmeus* (source: www.sor.ro)
	Population	At the global level, it has been estimated that the population of little cormorants reaches 85,000-180,000 individuals (study carried out by Wetlands International in 2006) and 75-94% of the total global population lives in Europe. According to a

		study carried out by BirdLife International in 2004, it was estimated that the population of small cormorants in Romania numbered 11,500-14,000 pairs and during the winter period 1,500-4,000 pairs. ((www.wikipedia.org))
	Threats and conservation measures	The little cormorant is a species whose habitats have been heavily affected by human activities. Because it is a big consumer of fish and destroys fishing nets it is often persecuted by fishermen. In Romania, the drying of the ponds located on the lower course of the Danube for their return to agriculture (Insula Mare a Brăilei and Balta Borcea), the accidental death of birds caught in the improvised nets of the perch, the destruction of nests by professional fishermen in order to protect fish resources have led to the decrease in the number of herds, a fact that determined the inclusion of the species on the IUCN red list with the status of a vulnerable species. It is also hunted for recreational purposes and in Iran the meat is sold for cooking. (www.wikipedia.org)
Platalea leucorodia	Species Code	A034
	The scientific name	Platalea leucorodia, Linnaeus, 1758
	Popular name	The rower
	Description of the species	The shoveler is a characteristic species of ponds and shallow lakes with thickets and stands of trees. The plumage is white, and a large tuft of thin feathers can be seen at the back of the head. Unlike egrets, with which it resembles the colour of the plumage, it has a beak flattened along its entire length and wide at the "tip like a spoon or a wide pair of pliers (C. Rosetti Balanescu)", and in flight it holds its neck outstretched. The length of the body is 80-93 cm and a weight of about 1,500 g. The wingspan is between 120-135 cm. Adults have a similar appearance. It feeds in areas with little water, where it catches aquatic insects, their larvae, molluscs, frogs and fish (www.sor.ro)
	Habitat requirements	Rare bird with discontinuous distribution, in addition to slightly deep waters, extensive ponds and lakes with reeds. It nests in colonies in thickets, rarely in trees or shrubs.

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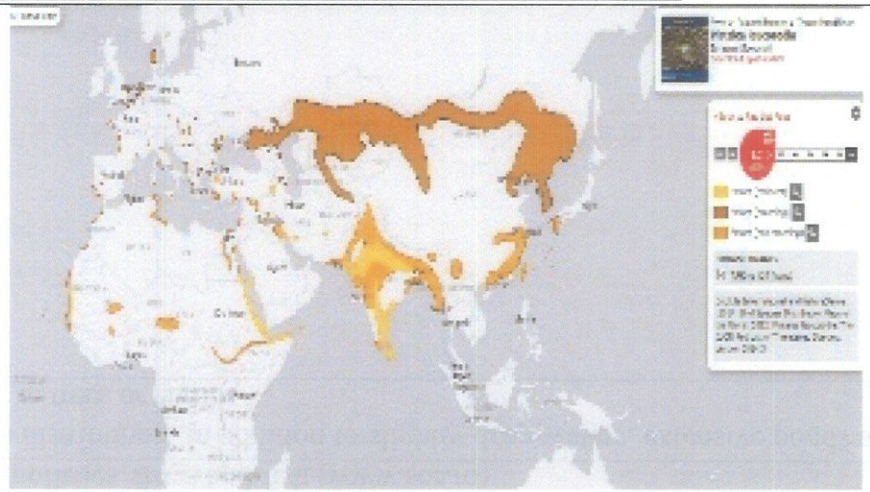
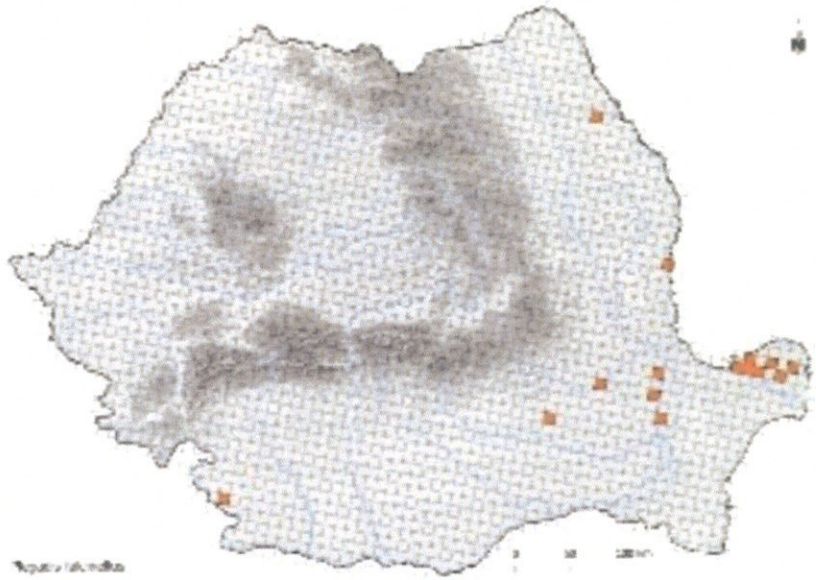
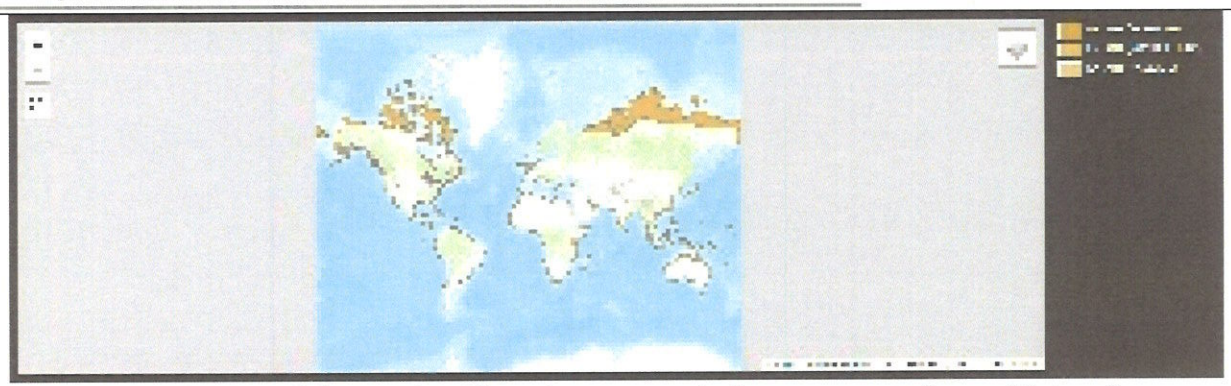
	The range of the species	 Distribution of the species *Platalea leucorodia* (source: www.iucnredlist.org)
	Population	The estimated population of the species is small and between 8,900 - 15,000 pairs. It registered a sharp decline in the period 1970-1990. Although the population present in Russia continued its downward trend, in the period 1990-2000 at the level of the continent, the numbers are considered stable due to the increases shown in the rest of the territories. In the Natura 2000 form, the population of the species was estimated at 5-20 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	The drying up of wetlands, the cutting of willows by the locals for fire, the burning of the reeds and the disturbance of the colonies by visitors and the birds by hunters, the movement by fast boats that produce waves forcing the birds to take refuge in other places represent the main dangers that affect the species. As conservation measures, the reduction of disturbance to the colonies, the informing of the local population about the dramatic effects on the birds determined by the cutting of the willows, the imposition of reduced speeds for boats in the feeding areas of the species and the prohibition of hunting are encouraged.
Plegadis falcinellus	Species Code	A032
	The scientific name	*Plegadis falcinellus,* Linnaeus, 1766
	Popular name	The Glossy Ibis
	Descrierea speciei	The Glossy ibis in flight and from a greater distance appears black. Seen up close, it has a beautiful plumage, with metallic greenish reflections on a rust-brown background and a curved sickle-shaped beak. It is a characteristic species of wet pastures and thickets with clumps of willows. The length of the body is 55-65 cm and the weight is about 485-580 g. The wingspan is

		between 88-105 cm. Adults have a similar appearance. It feeds on leeches, aquatic insects, tadpoles and small fish. (www.sor.ro)
	Habitat requirements	It is a species present in the southern and southeastern part of the European continent. It nests in colonies together with herons and cormorants. Being sociable, it appears most of the time in smaller or larger flocks in the form of long oblique or winding lines. The gypsy's flight is a sequence of floats and paddles (rapid wing beats). It is a silent bird, which roams through sloughs and small waters, with measured steps, without running in search of food. It winters on the African continent. The maximum known longevity is nine years and one month.
	The range of the species	 Distribution of the species *Plegadis fascinellus* (source: www.sor.ro)
	Population	The estimated population of the species is small, between 16,000-22,000 pairs. It registered a moderate decline in the period 1970-1990. Although the populations in Russia and Azerbaijan remained relatively stable in the period 1990-2000, the species continues to decrease numerically in South-Eastern Europe, which determines an overall downward trend. The estimated population in Romania is 2500-2800 pairs, larger numbers being registered in Russia and Azerbaijan.
	Threats and conservation measures	The drying up of wetlands, the cutting of willows by locals for fire, the burning of reeds and the disturbance of colonies by visitors and birds by hunters, the movement of fast boats that produce waves forcing the birds to take refuge in other places represent the main dangers affecting the species. As conservation measures, the reduction of disturbance to the colonies, the

		informing of the local population about the dramatic effects on birds determined by the cutting of willows, the imposition of reduced speeds for boats in the feeding areas of the species and the prohibition of hunting are encouraged.
Pluvialis squatarola	Species Code	A141
	The scientific name	*Pluvialis sqatarola,* Linnaeus, 1758
	Popular name	The black-bellied plover
	Description of the species	The black-bellied plover is a widespread species in the Asian and European continents, nesting in northern Russia and Europe, migrating to south-east Asia and the northern coasts of the Mediterranean Sea, Great Britain and the Black Sea coasts. The specific nesting habitat consists of the shores of northern lakes located between the forest edge and the water gloss, and the wintering territories consist of marshy areas, sandy banks and rice paddies. In winter plumage it has a much more variegated appearance than the Golden Plover, with more white on the forehead and sides of the breast, and the black on the belly extending to under the wings. The female is less contrastive than the male. In flight the white rump, an open stripe on the wing, the feathers at the base of the wing are black, and the legs extend beyond the tip of the tail. It feeds mainly on insect larvae and adults, as well as worms, molluscs and crustaceans. The body length is 26-29 cm and the wingspan is 56-63 cm, with a body mass of 135-227 g. The maximum longevity achieved in the wild is 25-26 years. (www.sor.ro)
	Habitat requirements	The species migrates from the northern areas of the European and Asian continents to the south-eastern regions of Asia, as well as southern Europe, also reaching the coasts of the Black Sea, the region of Dobrogea or the wet habitats along the course of European rivers. The silver plover leaves its nesting grounds in July-September and returns in May-June, nesting in May-August. A monogamous species during the breeding season, it nests in solitary pairs and feeds in small flocks of up to 30 individuals. During the winter period, they gather in large flocks of several thousand individuals in order to carry out the seasonal migration. The nest consists of a depression in the ground located near water, on the shores of northern lakes. Chicks quickly leave the nest with parents who care for the chicks until they learn to fly, usually within a very short time. In the passage and wintering territories, the birds feed on aquatic or terrestrial invertebrates that they find in riverbank areas or sandy lakeshores. Silver plovers become active for reproduction from the 3rd year of life.

	The range of the species	 Distribution of the species *Pluvialis squatarola* (source: www.iucnredlist.org)
	Population	The European breeding population is relatively small, with up to 2,100 pairs, with large numbers wintering in Europe of up to 120,000 individuals, with the largest numbers in France and the Netherlands. In Romania, the species is often observed in passage, rarely wintering in the Dobrogea region.
	Threats and conservation measures	Degradation and destruction of specific habitats, as well as the expansion of urban areas and the accumulation of plastic and oil waste in coastal areas are the main threats to the presence of the species. Also, the expansion of the electricity grid through wind turbines can affect the species during migration, which requires detailed studies of its migration route and the approval of the location of wind farms according to the results of the study. Sanitation and selective collection of waste accumulated in the nesting areas of the species can help preserve the habitats of this species. Also, banning the development of new ports or shipyards in the vicinity or inside the nesting habitats of this species can help to increase the population.
Podiceps cristatus	Species Code	A005
	The scientific name	*Podiceps cristatus* (Linnaeus, 1758)
	Popular name	The great crested grebe
	Description of the species	The great crested grebe is a semi-migratory species throughout Europe and Asia, it prefers moist habitats such as natural and artificial lakes, rivers with gently flowing water, lagoons and even bays with large open water. As nesting habitats, they prefer ponds within fish facilities or closed ponds where the water level is low. The summer plumage of the male is grey-brown on the back with a white throat, and on the head it shows two rusty collars with black on the cheeks and two black mottles on the top. The female has the same plumage as the male in summer, and in winter the two wattles and collars disappear, the plumage becoming gray on the back and dorsal side of the neck, with black forehead and nape. They feed mainly on medium-sized fish, but the diet may also include insects, crustaceans, molluscs, amphibians and invertebrate larvae. The body length

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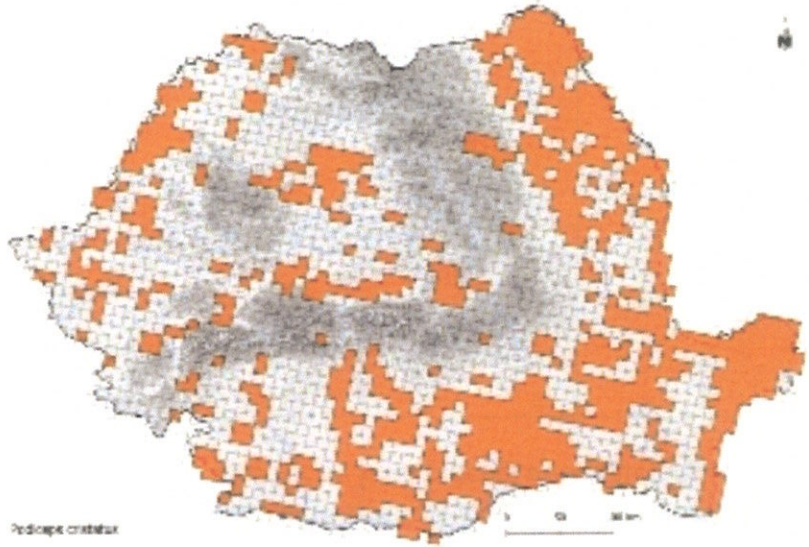
		is 46-61 cm and the wingspan is 59-73 cm, with a body mass of 800-1490 g. The maximum longevity achieved in the wild is 11-12 years. Females lay 3-8 eggs in March-April, incubation is 27-29 days. Chicks become independent in about 11-16 weeks after hatching, with the parents caring for them during this time. Pairs have only one tip per season. (www.sor.ro)
	Habitat requirements	The great crested grebe generally nests in inland waters that have a shallow surface area and shallow depths, where they set up their nest on small islands of land in ponds or lakes. In winter it migrates to lakes and pools with larger water areas, it is usually seen singly or in small groups of up to 10-15 individuals. Nesting can start as early as January-February, but most start in March-April, with both partners taking care of the arrangement and guarding of the nest. Pairs are monogamous only during one nesting season. The mating dance is remarkable, with the male and female circling chest to chest with the female with vigorous head shakes followed by wing beats. The nest is abandoned by the birds when the last chick hatches, the chicks are capable of movement from the first day. In the months of August-September, both adults change their winter plumage, congregating on larger waters, where they can stay until the spring of the following year or move to the coasts and bays of the inland seas, respectively the Black Sea coasts, Mediterranean or Asian coasts of the Indian Ocean. It feeds by diving, its preferred food consists of medium and small fish, but during the nesting season it can also feed on insects, crustaceans or molluscs that it also captures on the surface of the water or in aquatic vegetation. Birds become active for breeding already in the second year. (www.sor.ro)

	The range of the species	 **Distribution of the species *Podiceps cristatus* (ww.sor.ro)**
	Population	The European population is relatively large, up to 300,000-450,000 breeding pairs and also over 240,000 individuals during the wintering period, with the population increasing in the period 1970-1990. Although the population increased or remained stable in some countries in Europe during the period 1990-2000, other populations decreased in other countries, thus the population suffered a moderate decline overall. In Romania, the nesting population reaches approximately 20,000-30,000 pairs. (ww.sor.ro) In the Natura 2000 form, the population of the species was estimated at 30-80 nesting pairs and was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	Degradation of wetlands, introduction of exotic fish species, burning and cutting of reeds and poaching are the main threats affecting the species. Ecological reconstruction activities are needed throughout the lower Danube meadow, and poaching must be controlled. (www.sor.ro)
Podiceps nigricollis	Species Code	A 008
	The scientific name	*Picus canus,* Brehm 1831
	Popular name	The grey-headed woodpecker

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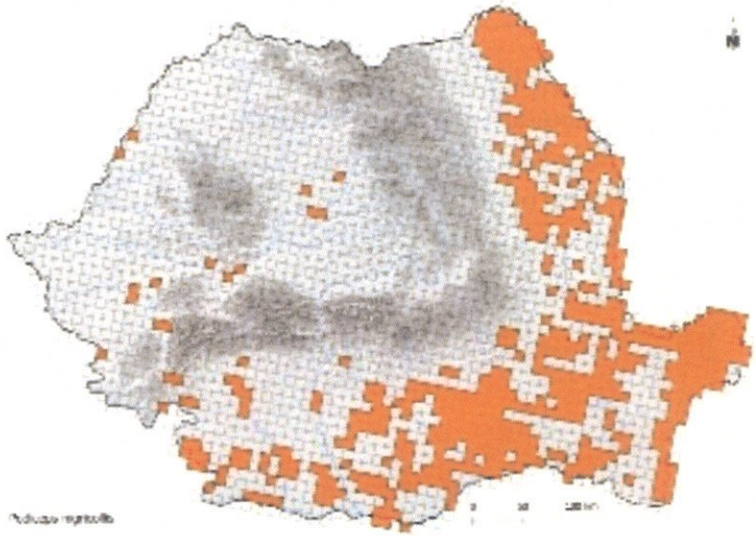
	Description of the species	The grey-headed woodpecker is a wide-ranging species, nesting in Europe, North America, central and eastern Asia, and western North America. Non-migratory populations also exist in the southern African continent, as well as in the great lake areas of eastern Africa. It frequents all types of aquatic habitats surrounded by emergent and submerged vegetation in the interior of the continents during the nesting season, and in winter it prefers the coastal areas of western North America, the Mediterranean Sea and Japan, flocks also reach the Black Sea and the Caspian Sea. In summer it has a characteristic plumage with a thin black neck, raised high, white cheek tufts arching down like a fan. In winter plumage it resembles the winter corcodella, differing by the gray neck and sides of the head, the cuboidal bill and slightly curved upwards, and the forehead rises towards the crest. It feeds on aquatic invertebrates of all genera, as well as small fish and amphibians. The body length is 28-34 cm and the wingspan is 40-55 cm, with a body mass of 300-550 g. The maximum longevity achieved in the wild is 13-14 years. Females lay 3-5 eggs in the months of May-June, the incubation being 21-22 days. Chicks are carried on their parents' backs for the first 9–10 days, developing juvenile plumage and becoming independent approximately 23–27 days after hatching. Pairs have only one tip per season. (www.sor.ro)
	Habitat requirements	The species is fully migratory, except for flocks in southern North America and southern Africa that do not move from nesting habitats throughout the year. It nests from May-June, often in colonies of 10-20 pairs, but may also nest singly, migrating to wintering grounds in October-November, although many pairs prefer to remain in the same areas during mild winters. Like the other corcodei species, it is a very good swimmer, it captures food even from the bottom of lakes, it easily reaches depths of 2-3 m. The nest is installed in the emergent vegetation near the water banks or in the bushy patches in the middle of the pools, anchored with floating vegetation and lined with feathers and algae. Pairs are monogamous throughout the nesting period. Chicks are carried on their backs and cared for by both parents after hatching. Birds become active for reproduction from the second year of life.

	The range of the species	 Distribution of the species Podiceps nigricollis (source: www.sor.ro)
	Population	The European population is relatively large, up to 96,000 breeding pairs, with the population increasing between 1970 and 1990. Although the population was decreasing in some countries in Europe, especially Romania, in the period 1990-2000, other populations in Russia and Ukraine remained stable, thus the population suffered a slight decline overall. In Romania, the nesting population reaches low numbers of individuals up to 2,500-3,500 nesting pairs.. (www.sor.ro)
	Threats and conservation measures	Degradation of wetlands, introduction of exotic fish species, burning and cutting of reeds and poaching are the main dangers affecting the species. Ecological reconstruction activities are needed throughout the lower Danube meadow, and poaching must be controlled.
Rallus aquaticus	Species Code	A118
	The scientific name	*Rallus aquaticus,* Linnaeus, 1758
	Popular name	The water rail
	Description of the species	It occupies wetlands with fresh or brackish water, standing or slightly flowing with dense vegetation. The upper part of the body is scarlet with black stripes, the face and lower part of the body is bluish-gray with white and black bars on the flanks and the subcaudals are white and striped. The long beak and eyes are reddish and the legs are pink. The sexes are similar although the female is smaller. Body length is 23-26 cm, wingspan 40-43 cm, average body weight 140 g (male) and 110 g

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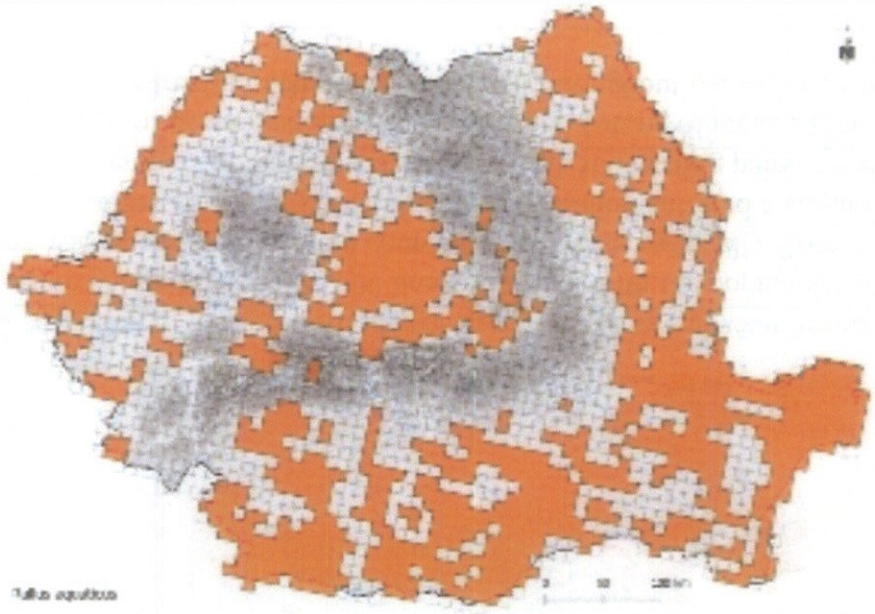
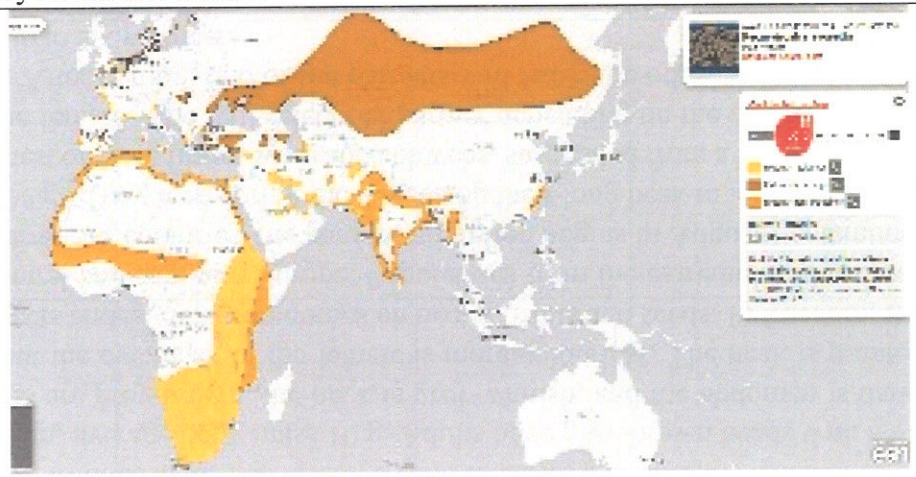
		(female). It feeds on terrestrial and aquatic invertebrates, small amphibians, fish, birds and mammals and sometimes plant material. The maximum known longevity in the wild is 8 years.
	Habitat requirements	It nests throughout the European continent. Northern and eastern populations migrate to southern Europe and northern Africa for the winter, leaving nesting grounds in September–October returning in March–April. A reclusive species, it feeds in dense vegetation, but may forage in open areas when food is hard to find. A diurnal species, it can also be heard at night during the nesting season. Reproduction begins at the age of one year. Monogamous mating lasts only one season. Males establish a nesting area and present it to the female while arching their wings, spreading their tails and positioning their beaks towards the ground. Pairs call each other throughout the breeding season to reinforce mating. A single nest is built on water.
	The range of the species	 Distribution of the species *Rallus aquaticus* (source: www.sor.ro)
	Population	The European breeding population is large at 140,000-360,000 pairs. Some populations suffered a decline in the period 1990-2000, although in many regions of Europe the species is stable during this period.
	Threats and conservation measures	Bushy areas and wetland habitats are threatened by drainage, urban development and pollution. In addition, island populations are threatened by the introduction of predators. In some areas, mink and coyote eradication programs have benefited the species, as have reedbed management practices. (www.sor.ro)

Recurvirostra avosetta	Species Code	A034
	The scientific name	*Recurvirostra avosetta,* Linnaeus, 1758
	Popular name	Pied avocet
	Description of the species	Pied avocet is a characteristic species of the coastal areas of estuaries and sea coasts, with brackish or salty water. The body length is 42-46 cm and an average body weight of 310-410 g. The wingspan is between 67-77 cm. Adults have a similar appearance. The beak of the male is longer and less curved upwards. The plumage is an interesting combination of black and white. It feeds through a "mowing" movement made with its beak, catching insects, molluscs, crustaceans, worms, but also plant fragments from the surface of the water.
	Habitat requirements	Rare bird with discontinuous distribution, in addition to slightly deep waters, extensive ponds and lakes with reeds. It nests in colonies in thickets, rarely in trees or shrubs.
	The range of the species	 Distribution of the species *Recurvirostra avosetta* (source: www.iucnredlist.org)
	Population	The European population of the species is relatively small and between 38,000 - 57,000 pairs. It increased significantly between 1970 and 1990. Although in some territories the numbers decreased between 1990 and 2000, overall, the population is considered stable. The largest nesting flocks are present in the Netherlands, Germany and Spain. In the wintering areas, the largest herds are in France, Portugal and Spain (www.sor.ro). In the Natura 2000 form, the population of the species was estimated at 5-12 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.

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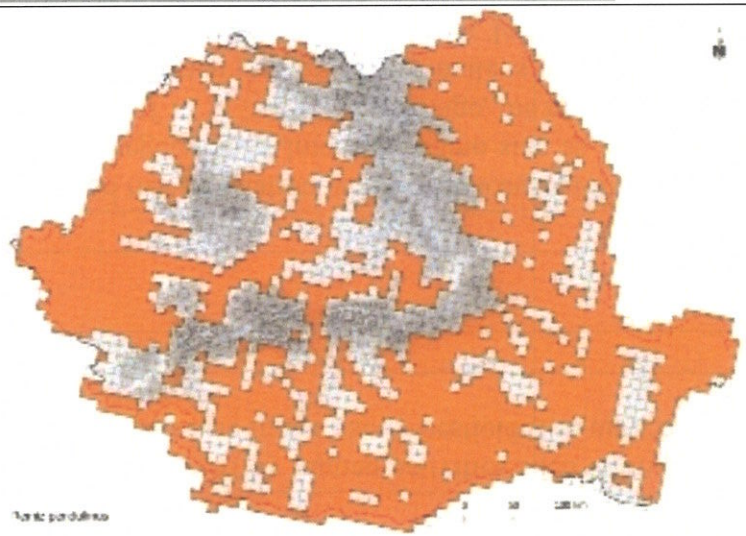
	Threats and conservation measures	Degradation and destruction of habitats, disturbance caused by tourist activity, urbanization are the main dangers affecting the species. Preserving the specific habitats needed by the species and reducing disturbance in the nesting areas are priorities for conservation (www.sor.ro)
Remiz pendulinus	Species Code	A336
	The scientific name	*Remiz pendulinus,* Linnaeus, 1758
	Popular name	The Eurasian penduline tit
	Description of the species	It is most often found around wooded areas near lakes, rivers, estuaries and swamps. Almost as big as a blue tit, body length 10-12 cm, wingspan 16-18 cm, average body mass 10 g. Adults have grey-brown heads with a black eye mask and chestnut plumage. The tail and wings are grey-brown, the neck is grey-whitish, and the abdomen is dark yellow. The male and the female look very similar, but the eye mask of the female is more colourless. The beak is pointed and the tail is notched. It feeds predominantly on insects and spiders, sometimes on nectar, fruits and seeds. In freedom, the longevity is three years.
	Habitat requirements	lives in distinct areas of central and southern Europe. Populations from the extreme north migrate in winter to the south of the continent, in the Mediterranean countries, the autumn migration begins in August-September, and the birds return to the nesting territories in April-May. They feed during the day, using their long beak to look for insects in the cracks on the trees. Males build a pear-shaped nest of plant fibres, wool and cobwebs, suspended from a branch or in reeds, often above the water. The males sing to attract the female, who will select her partner depending on the quality of the built nest. He preferred the bigger, more spacious one. After mating, one of the partners will leave the other to find a new pair. During a season, both male and female can have up to six partners.

	The range of the species	 Distribution of the species *Remiz pendulinus* (source: www.sor.ro)
	Population	The breeding population in Europe is large: 210,000 – 420,000 pairs. Despite the decline in some countries, in the years 1990-2000, other populations, including that of Romania, remained stable.
	Threats and conservation measures	The species benefits from the effective management practices of the stew. (www.sor.ro)
Riparia riparia	Species Code	A249
	The scientific name	*Riparia riparia* (Linnaeus, 1758)
	Popular name	The sea bass
	Description of the species	It can be found in many types of habitats, including near farms, in pastures and marshes, usually near rivers and lakes. Smaller than the house swallow and swallow, it has brown upperparts, white neck and abdomen and a dark stripe on the chest. The wings are black on the underside. Slender silhouette, with long wings and a slightly forked tail. Body length of 12-14 cm, wingspan of 25-29 cm, average body mass of 14 g. The male and female look very similar. They feed on flying insects. In freedom, the longevity is two years.
	Habitat requirements	In May, the female lays between two and seven eggs with a size of 18x13 mm, which the partners will hatch in turn, for 12-16 days. The chicks are fed by both parents until they leave the nest, 18-22 days after hatching. They will be dependent on

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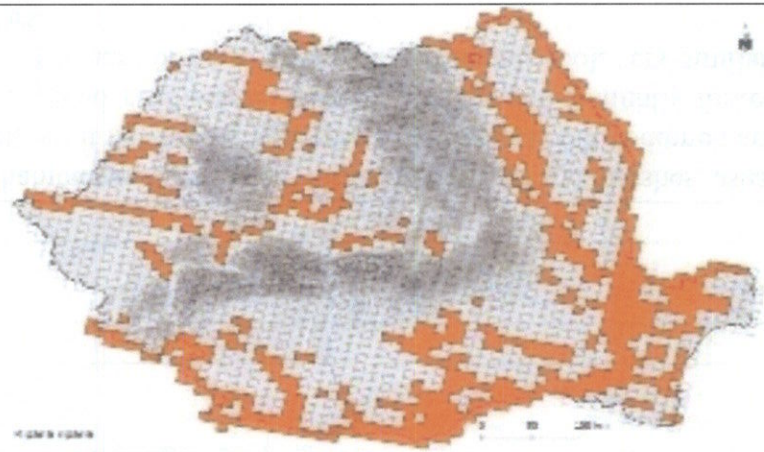
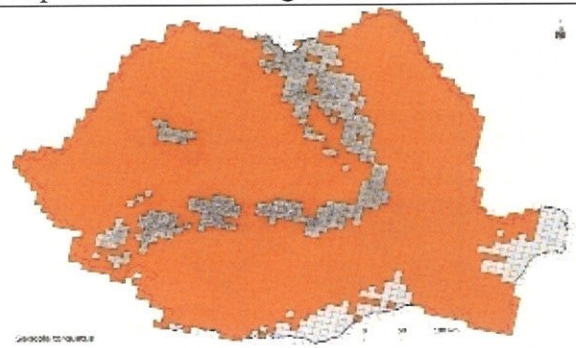
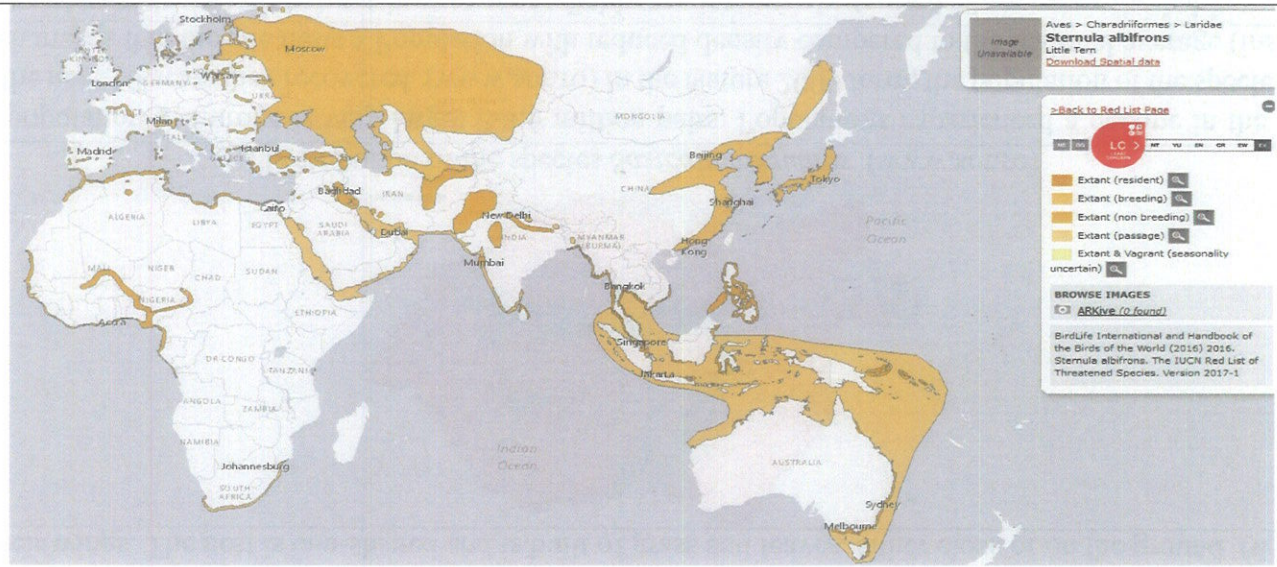
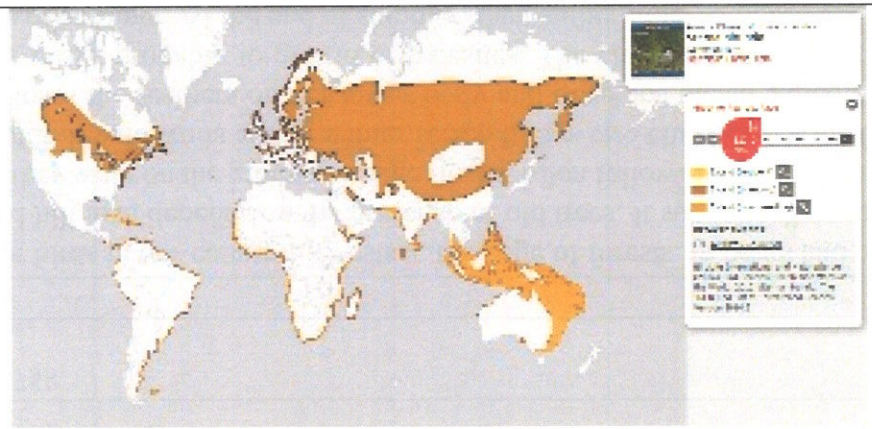
		their parents for another week, and in the evening they will return to the nest. Usually, sea bream give birth to two broods per year. (www.sor.ro)
	The range of the species	 Distribution of the species *Riparia riparia* (www.sor.ro)
	Population	The breeding population in Europe is very large: 5.4-9.5 million pairs. In the period 1970-1999, the species experienced a decline, but the populations stabilized in the years 1990-2000. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	The nesting sites of shorebirds are often destroyed by human activities such as river bed management. They can also use artificial places, when necessary. Also, the increase in the use of pesticides in agriculture leaves swallows without the main source: of food: insects. (www.sor.ro)
Saxicola torquata	Species Code	A276
	The scientific name	*Saxicola torquata* (Linnaeus, 1766)
	Popular name	The African stonechat
	Description of the species	It can be found in dry areas, with little and rare vegetation, walls or fences that it uses as an observation point. They populate plains and areas with bushes and small vegetation. Almost the same size as a macaleander, body length of 11.5-13 cm, wingspan of 21-23 cm, average body mass of 15 g. In nuptial plumage, the male has a black head with half a white collar on the neck, the back it is mottled black, the abdomen is white. The female is brown with a little orange on the chest. They feed mainly on invertebrates, but also on small vertebrates, seeds and fruits. In freedom, longevity is up to four years.

		Depending on the area, nesting takes place between March and June. The female hatches the three to six eggs alone, for 13-14 days. The eggs are 19x14 mm in size. Both parents feed the chicks until they leave the nest and for another 14-15 days after. In one season, a pair produces between two and four rows of chicks. (www.sor.ro)
	Habitat requirements	It nests almost everywhere in Europe. Birds from cold areas migrate in the winter to the countries around the Mediterranean Sea, in North Africa and in the Middle East. The first birds arrive at the wintering grounds in September and return at the end of February. Diurnal species, hunts invertebrates from high points above the ground. It reaches sexual maturity at the age of one year. In the nuptial season, the male sings to delimit his territory. Mainly, they are monogamous couples, although there are also cases of polygamy. The males attract the female with their songs and flights, they display their plumage and the white patches on their wings. The nest is cup-shaped and is built of grass and leaves, either close or on the ground. (www.sor.ro)
	The range of the species	 . Distribution of the species *Saxicola torquatus* (www.sor.ro)
	Population	The nesting population in Europe is very large: 2-4.6 million pairs. Populations experienced a decline in the period 1970-1990, but in the next 10 years they recovered. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	The decline has been blamed on habitat loss as more fields are intensively farmed. Preserving the habitat with scattered vegetation is an ideal conservation measure. (www.sor.ro)
Sterna albifrons	Species Code	A195
	The scientific name	*Sternula albifrons,* (Pallas, 1764)
	Popular name	The little Tern Ternlet

	Description of the species	Little Tern Ternlet is characteristic of coastal wetlands, but also of inland lakes with fresh water located at a distance of a few km from the sea. The body length is 20-28 cm and it weighs 45-60 g. The wingspan is about 45-55 cm. It is the smallest of the rent species. Adults have a similar appearance. The plumage is grey, the forehead white, the bill yellow with a black tip, and the legs are yellow. It feeds on fish, insects and their larvae, snails and clams. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 15-25 nesting pairs, being marked with C, which means that there is a population nesting on the site that represents less than 2% of the national population.
	Habitat requirements	
	The range of the species	 Distribution of the Species*sterna albifrons* (source: www.iucnredlist.org)
	Population	The European population is relatively small, between 35,000-55,000 pairs. A moderate decline was manifested in the period 1970-1990, continuing in the period 1990-2000. Overall, the population shows a moderate decline. The estimated population in Romania is 500-800 pairs. The largest numbers are in Russia, Italy and France. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 15-25 nesting pairs, being marked with C, which means that a population nesting at the site represents less than 2% of the national population.
	Threats and conservation measures	The disturbance determined by human activities, which leads to the loss of nesting places through the urbanization of the territories characteristic of the species, along with the flooding of the nests, represent the main dangers affecting the species. Reducing the disturbance produced by human activities and building artificial platforms to provide nesting places are priorities. (www.sor.ro)

Sterna hirundo	Cod Specie	A193
	Denumirea ştiinţifică	*Sterna hirundo*, Linnaeus, 1758
	Denumirea populară	The common tern
	Descrierea speciei	The common tern is characteristic of coastal wetlands, but also of inland freshwater lakes. The body length is 31-37 cm and a weight of 110-145 g. The wingspan is about 75-80 cm. Adults have a similar appearance. The plumage is grey, and the bill is bright red with a black tip and red legs. The upper part of the head is black. It feeds on fish (5-15 cm long), insects, and snails (www.sor.ro).
	Habitat requirements	It is a species frequently found in the wet areas of the interior of the whole country but also in the Lower Siret Basin, it usually arrives from migrations in the second decade of April and leaves after the nesting period for the winter quarters in September. The colony establishes itself in very varied places depending on the area. Nests were found on sand dunes, on stony beaches or even on floating vegetation. If the nest is floating, the construction is more solid, being made of plant debris as a concavity of several cm.
	The range of the species	 Distribution of the species *Sterna hirundo (source: www.iucnredlist.org)*
	Population	The European population is large and between 270,000 - 570,000 pairs. It remained stable between 1970 and 1990. Although in some countries the livestock numbers decreased between 1990 and 2000, nevertheless in the countries with significant livestock numbers they fluctuated or remained stable, which means that, on the whole, the population is considered stable. The largest numbers are in Russia, Finland and Ukraine. In the Natura 2000 form, the population of the species was estimated

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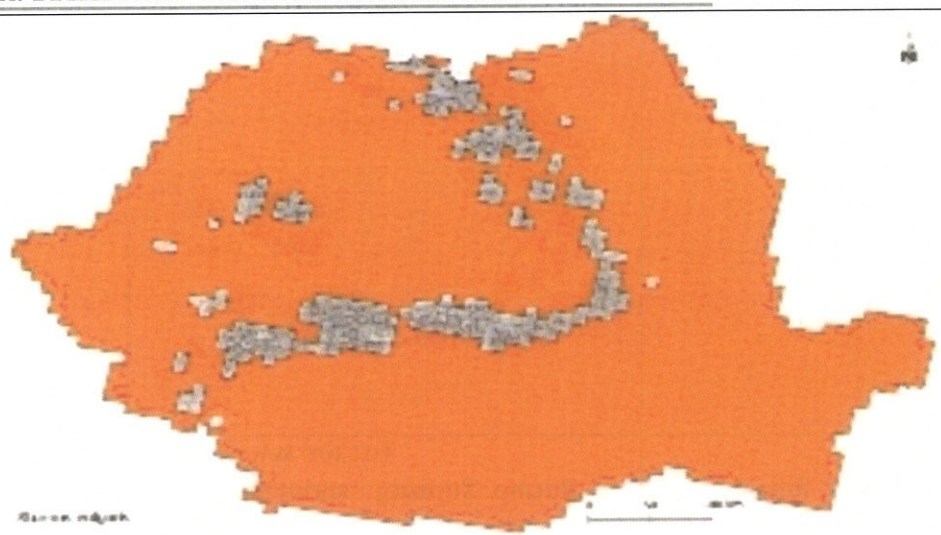
		at 3-5 nesting pairs, being marked with D, which means that at the level of the corridor there is a population nesting with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	The disturbance determined by human activities, which leads to the loss of nesting places, through the urbanization of the territories characteristic of the species, together with the flooding of the nests, represent the main dangers affecting the species. Reducing the disturbance produced by human activities and building artificial platforms, to ensure safe places for nesting, are priorities (www.sor.ro).
Sturnus vulgaris	Species Code	A351
	The scientific name	*Sturnus vulgaris Linnaeus*, 1758
	Popular name	The common starling
	Description of the species	It is one of the most abundant birds in our country. It nests at the edge of forests, in parks and old orchards. The distribution of the species in the plain and hill area depends on the presence of old trees. It successfully occupies artificial nests. It has a fast flight. In search of food, they walk on the ground in huge flocks, often following herds of animals. In spring and summer, they eat mostly insects, in autumn wild fruits and in winter seeds. It lays two clutches a year, the 3-7 eggs in the nest being hatched by the female, who loses the feathers on her lower body and develops the so-called hatching spot. They often use aromatic plants to build their nests, probably to get rid of parasites. The chicks of the first litter gather and roam together starting from the first months of summer. At the end of summer, they gather in large flocks and spend the night in reeds.
	Habitat requirements	Migratory species, the departure and arrival of which depends on the state of the weather. In the case of mild autumns, it stays even until November and returns already in February, if spring arrives sooner. It winters in the Mediterranean region, but in limited numbers also in the south of the country

	The range of the species	 . Distribution of the species *Sturnus vulgaris* (www.sor.ro)
	Population	The global population is estimated at c.310,000,000 individuals. The European population is estimated at 28,800,000-52,400,000 pairs, which is equivalent to 57,700,000-105,000,000 individuals (BirdLife International 2015). Europe has about 55% of the world's population. In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a population with a reduced density compared to the national average (insignificant).
	Threats and conservation measures	The species is considered to be declining in some areas due to the intensification and specialization of agriculture and changes in rural habitats, such as decreases in pasture and increases in fall-sown arable crops
Tachybaptus ruficollis	Cod Specie	A404
	The scientific name	*Tachybaptus ruficollis,* (Pallas, 1764)
	Popular name	The little grebe
	Description of the species	The small grebe is a resident species with a wide distribution in almost the entire continent of Europe, as well as in the southern half of Africa and Asia. However, there are herds of small corcodes that are also migratory, and they are widespread in northeastern Europe, as well as in the central-southern and eastern region of the Asian continent. The specific habitat of the small crocodile consists of lakes, ponds, floodplains, it even prefers bays or estuaries that are surrounded by reeds and have abundant aquatic vegetation. Throughout the year, its almost uniformly colored plumage and small size are

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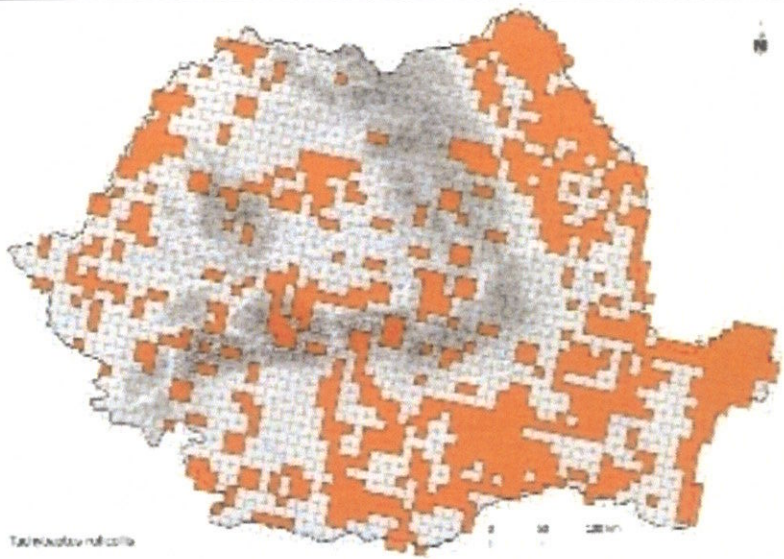
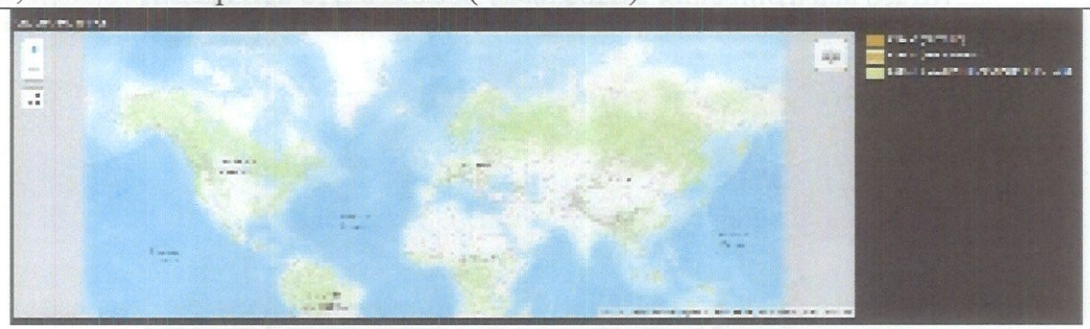
		characteristic. Cheeks, chin and front of neck are red-brown in summer plumage. At the base of the beak, it has a brightly coloured yellow-whitish spot. In the winter season, the gray-brown plumage of the male intensifies, and the spot at the base of the beak is no longer so obvious. The female has a duller plumage with a specific grey colour, with brown on the back. It feeds mainly on small fish, but may also catch aquatic insects or collect seeds of aquatic plants. The body length is 25-27 cm and the wingspan is 35-40 cm, with a body mass of 200-250 g. The maximum longevity achieved in the wild is 17-18 years. Females lay 4-6 eggs in the months of April-May, the incubation being 19-28 days. Chicks develop juvenile plumage approximately 29-40 days after hatching, being able to feed themselves after this period. Both parents take care of the young during the nesting period. Pairs have only one tip per season. (www.sor.ro)
	Habitat requirements	The species is semi-migratory in central and eastern Europe, as well as in central and eastern Asia, being sedentary in the rest of Europe, southern Asia and the southern half of the African continent. Migratory flocks move south in September-October, returning for nesting in March. The species nests in solitary pairs, the nesting period being varied geographically and depending on the development of emergent vegetation and water level. After nesting, the birds gather in flocks of up to 700 individuals in areas with abundant food until autumn, when they begin migration, and in the case of non-migrating flocks, they remain in groups even until the next nesting season. In winter, sedentary individuals are generally solitary, but may gather in small flocks of 5-30 individuals. Like its relatives in the Tachybaptus ruficollis family, the little one arranges its nest in the emergent vegetation on the edge of the lakes, as close as possible to the water, since its legs are short, not helping it to move on land. When the adult leaves the nest, it covers it with leaves in order not to be discovered by predators in its absence. The young are often carried by the female on her back until they develop juvenile plumage and are fed small fish, crustaceans and molluscs. Pairs are monogamous, forming during a single nesting season. Birds become active for reproduction from the second year of life. (www.sor.ro)

	The range of the species	 Distribution of the species *Tachybaptus Ruficollis*(www.sor.ro)
	Population	The European population is relatively large, up to 99,000 breeding pairs and also over 72,000 individuals during the wintering period, the population remains stable during the period 1970-1990. Although the population decreased in some countries in Europe during the period 1990-2000, other populations increased or remained stable in other countries, thus the population remained stable overall. In Romania, the nesting population reaches approximately 7,000-12,000 pairs. (www.sor.ro) In the Natura 2000 form, the population of the species was estimated at 150-200 nesting pairs and was marked with D, which means that the site nests a population with a low density compared to the national average (insignificant).
	Threats and conservation measures	Degradation of wetlands, introduction of exotic fish species, burning and cutting of reeds and poaching are the main dangers affecting the species. Ecological reconstruction activities are necessary throughout the lower Danube meadow, and poaching must be controlled, even if this also means stopping the hunting of other common species. (www.sor.ro)
Tringa erythropus	Species Code	A 161
	The scientific name	*Tringa erythropus,* Pallas, 1764
	Popular name	The spotted redshank
	Description of the species	It is a medium-sized wader (shorebird) species. There is no sexual dimorphism. Coloration in nuptial plumage is deep black on the head, neck and abdomen and black with white spots on the back. The winter plumage is completely different, gray on

		the back with small white spots on the sides and whitish on the chest and belly. In young birds the general coloration is brown, with small whitish spots on the back and barring on the chest and abdomen. The beak is characteristic, very long, thin and slightly curved downwards only in the terminal section. The legs are orange in young birds, deep red in winter plumage and black in nuptial plumage. The body length is 29 - 33 cm, the wingspan is 61 - 67 cm, and the weight is 97 - 230 grams. (www.sor.ro)
	Habitat requirements	Palaearctic species with a very wide distribution, nesting from northern Europe (Scandinavia), to the extreme east of Siberia, in the Arctic and Sub-Arctic regions. It winters in southern Europe, in Africa in the Mediterranean coastal area, south of the Sahara, in the Near East and southern Asia. In Romania, it is present all over the country (except the high areas) during migration periods, more frequent and in larger numbers outside the Carpathian arc. It does not nest in Romania. It is present only during the spring and autumn migration periods. Some specimens are also present during the summer, probably non-nesting individuals or juveniles newly arrived from the nesting areas. It nests in subarctic and arctic wetlands in the tundra region. It prefers moist open habitats such as swamps, peatlands with few bushes, areas of sparse birch forests at the edge of the tundra. In migration, it can be found all over the country, on the edge of aquatic habitats (lakes, riverbanks), where it finds suitable areas for feeding: muddy areas with shallow water. It is a carnivorous species, being related to the food available in the areas of shore: aquatic invertebrates (insects, worms, gastropods, crustaceans), spiders, sometimes tadpoles or small fish. (www.sor.ro)
	The range of the species	 Distribution of the species *Tringa erythropus* (www.iucnredlist.org)
	Population	The world population of the species is estimated at 110 000 - 270 000 individuals. The European one is estimated at 20,500 – 54,000 pairs. With such a large population and a huge distribution territory, the species is classified as "Low Risk". The trend at European level is considered stable.

	Threats and conservation measures	The destruction of wetlands in the nesting areas and especially those located on the migration route and in the wintering area represents the most important threat to the species. Additionally, water pollution through the use of pesticides in agriculture and disturbance caused by human activities constitute additional threats affecting the populations of this species. (www.sor.ro)
Tringa nebularia	Species Code	A 164
	The scientific name	*Tringa nebularia,* Gunnerus, 1767
	Popular name	The common greenshank
	Description of the species	It is a medium-sized wader (shorebird) species. There is no sexual dimorphism. It has a general coloration with shades of brownish-grey, with black spots on the back. Black spots are absent in young birds and in winter plumage. The chest is spotted, with a transition to white on the abdomen. The beak is characteristic, long, massive and visibly curved upwards. The legs are light green. The body length is 30 - 34 cm, the wingspan is 55 - 62 cm, and the weight is 125 - 290 grams. (www.sor.ro)
	Habitat requirements	Palaearctic species with a very wide distribution, nesting from northwestern Europe (Scotland, Norway) to the extreme East (Kamceatka), in the taiga and tundra region. It winters in southern and western Europe (especially in coastal regions), northern Africa, the Nile valley, the coastal zone of the Arabian Peninsula, the southern half of Africa and southern Asia. In Romania, it is present throughout the country during migration periods. It does not nest in Romania. It is present only during the spring and autumn migration periods. Some specimens are also present during the summer, probably non-nesting individuals or juveniles newly arrived from the nesting areas. It nests in subarctic wetlands, in the taiga region (boreal forest) and tundra (in the border zone with spruce and birch forests). Prefers open habitats within swampy woodlands, open peatland or brushy areas, eutrophic lake margins with abundant vegetation or other semi-open, scrubby wetlands. In migration, it can be found all over the country, on the edge of aquatic habitats (lakes, riverbanks), where it finds suitable areas for feeding: muddy areas with shallow water. It is a carnivorous species, being related to the food available in the areas of shore: aquatic invertebrates (insects, worms, gastropods, crustaceans), spiders, sometimes tadpoles or small fish. They also occasionally consume micromammals. In Romania, it is distributed throughout the territory during the migration periods (except for high areas), but larger numbers are recorded in the extra-Carpathian regions. (www.sor.ro)

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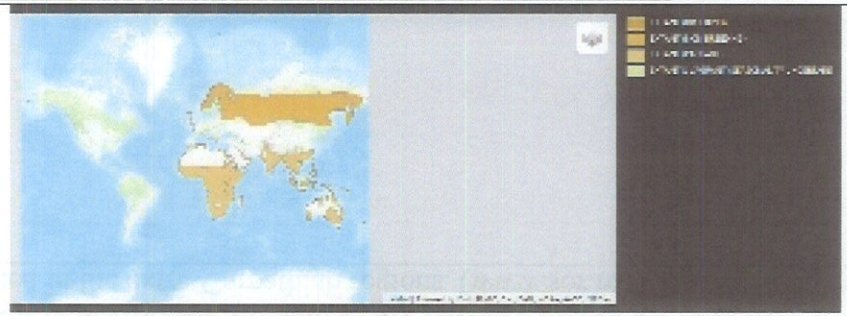
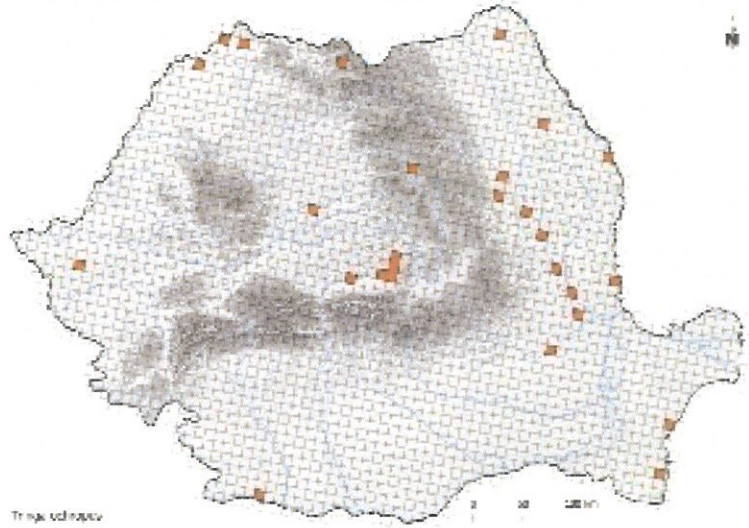
	The range of the species	 Distribution of the species *Tringa nebularia* (www.iucnredlist.org)
	Population	The world population of the species is estimated at 440,000 - 1,500,000 individuals. The European one is estimated at 98,700 – 202,000 pairs. With such a large population and a huge distribution territory, the species is classified as "Low Risk". The trend at European level is considered stable.
	Threats and conservation measures	The destruction of wetlands in the nesting areas and especially those located on the migration route, water pollution through the use of pesticides in agriculture and disturbance caused by human activities are the main dangers affecting the species. (www.sor.ro)
Tringa ochropus	Cod Specie	A 165
	The scientific name	*Tringa ochropus,* Linnaeus, 1758
	Popular name	The green sandpiper
	Description of the species	It nests in wet forests and winters near inland freshwater such as marshes, ditches and riverbeds. Adults have a blackish-green back with white spots, grey-brown head and chest, and white abdomen and rump. In winter the upperparts are less spotted and the face and upper throat are pale. The beak is straight and black and the legs are dark green. The sexes are similar although females are usually larger. Body length is 20-24 cm, wingspan 41-46 cm and body weight 75 g. Feeds on small invertebrates and fish. The maximum recorded longevity in the wild is 11 years. The female lays 3-4 eggs, 39x28 mm in size, in April-May. Both partners incubate the eggs for 20–23 days and care for the chicks first, although the female may leave them before plumage development at 27–29 days after hatching. Pairs raise only one generation per season. (www.sor.ro)
	Habitat requirements	The species nests predominantly in central and northern Europe, wintering in the Mediterranean Basin and Africa, as well as southern Asia. The birds start their autumn migration as early as June and return in March-April of the following year. It feeds by nibbling food from shallow water, sometimes stirring the food with its feet. Reproduction begins at the age of 2

		years. Mating is usually monogamous and the nest is set up in a tall tree, usually in the abandoned nest of a passerine species, although occasionally the nest is placed on natural platforms (plauri). (www.sor.ro)
	The range of the species	 Distribution of the species *Tringa ochropus* (www.sor.ro)
	Population	The European breeding population is large at 330,000–800,000 pairs and has remained stable overall since 1970.
	Threats and conservation measures	In some regions the species has been found to thrive in unfertilized grasslands with low cattle densities. (www.sor.ro)
Tringa stagnatilis	Cod Specie	A 163
	The scientific name	*Tringa stagnatilis,* Bechstein, 1803
	Popular name	The marsh sandpiper
	Description of the species	It is a migratory wading bird of the Scolopacidae family, Charadriiformes order that nests in wet meadows and freshwater or brackish marshes in Eastern Europe (especially in Ukraine and Russia), Central Asia and Siberia. It winters in the Mediterranean regions of southwestern Europe, on the coasts of the southern half of Africa, southern Asia, and Australia. It has a waist of 23 cm, the back is buff-brown with dark long spots, the chest and abdomen are white. The beak is fine and straight. The legs are very thin and long. It feeds on small fish, worms, crustaceans, molluscs and aquatic and terrestrial insects.

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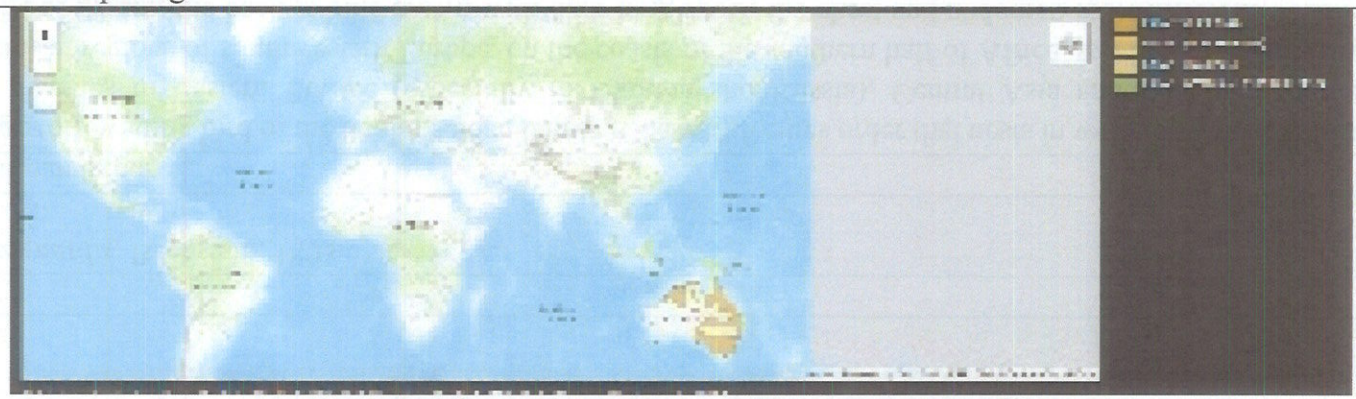
	Habitat requirements	In Romania, it rarely nests in the salt flats and grassy gravels of the Danube Delta and around the Dobrogen lakes; is more numerous in the passage.
	The range of the species	 Distribution of the species *Tringa stagnatilis* (www.iucnredlist.org)
	Population	According to the NATURA2000 standard form, at the site level, the population is estimated as 120-130 individuals.
	Threats and conservation measures	The species is threatened by degradation and loss of suitable habitat.
Tringa totanus	Species Code	A 162
	The scientific name	*Tringa totanus,* Linnaeus, 1758
	Popular name	The common redshank
	Description of the species	It is a medium-sized wader (shorebird) species. There is no sexual dimorphism. The coloring in the nuptial plumage is slightly different, dorsally with more intense white, brown and black spots, on the general brownish-grey background. On the chest it has brown spots that pass diffusely to small, erased spots towards the abdomen. In young birds the general coloration is brown, with small light spots on the back (mosaic appearance) and barring on the chest and abdomen. The beak is characteristic, short and more massive at the base. The legs are orange, lighter in young birds. The body length is 24 - 27 cm, the wingspan is 47 - 53 cm, and the weight is 85 - 155 grams. The genus name comes from the Greek trungas – a species of white-rumped shorebird that swings its tail, mentioned by Aristotle (uncertain identification). The species name comes from totano - the name of the species in Italian. The breeding season begins at the end of April. Egg laying begins in April and can extend until June (depending on weather conditions and area), with the female usually laying 3-5 eggs, which she incubates

		for 23-24 days. The chicks leave the nest after 25-35 days. Pairs nest solitary, or in loose colonies. The nest is rudimentary, usually a hollow at the base of tufts of vegetation. (www.sor.ro)
	Habitat requirements	Distribution Palaearctic species with a very wide distribution, nesting from western Europe to the far East (including Japan). Latitudinally, it nestles from the Mediterranean basin to Scandinavia. In Romania, it nests throughout the country (except in the high areas), but in a point-like and localized way. During migration periods, it is more widely distributed, but more frequent and in greater numbers outside the Carpathian arc. Phenology The species nests in Romania, especially in the lowlands. It is migratory, being present in greater numbers during the spring and autumn migration periods. Migration occurs early, starting in March. In autumn, larger numbers can be seen until October. A few specimens can also be seen in the winter months in frost-free areas. It nests in wetlands in temperate zones. Prefers open moist habitats such as coastal marshes, inland marshes associated with wetlands, lake margins. In migration, it can be found all over the country, on the edge of aquatic habitats (lakes, river banks), where it finds suitable areas for feeding: muddy areas with shallow water. Food It is a carnivorous species, being related to the food available in the shore areas: aquatic invertebrates (insects, worms, gastropods, crustaceans), spiders, sometimes tadpoles or small fish. They also occasionally consume micromammals. Other information It is the only species of the genus Totanus for which we have definite nesting date on the territory of Romania. (www.sor.ro)

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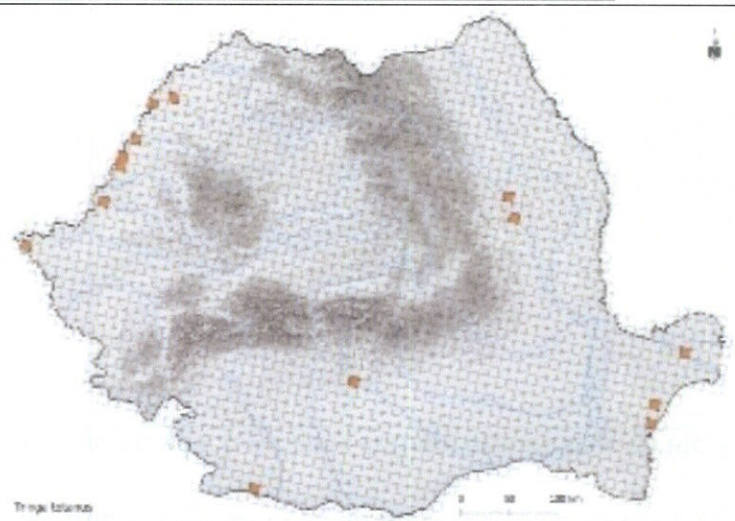
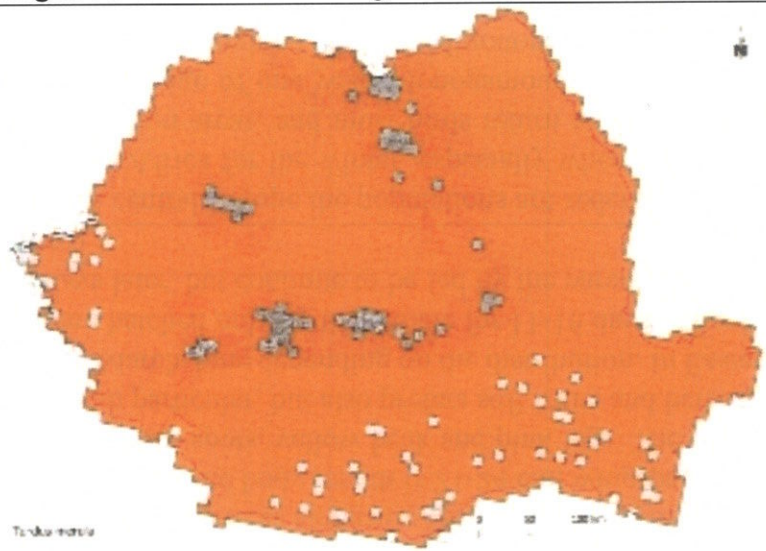
	The range of the species	 Distribution of the species *Tringa totanus* (www.sor.ro)
	Population	The world population of the species is estimated at 1,300,000 - 3,100,000 individuals. The European one is estimated at 340 00 – 484 000 pairs. With such a large population and a huge distribution territory, the species is classified as "Low Risk". The trend at European level is considered stable. In Romania, the size of the population is 800 - 2000 pairs. The population trend is unknown.
	Threats and conservation measures	The destruction of wetlands in the nesting regions and especially those located on the migration route, due to the intensification of agriculture, represents the main threat to the species. Additionally, water pollution through the use of pesticides and disturbance caused by human activities are dangers that can affect the species. (www.sor.ro)
Turdus merula	Cod Specie	A283
	The scientific name	*Turdus merula,* Linnaeus, 1758
	Popular name	The black bird
	Description of the species	The species is found in a wide variety of habitats, mainly forests and gardens, but also often found in farmland, hayfields and urban areas. It is a medium-sized thrush with a long tail, easily recognized by the male's uniform matte black plumage, light yellow-orange bill and yellow eye ring. The beak blackens in winter. Females have black-brown upperparts, brown spotted chest and a whitish throat. Body length is 23.5–29 cm, wingspan 34–38 cm and weight averages 100 g. It has an omnivorous diet feeding on insects and earthworms during the nesting season and berries in the autumn season and Winter. Longevity in

		the wild is 3 years. 4-5 eggs are laid starting in March and are incubated only by the female for 12-14 days. The average size of an egg is 29x21 mm. Both parents feed the fledglings which develop plumage 11-18 days after hatching. Cubs become independent 3 weeks later. Pairs can raise 2-3 generations per season. (www.sor.ro)
	Habitat requirements	It breeds in almost all of Europe. Populations in southern and western Europe tend to be sedentary, compared to northern populations that migrate to southern Europe or even as far as northern Africa in the winter season. Autumn migration begins in September, with birds leaving their wintering grounds in February-March. It feeds during the day by searching through leaf litter, listening to the ground for earthworms, or walking in trees and bushes for berries. Reproduction begins at the age of one year. Males establish a territory in the first year, and monogamous pairs stay together until one partner dies. Before mating, the male performs a nuptial dance, scampering along the ground while bowing his head and opening his beak. The female builds a cup-shaped nest of grass and leaves in low vegetation in a sheltered location. (www.sor.ro)
	The range of the species	 **Distribution of the species *Turdus merula*(www.sor.ro)**
	Population	The European breeding population is very large at 40,000,000–82,000,000 pairs, and populations in several countries increased during the 1990–2000 period. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).

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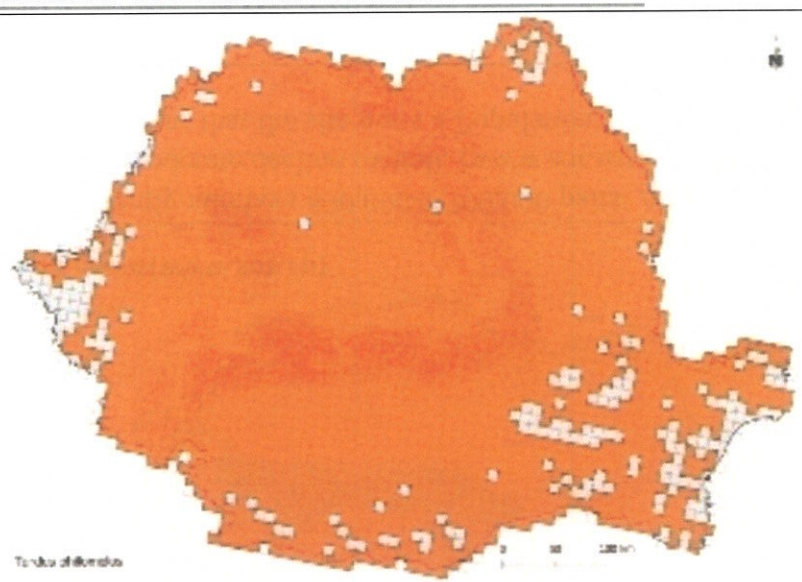
	Threats and conservation measures	Food availability can be affected by the use of pesticides in agricultural areas and gardens, and the disappearance of tree fences as a result of agricultural intensification leads to the loss of suitable nesting sites. Farmers and gardeners can help by using less chemicals to ensure the invertebrates blackbirds capture to feed their chicks. (www.sor.ro)
Turdus philomelos	Cod Specie	A285
	The scientific name	*Turdus philomelos,* Brehm, 1831
	Popular names	The song thrush
	Description of the species	The species occurs in any habitat with bushes and trees alongside open areas for feeding. It nests in forests, tree hedges, parks and gardens. Slightly smaller than a blackbird, the body length is 21-24 cm, wingspan 33-36 cm and body weight 83 g. The back is brown, the underside with white sharp spots, yellow beak and pink legs. The sexes are similar. It feeds on a variety of invertebrates, earthworms and snails in particular, but also prefers soft fruits and berries in autumn and winter. Longevity in the wild is 3 years. Nesting begins in March-June depending on the distribution. In Eastern Europe eggs are usually laid in April. 3-5 eggs of 27x20 mm in size are hatched only by the female for 11-16 days. After hatching, both parents care for the chicks, which leave the nest 12–16 days later, but continue to be fed by the parents for another 3 weeks. Each pair can have 2-3 generations per year. (www.sor.ro)
	Habitat requirements	The species nests throughout Europe. In central Europe the populations are sedentary, but those with a northern distribution migrate to southern Europe and northern Africa for the winter, especially when the winters are severe. Autumn migration begins in August in the northern distribution areas, and most birds return to their nesting territories in April-May of the following year. Reproduction begins at the age of one year. Monogamous and territorial, in regions where the species is sedentary, males sing to defend their territory throughout the year. Migratory males return to nesting territories before females. The female builds a neat nest of grass and twigs, cemented with mud, in trees or thick vegetation. (www.sor.ro)

	The range of the species	 **Distribution of the species *Turdus philomelos*(www.sor.ro)**
	Population	The European breeding population is very large at 20,000,000-36,000,000 pairs. The species declined in Germany in the 1990-2000 period but this decline was offset by growth in other areas of Europe. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).
	Threats and conservation measures	Population declines are greater in arable land and have been attributed to changes in agricultural practices. Intensive use of pesticides has decreased the availability of invertebrates and the removal of hedgerows has led to the disappearance of suitable nesting territories. Agri-environmental measures should encourage environmentally friendly agricultural practices. (www.sor.ro)
Upupa epops	Cod Specie	A232
	The scientific name	*Upupa epops,* Linnaeus, 1758
	Popular name	The Eurasian hoopoe
	Description of the species	It is a species often found in open habitats with short grass or furrows for foraging, as well as nearby nesting areas in the form of hollows in trees, rocks or walls. It is a relatively easy-to-spot species, about the size of a mistletoe thrush, with black and

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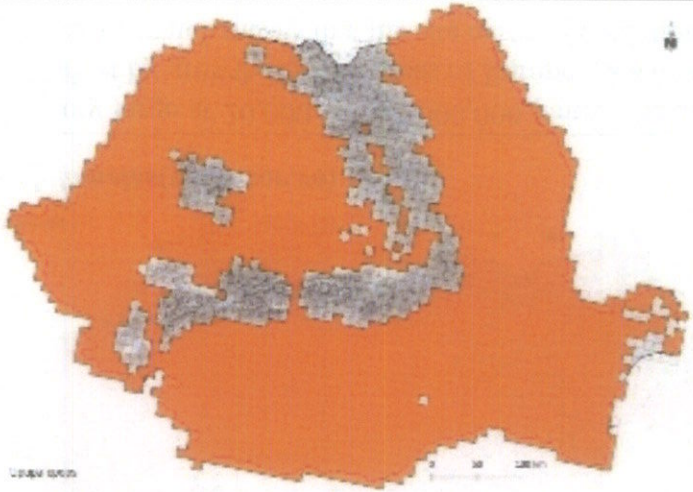
		white striped wings, a pinkish-brown body, and a pointed black crest. The beak is long, thin and curved downwards. Body length is 25-29 cm, wingspan 44-48 cm and body weight is 68 g. Genders are similar. It feeds mainly on insects, but also on small reptiles, amphibians, seeds and berries. It feeds by digging and probing the ground with its long beak. (www.sor.ro)
	Habitat requirements	It nests frequently throughout southern Europe. Most European birds migrate south to sub-Saharan Africa in winter, arriving in Africa from August, returning to their breeding grounds from February. It is a diurnal species, often seen basking in the sun with its wings wide open. The species is monogamous, although the pair lasts only for one nesting season. The male feeds the female during the courtship period and calls out to make his territory ownership known. Nests in cavities that may or may not be lined with vegetation. Nesting takes place between January and May. 6-9 eggs 26x18 mm in size are laid in the nest cavity. Hatching is done only by the female and lasts 15-18 days. During this time the male feeds the female. Chicks are then fed by both parents and develop plumage 26-29 days after hatching. It usually raises only one generation, although it may occasionally lay a second litter. (www.sor.ro)
	The range of the species	 **Distribution of the species *Upupa epops*(www.sor.ro)**
	Population	The European breeding population currently numbers 890,000-1,700,000 pairs. A few of the populations suffered a decline in the period 1990-2000 which led to a moderate decline overall. (www.sor.ro) In the Natura 2000 form, the population of the species was marked with D, which means that the site nests a Population with reduced density compared to the national average (insignificant).

	Threats and conservation measures	Reproductive success is based on the presence of suitable foraging territories with short vegetation and suitable nesting holes in existing trees or rocks in the same foraging area. Nesting areas are lost with the removal of old trees, and food supplies are affected by the use of pesticides in agricultural areas. Conservation measures must be directed towards habitat protection and environmentally friendly agricultural methods. (www.sor.ro)
Vanellus vanellus	Species Code	A 162
	The scientific name	*Vanellus vanellus,* Linnaeus, 1758
	Popular name	The Northern lapwing
	Description of the species	It is a wading (shore) species of medium size. It has a conspicuous long black crest on its head and black and white plumage with green iridescence on its back. Round wings are visible in flight. The sexes are similar. Body length is 67-72 cm, wingspan 67-72 cm and average body weight 140-320 g. Between March and July, 3-4 eggs are laid, measuring 47x33 mm and hatched by both parents for 26-28 days. Chicks develop plumage 35-40 days after hatching. (www.sor.ro)
	Habitat requirements	It is a widespread species throughout Europe and the central areas of Asia (up to the Far East). Most populations are migratory (except those in western and southern Europe and Asia Minor), wintering in southern Europe, northern Africa, the Middle East, northern India, Pakistan and some regions of China. In Romania, the species nests throughout the territory, in extensive areas in low and humid areas. The species nests in open habitats with little vegetation including agricultural land, meadows and wetlands. In winter they form flocks on pastures and arable land. Both diurnal and nocturnal in behavior, it feeds on worms, insects and other invertebrates. The male performs a courtship flight over the territory starting in February. The nest is located in a shallow depression, being lined with vegetation. (www.sor.ro)

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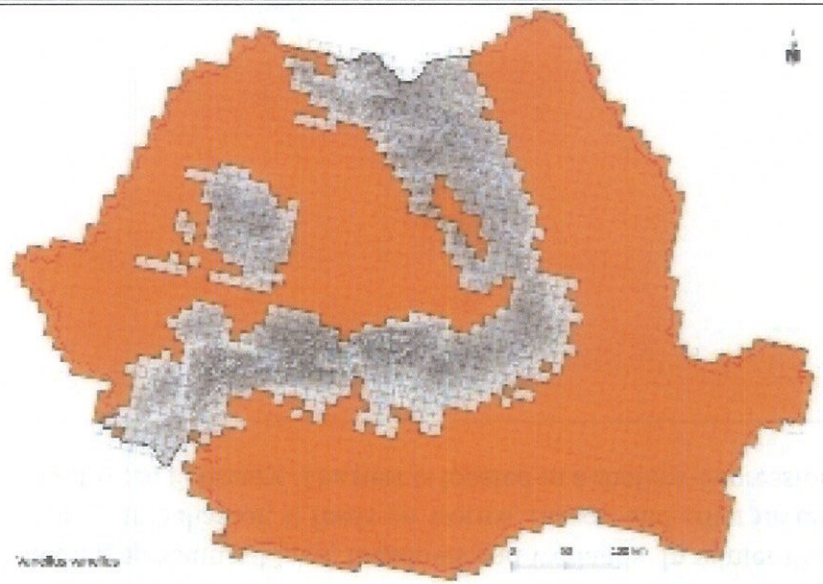
Brașov, Strada Republicii - ROMÂNIA

	The range of the species	 Distribution of the species *Vanellus vanellus* (www.sor.ro)
	Population	The total European breeding population is large at 1,590,000 - 2,580,000 pairs, but has suffered a major decline across Europe. The population trend is still decreasing. In Romania, the breeding population is 75,080 - 115,034 pairs, and the population trend is also decreasing.
	Threats and conservation measures	The massive decline of the European breeding population is caused by the loss of suitable habitats as a result of changes in agricultural practices. Intensification of agriculture with the loss of traditional agricultural mosaics and the widespread use of pesticides are the major causes of the decline. (www.sor.ro)

3.2. Date on the presence, location, population and ecology of species and/or habitats of community interest present on the surface and in the immediate vicinity of the proposed project, mentioned in the standard form of the protected natural area of community interest

In order to gather information regarding the presence and numbers/surfaces covered by species and habitats of community interest present on the surface and in the immediate vicinity of the proposed project, a field trip was carried out, the main objective being the determination of the fauna habitats/species identified in the site area studied and the neighbourhoods.

The Study area

The study area is represented by the location of the project proposed by FRIENDLY WASTE ROMANIA SRL, located in the premises of the Former Giurgiu Chemical Plant and its surroundings.

It is necessary that the vicinity of the site is included in the study area, as the potential impact on bird species may extend beyond its boundaries.



Figure no. 37. The studied zone

Also, observations were made outside the studied area, as follows:
- in a fixed point located on the banks of the Canalul Plantelor, at a distance of approx. 1,300 m from the location of the proposed project, in the southern area, towards the protected natural area ROSPA0108 Vedea – Danube;
- on a transect, in length of approx. 2,155 m, at the estimated limit of the protected natural area ROSPA0108 Vedea – Danube and at distances between 1,350 m and 3,150 m from the location of the proposed project.



Figure no. 43. Fixed point: Canalul Plantelor



Figure no. 44. Transect – Eastern limit of ROSPA0108

Methods of work

To monitor bird species in the studied area, the method of observations made at fixed points was used.

The method of observations at fixed points involves moving to a certain place, previously chosen and periodically visited, from where observations are made on the birds for a certain period of time, after which you move to another point. Obviously, the grid of points is always the same across investigations and the time period is constant. The advantage of this method lies in the fact that the observer has a greater ability to concentrate on the birds, the effective time available for identification is greater and, at the same time, it is easier to detect species that are usually hidden.

The analysed area is represented by the area adjacent to the site proposed for the implementation of the project, as well as nearby land surfaces, including the existing access roads within the former Giurgiu Chemical Plant.

Four observation points were established, and the location of the 4 points in relation to the location of the project proposed by FRIENDLY WASTE ROMANIA SRL, is highlighted in the following figure.



Figure no. 45. Avifauna monitoring points

For each observation, information on species, number of individuals and date on weather conditions were recorded. Attached is the Land Sheet dated 20.03.2023.

The identifications were made, either directly on the field with the help of the specialist determiner, or later, using the photos taken during the monitoring.

In order to efficiently collect the date, the following equipment was used:

1. CELESTRON 15X70 binoculars;
2. NIKON camera, 55-200mm lens and DSLR F5.6E ED VR lens;

The following were used to determine the bird species identified in the field:

1. Bird Determinator: Birds From Romania and Europe Illustrated Determinator - Bertel Bruun Hakan Delin Lars Svensson.

Attached is the Land Sheet dated 20.03.2023. The results of bird species monitoring in the studied area are presented in the following tables.

Table 27. Monitoring results - Point 1

No. crt.	Scientifical name	Common name	Number of individuals
1	*Corvus monedula*	Daw	30
2	*Streotopelia decaocto*	pigeon	2
3	*Pica pica*	Magpie	1
4	*Falco tinnunculus*	Common kestrel	1
5	*Columba palumbus*	Collared pigeon	1

Table 28. Monitoring results - Point 2

No. crt.	Scientifical name	Common name	Number of individuals
1	*Corvus monedula*	Daw	30
2	*Streotopelia decaocto*	pigeon	2
3	*Phoenicurus ochruros*	Mountain woodpecker	1

Table 29. Monitoring results - Point 3

No. crt.	Scientifical name	Common name	Number of individuals
1	*Corvus monedula*	Daw	20
2	*Phoenicurus ochruros*	Mountain woodpecker	1
3	*Pica pica*	Magpie	2
4	*Passer montanus*	Field sparrow	3

Table 30. Monitoring results - Point 4

No. crt.	Scientifical name	Common name	Number of individuals
1	*Falco tinnunculus*	Red wind	1
2	*Streotopelia decaocto*	pigeon	2
3	*Corvus monedula*	Daw	20
4	*Columba palumbus*	Collared pigeon	3
5	*Pica pica*	Magpie	1



Figure no. 38. *Columba palumbus* (Collared pigeon) – point 1, date: 20.03.2023



Figure no. 39. *Falco tinnunculus* (common kestrel) – point 1, date: 20.03.2023

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Figure no. 40. *Phoenicurus ochrurus* (Mountain woodpecker) – point 2, date: 20.03.2023



Figure no. 41. *Corvus monedula* (Daw– point 2, date: 20.03.2023



Figure no. 42. *Pica pica* (Daw) – point 3, date: 20.03.2023



Figure no. 43. *Phoenicurus ochrurus* (Mountain woodpecker) – point 3, date: 20.03.2023



Figure no. 44. *Corvus monedula* (The Western Jackdaw) – point 4, date: 20.03.2023



Figure no. 45. *Falco tinnunculus* (The common kestrel) – point 4, date: 20.03.2023

During field trips, **in the area of the project location** "***Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities***" **no bird species listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared**.

The results of the observations made **outside the studied area** are presented in the following tables:

Table 31. Monitoring results - Plant Channel fixed point

No. crt.	Scientifical name	Common name	Number of individuals
1	*Phalacrocorax carbo*	Great Cormorant	2
2	*Larus argentatus*	Silver gull	2
3	*Pica pica*	Magpie	1
4	*Motacilla alba*	White wagtail	2

Table 32. Monitoring results - Transect eastern boundary of ROSPA0108

No. crt.	Scientifical name	Common name	Number of individuals
1	*Fringilla coelebs*	Finch	1
2	*Erithacus rubecula*	Robin	2
3	*Aegithalos caudatus*	Encoded mole	1
4	*Falco tinnunculus*	Red wind	1
5	*Pica pica*	Magpie	3
6	*Passer montanus*	Field sparrow	15

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Figure no. 46. *Fringilla coelebs* (Finch) – transect, date: 20.03.2023



Figure no. 47. *Erithacus rubecula* (Robin) – transect, date: 20.03.2023



Figure no. 48. *Aegithalos caudatus* (The long-tailed tit) – transect, date: 20.03.2023



Figure no. 49. *Falco tinnunculus* (The common kestrel) – transect, date: 20.03.2023

From the point of view of the vegetation, the project site, with a total area of 3,050 square meters, is partly concrete and partly land with herbaceous vegetation, developed following the abandonment of the activities previously carried out in the former Giurgiu Chemical Plant.

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Figure no. 58. The vegetation on the site – the physiognomy of the plant communities present

The dominant plant association is Poëtum pratensis Răv., Căzac. et Turenschi 1956, which form meso-hygrophilous meadows with a rich composition of species, dominated by Poa pratensis alongside Agrostis sp., Festuca sp., Alopecurus pratensis, Trifolium repens, Trifolium pratense, Ranunculus repens, etc.
In addition to the specific phytocenotic composition, shrubby species such as Rosa canina are present on the land.



Figure no. 50. *Rosa canina*

3.3. Description of the ecological functions of the affected species and habitats of community interest (surface, location, characteristic species) and their relationship with the neighboring protected natural areas of community interest and their distribution

Any ecosystem performs three main functions [30]:
1. energy;
2. circulation of matter;
3. self-regulation.

The energy function provides all the energy necessary for the proper functioning of the entire ecosystem. In order for the ecosystem to exist, the continuous penetration of solar energy is absolutely necessary, which is captured by green plants and some photosynthesizing microorganisms, being used in the synthesis of their own organic substances (primary producers). With the help of consumers, the energy embedded in plant biomass consumed through food is further transferred to the entire chain of consumers through a continuous flow. Secondary production is that made by consumers. They are dependent on energy received from primary producers. The energy losses are all compensated by the continuous supply of solar radiation.

The function of circulation of matter allows the resumption of productive cycles. It depends on the structure of the ecosystem and especially on the populations of the biocenosis. It depends on the structure of

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the ecosystem and especially on the populations of the biocenosis. Trophic relationships are established between them and as a result of them, the basic nutrients circulate from producers to consumers of various degrees, to detritivore populations and finally to decomposers. If the decomposition process stopped or took place at an inadequate rate, the entire system would be blocked and primary production would cease to occur. The faster this process, the more productive the ecosystem. In addition to the local ecosystem cycles in the biosphere, there are also global cycles called biogeochemical cycles. Among these the most important are the cycles of: water, carbon, oxygen, nitrogen and phosphorus.

The self-regulatory function ensures self-control and stability of the ecosystem in time and space. The stability of ecosystems is a dynamic process, through which the component populations of the biocenosis manage to adapt to each other, as well as to natural factors, respectively to biotope factors. Self-control within ecosystems is mandatory, due to the fact that both the amount of nutrients and the amount of energy that primary producers receive or retain are finite. The main mechanism of self-control is ensured by means of food chains.

The three functions of the ecosystem are closely related to each other, as is the trophic structure of the biocenosis.

SELF-CONTROL AND STABILITY OF ECOSYSTEMS

Self-control or homeostasis of a biological system (individual, population, biocenosis) or of a mixed system (ecosystem), represents the internal stability tendency of the system against the changing conditions of the external environment (climatic factors, source: food, etc.). The function of self-control or homeostasis ensures stability in the structure, organization and functioning of the entire ecosystem.

Through its self-control function, the ecosystem maintains a state of equilibrium between the component populations, keeping the numerical variations of these populations within certain limits. Exceeding these limits leads to the disturbance of the balance by changing the structure and functioning of the entire ecosystem.

The main mechanism for maintaining ecosystem stability is based on trophic relationships within biocenoses. Trophic relationships control the numerical oscillations of each population in the ecosystem. When the populations register large numerical oscillations, they sometimes result even in the disappearance of both species. One such example is the caterpillars of the oak defoliating butterfly (Tortrix Viridana) which starve to death after destroying the forest leaves. The disappearance of the caterpillars in turn causes the imbalance between other species of the interdependent biocenosis (birds, mammals, etc.). Maintaining the equilibrium level of the population of a species in a biocenosis is achieved by different mechanisms from species to species. Some plants release into the external environment substances that negatively influence the development of individuals of the same species.

Therefore, the stability of an ecosystem is given by its structure, respectively by the number of component populations. The more complex the system, the greater its self-regulating capacity and will exhibit much greater stability against external disturbances. Ecosystem with few species and food chains (agriculture) will have much less stability. The stability of the agrosystem will be greatly influenced by external conditions:

- temperature,
- humidity
- the amount of mineral nutrients in the soil
- pests
- etc.

In such simple systems pest invasions occur much more frequently and easily.

Consequently, the self-control function of ecosystems is necessary because:

- the amount of energy received by a certain ecosystem as well as the amount of available nutrients are limited;

- the survival of the Population and the fulfilment of its functions in the biocenosis depends on the recovery (recycling) of the initial material resources and on maintaining a certain numerical level.

Both problems are solved by differentiating the functions of the component species of a biocenosis. The differentiation of functions through a more or less complex specialization, determines the interdependence of species and the organization of a natural self-control system similar to an informational cybernetic system.

The relationships between organisms and their living environment, made up of all environmental factors (abiotic and biotic), as well as the structure, function and productivity of supra-individual biological systems (populations, biocenoses) and mixed systems (ecosystems), are the aspects that define ecological functions and consisting of:

- relationships between living things (plants and animals);
- relationships between organisms and the environment;
- the relationships that are established between organisms and various communities.

Ecological factors are represented by the totality of abiotic (temperature, light, precipitation, pressure, etc.) and biotic factors (parasites, pests, intraspecific and interspecific competition, generated by the procurement of food within the nutrition relationship) with which an organism comes into contact and with which they mutually intercondition. Depending on their characteristics and the needs of the biotic components, environmental factors can favour, or on the contrary, prevent the survival and reproduction of organisms.

Both abiotic and biotic factors play an essential role in maintaining habitats and species.

Abiotic factors are represented by a set of physical and chemical elements that influence living organisms: climate (through temperature, humidity, pressure, the presence of light, wind, etc.), water, soil and air, living conditions differing according to microclimate, mesoclimate and macroclimate.

Among the biotic factors, the nutritional relationship between the species present in the same habitat is decisive. Between the populations that coexist in a microbiocenosis, connections (interspecific relations) are established that determine both the structure and the functions of the biocenosis as an integrative supersystem. The more diverse and varied the connections, the more complex and stable the biocenosis will be.

Intraspecific relationships are the relationships between individuals of the same species and intrapopulation relationships are manifested between individuals of the same population.

The species of community interest potentially affected by the implementation of the project "*Construction of hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewage, location of wastewater pretreatment station, location of waste incinerator medical facilities with related facilities*" are represented by the **bird species** listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube has been declared..

During field trips, **in the area of the project location** "***Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities*****" no bird species listed in Annex I of Council Directive 2009/147/EC,** for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared.

3.4. Conservation status of species and habitats of community interest

Table 33. Conservation status of species of Community interest mentioned in the ROSPA0108 Vedea - Danube standard form

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
1	Birds	A402	*Accipiter brevipes*	The short-legged hawk	B	Annex 1	LC-least concern	Annex 3	-	-
2	Birds	A086	*Accipiter nisus*	The birdseed hawk	-	Annex 1	LC-least concern	-	-	-
3	Birds	A298	*Acrocephalus arundinaceus*	The great reed warbler	-	-	LC-least concern	-	-	-
4	Birds	A295	*Acrocephalus schoenbaenus*	The small shoveler	-	-	LC-least concern	-	-	-
5	Birds	A297	*Acrocephalus scirpaceus*	The common reed warbler	-	-	LC-least concern	-	-	-
6	Birds	A168	*Actitis hypoleucos*	The common sandpiper	-	-	LC-least concern	Annex 4B	-	-
7	Birds	A247	*Alauda arvensis*	The Eurasian Skylark	-	Annex 2	LC-least concern	Annex 5C	-	-
8	Birds	A229	*Alcedo atthis*	The blue gull	-	Annex 1	LC-least concern	Annex 3	Annex 2	-
9	Birds	A054	*Anas acuta*	The northern pintail	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	-
10	Birds	A056	*Anas clypeata*	The spoonbill duck	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	-
11	Birds	A052	*Anas crecca*	The dwarf duck	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	-

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSP A0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
12	Birds	A053	*Anas platyrhynchos*	The mallard	-	Annex 2	LC-least concern	Annex 5C Annex 5D	-	-
13	Birds	A043	*Anser anser*	The Tummer goose	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	-
14	Birds	A028	*Ardea cinerea*	The grey heron	-	-	LC-least concern	-	-	-
15	Birds	A029	*Ardea purpurea*	The red heron	B	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2
16	Birds	A024	*Ardeola ralloides*	The yellow heron	C	Annex 1	LC-least concern	Annex 3	Annex 2	-
17	Birds	A221	*Asio otus*	The forest tuft	-	-	LC-least concern	-	-	-
18	Birds	A059	*Aythya ferina*	The chestnut-headed duck	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	-
19	Birds	A060	*Aythya nyroca*	The red duck	B	Annex 1	LC-least concern	Annex 3	-	-
20	Birds	A087	*Buteo buteo*	The common buzzard	-	-	LC-least concern	-	-	-
21	Birds	A144	*Calidris alba*	The sanderling	B	-	LC-least concern	-	Annex 2	-
22	Birds	A149	*Calidris alpina*	The dunlin	B	Annex 1	LC-least concern	Annex 3	Annex 2	-
23	Birds	A147	*Calidris ferruginea*	The curlew sandpipe	B	-	NT-quite threatened	-	Annex 2	-

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No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
24	Birds	A145	*Calidris minuta*	The little stint	B	-	LC-least concern	-	Annex 2	-
25	Birds	A146	*Calidris temminckii*	The Temminck's stint	B	-	LC-least concern	-	Annex 2	-
26	Birds	A366	*Carduelis cannabina*	The common linnet	-	-	LC-least concern	Annex 4B	Annex 2	-
27	Birds	A364	*Carduelis carduelis*	The European goldfinch	-	-	LC-least concern	Annex 4B	Annex 2	-
28	Birds	A363	*Carduelis chloris*	The European greenfinch	-	-	LC-least concern	Annex 4B	Annex 2	-
29	Birds	A136	*Charadrius dubius*	The little ringed plover	B	-	LC-least concern	-	Annex 2	-
30	Birds	A137	*Charadrius hiaticula*	The common ringed plover	B	-	LC-least concern	-	Annex 2	-
31	Birds	A031	*Ciconia ciconia*	White stork	B	Annex 1	LC-least concern	Annex 3	-	Annex 2
32	Birds	A030	*Ciconia nigra*	Black stork	B	Annex 1	LC-least concern	Annex 3	-	Annex 2
33	Birds	A081	*Circus aeruginosus*	The western marsh harrier	C	Annex 1	LC-least concern	Annex 3	-	-
34	Birds	A082	*Circus cyaneus*	The Harnie hen	B	Annex 1	LC-least concern	Annex 3	-	-
35	Birds	A231	*Corracias garrulus*	Roller	B	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
36	Birds	A212	*Cuculus canorus*	Cuckoo	-	-	LC-least concern	-	-	-
37	Birds	A036	*Cygnus olor*	The mute swan	-	Annex 2	LC-least concern	Annex 3	Annex 2	-
38	Birds	A253	*Delichon urbica*	The common house martin	-	-	LC-least concern	-	-	-
39	Birds	A027	*Egretta alba*	The great White Egret	B	Annex 1	LC-least concern	Annex 3	Annex 2	-
40	Birds	A026	*Egretta garzetta*	The small white egret	B	Annex 1	LC-least concern	Annex 3	Annex 2	-
41	Birds	A269	*Erithacus rubecula*	The robin	-	-	LC-least concern	Annex 4B	Annex 2	-
42	Birds	A096	*Falco tinnunculus*	The common kerstel	-	-	LC-least concern	Annex 4B	-	-
43	Birds	A097	*Falco vespertinus*	Red-footed Falcon	B	Annex 1	LC-least concern	Annex 3	-	-
44	Birds	A359	*Fringilla coelebs*	*The common chaffinch*	-	Annex 1	LC-least concern	-	-	-
45	Birds	A125	*Fulica atra*	The Eurasian coot	-	Annex 2	LC-least concern	Annex 5C Annex 5E	-	Annex 2
46	Birds	A153	*Gallinago gallinago*	The common snipe	B	-	LC-least concern	Annex 5C Annex 5E	-	-
47	Birds	A075	*Haliaeetus albicilla*	The white-tailed eagle	B	Annex 1	LC-least concern	Annex 3	-	Annex 1

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No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
48	Birds	A131	*Himantopus himantopus*	The black-necked stilt	B	Annex 1	LC-least concern	Annex 3	-	-
49	Birds	A251	*Hirundo rustica*	The swallow	B	-	LC-least concern	-	-	-
50	Birds	A022	*Ixobrychus minutus*	The little heron	B	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2
51	Birds	A459	*Larus cachinnans*	The pontic Gull	B	Annex 2	LC-least concern	-	-	-
52	Birds	A182	*Larus canus*	The brother seagull	-	Annex 2	LC-least concern	-	-	-
53	Birds	A156	*Limosa limosa*	The hore sitar	B	Annex 2	LC-least concern	-	-	-
54	Birds	A292	*Locustella luscinioides*	Reed racket	-	-	LC-least concern	Annex 4B	-	-
55	Birds	A271	*Luscinia megarhynchos*	The common nightinale	-	-	LC-least concern	-	Annex 2	-
56	Birds	A230	*Merops apiaster*	Prigoria	-	-	LC-least concern	Annex 4B	Annex 2	Annex 2
57	Birds	A383	*Miliaria calandra*	Sour rennet	-	-	LC-least concern	Annex 4B	-	-
58	Birds	A262	*Motacilla alba*	White cod	-	-	LC-least concern	Annex 4B	-	-
59	Birds	A260	*Motacilla flava*	The yellow cod	-	-	LC-least concern	Annex 4B	-	-

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
60	Birds	A319	*Muscicapa striata*	The spotted flycatcher	-	-	LC-least concern	Annex 4B	-	-
61	Birds	A160	*Numenius arquata*	Eurasian curlew	B	Annex 2	NT-quite threatened	-	-	-
62	Birds	A023	*Nyctycorax Nyctycorax*	Night heron	B	Annex 1	LC-least concern	Annex 3	Annex 2	-
63	Birds	A020	*Pelecanus crispus*	Curly pelican	B	Annex 1	LC-least concern	Annex 3	-	Annex 1 Annex 2
64	Birds	A019	*Pelecanus oncrotalus*	Common pelican	B	Annex 1	LC-least concern	Annex 3	-	Annex 1 Annex 2
65	Birds	A017	*Phalacrocorax carbo*	Great Cormorant	B	-	LC-least concern	-	-	-
66	Birds	A393	*Phalacrocorax pygmeus*	Little cormorant	A	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2
67	Birds	A034	*Platalea leucordia*	Rower	B	Annex 1	LC-least concern	Annex 3	-	Annex 2
68	Birds	A032	*Plegadis falcinellus*	The glossy ibis	-	Annex 1	LC-least concern	Annex 3	-	Annex 2
69	Birds	A141	*Pluvialis squatarola*	The grey plover	B	Annex 2	LC-least concern	-	-	-
70	Birds	A005	*Podiceps cristatus*	The great crested grebe	-	-	LC-least concern	-	-	-
71	Birds	A008	*Podiceps nigricollis*	The black-necked crocodile	-	-	LC-least concern	-	Annex 2	-

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
72	Birds	A118	*Rallus aquaticus*	The pond hook	-	Annex 2	LC-least concern	-	-	-
73	Birds	A132	*Recurvirostra avosetta*	Pied avocet	B	Annex 1	LC-least concern	Annex 3	-	-
74	Birds	A336	*Remiz pendulinus*	The Eurasian penduline tit	-	-	LC-least concern	Annex 4B	-	-
75	Birds	A249	*Riparia riparia*	The bank shack	-	-	LC-least concern	-	-	-
76	Birds	A276	*Saxicola torquata*	The black buckthorn	-	-	LC-least concern	-	Annex 2	-
77	Birds	A195	*Sterna albifrons*	The little tern	B	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2
78	Birds	A193	*Sterna hirundo*	The puddle bunting	B	Annex 1	LC-least concern	Annex 3	Annex 2	Annex 2
79	Birds	A351	*Sturnus vulgaris*	The rook	-	Annex 2	LC-least concern	Annex 5C	Annex 3	-
80	Birds	A004	*Tachybaptus ruficollis*	Little crowberry	-	-	LC-least concern	Annex 4B	-	-
81	Birds	A161	*Tringa erythropus*	Black whistler	B	Annex 2	LC-least concern	-	-	-
82	Birds	A164	*Tringa nebularia*	The green-footed whistler	-	Annex 2	LC-least concern	-	-	-
83	Birds	A165	*Tringa ochropus*	The common whistler	-	-	LC-least concern	-	Annex 2	-

No. crt.	Species				Conservation status according to					
	Group	Code	Scientifical name	Common name	Standard formROSPA0108	Birds Directive	IUCN	O.U.G. no. 57/2007	The Berne Convention	The Bonn Convention
84	Birds	A163	*Tringa stagnatilis*	The lake whistle	-	-	LC-least concern	-	Annex 2	-
85	Birds	A162	*Tringa totanus*	The red-footed whistle	B	Annex 2	LC-least concern	-	-	-
86	Birds	A283	*Turdus merula*	The blackbird	-	Annex 2	LC-least concern	-	-	-
87	Birds	A285	*Turdus philomelos*	The song thrush	-	Annex 2	LC-least concern	Annex 5C	-	-
88	Birds	A232	*Upupa epops*	The Eurasian hoopoe	-	-	LC-least concern	Annex 4B	-	-
89	Birds	A142	*Vanellus vanellus*	The Northern Lamping	B	Annex 2	NT-Quite threatened	-	-	-

Legend:
Group – species group: amphibians, birds, fish, invertebrates, mammals, plants, reptiles;
Code – the four-character sequential code for each Species;
Standard form ROSPA0071 – State of conservation A – excellent, B – good, C – average or poor;
"Birds Directive" – Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds; Annex 1 – the mentioned Species are the subject of special measures to preserve their habitats in order to ensure their survival and reproduction in their distribution area;
IUCN – International Union for Conservation of Nature – The IUCN Red List of Threatened Species™: NE – Not Assessed, DD – Date Insufficient, LC – Least Concern, NT – Near Threatened, VU – vulnerable, EN – endangered, CR – critically endangered, EW – extinct in the wild, EX – extinct;
GEO no. 57/2007 regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna, with subsequent amendments and additions: Annex 2 – types of natural habitats whose conservation requires the declaration of special conservation areas; Annex 3 – plant and animal Species whose conservation requires the designation of special conservation areas and areas of special avifaunistic protection; Annex 4A – Species of community interest - animal and plant Species that require strict protection; Annex 4B – Species of national interest - animal and plant Species that require strict protection;

The Berne Convention – Law no. 13/1993 for Romania's accession to the Convention on the Conservation of Wild Life and Natural Habitats in Europe, adopted in Bern on September 19, 1979: Annex 1 – Species of wild flora for which appropriate legislative and administrative measures are necessary and necessary to ensure conservation; Annex 2 – strictly protected fauna Species, Annex 3 – protected fauna Species;

Bonn Convention – Law no. 13/1998 for Romania's accession to the Convention on the Conservation of Migratory Species of Wild Animals, adopted in Bonn on June 23, 1979: Annex 1 – list of migratory Species that are endangered, Annex 2 – list of migratory Species that have an unfavorable conservation status and that require international agreements for their conservation and management, as well as migratory Species that have a conservation status that could benefit significantly from international cooperation that could be achieved through an international agreement.

3.5. Data on the structure and dynamics of populations of affected species (numerical evolution of the population within the protected natural area of community interest, the estimated percentage of the population of a species affected by the implementation of the proposed project, the area of the habitat is large enough to ensure the long-term maintenance of the species)

The available information on the structure and dynamics of populations of affected species in ROSPA0108 Vedea - Danube are those presented in the Natura 2000 Standard Form of the protected natural area, but they do not present the structure by age, gender or population dynamics.

Table 34. Information on the structure of bird populations in the Natura2000 site ROSPA0108

No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ. C | R | V | P	Quality of the data
				Min.	Max.			
1	*Accipiter brevipes*	The levant sparrowhawk	R	1	2	p	C	
2	*Accipiter nisus*	The Eurasian sparrowhawk	W	1		i	C	
3	*Acrocephalus arundinaceus*	The Great reed warbler	R				C	
4	*Acrocephalus schoenobaneus*	The little warbler	R				C	
5	*Acrocephalus scirpaceus*	The Eurasian reed warbler)	R				C	
6	*Actitis hypoleucos*	The common sandpiper	C	60		i	P	
7	*Alauda arvensis*	The field chickadee	C				C	
8	*Alcedo atthis*	The blue gull	R	12		p	C	
9	*Anas acuta*	The Javelin duck	W	10		i	R	
10	*Anas Clypeata*	The spoon duck	C	500		i	R	
11	*Anas crecca*	The dwarf duck	C	1200	1500	i	C	
12	*Anas crecca*	The dwarf duck	W	300		i	C	
13	*Anas platyrhynchos*	The big duck	R	20		p	C	
14	*Anas platyrhynchos*	The big duck	C	3000	4500	i	C	
15	*Anas platyrhynchos*	The big duck	W	250		i	C	
16	*Anser anser*	The summer goose	C	30		i	C	
17	*Ardea Cinerea*	The grey heron	C	30		i	C	
18	*Ardea Cinerea*	The grey heron	W	11		i	C	

No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ. C | R | V | P	Quality of the data
				Min.	Max.			
19	*Ardea purpurea*	Red heron	R	5	10	p	R	
20	*Ardea purpurea*	Red heron	C	70	100	i	R	
21	*Ardeola ralloides*	Yellow heron	R	50	60	p	C	
22	*Asio otus*	The long-eared owl	R				R	
23	*Aythya ferina*	The duck with grey head	R	90	120	p	P	
24	*Aythya nyroca*	The red duck	R	25	34	p	P	
25	*Aythya nyroca*	The red duck	C	300	400	i	P	
26	*Buteo buteo*	The common buzzard	W	3		i	P	
27	*Calidris alba*	The sanderling	C				R	
28	*Calidris alpina*	The shore stint	C	1400		i	P	
29	*Calidris ferruginea*	The red stint	C				R	
30	*Calidris minuta*	The little stint	C	332	404	i	C	
31	*Calidris temminckii*	The dwarf stint	C				R	
32	*Carduelis cannabina*	Linnet	C				C	
33	*Carduelis carduelis*	Goldfinch	R				C	
34	*Carduelis carduelis*	Goldfinch	C				C	
35	*Carduelis chloris*	European greenfinch	R				C	
36	*Carduelis chloris*	European greenfinch	C				C	
37	*Charadrius dubius*	Little ringed plover	C	240	300	i	C	
38	*Charadrius hiaticula*	Big ringed plover	C				R	
39	*Ciconia ciconia*	White stork	R				P	
40	*Ciconia ciconia*	White stork	C	500	1000	i	P	
41	*Ciconia nigra*	Black stork	R	1	2	p	R	
42	*Ciconia nigra*	Black stork	C	40	60	i	R	

No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ. C | R | V | P	Quality of the data
				Min.	Max.			
43	*Circus aeruginosus*	Western marsh harrier	R	2	4	P	R	
44	*Circus aeruginosus*	Reed erete	C	80	100	i	R	
45	*Circus aeruginosus*	Reed erete	W	10	15	i	R	
46	*Circus cyaneus*	Hen harrier	C	20	30	i	R	
47	*Circus cyaneus*	Hen harrier	W	4	6	i	R	
48	*Coracias garrulus*	Roller	R	20	30	p	C	
49	*Cuculus canorus*	Cuckoo	R				C	
50	*Cygnus olor*	Summer swan	C	8		i	C	
51	*Delichon urbica*	Homemade spinach	C				C	
52	*Egretta alba*	great egret	R	1	3	p	P	
53	*Egretta alba*	great egret	W	20	30	i	P	
54	*Egretta garzetta*	little egret	R	45	80	p	P	
55	*Egretta garzetta*	little egret	C	300	500	i	P	
56	*Erithacus rubecula*	robin	C				C	
57	*Falco tinnunculus*	Red-footed falcon	W	1		i	P	
58	*Falco vespertinus*	Red-footed falcon	R	5	10	p	C	
59	*Falco vespertinus*	Red-footed falcon	C	200	300	i	C	
60	*Fringilla coelebs*	Wood finch	C				C	
61	*Fulică atra*	coot	R	250		p	R	
62	*Fulică atra*	coot	W	57		i	R	
63	*Gallinago gallinago*	Common snipe	C	90	200	i	V	
64	*Haliaeetus albicilla*	white-tailed	R	1	1	p	C	
65	*Haliaeetus albicilla*	white-tailed eagle	C	5	10	i	C	
66	*Haliaeetus albicilla*	white-tailed eagle	W	4	6	i	C	

No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ. C | R | V | P	Quality of the data
				Min.	Max.			
67	*Himantopus himantopus*	Black-winged stilt	R	15	27	p	P	
68	*Himantopus himantopus*	Black-winged stilt	C	70	150	i	P	
69	*Hirundo rustica*	Swallow	C				C	
70	*Ixobrychus minutus*	Little heron	R	20	24	p	P	
71	*Ixobrychus minutus*	Little heron	C	20		i	P	
72	*Larus cachinnanis*	Pontic Gull	C	600	2500	i	R	
73	*Larus canus*	Brother seagull	C	180	300	i	R	
74	*Limosa limosa*	Shore sitar	C	450	3000	i	P	
75	*Locustella luscinioides*	Reed racket	R				C	
76	*Luscinia megarhynchos*	Reddish Nightingale	R				R	
77	*Luscinia megarhynchos*	Reddish Nightingale	C				C	
78	*Merops apiaster*	Prigoria	R				C	
79	*Miliaria calandra*	Sour rennet	C				C	
80	*Motacilla alba*	White cod	R				C	
81	*Motacilla flava*	Yellow cod	R				C	
82	*Muscicapa striata*	The spotted flycatcher	C				C	
83	*Numenius arquata*	The Eurasian curlew	C	120	600	i	V	
84	*Nycticorax nycticorax*	Night heron	R	40	60	p	C	
85	*Pelecanus crispus*	Curly pelican	C	3	11	i	P	
86	*Pelecanus onocrotalus*	Common pelican	C				R	
87	*Phalacrocorax carbo*	Great Cormorant	C	1500		i	C	

No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ.	Quality of the data
				Min.	Max.		C | R | V | P	
88	*Phalacrocorax carbo*	Great Cormorant	W	500		i	C	
89	*Phalacrocorax pygmeus*	Little cormorant	C	1000		i	R	
90	*Phalacrocorax pygmeus*	Little cormorant	W	240		i	R	
91	*Platalea leucorodia*	Rower	R	18	24	p	P	
92	*Platalea leucorodia*	Rower	C				C	
93	*Plegadis falcinellus*	Glossy ibis	C				C	
94	*Pluvialis squatarola*	The greu plover	C				R	
95	*Podiceps cristatus*	Great crested grebe	R	50		p	C	
96	*Podiceps nigricollis*	Black-necked crocodile	C	24		i	P	
97	*Rallus aquaticus*	Pond hook	W	2		i	V	
98	*Recurvirostra avosetta*	Pied avocet	R		40	p	C	
99	*Recurvirostra avosetta*	Pied avocet	C	50	150	i	C	
100	*Remiz pendulinus*	Boicus	R				C	
101	*Riparia riparia*	Bank shack	R				C	
102	*Riparia riparia*	Bank shack	C				C	
103	*Saxicola torquata*	Black buckthorn	C				C	
104	*Sterna albifrons*	The little tern	R	4	8	p	C	
105	*Sterna albifrons*	The little tern	C	50	70	i	C	
106	*Sterna hirundo*	Common tern	R	30	80	p	C	
107	*Sterna hirundo*	Common tern	C	800	1500	i	C	
108	*Sturnus vulgaris*	Starling	C				C	
109	*Tachybaptus ruficollis*	Little grebe	R	4		p	C	

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No. crt.	Scientifical name	Common name	Population					
			Type	Size		Unity of Measure	Categ. C | R | V | P	Quality of the data
				Min.	Max.			
110	*Tachybaptus ruficollis*	Little grebe	C	30		i	C	
111	*Tringa erythropus*	Black whistler	C	440	600	i	P	
112	*Tringa nebularia*	Green-legged Whistler	C	200		i	P	
113	*Tringa ochropus*	Latenc whistle	C	90		i	P	
114	*Tringa stagnatilis*	Lake whistle	C	120	130	i	P	
115	*Tringa totanus*	Red-legged Whistler	C	1200	2000	i	C	
116	*Turdus merula*	Blackbird	C				C	
117	*Turdus philomelos*	Mavis	C				C	
118	*Upupa epops*	The European Hoopoe	C				C	
119	*Vanellus vanellus*	Lapwing	C	2100	3000	i	R	

The legend:
□ **Type:**

- (P) - Permanent: found in the site throughout the year (non-migratory species or plants, resident populations of some migratory species);
- (R) - Reproductive: use the site for raising young (eg for mating, nesting);
- (C) - Concentration: the site is used as a crossing point, nesting space, stopover during migration or for moulting outside the mating areas, excluding wintering;
- (W) - Winter: the site is used during the winter.
- Size: known population data, in terms of abundance, if available
- Unit of measurement: i = individuals, p = pairs

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By implementing the project *"Construction of a hall building, drainable concrete basin, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of medical waste incinerator with related facilities"* no there will be losses of habitat surfaces used for the needs of food, rest and reproduction of species of community interest for which ROSPA0108 Vedea – Duenăre has been declared.

During field trips, **in the area of the project location** "*Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related*

facilities" no species of Birds listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared.

3.6. The structural and functional relationships that create and maintain the integrity of the protected natural area of community interest

- In nature, each Species has a well-defined ecological role in ecosystems, through the position it holds within the trophic chains. The structure of the protected natural area ROSPA0108 Vedea - Danube is defined by all the abiotic (climate, relief, surface waters) and biotic (fauna and flora) factors that contribute to the realization of the natural framework.
- The preservation or maintenance of structural and functional integrity, within the stability domain of a natural or semi-natural ecological system, implies to the same extent, maintaining the natural course of the dynamics of the compartments of the hydrogeomorphological unit and the dynamics of the associations of plant and animal Species that populate these compartments, such as and the dynamics of interactions between them.
- The connectivity between the different types of natural and semi-natural ecosystems, ensured through natural corridors or obtained through "ecological reconstruction" works, is a fundamental condition for achieving the objectives regarding the conservation of the diversity of habitats and biological systems.
- The diversity of the faunal elements is closely correlated with the floristic peculiarities and phytocenological associations (habitat peculiarities), with the relief elements and the geological characteristics as well as the microclimate of the area.
- The combination and interaction of all these determining factors establishes the distribution of faunal elements, as well as the delimitation of local population boundaries, thus contributing to the way Species spread, varying from a uniform spread to an insular one, depending also on the adaptability of each Species. Also, the availability of feeding and nesting sites is closely related to the outcome of combinations of these factors.
- The set of structural and functional relationships that create and maintain the integrity of the protected natural area are the interdependence relationships between the component elements of the entire ecological system; these relationships ensure the maintenance of its structure, functioning and harmonious dynamics.
- The structural and functional relationships that create and maintain the integrity of a protected natural area relate to the conditions of feeding, shelter and reproduction of fauna Species, on the one hand, and on the other hand, to anthropic pressure and all the external factors that may affect integrity. Maintaining the integrity of protected natural areas involves preserving the balance established between biotope and biocenosis and is achieved by preventing and/or minimizing any actions that could lead to:
- fragmentation of habitats of community interest;

generating a significant negative impact on biotic and/or abiotic factors that would lead to changes in the dynamics of relationships that define the structure and functions of the protected natural area.

Maintaining the structure and functions of ecosystems in a constantly changing environment, but also with finite resources, can also be explained as the result of self-regulation mechanisms (self-control) and materializes with ecological balance.

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Maintaining the state of ecological balance represents the stability, the integrity of the system, in the description of which numerous dimensions are taken into account, the knowledge of which becomes important in the actions of ecological reconstruction and establishing the ways of rational exploitation of resources.

Thus, the quantities that characterize integrity are represented by:

- constancy or lack of disturbances;
- persistence - the ability of ecosystems to survive over time;
- inertia or the ability to resist disturbances;
- the amplitude – the measure of the reversible departure from the initial equilibrium state;
- trajectory stability – the property of ecosystems to move away and evolve towards a particular state starting from a variety of situations.

Regarding the evolution of the state of the environmental factors in the site, the most likely to undergo changes is the water environmental factor. Any change in this factor leads to changes in the vegetation and lotic fauna, but also in the specific composition of the organisms that populate its banks.

The activities carried out as a result of the implementation of the project ***"Construction of hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewage, location of wastewater pretreatment station, location of medical waste incinerator with facilities related"*** proposed by FRIENDLY WASTE ROMANIA SRL will not generate fragmentation of habitats, will not destroy the structural or functional relationships within the protected area and will not endanger its integrity. The ecological balance of all structural components of the sites is maintained by the biodiversity of the area.

3.7. The conservation objectives of the protected natural area of community interest, where they have been established by management plans

The legislative basis for the establishment of the Natura 2000 network is Directives 79/409/EC ("Birds Directive") and 92/43/EEC ("Habitats Directive"). According to the Habitats Directive, the purpose of the Natura 2000 network is to establish a "favourable conservation status" for habitats and Species considered to be of Community interest.

At the European level, the legal framework for the implementation of the Natura 2000 Network is represented by two directives of the European Commission: Directive 79/409/EEC on the conservation of wild birds, known as the "Birds Directive" (adopted on April 2, 1979) and Directive 92/43 /EEC on the conservation of natural habitats, flora and fauna, known as the "Habitats Directive" (adopted on 21 May 1992). These directives contain in annexes the lists of Species and types of habitats that are the subject of the Natura 2000 Network.

For Romania, the authority responsible for the implementation of the Natura 2000 Network is the Government of Romania, through the Ministry of the Environment and Sustainable Development, according to the obligations assumed in the European Union accession negotiations for Chapter 22 Environment, the nature protection sector. From a legal point of view, the two European directives were initially transposed into Romanian legislation by Law 462/2001, for the approval of Government Emergency Ordinance no. 236/2000 regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna. Later, H.G. were promulgated. no. 1284/2007 regarding the declaration of bird faunistic protection areas, as an integral part of the European ecological network Natura 2000 in Romania and O.M. no. 1964/2007 regarding the establishment of the protected natural area regime for sites of community importance, as an integral part of the European Natura 2000 ecological network in Romania. In June 2007, Emergency Ordinance no. 57/2007 regarding the regime of natural protected areas, the conservation of natural habitats, flora and fauna which, compared to previous acts, contains more detailed provisions regarding both the establishment of the Natura 2000 network and the administration of sites and the exercise of control over the application of the legal regulations established for these (taken from Stănciou & al, 2008; Pop & Florescu 2008).

The management plan establishes the responsibilities for the implementation of special management measures aiming at the conservation of elements of conservation interest and the sustainable use of the values of the protected natural area, regulating the activity of the administrator and the authorities as specified in article 21, paragraph 6 of the Government Emergency Ordinance no. 57/2007 regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna, with subsequent amendments and additions.

The management plan is an important tool to draw attention to the importance of nature and natural resources for the development of communities and the need to maintain them for future generations.
The natural area protected by community interest ROSPA0108 Veeda – Danube does not benefit from a management plan.

The responsibility for implementing the management plan rests with the custodian of the protected natural area and is carried out based on the activity planning described in this document. The custodian will ensure that the activities that fall under the responsibility of other institutions fall within the provisions of the management plan and do not contradict the objectives of this document. In these cases, the custodian has a defining role in establishing collaborative relationships with the respective institutions/organizations and defining how they organize their activities that have a direct or indirect impact on the protected natural area.

At the time of the preparation of this study, the protected natural area of community interest ROSPA0108 Vedea - Danube is not managed by a designated custodian.
The authority responsible for the management of the Special Avifaunistic Protection Area ROSPA0108 Veeda - Danube is the NATIONAL AGENCY FOR NATURAL PROTECTED AREAS, in accordance with the provisions of Law no. 95/2016 regarding the establishment of the National Agency for Protected Natural Areas and for the amendment of Emergency Ordinance no. 57/2007 regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna, of Decision no. 997/2016 on the organization and operation of the National Agency for Protected Natural Areas and on the amendment and completion of annex no. 12 at H.G. no. 1705/2006 for the approval of the centralized inventory of goods in the public domain of the state and of the O.U.G. no. 90/2016 regarding the establishment of measures to ensure the management of protected natural areas, with subsequent amendments and additions.

The conservation objectives specific to the NATURA 2000 site ROSPA0108 Veeda – Danube were approved by Note no. 2/R/7255/10.08.2022 regarding the approval of the minimum set of special measures for the protection

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and conservation of biological diversity, as well as the conservation of natural habitats, flora and fauna, safety of the Population and investments in ROSPA0108 Vedea - Danube.

3.8. Description of the current conservation status of the protected natural area of community interest, including developments/changes that may occur in the future

The conservation status of natural protected areas is very different depending on the area being discussed.

In the case of project implementation, the evolution of the protected natural area of community interest ROSPA0108 Vedea – Danube will be towards maintaining the current structure.

The evolution of the state of conservation will depend a lot on the direction in which the anthropic factor acts and the degree of compliance with the protection measures imposed.

The Avifaunistic Special Protection Area - Vedea - Danube was declared by H.G. 1284 of 31.10.2007 regarding the declaration of areas of special avifaunistic protection as an integral part of the European ecological network NATURA 2000 in Romania, amended and supplemented by H.G. no. 971/2011.

We do not have any information regarding developments/changes that may occur in the future regarding the conservation status of the protected natural area of community interest, considering the fact that the protected natural area ROSPA0108 Vedea – Danube does not benefit from a management plan.

Considering mainly the state of bird Species of community interest, in the document Site-specific conservation objectives ROSPA0108 Veeda – Danube = revised =, site-specific conservation objectives are included for each Species, namely the **maintenance of the state of conservation**.

The conservation status of a Species is given by all the factors that act on it and that can influence the long-term spread and abundance of populations of the respective Species on the territory of the European Union. The state of conservation is considered "favourable" when the conditions are met:

• the date on the dynamics of the Species' populations indicate that it is maintained and is likely to be maintained in the long term as a viable component of the natural habitat;

• the natural range of the Species is not decreasing and there is no risk of it decreasing in the foreseeable future.

In accordance with GEO 57/2007 regarding the regime of natural protected areas, conservation of natural habitats, flora and fauna, art. 33, for all Species of protected birds are prohibited:

- intentional killing or capture regardless of the method used;
- intentional damage, destruction and/or collection of nests or eggs from nature;
- collecting eggs from nature and keeping them even if they are empty;
- intentional disturbance, especially during the period of reproduction, growth and migration;
- possession of specimens of Species for which hunting and capture are prohibited;
- trading, holding and/or transporting for the purpose of trading live or dead or any parts from protected Species.

From the point of view of conservation status, all the bird Species mentioned in the standard form of ROSPA0108 Veeda – Danube have a good conservation status, as was also reported in the previous chapters.

An overall assessment of the bird Species declared in the standard protected area form indicates that the vast majority of them have considerable conservation value.

3.9. Other relevant information regarding the conservation of the protected natural area of community interest, including possible changes in the natural evolution of the protected natural area of community interest

Biodiversity monitoring activities in the Special Avifaunistic Protection Area ROSPA0108 Veea - Danube imperatively necessary for the development of the Management Plan, will be particularly important for knowing the numbers and their distribution within and around the site limits.

3.10. Other relevant aspects for the protected natural area of community interest

The location of the proposed project is represented by a plot of land in the premises of the Former Giurgiu Chemical Plant, at a distance of approx. 1430 m from the Special Avifaunistic Protection Area ROSPA0108 Veeda – Danube.

During field trips, **in the area of the project location** "Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities" no bird Species listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared.

4. IDENTIFICATION AND ASSESSMENT OF IMPACT

4.1. Methodology for estimating impacts on biodiversity

The matrix method was used to assess the significance of the impact. The evaluation was carried out in all phases of the project (implementation, operation, decommissioning).

In estimating the impact of the project on biodiversity, both the results of biodiversity monitoring in the area and the targets set by the specific conservation objectives at the level of the Natura2000 Vedea – Danube site were taken into account.

The color-coded matrix (traffic light) method was used for the global impact assessment. The traffic light method assumes that the most unfavourable value recorded for one of the impact categories dictates the value of the global impact assessment.

Table 35. Matrix of colour codes (traffic lights)

Colour code	The level of impact
	Significant negative impact
	Moderate negative impact
	Low negative impact
	Neutral impact (no impact)

The global impact assessment was carried out taking into account four risk classes that include the following risk categories, taking into account the specific conservation objectives of ROSPA0108 Veea – Danube.

Table 36. Risk classes considered in the conservation risk assessment

Risk class	Risk category
Big	The habitat/species is in an unfavorable conservation status – bad and the project directly prevents the achievement of the environmental objective, i.e. the improvement of the conservation status
	The habitat/species is in an unfavorable – inadequate conservation status and the project will directly cause the worsening of the conservation status (transition to the unfavorable – bad status).
Moderate	The habitat/species is in an unfavorable - bad state of conservation, but the project does not directly prevent the achievement of the environmental objective, namely the improvement of the state of conservation.
	The habitat/species is in an unfavorable - inadequate conservation state and the project directly prevents the achievement of the environmental objective, namely the improvement of the conservation state.
	The habitat/species is in a favorable state of conservation and the project will directly cause the deterioration of the state of conservation (the transition to the unfavorable state of conservation - inadequate).
Reduced	Changes at the level of the surfaces of Natura 2000 habitat types/Species favorable habitats and at the level of the population are not able to lead to the deterioration or to the prevention of the improvement of the state of conservation.
No risk	No changes are estimated regarding the surfaces of the Natura 2000 habitat types/Species favorable habitats and at the level of the population.

The classes used for the global assessment of the significance of the impact are presented in the following Table:

Table 37. Matrix of classes used for the overall assessment of impact significance

Habitat loss (PH)	Habitat alteration (AH)	Habitat fragmentation (FH)	Disturbance of the activity of fauna species (PASF)	Population reduction (REP)	Global impact assessment
High impact	High impact	High impact	High impact	High risk	High impact
Moderate impact	Moderate impact	Moderate impact	Moderate impact	Moderate risk	Moderate impact
Low impact	Low impact	Low impact	Low impact	Low risk	Low impact
No impact	No impact	No impact	No impact	No risk	No impact

Following the analysis of the characteristics of the environment in the area of the site proposed by FRIENDLY WASTE ROMANIA SRL for the implementation of the **project "Construction of hall building, drainable concrete basin, concrete platforms, fencing, lighting system, drilling and internal network for**

water supply and sewage, location of water station wastewater pre-treatment, location of medical waste incinerator with related facilities" on a plot of land located within the former Giurgiu Chemical Plant, the impact on biodiversity is neutral, as can be seen from the impact significance assessment matrix:

Table 38. Overall estimate of impact significance

Habitat loss (PH)	Habitat alteration (AH)	Habitat fragmentation (FH)	Disturbance of the activity of fauna species (PASF)	Population reduction (REP)	Global impact assessment
No impact	No impact	No impact	No impact	No risk	No impact

In the framework of this study, all types of impact of the proposed project, likely to affect the natural area protected by community interest ROSPA0108 Vedea - Danube, will be identified and evaluated, respectively:
- the direct and indirect impact - it is neutral considering the large distance between the project site and the natural area protected by community interest ROSPA0108 Vedea - Danube, corroborated with the results of field observations;
- the short or long term impact – there is no short or long term impact, considering the large distance between the project location and the natural area protected by community interest ROSPA0108 Vedea – Danube and the fact that the activity of the incinerator results in extremely small amounts of pollutants emitted into the atmosphere and due to the air currents that contribute to their dispersion in short times, the impact manifests itself on a very limited surface that does not go beyond the limits of the site;
- the impact from the construction, operation and decommissioning phase – is neutral according to the impact assessment matrix;
- the residual impact - is neutral considering the fact that the activity of the incinerator results in extremely small amounts of pollutants emitted into the atmosphere and due to the air currents that contribute to their dispersion in short times, the impact manifests itself on a very limited surface that does not go beyond the limits location;
- the cumulative impact - the cumulative impact of the project with that of the existing installations in the analysed area is insignificant (even negligible) taking into account the fact that the emissions resulting from the incinerator's activity are located at totally negligible values.Evaluarea semnificației impactului

4.2. The evaluation of the signification of the impact

According to the Methodological Guide regarding the adequate evaluation of the potential effects of plans or projects on natural areas protected by community interest, the correct interpretation of the significance of the impact is the most important part of the entire process, and can be considered crucial for the entire evaluation. The significance of the impact must be evaluated at the level of each protected natural area of community interest, taking into account the conservation status of species and habitats at the level of the biogeographical region.

The evaluation of the significance of the impact was carried out on the basis of the following quantifiable key indicators:

Table 39. Key quantifiable indicators

Quantifiable key indicators	ROSPA0108 Vedea - Dunăre
The percentage of habitat area that will be lost	It's not necessary. There will be no loss of areas of habitats of community interest. The location of the proposed project is represented by a plot of land within the former Giurgiu Chemical Plant, at a distance of approx. 1430 m from the Special Avifaunistic Protection Area ROSPA0108 Veeda – Danube.
The percentage that will be lost from the surfaces of habitats used for the needs of food, rest and reproduction of Species of community interest	It's not necessary. Through the implementation of the proposed project, there will be no loss of the areas of the habitats used for the needs of food, rest and reproduction of Species of community interest, according to the information related to biodiversity monitoring presented in Chap. 3.2. Date on the presence, location, population and ecology of Species and/or habitats of community interest present on the surface and in the immediate vicinity of the proposed project, mentioned in the standard form of the protected natural area of community interest of this appropriate assessment study
Fragmentation of habitats of community interest (expressed as a percentage)	It is not the case
Duration or persistence of fragmentation	It is not the case
The duration or persistence of the disturbance of Species of community interest, the distance from the natural area protected by community interest	It's not necessary. During field trips, in the area of the project location "Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities" no bird Species listed in annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube was declared.
Changes in population density (no. of individuals/area)	It's not necessary.
Timescale for Species replacement/	It's not necessary.

Quantifiable key indicators	ROSPA0108 Vedea - Dunăre
habitats affected by the implementation of the proposed project	It's not necessary. During field trips, in the area of the project location "Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities" no bird Species listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared.

The matrix method was used to assess the significance of the impact. The evaluation was carried out in all phases of the project (implementation, operation, decommissioning).
In estimating the impact of the project on biodiversity, both the results of biodiversity monitoring in the area and the targets set by the specific conservation objectives at the level of the Natura2000 Vedea – Danube site were taken into account.

For a very good visualization of the impact of the proposed project on the biodiversity generated by the implementation, exploitation and decommissioning of the proposed project, the following matrices were used:

Table 40. Estimated impact during the implementation phase of the project

STAGE	Expected impact on avifauna ROSPA0108 Veeda - Danube
Faza de implementare	**0**
Faza operațională	**0**
Decommissioning phase	**0**

The legend:
- insignificant negative impact
0 neutral impact
+ insignificant positive impact
++ significant positive impact

Estimate of the project's potential impact on the bird Species listed in Annex I of Council Directive 2009/147/EC, mentioned in the Standard Form of the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube

Considering the location of the project site "Construction of a hall building, drainable concrete basin, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of medical waste incinerator with installations related", *proposed by FRIENDLY WASTE ROMANIA SRL, respectively a land area located within the former Giurgiu Chemical Complex, at a distance of approx. 1430 m from the limits of the nearest protected natural area*

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of community interest, corroborated with the results of field observations, we consider that the impact of the project on the bird Species listed in Annex I of Council Directive 2009/147/EC, mentioned in the Standard Form of the Area of Avifaunistic Special Protection ROSPA0108 Veeda – Danube is neutral.

Assessment of the impact on bird Species of community interest from the territory of the Natura 2000 site ROSPA0108 Vedea - Danube based on chemical indicators - pollutants emitted into the atmosphere

The forecasted impact is neutral considering the fact that it manifests itself on a very limited surface that does not go beyond the limits of the site, as can also be seen from the dispersion maps of pollutants emitted into the atmosphere integrated in this work, in conjunction with the fact that the project site is located at a distance of approx. 1430 m from the limits of the protected natural area ROSPA0108 Vedea – Danube.

Analysis of the impact of the project on bird Species of community interest based on maps of the dispersion of pollutants in the atmosphere

The predicted impact is neutral considering the fact that it manifests itself on a very limited surface that does not go beyond the limits of the site, as can be seen from the dispersion maps of pollutants emitted into the atmosphere integrated in this work (Chap. 2.6.1.2. Emissions in air), combined with the fact that the project site is located at a distance of approx. 1430 m from the limits of the protected natural area ROSPA0108 Vedea – Danube.

5. MEASURES TO REDUCE THE IMPACT

The purpose of mitigation measures is to avoid the negative effects of a project or to reduce its impact on the integrity of the protected natural area of community interest. As a general rule, the more attention is paid to mitigation measures, the harder it will be to reach compensatory measures.

The negative impact of a project on Natura 2000 sites does not mean that it cannot be implemented. On the contrary, the project can be made so that it is compatible with Natura 2000 requirements, implementing mitigation measures that address each impact.

Criteria to consider mitigation measures effective:
- must be an integral part of the project;
- must directly address the impact;
- must be functional at the time of the impact.

Mitigation measures can be:
- optimization of the works implementation calendar (e.g. no works will be carried out during the reproduction period);
- the use of the sprinkler method during construction;
- mechanisms to reduce negative effects.

All the measures established in this chapter are general measures, the purpose of which is to avoid the negative effects of the project proposed by FRIENDLY WASTE ROMANIA SRL, established in accordance with the provisions of the Methodological Guide regarding the adequate assessment of the potential effects of plans or projects on protected natural areas of community interest, approved by the M.M.P. Order. no. 19/2010, including recommendations regarding the general framework in which the implementation of the proposed project will be allowed within the analysed area, so that a calendar for the implementation and monitoring of the impact reduction measures cannot be established/the natural person cannot be named or legal entity responsible for the implementation of impact reduction measures. Also, it is not possible to highlight a necessary financial amount by which the reduction measures can be ensured in the short, medium and long term.

Measures to reduce the impact on bird Species

These measures refer to:

• reduction of noise and vibration emissions by using equipment and machines that are technically compliant with the best existing technologies;
• stopping the engines of machines and transport vehicles during the periods when they are not involved in activities;
• periodic inspection of the location to detect specimens of bird Species identified in the area;
• the analysed activities will be carried out on the strictly necessary surfaces in order not to disturb the bird Species that will be observed when the works start;
• compliance with established access routes;
• prohibiting the capture, expulsion and destruction of bird Species by the personnel serving the activity;
• preserving the nesting places of the Species identified at the time of starting the construction works; if, at the time of the start of the construction works, nesting places will be identified, the owner - FRIENDLY WASTE ROMANIA SRL - will notify the competent authorities (A.P.M. Giurgiu and A.N.A.N.P. Giurgiu) in order to determine the required apples;
• respecting the work schedule in the sense of respecting the routes and the work schedule;

Specific measures for the protection of the Species for which the protected natural area was designated ROSPA0108 Vedea - Danube

These are:
• intentional disturbance during breeding, breeding, hibernation and migration periods;
• intentional damage, destruction and/or collection of nests and/or eggs from nature;
• damage and/or destruction of breeding or resting places;
• the uncontrolled storage of household waste and from specific activities is prohibited.

For all bird Species are prohibited:
- intentional killing or capture, regardless of the method used;
- damage, destruction and/or intentional collection of nests and/or eggs from nature;
- collecting eggs from nature and keeping them, even if they are empty;
- intentional disturbance, especially during the period of reproduction, growth and migration;
- possession of specimens of Species for which hunting and capture are prohibited;
- trading, holding and/or transporting for the purpose of trading them in a live or dead state or any easily identifiable parts or products derived from them;
- it is forbidden to disturb the birds by moving with noise-generating means.

As shown in the Environmental Impact Report prepared for the project proposed by FRIENDLY WASTE ROMANIA SRL, both during the implementation of the investment and during its exploitation, there will be no significant impact on the environment.
However, recommendations will be made in order to avoid the occurrence of situations that could generate a significant impact on some or all environmental factors. Compliance with the provisions of the normative acts

(notices and agreements issued by the competent authorities in the field of environmental protection and water management) would meet the emergence of such situations.

A. the air environment factor

Project implementation stage

In this stage, vehicles and machinery equipped with engines with pollution standards starting from EURO 4 will be used.

In order to limit dust emissions, the roadways in the construction site will be wetted during very dry periods.

Project operation stage

At this stage they will be used for supply, waste collection, etc. vehicles equipped with engines with pollution standards starting from EURO 5.

The incinerator burners are state-of-the-art with low NOx emissions.

B. environmental factor noise and vibration

Noise protection is regulated by the "Regulation on noise protection", indicative 1, approved by the Ministry of Transport, Construction and Tourism in 2003. In the concrete situation of the project, the protection against noise is determined according to the noise curve map, drawn up according technical specifications of the equipment, made by the specialized German company DEUTSCHE WINGUARD. The following are mentioned in the aforementioned regulation:

The permissible limits of Lech-equivalent noise levels outside buildings, at a distance of 2.00 m from the facade and a height of 1.30 m from the ground or the level considered for protected buildings are indicated in the table below:

Table 27 - Admissible noise level limits near protected buildings

No. crt.	Listed building	Admissible limit of equivalent noise level dB (A)	Order number of the corresponding Cz curve
1.	Homes, hotels, hostels, guest houses	55	50
2.	Hospitals, polyclinics, dispensaries	45	40
3.	Schools	55	50
4.	Kindergartens, nurseries	50	45
5.	Office buildings	65	60

Noise sources are represented by:

- the machines that perform the construction works
- vehicles participating in construction works
- vehicles participating in waste transport activities for incineration
- the incinerator during operation

The level of noise and vibration produced

No noise and vibration level determinations were made; we can estimate that the noise level will not exceed, at the limit of the property, the maximum value allowed by the Order of the Minister of Health no. 119/2014 for the approval of the norms of hygiene and public health regarding the living environment of the Population.

C. the soil environmental factor

The entire activity will be carried out on the existing concrete platforms on the analysed site, which constitutes a good protection to avoid soil pollution.

Possible sources of soil and subsoil pollution

Possible sources of soil pollution are:

• possible accidental leaks of fuels or lubricants from vehicles and machinery that serve the construction activity and then during the specific activities of the incinerator operation stage – these leaks are classified as accidental pollution

• possible accidental leaks of fuels or lubricants from vehicles and machinery that serve the incinerator's operation

Taking into account the fact that the waste that will be brought to the site for incineration is:

• transported in containers or bins

• by their nature, these wastes do not have a liquid composition with the potential to pollute the soil

• their handling will only be done under controlled conditions by well-trained personnel

• the entire waste handling process will be carried out exclusively on concrete platforms

this waste will not constitute a soil pollution factor.

Measures, facilities and arrangements for soil and subsoil protection

In order to avoid soil pollution, the following measures were provided:

- it is ensured, on time, that the functionality of the thermal engines of vehicles serving the construction activity is checked
- fuel and oil depots are not set up in other places than those with the facilities corresponding to the legal provisions;
- maintenance and repair works of machinery and means of transport are carried out only in places specially arranged for this purpose;
- machines and vehicles are not washed within the site, with the exception of washes for the sanitization of means of transport of non-hazardous waste of animal origin;
- the supply of diesel and lubricants to machines is done with the provision of all the conditions to avoid accidental losses and to protect the environment in specially arranged places - fuel distribution stations;
- all machinery and vehicles used in the construction activity and then in the incineration activity run on landscaped roads and are parked only on concrete platforms
- waste for incineration is temporarily stored only in special containers, placed in specially arranged places
- the waste resulting from the incineration process is collected in special containers located in a properly arranged area.

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D. the water environmental factor – only groundwater is referred to because there are no surface waters in the area.

The causes that can determine a potential pollution of surface waters as well as groundwater, through the infiltration of pollutants into the groundwater table, during the implementation of the project as well as during the operation stage can be related to:

• accidents in the normal operation of the machines used in the construction works (crane, forklift) that generate possible accidental losses of lubricants and/or fuels

• possible accidental damage to the diesel tanks from the vehicles serving the activity

• possible accidental loss of lubricants by machinery or vehicles serving the activity

Even in the unlikely event of having such situations taking into account the aspects:

• all activity on the site is carried out only on concrete platforms

• there is no surface water nearby. The closest surface water is Lac Giurgiu at a distance of 1037 m

it is practically impossible to produce surface water pollution resulting from the company's activity.

However, there remains a very low probability of accidentally generating ground water pollution if no preventive measures are taken.

To avoid accidental pollution of surface water and ground water, it is recommended:

• a check of the functionality of the engines and other facilities will be ensured in due course

• a permanent check of the fuel tanks of vehicles serving the activity will be ensured

• prohibiting the setting up of fuel and oil depots in places other than those already existing and which meet environmental protection standards;

• maintenance and repair works of machinery and means of transport will be carried out only in places specially arranged for this purpose, outside the construction area;

• it is forbidden to wash machines within the site, except for washing for disinfection

• the supply of diesel fuel and lubricants will be done with the provision of all conditions to avoid accidental losses and to protect the environment;

 any pollution of the surface water or the phreatic aquifer found, regardless of the causes of its pollution, will be immediately reported to the Buzău Basin Administration - Giurgiu Water Management System and the Giurgiu Environmental Guard.

Transboundary nature of the impact

1. The air environment factor

In order to be able to make a correct and complete analysis of a possible cross-border impact exerted by the operation of the incinerator in the analysed location, an analysis must be carried out regarding:

1. the activities of the companies that operate in the Giurgiu municipality area and that have a significant impact on air quality, respectively those companies that hold IPPC authorizations.

The main economic operators regulated by environmental authorizations are:

• SC SCUT Giurgiu SA (currently SC Global Energy Production SA) – thermoelectric plant is located in the western area of Giurgiu city. To reduce its impact on air quality, the plant was equipped with low NOX burners and the fuel was changed, switching from the classic fuel, coal, to natural gas. Emissions quantities, mainly SOx, NOx, CO and PM10 have decreased significantly year-on-year due to reduced operating capacity.

• SC Poll Chimic SRL is located in the eastern area of Giurgiu. Its main activity is the manufacture of other basic chemical products. The emissions from this economic operator are those from the thermal plant that provides the

heating agent for this location and those that are released from the manufacturing process. The most important pollutants emitted are: SO2, NOx, CO and NMVOC.

• SC UCO Țesătura SRL is located in the eastern industrial area of Giurgiu and its main activity is the processing of spun and wound cotton fibers and the production of fabrics and textiles. The unit ceased its activity.

2. •

2. the ratio between the emissions generated by the incinerator's activity and the emissions generated by the activities of the other companies located around Giurgiu municipality.

• greenhouse gas emissions – from the incineration activity, the amount of greenhouse gases that can result in a year, if the incinerator were to operate at maximum capacity and maximum time, was calculated as 211 t CO2/year

• the amounts of greenhouse gases resulting from other activities carried out in the area (SC Global Energy Production SA – as the most important economic agent in terms of combustion emissions) were:

o 2017 – 5287 t CO2
o 2018 – 6244 t CO2
o 2019 – 5233 t CO2

• the ratio between the emissions generated by the activity of the incinerator and the emissions generated by the activities of the other companies located around the Giurgiu municipality - only the combustion gas emissions resulting from the activity of SC Global Energy Production SA will be taken into account and the ratio will be made with the amount of emissions of combustion gases estimated to result from the activity of SC Friendly Waste Romania SRL in one year (respectively 211 t CO2/year)

o 2017 – 211 / 5287 t CO2 = 3.99 %
o 2018 – 211 / 6244 t CO2 = 3.38 %
o 2019 – 211 / 5233 t CO2 = 4.03 %

It is noted that this ratio is insignificant and that the share of greenhouse gas emissions resulting from the activity of the incinerator is not able to produce significant negative effects on the air environment factor and on the climate in the area.

3. the prevailing direction of the air currents (of the wind) and their speed. For such an analysis, the date collected for the years 2010 ÷ 2015 were used[31]

Table 28 - Average annual frequency of wind and atmospheric calm (%) at the weather station Giurgiu

[31] Report concerning to the quality of the air 2016

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Table 29 - Average monthly and annual wind speed (m/s) at the Giurgiu weather station

ANII	DIRECTIA								
	N	NE	E	SE	S	SV	V	NV	CALM
2010	6,32	23,3	10,94	2,25	7,05	22,24	16,82	3,11	7,95
2011	5,7	21,31	14,7	2,67	5,57	21,27	15,48	4,17	9,13
2012	4,58	19,18	18	3,07	7,76	20,62	15,41	3,32	7,5
2013	3,8	17,7	19,8	3,55	5,05	16,5	22,87	3,39	7,43
2017	4,02	19,03	24,31	4,1	3,8	14,32	18,2	4,14	7,75
2015	3,42	12,8	24,5	2,48	3,78	16,28	23,34	3,83	9,57

ANII	LUNILE												ANUALA
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
2010	2,4	2,7	3,1	2,3	1,8	1,6	1,3	1,5	2,2	2,4	2,2	2,0	2,1
2011	1,6	3,0	2,6	2,5	1,7	1,4	1,6	1,5	1,7	1,9	1,6	1,9	1,9
2012	2,7	3,1	2,3	2,1	1,8	1,6	2,1	1,7	1,9	1,9	1,9	2,5	2,1
2013	2,2	3,1	2,9	2,3	1,9	1,4	1,4	1,7	2,0	1,6	2,6	1,6	2,1
2017	2,4	2,1	2,8	2,7	1,4	1,5	1,5	1,6	1,8	1,8	1,8	2,7	2,0
2015	2,3	2,5	2,7	2,1	1,5	1,4	1,3	1,5	1,5	1,6	2,2	2,0	1,9

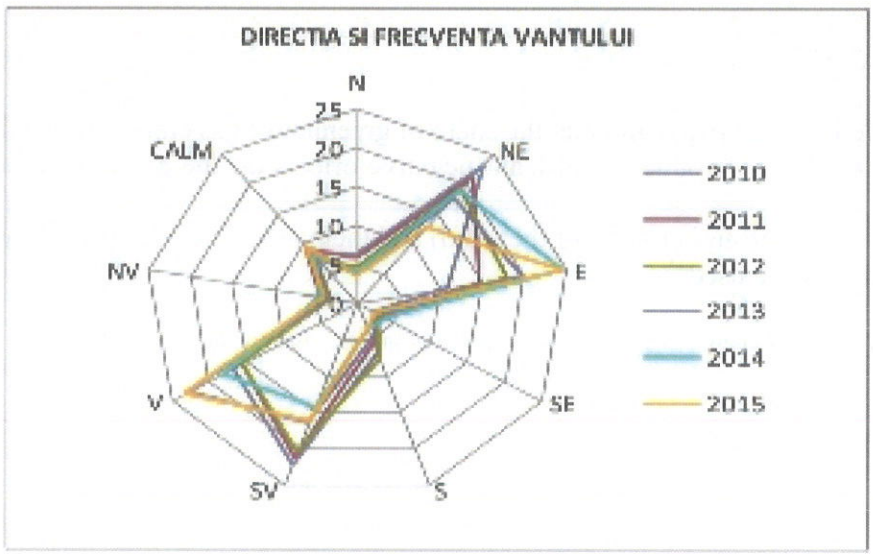

Figure 9 – Diagram representing wind direction and frequency

From the analysis of all the information presented, it can be concluded that the cross-border impact on the air environment factor manifested by the activity of the incinerator is neutral on all levels (direct, indirect, secondary, cumulative, short/medium/long term, temporary, permanent) because:

- the values of the quantities of atmospheric pollutants emitted from the operation of the incinerator are small and fall within the legal limits
- there are no areas with exceedances of pollutant concentration values and the nearest border point is located 3317 m from the flue gas exhaust stack of the analysed incinerator

• the direction of the wind towards the border with Bulgaria (from the N and from the NE) manifests itself for a period of approx. 23.4% of the year but the propagation of pollutants towards the border is non-existent because, according to mathematical modelling, the concentrations in the emission are very low and below the VLA levels in the immediate vicinity of the emission point (the incinerator chimney)

The water environmental factor

The project provides for a local pre-treatment of waste water, with discharge into the sewer network from the premises of the Former Giurgiu Chemical Plant.

The resulting waste water flow on the site analysed is 2.06 m3/day = 0.0858 m3/hour = 0.000023 m3/s.

The quality of the receiver (Danube river), whose multiannual average flow is 6040 m3/s will not be affected by the waste water resulting from the water treatment on the analysed site because their flow is more than insignificant (0.000023 m3/s waste water compared to the average flow rate of the Danube river of 6040 m3/s) and the pollutant concentrations when they are discharged into the outfall fall within the legal limits (NTPA 001/2005) being efficiently treated in the treatment plant of Giurgiu municipality.

Taking into account the following aspects:

- the average annual flow of the Danube river is 6040 m3/s
- the flow rate of the wastewater produced on the site analysed and treated in the treatment plant of Giurgiu municipality, before discharge into the natural receiver (the Danube river), is 0.000023 m3/s and is more than insignificant compared to the average annual flow rate of the river
- the flow of waste water resulting from the site analysed and treated in the treatment plant of the municipality of Giurgiu, before discharge into the natural receiver (the Danube river), more than insignificant compared to the flow of waste water entering the treatment plant
- the dilution effect of the water discharged into the Danube River is instantly analysed by the ratio between the flow rate of the waste water resulting from the site analysed (0.000023 m3/s) and the average annual flow rate of the Danube River (6040 m3/s)

there is no question of the existence of a cross-border impact.

The environmental factor soil, subsoil and biodiversity

No cross-border impact resulting from the activity of the project that is intended to be implemented is anticipated.

See the assessments and conclusions on pages: 161, 162 of the Environmental Impact Report.

Cumulative impact at the border with Bulgaria

According to the evaluation matrices and diagrams, based on credit ratings, of the impact generated by the operation of the incinerator at the border with Bulgaria, we have the following conclusions:

1. The environment is affected within acceptable limits
2. Impact is reduced.

6. The methods used to collect information on the Species and/or habitats of community interest affected

In order to gather information regarding the presence and numbers/surfaces covered by Species and habitats of community interest present on the surface and in the immediate vicinity of the proposed project, a field trip was carried out, the main objective being the determination of the fauna habitats/Species identified in the site area studied and the neighbourhoods.

To monitor bird Species in the studied area, the method of observations made at fixed points was used.

The method of observations at fixed points involves moving to a certain place, previously chosen and periodically visited, from where observations are made on the birds for a certain period of time, after which you move to another point. Obviously, the grid of points is always the same across investigations and the time period

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is constant. The advantage of this method lies in the fact that the observer has a greater ability to concentrate on the birds, the effective time available for identification is greater and, at the same time, it is easier to detect Species that are usually hidden.

The analysed area is represented by the area adjacent to the site proposed for the implementation of the project, as well as nearby land surfaces, including the existing access roads within the former Giurgiu Chemical Plant.

Four observation points were established, and the location of the 4 points in relation to the location of the project proposed by FRIENDLY WASTE ROMANIA SRL, is highlighted in the following figure.



Figure no. 60. Bird and fauna monitoring points

For each observation, information on Species, number of individuals and date on weather conditions were recorded. Attached is the Land Sheet dated 20.03.2023.

The identifications were made, either directly on the field with the help of the specialist determiner, or later, using the photos taken during the monitoring.

In order to efficiently collect the date, the following equipment was used:

1. CELESTRON 15X70 binoculars;
2. NIKON camera, 55-200mm lens and DSLR F5.6E ED VR lens;

The following were used to determine the bird Species identified in the field:

1. Bird Determinator: Birds From Romania and Europe Illustrated Determinator - Bertel Bruun Hakan Delin Lars Svensson.

Also, observations were made outside the studied area, as follows:

- in a fixed point located on the banks of the Plantelor Channel, at a distance of approx. 1,300 m from the location of the proposed project, in the southern area, towards the protected natural area ROSPA0108 Vedea – Danube;

- on a transect, in length of approx. 2,155 m, at the estimated limit of the protected natural area ROSPA0108 Vedea – Danube and at distances between 1,350 m and 3,150 m from the location of the proposed project.



Figure no. 51. Fixed point Canalul plantelor



Figure no. 52. Transect – The Easter Limit of ROSPA0108

7. CONCLUSIONS

This work represents the appropriate assessment study regarding the potential effects that the implementation of the project may have ***"Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewage, location of water station wastewater pretreatment, location of medical waste incinerator with related facilities"*** on the Special Protection Area for Avifaunistics ROSPA0108 Vedea - Danube.

The project proposed by FRINDLY WASTE ROMANIA SRL is included in the Annex - *List of projects subject to environmental impact assessment of Law no. 292/2018 regarding the assessment of the impact of certain public and private projects on the environment, at point 9. Hazardous waste deposits or installations for the disposal of hazardous waste by incineration or chemical treatment, as defined in annex no. 2 to Law no. 211/2011 regarding the waste regime, republished, with subsequent amendments and additions.*

According to the Decision of the recruitment stage no. 1480/SAAA/07.07.2022, issued by the Giurgiu Environmental Protection Agency, for the project *"Construction of hall building, drainable concrete basin, concrete platforms, fencing, lighting system, drilling and internal network for water supply and sewage, location wastewater pretreatment station, location of medical waste incinerator with related facilities"* the decision was made to request the environmental impact assessment and to request the appropriate assessment.

This appropriate assessment study was prepared in accordance with the Methodological Guide regarding the appropriate assessment of the potential effects of plans or projects on protected natural areas of community interest, approved by the M.M.P. Order. no. 19/2010, with subsequent amendments and additions, in order to

issue the environmental consent for the project "CONSTRUCTION OF HALL BUILDING, DRAINABLE CONCRETE POOL, CONCRETE PLATFORMS, FENCE, LIGHTING SYSTEM, EXECUTION OF DRILL AND INTERNAL NETWORK FOR WATER SUPPLY AND SEWERAGE, STATION LOCATION WASTEWATER PRE-PURIFICATION, MEDICAL WASTE INCINERATOR LOCATION WITH RELATED FACILITIES".

The owner of the project - FRIENDLY WASTE ROMANIA SRL - intends to place a hall on a metal structure and purchase and place a rotary incinerator for the incineration of non-hazardous waste, of animal origin and of hazardous and non-hazardous medical waste in order to develop and streamline the company's activities and increase efficiency regarding the protection of environmental factors.

Waste thermal treatment processes represent a feasible option after the valorization options (collection, sorting, recycling) and before controlled storage. Oxidation at high temperatures transforms organic components into specific gaseous oxides, which are mainly carbon dioxide and water. The inorganic components are mineralized and turned into ash.

The general purpose of waste incineration is:

1. the maximum possible reduction of risk and pollution potential;
2. reducing the amount and volume of waste;
3. conversion of the remaining substances into a form that allows their recovery or storage;
4. transformation and utilization of the energy produced.

The works that will be carried out for the development of the company's activity and for ensuring a technological flow in accordance with the legal provisions as well as for ensuring the operation at maximum performance in terms of the protection of environmental factors will consist of:

1. building a hall from corrugated iron panels placed on a metal structure
2. the purchase and placement in the technological flow of a waste incinerator type IER 1000-300
3. the purchase and placement in technological flow of 2 cold rooms with V = 16 mc each
4. purchase and placement of a weighing platform
5. acquisition and placement
6. a mobile scale for 1 t
7. the purchase and placement in the technological flow of 4 LPG tanks of 10 cubic meters each
8. building concrete platforms
9. location of a basin with V = 10 mc
10. construction of water supply and sewage disposal networks
11. making a connection to the municipal drinking water network
12. making a connection to the sewage network in the premises of the Former Giurgiu Chemical Plant.

The implementation of the proposed project was conceived with the idea of developing the company's business both by increasing the waste incineration capacity and by diversifying the activity by incinerating both non-hazardous waste and a wide range of hazardous waste.

At the same time, the creation of new incineration capacities for the geographical area that includes Giurgiu county and the counties around it is being considered by equipping it with high-performance equipment that complies with the highest technical and environmental protection standards.

The administrative location of the site of the analysed project is in Giurgiu municipality, Şoseaua Sloboziei, km 4, lot 2, Giurgiu county.

The area of the land related to the works is 3050.00 square meters, it is located in the suburbs of Giurgiu municipality, with the use category of construction yards, production area, C.U.T. = 2.4 sqm ADC/sqm land and

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P.O.T. = 60%. It is a Land located in zone "C" according to HCLM 173/2007. No changes to the current use regime are foreseen.

According to the updated General Urban Plan of the municipality of Giurgiu, approved by HCLM 37/2011, the land is located in sub-zone 11 - production, storage, construction area with buildings of a maximum P+3 levels and a maximum height of 20.0 m (except for the accents of machinery), with a discontinuous construction regime: with various functions related to productive activities: storage, specialized services for production, distribution and marketing to which are added various services for staff and customers.

The location of the proposed project is represented by an area of land located within the premises of the Former Giurgiu Chemical Plant, at a distance of approx. 1430 m from the Special Avifaunistic Protection Area ROSPA0108 Veeda – Danube.

The protected natural area of community interest ROSPA0108 Vedea – Danube is located in the lower basin of the river Vedea and is part of the Lower Meadow of the Danube. The site includes both the area of the lower basin of the Vedea River and the portion of the Danube, from the village of Năsturelu to near Giurgiu with its meadow. The Special Avifaunistic Protection Area ROSPA0108 Vedea – Danube is important for the conservation of a rich avifauna, the Species nesting, wintering or just transiting the site due to its position close to the Central European-Bulgarian migration route. During the migration period, the area is transited by very large flocks of some Species of birds related to the aquatic environment, which feed or rest in the site.

When the phenomenon of Species movement depends on the provision of population connectivity or the provision of food resources (for example, in the case of Species with high mobility, such as birds) they can use diverse habitats existing both within the limits of the protected natural area and outside it.

The location of the proposed project is represented by an area of land located in the premises of the Former Giurgiu Chemical Plant, in the area there are no habitats preferred by the bird Species for which ROSPA0108 Vedea – Danube was declared.

From the observations made in the 4 observation points, we can conclude that the number of bird Species observed is not very high, the Species being components of the specific fauna in the anthropogenic areas.

On the open lands with steppe vegetation, Species of birds characteristic of the steppe zone and common Species were identified, such as: Corvus monedula, Pica pica, Streptopelia decaocto or Passer montanus.

During field trips, in the area of the project location "Construction of a hall building, drainable concrete pool, concrete platforms, fencing, lighting system, execution of drilling and internal network for water supply and sewerage, location of wastewater pretreatment station, location of incinerator medical waste with related facilities" no bird Species listed in Annex I of Council Directive 2009/147/EC, for which the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube, was declared.

From the point of view of the vegetation, the project site, with a total area of 3,050 square meters, is partly concrete and partly land with herbaceous vegetation, developed following the abandonment of the activities previously carried out in the former Giurgiu Chemical Plant.

The dominant plant association is Poëtum pratensis Răv., Căzac. et Turenschi 1956, which form meso-hygrophilous meadows with a rich composition of Species, dominated by Poa pratensis alongside Agrostis sp., Festuca sp., Alopecurus pratensis, Trifolium repens, Trifolium pratense, Ranunculus repens, etc.

In addition to the specific phytocenotic composition, shrubby Species are present on the land, such as Rosa canina.

Considering the aspects specified above and the location of the project in the premises of the Former Giurgiu Chemical Plant, at a distance of approx. 1430 m of the natural area protected by community interest, we consider that the project **"CONSTRUCTION OF A HALL BUILDING, DRAINABLE CONCRETE**

POOL, CONCRETE PLATFORMS, FENCING, LIGHTING SYSTEM, EXECUTION OF DRILLING AND INTERNAL NETWORK FOR WATER SUPPLY AND SEWAGE, LOCATION OF WASTEWATER PRE-TREATMENT STATION, MEDICAL WASTE INCINERATOR LOCATION WITH ANCILLARY FACILITIES", alone or in combination with other projects, is not able to significantly affect the Special Avifaunistic Protection Area ROSPA0108 Vedea - Danube.

The implementation of the proposed project will not generate fragmentation of lake habitats, will not destroy the structural or functional relationships within the protected area, will not endanger its integrity and will not affect the feeding, reproduction or migration areas of the bird Species mentioned in the NATURA2000 Standard Form of ROSPA0108 Veeda – Danube.

ORGANIZATIONS/INSTITUTIONS/SPECIALISTS INVOLVED IN PROVIDING INFORMATION ON SPECIES AND HABITATS OF COMMUNITY IMPORTANCE AFFECTED BY PROJECT IMPLEMENTATION

The due diligence study was developed by the team of certified natural person experts as follows:

EA developer: Oana SAVIN, certified expert - main level, who holds the RGX series attestation certificate, no. 450/25.01.2023 issued by the Romanian Environment Association

- Address: Focșani, str. Horia, Cloșca și Crișan, no. 4, Vrancea county;
- Telephone number and e-mail address: tel.: 0756 039 802; e-mail: oana.savin@divori.ro

RIM developer: Chapter 2 – Information regarding the proposed project, was taken from the Environmental Impact Report prepared by Volodea FECHETE, main level attested expert with RGX Series Attestation Certificate, no. 485/02.03.2023 issued by the Romanian Environmental Association 1998, for the development of the following environmental studies: RIM-2, RIM-3, RIM-6, RIM-8, RIM11b, RA-3, RA7, RA-8, RA- 10, RA-11b, RM-13b, RS-1, RS-7, BM-2, BM-6, BM-7, MR-11b, EGZA.

The project analysed in the present study falls under the study type RIM-11b) Waste management infrastructure.

- Address: Focșani, Carăbuș str., no. 19A, Vrancea county
- Telephone number and e-mail address: tel.: 0727 878 441; e-mail: volodea.fechete@divori.ro

The research team, which participated in the field studies necessary to develop this adequate evaluation study, is made up of university graduates in the fields of biology, ecology, geography, who have experience in developing or participating as a collaborator in the development of biodiversity studies :

- ecologist Oana SAVIN
- biologist Cristina TELIMAN
- geographer Mădălina MEGA

whose CVs we attach to this paper.

The information (regarding the Species and habitats of community importance affected by the implementation of the project) that was used in the preparation of this paper was obtained by the authors of the paper by conducting research in the field.

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REFERENCES

The appropriate evaluation study was developed by studying and taking date from the information sources mentioned below or from the following documents made available by the beneficiary of the work:
- Bănărescu P.M. 1965 - Fauna of the Romanian People's Republic – Pisces, Osteichthyes, vol. XIII;
- Urban Planning Certificate no. 123 of 07.03.2023, issued by the Giurgiu City Hall;
- Date on the ecology of the Species declared in the standard forms of ROSPA0108 Veeda - Danube, available on the website www.iucnredlist.org;
- Date on the ecology of bird Species mentioned in Annex 1 of Council Directive 2009/147/CE, available on the website www.sor.ro;
- Commission Decision 2014/955/EU of 18 December 2014 amending Decision 2000/532/EC establishing a list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council on waste management records and for approving the list comprising waste, including hazardous waste;
- The Commission's implementation decision of 11 July 2011 regarding the model form for Natura 2000 sites, amended by number C(2011) 4892 (2011/484/EU);
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and Species of wild fauna and flora ("Habitats Directive");
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds ("Birds Directive");
- Doniță N., Popescu A., Paucă-Comănescu M., Mihăilescu S., Biriș I.-A., 2005 – Habitats in Romania. Bucharest: Silvic Technical Publishing House;
- The Natura 2000 Standard Form of the Special Avifaunistic Protection Area ROSPA0108 Veeda - Danube;
- Geological Map of Romania, scale 1: 200,000, available on the website www.geo-spatial.org;
- Maniu M., 2004, Ecology and environmental protection, Bioterra University Bucharest;
- The conservation objectives specific to the NATURA 2000 site ROSPA0108 Veeda – Danube, approved by Note no. 2/R/7255/10.08.2022 regarding the approval of the minimum set of special measures for the protection and conservation of biological diversity, as well as the conservation of natural habitats, flora and fauna, safety of the Population and investments in ROSPA0108 Vedea - Danube.

ANNEXED DOCUMENTS

Attached to this work we hereby present the following documents:
- RGX series attestation certificate no. 450/25.01.2023 for OANA SAVIN, issued by the Romanian Environmental Association - Commission for the attestation of natural and legal persons preparing environmental studies;
- Urban Planning Certificate no. 123 of 07.03.2023, issued by the Giurgiu City Hall;
- Curriculum Vitae of the people involved in the documentation activities in the field, respectively:
• Oana Savin;
• Cristina Teliman;
• Madălina Mega:
- Biodiversity monitoring sheet for field trips dated 20.03.2023;

- Analysis of the potential impact of the project on the specific conservation objectives developed and assumed by ANANP (in tabular format, on electronic support – CD).----------

Development Team:
Ecologist Oana SAVIN *illegible signature*
Eng. Volodea FECHETE *illegible signature*

Responsible for the works:

Oana SAVIN

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Annex 1.1 to Addendum no. to Circular no. 4654/22.07.2020

Natura 2000 site	Nature components 2000	Nature Code 2000	Scientifical denomination	Presence type (For Birds only)	Location towards the project	Annex 1 or 2 (just for Birds)	The source of the spatial data	The source of information	Conservation status	Conservation objectives	Parameters	Unity of measure of the parameter	For the moment (minimum)	For the moment (maximum)	Target value	It is possible to be affected by the project?	Explanation for the possibility of being affected	Quantification of impacts (m or ha)	Potential impact (without measures)	Justification of the estimated impact	Measures adopted to ensure insignificant residual impacts	Residual impact
ROSPA 0108 Vedea - Dunăre	Birds	A402	*Accipiter brevipes*	R	No habitat/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahuiote The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	1	2	At least 2	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of nesting habitat	Ha			At least 3203.7							
											Proportion and total area of mature forests over 80 years old	Percentage of total forest area			At least 40%							
											The protection zone around the nests	Surface of the strict protection zone in the site (ha) The surface of the buffer protection zone			At least 0.24 3.14 x 2 At least 56.52 28.26 x 2							
ROSPA 0108 Vedea - Dunăre	Birds	A229	*Alcedo atthis*	R	No habitat/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahuiote The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Necunoscută	Mentinerea sau îmbunătățirea stării de conservare	Population size	Number of nesting pairs	12		At least 12	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of nesting habitat	Ha			At least 2652							
ROSPA 0108 Vedea - Dunăre	Birds	A029	*Ardea purpurea*	R, C	No habitat/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahuiote The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs Number of individuals in migration	5 70	10 100	At least 8 At least 85	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of nesting habitat	Ha			At least 824.4							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on ecological indicators (macroinvertebrates, phytobenthos, phytoplankton)	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A024	*Ardeola ralloides*	R	No habitat/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahuiote The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	50	60	At least 55	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	Ha			At least 842.4							
											Area of nesting habitat	Ha			To be defined in the next 2 years							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on ecological indicators (macroinvertebrates, phytobenthos, phytoplankton)	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A060	*Aythya nyroca*	R, C	No habitat/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahuiote The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs Number of individuals in migration	25 100	3 500	At least 30 At least 350	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	Ha			It must be defined in 2 years							
											Area of nesting habitat	Ha			At least 2852							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on ecological indicators (macroinvertebrates, phytobenthos, phytoplankton)	Water quality class			At least class II							

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ROSPA 0108 Vedea - Dunăre	Birds	A031	*Ciconia ciconia*	R, C	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of breeding pairs Nomber of individuals in migration	500 exemplare	1000 exemplare	Must be established within 2 years At least 750	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	Ha			At least 15785.7							
ROSPA 0108 Vedea - Dunăre	Birds	A030	*Ciconia nigra*	R, C	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of breeding pairs Nomber of individuals in migration	1 40	2 60	At least 2 At least 50	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than those from natural variation							
											Area of foraging habitat	Ha			Must be defined within 2 years							
											The surface of the nesting habitat	Ha			At least 3203.7							
											Proportion and total area of mature forests over 80 years old	Percentage of total forest area			At least 40%							
											The protection zone around the nests	Surface of the strict protection zone in the site (ha) The surface of the buffer protection zone			At least 6.28 At least 56.52							
ROSPA 0108 Vedea - Dunăre	Birds	A081	*Circus aeruginosus*	R, C, W	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of nesting pairs	2	4	At least 2	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Nomber of individuals in migration	80	100	At least 90							
												Nomber of individuals in winter	10	15	At least 13							
											Population trends	Percentage change			Long-term population trends for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											The surface of the nesting habitat	Ha			It must be defined in the next 2 years							
											Area of foraging habitat	Ha			At least 15785.7							
ROSPA 0108 Vedea - Dunăre	Birds	A082	*Circus cyaneus*	C, W	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of individuals in migration	20	30	At least 25	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Nomber of individuals in winter	4	6	At least 55							
											Population trends	Percentage change			Long-term population trend stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Habitat area	Ha			At least 15785.7							
ROSPA 0108 Vedea - Dunăre	Birds	A231	*Coracias garrulus*	R	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of nesting pairs	20	30	At least 25	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of nesting and foraging habitat	hectare			At least 3064.8							
											Nomber/density of century-old trees in pastures	Total Nomber / Nomber / ha of trees			Must be defined within 2 years							
ROSPA 0108 Vedea - Dunăre	Birds	A027	*Egretta alba*	R, W	No habitats/favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Veeda - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Nomber of nesting pairs	1	3	At least 2	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Nomber of individuals in winter	20	30	At least 25							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											The surface of the nesting habitat	Ha			It must be defined in the next 2 years							
											Area of foraging habitat	Ha			It must be defined in the next 2 years							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Notrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on	Water quality class			At least class II							
											Population size	Nomber of nesting pairs	45	80	At least 68							
												Nomber of individuals in migration	300	500	At least 400							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	hectare			It must be defined in the next 2 years							

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ROSPA 0108 Vedea - Dunăre	Birds	A026	*Egretta garzetta*	R, C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Area of nesting and foraging habitat	hectare			It must be defined in the next 2 years	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A267	*Falco vespertinus*	R, C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	5	10	At least 9	no	Not the case	Not the case	Neutru	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Number of specimens in migration	200	300	At least 250 250							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											The surface of feeding habitat	Ha			At least 3064 8							
											The surface of the nesting habitat	Ha			It must be established in the next 2 years							
ROSPA 0108 Vedea - Dunăre	Birds	A075	*Haliaeetus albicilla*	R, C, W	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status		Number of nesting pairs		1	At least 1	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Number of individuals in migration	5	10	At least 8							
												Number of individuals in winter	4	6	At least 55							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											The surface of the nesting habitat	hectare			At least 3203 7							
											Proportion and total area of mature forests over 80 years old	Percentage of total forest area			At least 40%							
											The protection zone around the nests	Area of strict protection zone in the site (ha)			At least 3 14							
												Area of buffer protection zone (ha)			At least 28 26							
ROSPA 0108 Vedea - Dunăre	Birds	A131	*Himantopus himantopus*	R, C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	15	27	At least 23	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Number of individuals in migration	70	150	At least 110							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	hectare			It must be defined in the next 2 years							
											Area of nesting habitat	hectare			It must be defined in the next 2 years							
											Water quality based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micropollutants)	Water quality class			At least class II							
											Water quality based on ecological indicators (macroinvertebrates, phytobenchos, phytoplankton)	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A022	*Ardeirchus ralloides*	R, C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - DaNobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	20	24	At least 22	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Number of individuals in migration		20	At least 20							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging and nesting habitat	Ha			At least 842 4							
											Water quality based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micropollutants)	Water quality class			At least class II							
											Water quality based on ecological indicators (macroinvertebrates, phytobenchos, phytoplankton)	Water quality class			At least class II							
											Population size	Number of nesting pairs	40	60	At least 50							
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							

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ROSPA 0156 Vedea - Dunăre	Birds	A023	*Nycticorax nycticorax*	R	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1410 m from ROSPA0108 Veedea - Dunăre The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Area of foraging habitat	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											The surface of the nesting habitat	Hectare			It must be defined in the next 2 years							
												Hectare			It must be defined in the next 2 years							
												Water quality class			At least class II							
											Population size	Water quality class			At least class II							
												Number of individuals in the passage	3	11	At least 7							
ROSPA 0108 Vedea - Dunăre	Birds	A030	*Pelecanus crispus*	C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1410 m from ROSPA0108 Veedea - Dunăre The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population trends	Percentage change			Long-term population trend for all species stable or increasing	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											The surface of the nesting habitat	Ha			At least 2852							
											Proportion and total area of mature forests over 80 years old	Water quality class			At least class II							
											The protection zone around the nests	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A019	*Pelecanus onocrotalus*	C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1410 m from ROSPA0108 Veedea - Dunăre The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of individuals in the passage			Must be established within 2 years	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Long-term population trend for all species stable or increasing							
											Population trends	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Distribution pattern	Ha			At least 2852							
											Area of foraging habitat	Water quality class			At least class II							
											Area of nesting habitat	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A393	*Phalacrocorax pygmeus*	C, W	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1410 m from ROSPA0108 Veedea - Dunăre The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Water quality based on ecological indicators (macroinvertebrates, phytobenthos, phytoplankton)	Number of individuals in migration		1000	At least 1000	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
												Number of individuals in winter		240	At least 240							
											Population size	Percentage change			Long-term population trend for all species stable or increasing							
												Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Population trends	Ha			At least 2852							
											Distribution pattern	Water quality class			At least class II							
											Area of foraging and nesting habitat	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A393	*Platalea leucorodia*	R, C	No habitats/Favorable habitats are crossed The project is located at a distance of approx. 1410 m from ROSPA0108 Veedea - Dunăre The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Water quality based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Number of nesting pairs	18	24	Cel puțin 24	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1410 m from the site)	Not the case	Not the case
												Number of specimens in migration			Trebuie definită în următorii 2 ani							
											Population size	Percentage change			Tendința pe termen lung a populației pentru fiecare specie vizată sau în creștere							
												Spatial and temporal pattern, intensity of habitat use			Fără scădere semnificativă a ligandru-prostomo, vremenisko sau a emanațiilor calitative habitatelor fiecărei specii, altele decât cele rezultate din variațiile naturale							
											Population trends	Ha			Trebuie definită în următorii 2 ani							
											Area of nesting habitat	Ha			Trebuie definită în următorii 2 ani							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on	Water quality class										

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															At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A092	*Pleganis falcinellus*	C	No habitatul favorabile habitats are crossed The project is located at a distance of approx. 1433 m from ROSPA0108 Vedea - Dahobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Necunoscută	Menținerea sau îmbunătățirea stării de conservare	Population size	Number of individuals in the passage			Trebuie stabilit în următorii 2 ani	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1433 m from the site)	Not the case	Not the case
											Population trends	Percentage change			Tendința pe termen lung a populației pentru toate speciile stabilă sau în creștere							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			Fără scădere semnificativă a întinderii spațial, temporal sau a intensității utilizării habitatelor fiecărei specii, altele decât cele rezultate din variații naturale							
											The area of the species' habitat	hectare			Trebuie definită în următorii 2 ani							
											Area of nesting habitat	hectare			Trebuie definită în următorii 2 ani							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A132	*Recurvirostra avosetta*	R, C	No habitatul favorabile habitats are crossed The project is located at a distance of approx. 1435 m from ROSPA0108 Vedea - Dahobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs		40	At least 40	No	Not the case	Not the case	Neutru	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1433 m from the site)	Not the case	Not the case
												Number of specimens in migration	50	150	At least 100							
											Population trends	Percentage change			Long term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	hectare			It must be defined in the next 2 years							
											The surface of the nesting habitat	hectare			It must be established in the next 2 years							
ROSPA 0108 Vedea - Dunăre	Birds	A195	*Sterna albifrons*	R, C	No habitatul favorabile habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	4	8	At least 6	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1433 m from the site)	Not the case	Not the case
												Number of individuals in migration	50	70	At least 69							
											Population trends	Percentage change			Long term population trend for all species stable or increasing							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			No significant decline in the spatial, temporal pattern or intensity of habitat use of each species, other than as a result of natural variation							
											Area of foraging habitat	hectare			At least 2852							
											Area of nesting habitat	hectare			It must be defined in the next 2 years							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on	Water quality class			At least class II							
ROSPA 0108 Vedea - Dunăre	Birds	A193	*Sterna hirundo*	N, C	No habitatul favorabile habitats are crossed The project is located at a distance of approx. 1430 m from ROSPA0108 Vedea - Dahobe The species was not observed in the project site area	Annex 1	Specific conservation objectives	Specific conservation objectives, NATURA 2000 standard form	Favourable	Maintaining conservation status	Population size	Number of nesting pairs	30	80	At least 55	No	Not the case	Not the case	Neutral	Location of the project in relation to the protected natural area (premises of the Former Giurgiu Chemical Plant, approx. 1430 m from the site)	Not the case	Not the case
												Number of individuals in migration	800	1500	At least 55							
											Population trends	Percentage change			At least 1150							
											Distribution pattern	Spatial and temporal pattern, intensity of habitat use			Long-term populations trend for all species stable or increasing							
											Area of foraging habitat	hectare			At least 2852							
											Area of nesting habitat	hectare			It must be defined in the next 2 years							
											The ecological state of water bodies based on physico-chemical indicators (oxygen regime, Nutrients, salinity, metals, organic and inorganic micro-pollutants	Water quality class			At least class II							
											Ecological status of water bodies based on ecological indicators (macroinvertebrates,	Clasa de calitate a apei			At least class II							

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