



ASDE-ECOREGIONS - OPERATIONAL EXPERIENCE

PRELIMINARY OF THE EUROZONE AND FOR THE BENEFIT OF STATE AND LOCAL ADMINISTRATION

I. INTRODUCTION

The inclusion of Bulgaria in the group of member states of the so-called Eurozone, in addition to the transition from the national currency - the Bulgarian lev - to the common European currency - the euro, also requires national governance in a much more direct connection with the common rules and regulations imposed by the European Commission and other European institutions.

In this regard, ASDE-ECOREGIONS begins publishing short materials related to the established operational capacity, in accordance with the introduced or upcoming mandatory European regulations, especially in the field of territorial planning, risk management, combating climate change, and the protection of natural and cultural-historical heritage.

In this short publication, we offer to the attention of the state and local administration our comment and proposal regarding the need for constant monitoring of the adopted mandatory indicators for the percentage of green spaces, in accordance with the Law on Territorial Development and the related general development plans of the municipalities in Bulgaria.

Our operational capacity is built on the basis of a number of projects under programs such as the 7th Framework Program, HORIZON 2020, INTERREG and ESA-PECS for Bulgaria in this case - monitoring of green space indicators in development zones, implemented in the general development plans in each municipality.

II. STRATEGY

The main position of the expert team of AURE-ECOREGIONS, when developing intelligent high-tech solutions, is that they should be maximally linked to real management practice, as well as to the operational capacity of the end user. On the other hand, we believe that there can be no sustainable and modern management of territory, resources, infrastructure and population without constant monitoring of mandatory priority indicators for the individual elements of territorial planning, such as the state of the natural environment, maintenance of environmentally friendly agriculture and, above all, sustainable management of the urban environment. For this type of monitoring to be meaningful, it must be linked to indicators that are monitored and complied with by local authorities, which leads us to the so-called general development plans of municipalities (GDPs or Master plan of municipalities), mandatory for municipalities in accordance with the Territory Act. As an integral part of this law, there is also the accompanying Regulation 7 on the rules and norms that should be observed when developing a GDP and subsequently its application. An important condition is that the monitoring of these indicators should not be dependent on the services dealing with the implementation of the GDP, but should be based on objective, independent and regularly received data, which should be analyzed on the basis of internationally accepted standards. In our opinion, this can be done on the basis of data received from satellite constellations, which should be supplemented with data from the ground. In this case, the most suitable is the European COPERNICUS program, which provides free data from the SENTINEL satellite group, which can be processed in accordance with the global standard ISO 19144. With the help of external experts, an algorithm was set up, including partial artificial intelligence for rapid processing of large data sets.

The main indicators that are set out in the law and the regulation and can be monitored are the indicators of the development zones, of which two are particularly important: the percentage of built-up area for the respective zone and the percentage of green areas for the respective zone.

As an example, we can present the results of an application for monitoring trends in green space indicators in the urbanized territories of Sofia Municipality. This application was developed within the framework of the project "HARMONY" - Development of a Support System for Improved Resilience and Sustainable Urban areas to cope with Climate Change and Extreme Events based on GEOSS and Advanced Modelling Tools, under the European Program HORIZON 2020. The development was carried out with the kind cooperation of Sofia Municipality - Directorate "Emergency Response and Prevention", Directorate "European Policies, Programs and Tourism" and SofiaPlan – Master Plan of Sofia Municipality.

EXAMPLE - TREND MAP OF THE STATUS OF THE GREENING INDEX OF URBANIZED FUNCTIONAL AREAS UNDER THE MASTER PLAN OF THE MUNICIPALITY OF SOFIA, FOR THE PERIOD 2017-2023.

(developed within the framework of the HARMONIA project under the European HORIZON 2020 Program)

Preliminary information from the Master Plan of Sofia Municipality: The main types of functional (or development) zones in the General Development Plan (GDP) of Sofia Municipality are 7 (according to the Law on Urban and Regional Planning for the **urban area of Sofia**). They are:

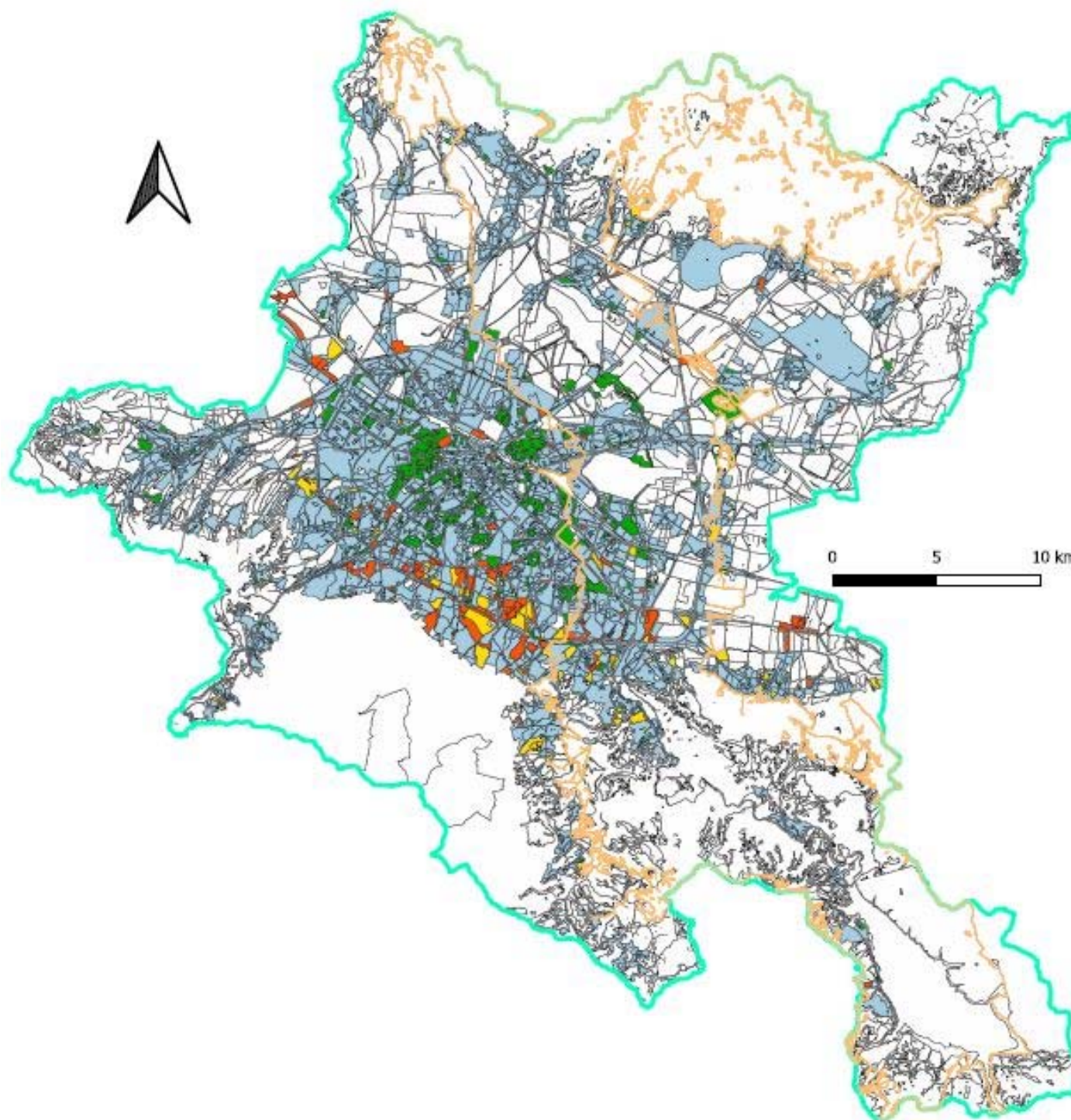
- Group of central development zones (C)
- Group of mixed multifunctional development zones (Mmf)
- Group of residential development zones (R)
- Group of development zones for public service activities (P)
- Group of production development zones (Pr)
- Group of development zones and independent greening areas (G)
- Group of development zones for sports and attractions (Sa)

Other functional (or development) zones have been introduced separately, but they refer to non-urbanized territories, such as - "Agricultural" and "Forest territories (AT, FT), or territories with special purposes - "Special regime zones" (SZ) or "Transport and engineering infrastructure zones" (T, I).

Monitoring trends in the percentage of green areas is mainly focused on the urbanized territories of the Sofia Municipality, because other types of territories - natural environment and agricultural areas require other monitoring methods. In addition, green areas in the urban environment are of fundamental importance for preserving the quality of habitation, the necessary standard of infrastructure, the health status of Sofia residents, as well as providing a major factor for risk prevention.

Table of quantitative indicators for the scope of the studied functional zones from the General Development Plan (GDP) of Sofia Municipality, as well as the various trends in the percentage of greening. GIS analyses, through an algorithm using partial artificial intelligence and based on data from the COPERNICUS Program and on-site data. Observation period – 2017 to 2023.

Master plan of Sofia Municipality – total of all functional zones	Functional areas for which data is missing – white (1)	Functional areas with no noticeable trends (no change) – pale blue (2)	Functional areas with negative trends, but with indicators still above the minimum – yellow (3)	Functional areas with negative trends and indicators below the minimum percentage – red (4)	Functional areas with positive trends – green (5)
Number	6307	4901	162	285	651
Total area [ha]	90 206.66	35 067.63	1 398.85	1 687.14	2899.53
Note: SOFIA MUNICIPALITY - total area 134'168 ha; (according to the SofiaPlan website - https://sofiaplan.bg/Documents/OUP-Sofia_2009_withfonts.pdf)					



Legend:

1. white - analyses are missing for three possible reasons:
a/ functional zones are without an indicator for the percentage of greening areas;
b/ Functional zones are not urbanized territories and are subject to another type of monitoring methodology – agricultural areas, forest areas, reserves, etc.
c/ Urbanized functional zones, outside the scope of the data from the analyzed scene by SENTINEL – 2
2. pale blue - no noticeable trends;
3. yellow - negative trends, but indicators are still within the norm;
4. red - negative trends and indicators below the required percentage of greened territory;
5. green - positive trends.

Important preliminary note: The presented map and data are an intermediate stage of development and should not be considered as a final product. In addition to completing the analysis of the satellite data, coordination with on-site data should be carried out, as well as discussions with experts from the capital administration in order to identify possible errors or possible other interpretations, as well as possible explanations for the changes that have occurred and trends noted.

III. OUTPUT DATA FROM THE SENTINEL SATELLITE CONSTELLATION PROVIDED UNDER THE EC'S COPERNICUS PROGRAMME

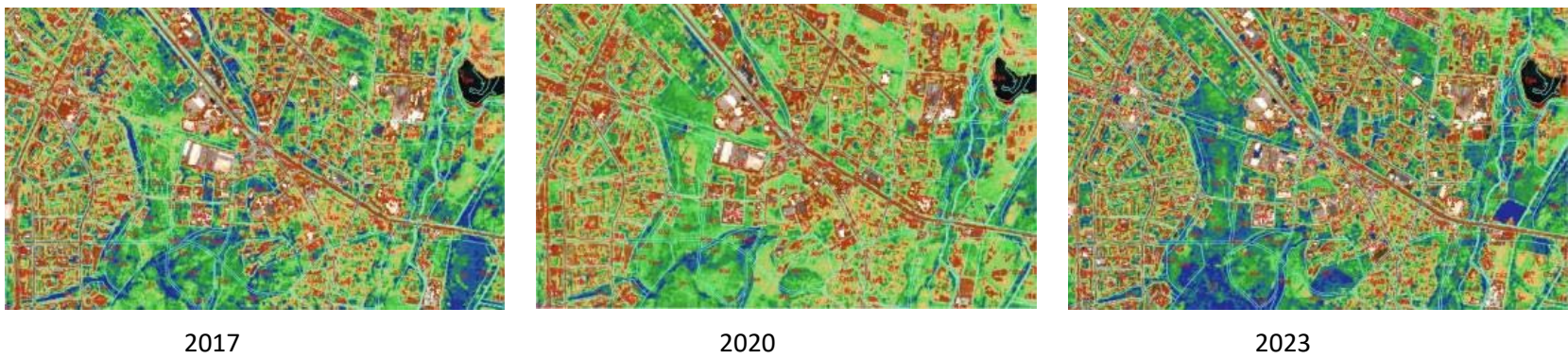
This map is the result of applying the mechanism of regular monitoring of changes - CbM (Change by Monitoring), in accordance with the best European and global practice. Data from the SENTINEL satellite constellation, under the European COPERNICUS Program, were used. The analysis is combined - human expert analysis, with the application of artificial intelligence algorithms. Data from the optical sensor of the SENTINEL 2 satellite and products from the Copernicus Land Monitoring Service, for the period 2017-2023, were analyzed. The results show the trends of preservation, increase or decrease in the percentage of free greening area - one of the main sustainability indices, for the adopted functional zones under the General Development Plan of Sofia Municipality. Mainly urbanized territories were studied - territories corresponding to agricultural lands and territories that are forest massifs, reserves and natural environments were excluded from the presented analyses, as they are subject to analysis using a different type of methodology. Urbanized territories without a greening indicator were also not analyzed.

As the most visible and significant result for the sustainable management of Sofia Municipality, the obvious reduction in the mandatory indicators for green spaces in the southern urbanized territories of Sofia Municipality should be declared - the areas around the Southern Arc of the Ring Road, the so-called Vitosha Collar - the neighborhoods of Knyazhevo, Boyana, Dragalevtsi, Simeonovo and others.

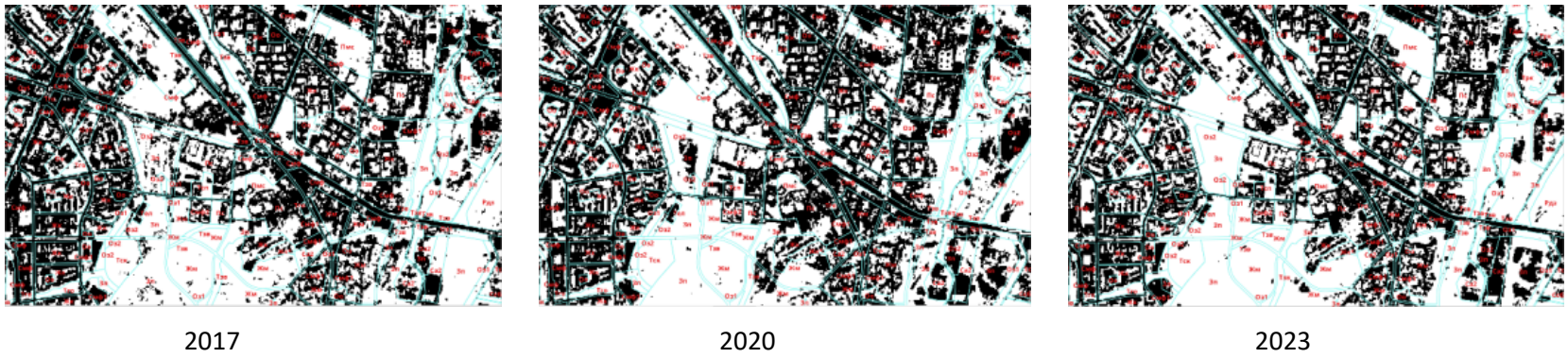
The development is related to applied projects of AURE-ECOREGIONS, implemented under the PECS Program of the European Space Agency, as well as under the European Program HORIZON 2020 - "HARMONY". Partners in these projects are Sofia Municipality - Directorate "Emergency Response and Prevention", Directorate "European Programs". Assistance was also provided by the Municipal Enterprise SofiaPlan.

Examples of the products used by the Copernicus Territory Monitoring Services - HR_VPP product from CLMS: <https://land.copernicus.eu/en>

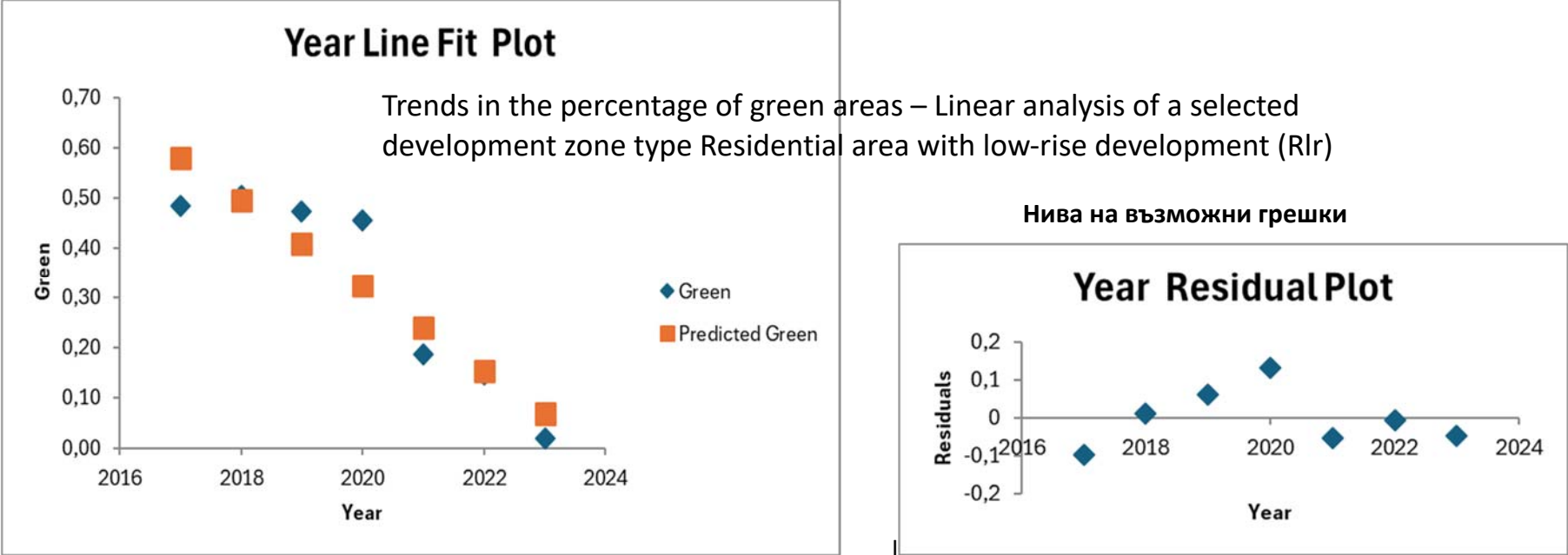
HR_VPP TPROD time series



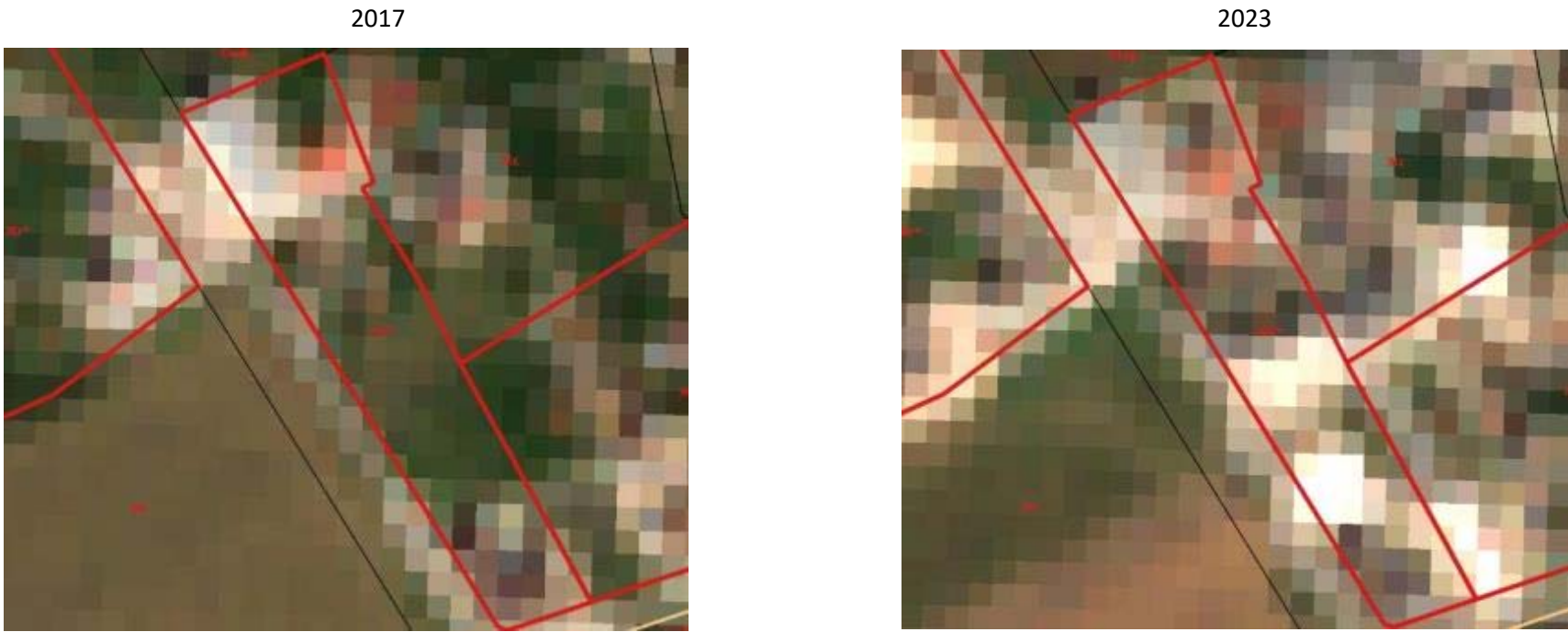
Mask from HR_VPP TPROD (value > 100)



Example of trend analysis in the green space indicator for a specific development zone for which a decline in the percentage of green spaces below the mandatory minimum has been identified - Trend analysis from TPROD time-series (2017-2023):



Development Zone with an identified negative trend in the percentage of green areas and a final value for 2023 (below the requirement). The example is for a residential development zone: Type - (Rhr) - residential area with high-rise buildings; Minimum required green areas - 20%. **Potential green spaces identified for 2021 = 2%.**



The above two images are from the SENTINEL 2 satellite, with the boundaries of the development zone imposed.

IV. OUTPUT DATA FROM SITE

The main source of information on development zones and green space indicators is the Sofia Municipality's OUP, presented on the website of the Municipal Enterprise Sofia-Plan - <https://sofiaplan.bg/portfolio/oup-sofia/> . Unfortunately, there is no information there on the number, individual and total area of the relevant development zones, according to the table of development regimes and the rules and norms of the individual types of territories (under REGULATION 7 of 22.12.2003). This does not allow us to make a comparison with the areas, according to the relevant data from the SENTINEL satellite constellation products of the Copernicus Territory Monitoring Services. For the needs of the analysis, an algorithm was developed, combining the expert work of the expert with the help of artificial intelligence. The number of development zones and their individual and total area were derived using this algorithm. In our opinion, it is necessary for the data to be verified and coordinated by the experts from Sofia Municipality-Sofia-Plan, in order to ensure its relevance and reliability. This is also necessary due to the operational work of the planning mechanisms of Sofia Municipality,

responsible for territorial development, planning and building permits, where relevant updates and changes are made, as long as they are subject to the law and the adopted rules and regulations.

According to the Master Plan of the Sofia Municipality, adopted in 2009 (approved by Decision 06/147 of the Council of Ministers), the main principles for territorial development include:

"Regional approach to planning the development of Sofia Municipality

- Equality of all types of property;
- Achieving a balance in the development of the compact city and the surrounding area;
- Sustainable development of the urban and natural environment.

Guided by these basic principles, the development concept of the plan provides for:

- Limiting the compact growth of the territory of Sofia. Renewal of the city center and improvement of the living environment in the compact city, through restructuring and reconstruction.
- Formation of linear-point urbanized structures along the five main "axes of development" ("Evropa" Blvd., "Tsarigradsko Shosse" Blvd., "Tsar Boris III" Blvd., "Botevgradsko Shosse" Blvd., "Rozhen" Blvd.), with an emphasis on the dominant northwest-southeast axis, passing through the entire territory of Sofia Municipality and reaching the "buffer cores" in the zone of active influence of the Capital. Breaking the monocentric model by developing secondary centers on the periphery of the compact city along the five axes of development.
- Regulating development in the southern territories by applying rules and norms adopted with the Law on Urban and Regional Planning, so as not to interrupt the green connections of the city with Vitosha. Preservation and further development of the "lungs of the city" – the large city parks.
- Formation of a new "development zone" along the routes of the Trans-European Transport Corridors in the northern part of the municipality. Activation of the settlements in the southern Stara Planina collar, to reduce the spatial imbalance.
- Preservation of the territories between the compact city and the northern arc of the Ring Road as a cultural landscape and a reserve for future development

As declared in the Master Plan, these basic principles should be preserved in the process of amendment and updating. Unfortunately, it is clear to everyone that this declaration has not been respected to a large extent. This can be most clearly seen in the changes that have occurred in the so-called "southern territories", where new chaotic developments, on the one hand, have interrupted the green connections with Vitosha, and on the other hand, have created serious problems with inadequate infrastructure and urban transport flows.

In the case of our analysis of trends in the green indicators of urban development zones, the violations that have occurred in legally binding regulatory requirements are clear, especially in the urbanized territories within the scope of the so-called "southern territories". Specific data can also be provided for each of the relevant zones.

Here are the indicators of the development zones that were analyzed regarding trends in the indicator - percentage of green spaces. The analysis includes only urbanized territories with green space indicators:

1. BASIS-TABLE OF ZONES WITH DEVELOPMENT REGIME AND MANDATORY PERCENTAGE OF GREEN AREAS (column in green), according to REGULATION 7 of December 22, 2003

on rules and regulations for the development of individual types of territories and development zones

	УСТРОЙСТВЕНА КАТЕГОРИЯ	УСТРОЙСТВЕНИ ПАРАМЕТРИ				ПРЕДНАЗНАЧЕНИЕ, ОСНОВНИ И ДОПЪЛВАЩИ ФУНКЦИИ, ОГРАНИЧЕНИЯ	Индек с	Цвят	Площ/конт ур
		Макс. плътност на застр. в %	Макс. Кинт	Мин. озеле- нена площ %	Макс. Кота корниз в м				
	1	2	3	4	5	6	7	8	9
	УРБАНИЗИРАНИ ТЕРИТОРИИ								
	ГРУПА ЖИЛИЩНИ УСТРОЙСТВЕНИ ЗОНИ						Ж	кафяв	площ
1	Жилищна зона с преобладаващо високо-етажно застрояване	60	3,5	20	26 за жил. и общ. сгр.		Жг	кафяв	площ
2	Жилищна зона с преобладаващо комплексно застрояване	40	3,0	40	26 за жил. сгр. 32 за общ. сгр.		Жк	кафяв	площ
3	Жилищна зона с преобладаващо средноетажно застрояване	50 25 до 40	2,3 1,0 до 1,5	35 40 до 55	15 за жил. сгр. 20 за общ. сгр. 12 за жил. сгр. 15 за общ. сгр.		Жс	кафяв	площ
4	Жилищна зона с преобладаващо малкоетажно застрояване	40	1,3	40	10		Жм	кафяв	площ
5	Жилищна зона с малкоетажно застрояване в природна среда	20 до 30	0,6 до 0,9	70 до 60	7 до 10		Жм1	св.кафяв	площ
6	Жилищна зона с малкоетажно застрояване с допълнителни, специфични изисквания	30 25	1 0,8	60 60	10 8,5		Жм2	св.кафяв	площ
7	Жилищна зона с малкоетажно застрояване, с ограничителни параметри	10 до 15 до 20	0,1 до 0,3 до 0,5	80 до 80 до 70	кота било 7,5 кота било 8,5 7		Жм3	св.кафяв с вертикално зелено райе	площ
8	Вилна зона	25 до 20	0,8 до 0,6	60	8,5 до 7		Жв	Св. каки	площ
	ГРУПА ЦЕНТРАЛНИ УСТРОЙСТВЕНИ ЗОНИ						Ц		
9	Зона на новия делови център			15			Ц1	Кереми-дено	площ
10	Зона на стария градски център	60 до 80	3,5 до 5	30 до 20			Ц2	Кереми-дено	площ
11	Зона централна със смесено застрояване	60	3,5	40			Ц3	Кереми-дено	площ
	ГРУПА СМЕСЕНИ МНОГОФУНКЦИОНАЛНИ УСТРОЙСТВЕНИ ЗОНИ								

11 а	Смесена многофункционална зона за много високо строителство	60	3,5	40			Смф в	керемидено	
12	Смесена многофункционална зона	60	3,5	40			Смф	светло кереми-дено	площ
13	Смесена многофункционална зона с занижени параметри	40	2	40	26		Смф 1	светло кереми-дено	площ
14	Смесена многофункционална зона предимно за околорадския район	40 60	1,2 1,2	40 30			Смф 2	светло-керемеи-дено	площ
	ГРУПА УСТРОЙСТВЕНИ ЗОНИ ЗА ОБЩЕСТВЕНО-ОБСЛУЖВАЩИ ДЕЙНОСТИ						О	Червено	площ
15	Зона за общественообслужващи дейности	60 50	3 1,5	30 40	20 12		Оо	червено	площ
16	Зона за обществено-обслужващи дейности и озеленяване в градския район	30	1,2	50			Оз1	зелено с вертикално червено райе	площ
17	Зона за обществено-обслужващи дейности и озеленяване в околорадския район	20	0,8	60			Оз2	зелено с вертикално червено райе	площ
18	Линеен фронт на обекти за обществено обслужване							в цвета на съответната зона	червен контур
	ГРУПА ПРОИЗВОДСТВЕНИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ ЗА СПЕЦИФИЧНИ ПРОИЗВОДСТВА						П		
19	Производствена зона	60	1,5	25			Пп	тъмно виолето	площ
20	Смесена производствена зона	55	1,5	30			Пс	светло виолето	площ
21	Зона за малки и средни производства и занаятчийски услуги	50	1,5	35			Пмс	розово-лилав	площ
22	Зона за високотехнологични производства	30	1,2	40			Птп	Розово-лилав с зелен щрих	площ
23	Терени за добив на полезни изкопаеми	10					Тди	сиво	площ
	ТЕРЕНИ ЗА БАЗИ НА ГРАДСКОТО СТОПАНСТВО И ТЕХНИЧЕСКАТА ИНФРАСТРУКТУРА								
24	Терени за бази на зелената система						Тбз	кафяво-сиво	площ
25	Терени за транспортна инфраструктура						Тти	светло сиво	площ
26	Терени за инфраструктура на жп транспорта						Тжп	светло сиво с тъмно сив щрих	площ
27	Терени за бази на транспорта						Ттр	светло сиво	площ
28	(Изм. – ДВ, бр. 41 от 2007 г.) Терени за площни обекти на електроснабдяването и електронните съобщения						Тел	светло сиво	площ
29	Терени за площни обекти на ВиК						Твк	светло сиво	площ
30	Терени за площни обекти на снабдяване с петролни продукти, газ и топлоенергия						Тп	светло сиво	площ
31	Терени за сметища и инсталации за преработка на отпадъци						Тсм	светло сиво	площ
	УСТРОЙСТВЕНА ЗОНА И ТЕРЕНИ ЗА ОЗЕЛЕНЯВАНЕ							Зелено	площ
32	Зона на градски паркове и градини	1	0,06	85 (вкл. декор. водни площи)			Зп	зелено	площ
33	Терени на локални градини и озеленяване	2	0,02	80 (вкл. декор. водни площи)			Тго	зелено	площ
34	Терени за зелени връзки и озеленяване на улици, реки и дерета, открити канали и сервитути	0					Тзв	зелено	площ
35	Терени за специални зелени площи			60			Тзсп	светло зелено	площ с червен контур
36	Терени за гробищни паркове						Тгп	зелено с червен контур	площ с контур
37	Терени за декоративни разсадници						Тдр	светло зелено	площ
	ГРУПА УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ ЗА СПОРТ И АТРАКЦИИ								
38	Зона за спорт и атракции, предимно в градския район	20	0,3	40			Са1	синьо-зелено	площ
39	Зона за спорт и атракции, предимно в околорадския район	10	0,15	50			Са2	синьо-зелено	площ
40	Терени с конкретно предназначение за спорт и атракции	25	0,5	40			Тск	синьо-зелено	площ
	ДРУГИ ТЕРЕНИ								
41	Специални терени						Тсп	сиво-розово	площ

42	Терени на реки и други открити водни площи						Трк	синьо	площ
	ЗЕМЕДЕЛСКИ ТЕРИТОРИИ								
	ГРУПА ЗЕМЕДЕЛСКИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ						Сс		
43	Земеделска зона с разрешено застрояване						Сср	тъмно жълто	площ
44	Земеделска зона без право на застрояване						Ссб	светло жълто	площ
45	Земеделска зона със специфичен режим	1	0,02	20			Ссп	светло жълто-зелено	площ
46	Земеделска зона - трайни насаждения, разсадници и др.						Сст	светло жълто с зелено каре	площ
47	Терени за опитни полета на научни институти	5	0,05				Топ	жълто	площ
	ГОРСКИ ТЕРИТОРИИ								
	ГРУПА ГОРСКИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ								
48	Защитни гори и земи						Гз	тъмно зелено	площ
49	Рекреационни гори и земи – зелена зона						Гр	тъмно зелено	площ
50	Лесопаркове						Глп	тъмно зелено със св. зелен контур	площ с контур
51	Държавно ловно стопанство						Глс	тъмно зелено със св. зелен контур	площ с контур
52	Стопански гори						Гс	тъмно зелено	
53	Терени за горски разсадници						Тгр	тъмно зелено със св. зелен контур	площ с контур
	ЗАЩИТЕНИ ТЕРИТОРИИ								
	ГРУПА ТЕРИТОРИИ ЗА ЗАЩИТА НА КУЛТУРНО-ИСТОРИЧЕСКОТО НАСЛЕДСТВО								
54	Територия с концентрация на обекти на КИН							оранжев контур върху основния режим	контур
55	Културно-исторически резерват							тънко черно каре върху основния режим	диагонален кариранцрих
56	Охранителна зона на културно-исторически резерват							тънък черен щрих върху основния режим	диагонален щрих
	ГРУПА ТЕРИТОРИИ ЗА ПРИРОДНА ЗАЩИТА						Р		
57	Природни резервати						Рзп	сиво зелено с синьо райе	площ с райе
58	Природни паркове						Рпп	сиво зелено	площ
59	Защитени местности и природни забележителности						Рдз	сиво зелено с тънък червен контур	площ с контур
	ОХРАНИТЕЛНИ ЗОНИ НА ВОДОИЗТОЧНИЦИ И НА КУРОРТИ					х.			
60	(Изм. - ДВ, бр. 98 от 2014 г., в сила от 28.11.2014 г.) Охранителен пояс “I” водоизточници, вкл. на минерални извори							светло син контур върху осн. режим	контур
61	Оранителна зона “А” на курорт							розов контур върху осн. режим	контур
	НАРУШЕНИ ТЕРИТОРИИ ЗА ОЗДРАВЯВАНЕ, ВЪЗСТАНОВЯВАНЕ И УКРЕПВАНЕ НА ЗЕМНАТА ОСНОВА								Означ.с гра-ници и щрих върху осн. режим
62	Техногенно нарушени терени за биологично възстановяване						Ссб		Растер жълт
63	Техногенно нарушени терени за техническо укрепване						Тди		Растер зелен
64	Блата, мочурища и др. територии за оздравяване								
65	(Изм. - ДВ, бр. 98 от 2014 г., в сила от 28.11.2014 г.)) Свлачища и срутища за укрепване								Черен контур
66	Сеизмично рискови зони								Червен контур
67	Суфозионен карст								Жълт контур

2. OUTPUT DATA FROM THE GUP of the Sofia Municipality - FOR COMPARISON, THE TABLE CAN BE USED - TABLE OF ZONES WITH DEVELOPMENT REGIME AND MANDATORY PERCENTAGE OF GREEN AREAS (column in green), according to REGULATION 7, according to the GUP of the Sofia Municipality

General Development Plan of the Sofia Municipality - Rules and regulations for development and construction

	УСТРОЙСТВЕНА КАТЕГОРИЯ	УСТРОЙСТВЕНИ ПАРАМЕТРИ				Предназначение, основни и допълв. функции,ограничения и специф.и зисквания	Индекс	Цвят	Площ/ контур
		Макс. Плът. Заст. %	Макс. Кинт	Мин. Озеленена площ %	Макс. Кота корниз м.				
	1	2	3	4	5	6	7	8	9
	УРБАНИЗИРАНИ ТЕРИТОРИИ								
	ГРУПА ЖИЛИЩНИ УСТРОЙСТВЕНИ ЗОНИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – осем зони със съответните показатели					Ж		
	ГРУПА ЦЕНТРАЛНИ УСТРОЙСТВЕНИЗОНИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – три зони със съответните показатели							
	ГРУПА СМЕСЕНИ МНОГОФУНКЦИОНАЛНИ УСТРОЙСТВЕНИ ЗОНИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – четири зони със съответните показатели							
	ГРУПА УСТРОЙСТВЕНИ ЗОНИ ЗА ОБЩЕСТВЕ-НООБСЛУЖВАЩИ ДЕЙНОСТИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – четири зони със съответните показатели							
	ГРУПА ПРОИЗВОДСТВЕНИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ ЗА СПЕЦИФИЧНИ ПРОИЗВОДСТВА	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – пет зони със съответните показатели							
	ТЕРЕНИ ЗА БАЗИ НА ГРАДСКОТО СТОПАНСТВО И ТЕХНИЧЕСКАТА ИНФРАСТРУКТУРА	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – четири зони със съответните показатели							
	УСТРОЙСТВЕНА ЗОНА И ТЕРЕНИ ЗА ОЗЕЛЕНЯВАНЕ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – осем зони със съответните показатели							
	ГРУПА УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ ЗА СПОРТ И АТРАКЦИИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – три зони със съответните показатели							
	ДРУГИ ТЕРЕНИ	РАЗЛИКА С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – две зони, вместо три зони със съответните показатели (без особено значение за крайните резултати на проучването)							
	ЗЕМЕДЕЛСКИ ТЕРИТОРИИ								
	ГРУПА ЗЕМЕДЕЛСКИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – пет зони със съответните показатели							
	ГОРСКИ ТЕРИТОРИИ								
	ГРУПА ГОРСКИ УСТРОЙСТВЕНИ ЗОНИ И ТЕРЕНИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – шест зони със съответните показатели							
	ЗАЩИТЕНИ ТЕРИТОРИИ								
	ГРУПА ТЕРИТОРИИ ЗА ЗАЩИТА НА КУЛТУРНО-ИСТОРИЧЕСКО НАСЛЕДСТВО	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – три зони със съответните показатели							
	ГРУПА ТЕРИТОРИИ ЗА ПРИРОДНА ЗАЩИТА	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – три зони със съответните показатели							
	ОХРАНИТЕЛНИ ЗОНИ НА ВОДОИЗТОЧНИЦИ И НА КУРОРТИ	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – две зони със съответните показатели							
	НАРУШЕНИ ТЕРИТОРИИ ЗА ОЗДРАВЯВАНЕ, ВЪЗСТАНОВЯВАНЕ И УКРЕПВАНЕ НА ЗЕМНАТА ОСНОВА	НЯМА РАЗЛИКИ С ПОКАЗАТЕЛИТЕ ПО НАРЕДБА 7 – шест зони със съответните показатели							

Indicators from the Sofia Municipality's OUP (<https://sofiaplan.bg/portfolio/oup/>)

POSSIBLE DISCUSSION ON FORECASTS AND OFFERS FOR REGULAR MONITORING AND SUPPORT BY AURE-ECOREGIONS:

1. Following the market behavior of users of a specific product, they would probably be most interested in receiving a product at extremely low delivery prices and, if possible, without subsequent data maintenance fees. We are ready to have a free trial period. It is possible to discuss a high one-time license price with a longer validity period, for example 3 or 5 years with free maintenance. More subscription options should be provided, similar to mobile operators. Higher interest can only be caused by a proven and obvious superiority of the platform over competitors.
2. The option of self-maintenance and updating of data and the possibility of integration, transfer (migration) or at least one-way data exchange with an existing GIS would be of interest, if this is considered possible. The interest of municipalities is related to the provision of a free version for at least one year, possibly reducing/optimizing the costs of mandatory insurance for non-threatened sites (those outside the risk zones), with the possibility of relevant amendments to the applicable laws and regulations.
3. The following annexes/appendices are under development: 3.1. Legal rules for compulsory insurance of public property - under development/discussion. 3.2. Exemplary model for risk assessment of a "functional area" - under development/discussion. 3.3. Methodology for monitoring the condition of forest areas in support of the Green Forest Certification Scheme - Carbon Standard Assessment (CSA). This could be the basis for a new HORIZON 2020 project or an upgrade of a project under the NPRF: 3.4. Methodology and application model of the insurance for adjusting the "Reserve for future payments" at a certain rate in the presence of a risk assessment. Possible revision of Council Directive 91/674/EEC of 19 December 1991 on the annual accounts and consolidated accounts of insurance undertakings: to be developed in consultation.
4. In support of REGULATION (EU) 2024/1991 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 June 2024 on nature restoration.

V. EUROPEAN REGULATION

The present study of trends in compliance with mandatory indicators for green areas in the development zones of Sofia Municipality is in line with good European practice and, above all, with the requirements of the new **REGULATION (EU) 2024/1991 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** on nature restoration. . According to the uniform format of the national nature restoration plan (Regulation (EU) 2025/912): “Member States shall identify urban ecosystem areas in order to achieve the objectives of Article 8. Entire cities or smaller towns and suburbs may be identified directly based on the latest available data from Eurostat. If the Member State decides to use a different approach for urban ecosystem areas, it shall provide additional information.” For Bulgaria, which has a Law on Territorial Planning and the accompanying ORDER 7 of December 22, 2003, which require each municipality to prepare and adopt a general development plan for the management of urbanized, agricultural and

natural territories, it is appropriate and natural to implement a system for monitoring green space indicators, which are determined for the relevant development zones, and to regularly monitor trends.

It is logical that this monitoring be carried out by an appropriate independent team of specialists based on objective data from European sources, such as the COPERNICUS Program and accepted standards, such as ISO 19144.

We are ready to share our experience and knowledge, which has been improved in continuous contact with European structures that provide independent, evidence-based knowledge and science, supporting EU policies for a positive impact on society.

ASDE-ECOREGIONS TEAM AND PARTNERS