

orogramme

CLIMATE CHANGE MITIGATION, CLIMATE CHANGE ADAPTATION AND OZONE LAYER PROTECTION PROGRAMME OF THE CITY OF ZAGREB

Human-induced climate change has been recognized as humanity's greatest challenge, so preparing a response to upcoming changes in the climate is also crucial for the City of Zagreb.

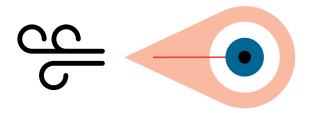
In recent years in Zagreb, the number of hot days (when the daily maximum temperature exceeds 30 °C) in the summer period is often over 40 days, compared to only 11 days recorded in the 1970s. The number of hot days is increasing rapidly, and in the last 30 years we have recorded approximately 9 more hot days every decade. At the same time, the city center is exposed to the effect of an urban heat island, and the temperatures at the Grič measuring station are about 2° C higher than at the Maksimir measuring station, thanks to a high degree of urbanization with too few green areas, further increasing the risk of a future temperature rise. In addition to contributing to the increase in local temperature, asphalt and concrete surfaces also increase the risk of urban torrential floods, which increases with the forecasted increase in the daily maximum rainfall. High and increasing temperatures in the summer, together with more frequent and extreme precipitation in the winter, pose a threat to human life, property and infrastructure of the city, so it is crucial to act in a timely and immediate manner to stop and reduce greenhouse gas emissions (mitigation), as well as to adapt infrastructure and society to the future changed climate.

For these reasons, and pursuant to Article 19, paragraph 1 of the Act on Climate Change and Ozone Layer Protection (Official Gazette 127/19), the City Assembly of the City of Zagreb at its 40th session held on 23 January 2025 adopted the **Program for Climate Change Mitigation, Climate Change Adaptation and Ozone Layer Protection**. Prior to the adoption, the interested public was also consulted on the draft proposal of the Program for 30 days in the period from November 26 to December 25, 2024.

The objective of the Programme is systematic, planned and targeted action towards climate change mitigation and adaptation by individual sectors. The programme includes a description of the current climate and a projection of the future climate, an assessment of the impact of climate change, a risk analysis, an assessment of greenhouse gas emissions, climate change adaptation and mitigation measures and an assessment of the necessary resources and measures to protect the ozone layer.

This brochure contains a summary of the most important information from the Program, and the entire Program was published in the Official Gazette of the City of Zagreb (4/2025) and in a printed edition.





Climate and Climate Change of the City of Zagreb

Climate is the average weather condition of an area over a 30-year period. Therefore, in order to determine the climate of a certain area, including the City of Zagreb, long-term and reliable data sets on different weather properties are needed. Thanks to many years of measurements carried out at Grič, Maksimir and Pleso meteorological stations, we have reliable data on the climate of the City of Zagreb. Measurements at the Grič station have been carried out since 1861.

According to the Köppen classification, the area of the City of Zagreb was dominated by a moderately warm humid climate with warm summers (Cfb) in which there is no dry season during the year, and precipitation is evenly distributed throughout the year. Annually, about 880 mm of precipitation falls over Zagreb, and the precipitation maximum occurs twice a year. The first takes place in spring (May), while the second occurs in late summer (July and August). The smallest amounts of precipitation are present in the cold part of the year. The temperature of the coldest month of the year ranges above 0 °C, while the mean monthly temperature of the warmest month (July) was above 22 °C. In winter, fog often sets in, and sometimes the north wind blows. Although common in winter, snow rarely stays above the ground in the City for a long time and is more often present on Medvednica mountain.

The climate of the City of Zagreb has changed in the last 40 years. Thus, today we notice higher mean temperatures, a more frequent number of warm and hot days in summer, more frequent warnings of heat waves, less or almost no snow, higher maximum daily precipitation, and a more pronounced

phenomenon of the urban heat island. An urban heat island occurs when densely built parts of the city made of asphalt, concrete and brick, and without green areas, retain more heat during the day than the rest of the city, and during the night, this heat is radiated and heated by the surrounding air. At the same time, in 2022, 43 hot days occurred in Zagreb (Maksimir station) (maximum daily temperature above 30 °C), and in 2023, 29 hot days. By comparison, there were only 12 hot days per year on average in 1961-1990.

Thanks to the fact that the mean temperature of the warmest month (July) exceeded 22 ° C, the climate of Zagreb also changed according to the Köppen classification. It has gone from a moderately warm humid climate with warm summers (Cfb) to a moderately warm climate with hot summers (Cfa). Also, the climate of Medvednica mountain no longer corresponds to the humid snow-forest climate (Dfb), but is classified as humid moderately warm climate (Cfb), since the average monthly temperature of the coldest month (January) has risen and now does not fall below -3 °C. Therefore, we undoubtedly live in a different climate today compared to the climate in which our grandparents lived.

Thanks to the use of numerical models and the physical description of the climate and atmosphere, today we can predict with reasonable reliability what kind of climate awaits us in the near future. If we assume that greenhouse gas emissions will not decline in the near future, i.e. that humanity continues according to the business-as-usual emission scenario marked with RCP8.5, then we can also predict what the climate of the City of Zagreb will be in the future.



The analysis of data obtained from the RegCM climate model simulations, with a spatial resolution of 12.5 km and using four global climate models (CNRM-CM5, EC-Earth, MPI-ESM, HadGEM2) for the location of the City of Zagreb, showed the following for the future climate of Zagreb.

City of Zagreb					
Climatological parameter 2011 – 2040		Projections of the future climate according to the RCP8.5 scenario in relation to the period 1971-2000 obtained by climate modelling with the RegCM model			
2011 - 2040		2041 – 2070			
PRECIPITATION		Average annual volume: no significant changes expected			
		Seasons: clearly pronounced reduction (-10%) of precipitation in summer with a slight decrease in winter and a weak increase in precipitation in spring and autumn	Seasons: clearly expressed decrease in precipitation in summer and autumn as well as clearly expressed increase in precipitation in winter and weak decrease in spring		
		Increase in maximum daily precipitation, number of consecutive dry days does not have a clear signal but possible increase, number of consecutive rainy days does not have a clear signal but possible without changes Increase in maximum daily precipitation, number of condry days does not have a clear signal but possible increase, number of consecutive rainy days does a clear signal but possible without changes			
AIR TEMPERATUR	E	Average: <i>rise</i> in the range of 0.9 °C to 1.7 °C	Average: <i>rise</i> in the range of 2.1 °C to 3.4 °C		
		Average maximum: rise from 0.9 °C up to 2.8°C	Average: rise in the range of 2.1 °C to 4.4 °C		
		Average minimum: rise from 1.0 °C to 1.7 °C	Average minimum: rise from 1.7 °C to 3.3 °C		
EXTREME WEATHER (number of days with Tmax ≥ +30 °C)		11.2 to 16.2 days more than the reference period (reference period: 25 – 54 days per year)	15.2 to 39.1 days more than the reference period		
Warm nights (number of days with Tmin ≥ +20 °C)		5 to 7 days <i>more than</i> the reference period (3 – 13 days per year)	9 to 46 days more than the reference period		
	Max. speed at 10 m	Slight decrease	Slight increase		

By the end of the century, we can expect that the average amount of annual precipitation will not change, but its distribution will change throughout the year - that is, we can expect higher maximum daily amounts of precipitation during late autumn and winter and in spring, and drought in summer. At the same time, the average air temperature, the

minimum air temperature and the maximum air temperature will rise. And this is closely related to the number of hot days and warm nights, which we can expect about 40 more in 2100 than today. All these changes represent a great challenge for humans, infrastructure, but also the flora and fauna on which we depend.



CO₂ Emissions of the City of Zagreb

CO₂ emissions were calculated using the internationally recognized IPCC methodology, using data on energy consumption from the energy balance of the City of Zagreb for 2023. CO₂ emissions due to fuel combustion and the contributions of individual energy subsectors are shown in the table:

The largest share of emissions in the City of Zagreb comes from energy production, while the next largest share is emissions from road transport. Reducing emissions from these sectors is becoming key to mitigating climate

change. This includes the transition to renewable energy sources such as solar or geothermal energy, energy renovation of buildings, and the use of sustainable forms of mobility like cycling or public transportation.

Total CO₂ emissions from energy sources in the City of Zagreb amounted to 3.05 million tons, which is 3.44% more than in the previous 2022. Given the year-on-year increase in emissions, it is necessary to focus strategic policies on reducing emissions in all sectors.

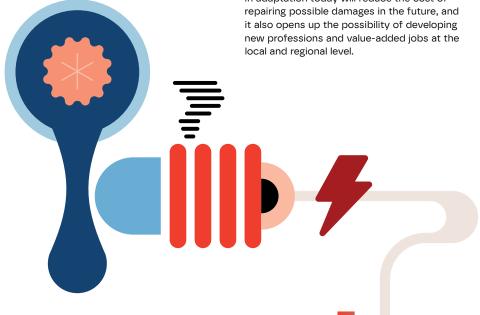
Source	CO ₂ kt	Share
Production and energy transformation	1,174,615.00	38.5%
Public heating plants		05.00
(TE-TO and EL-TO Zagreb)	1,134,044.00	37.2%
Other energy transformations	40,571.00	1.3%
Industry and construction	146,938.00	4.8%
Industry	63,480.00	2.1%
Construction	83,458.00	2.7%
Traffic	1,092,601.00	35.8%
Road	1,045,084.00	34.3%
Railway	0.00	0.0%
Public urban	47,517.00	1.6%
Overall consumption	635,204.00	20.8%
Households	416,795.00	13.7%
Services	207,989.00	6.8%
Agriculture	10,419.00	0.3%
Total	3,049,357	100.0%



Risks of the City of Zagreb

Risk assessment is a comparative analysis of natural causes and their consequences related to hazards and conditions of vulnerability in which people and property may be harmed, livelihoods, infrastructure and services in a given area endangered. The result of risk analysis is an evaluation of the probability and level of potential losses and an understanding of why they occur and what effects they have. Climate change vulnerability serves to understand the interconnectedness of the causes and consequences of climate change and the impact on people, the economy, society and the ecosystem.

The effects of climate change depend on a number of parameters. According to international climate modelling results (IPCC, EEA), the Mediterranean basin has been designated as a "hot" climate point with particularly pronounced climate change effects. The vulnerability of some economic sectors is particularly significant: building, transport, tourism, agriculture, forestry and energy; given that the success of these sectors depends largely on climate factors. Consequently, the exceptional vulnerability of the economy to the effects of climate change can also have a negative impact on overall social development, especially on vulnerable groups of society. The cost of investing in adaptation today will reduce the cost of repairing possible damages in the future, and it also opens up the possibility of developing new professions and value-added jobs at the local and regional level.





SECTOR	тнвеат	RISK
	Flooding	High
WATER MANAGEMENT	Drought	High
	Flooding	Moderate
AGHICOLIONE	Drought	Moderate
	Fire	Low
FORESTRY	Stormy weather	High
HEALTHCARE	Heat wave	Moderate
TOURISM	Heat wave	Moderate
BIODIVERSITY	Temperature increases and changes in precipitation patterns	Moderate
	Flooding	Moderate
BOLLDING	Stormy weather	High
ТВАРГІС	Flooding	High
ELECTRICITY	Heat wave	Moderate

RISK

/ERSITV	Temperature increases and changes in precipitation patterns Moderate	Moderate	Very IOW
(Flooding	Moderate	Low
5	Stormy weather	High	Moderate
v	Flooding	High	High
IICITV	Heat wave	Moderate	Extremely high





Risks by sector

Water management

High risk of floods and droughts due to the occurrence of extreme precipitation, growing land occupation, high level of population, and aging infrastructure. The drainage system is not adapted to future rainfall volumes and the development of nature-based solutions and infrastructure improvements, as well as support for innovative water management solutions and technologies, are needed. Additional analyses of soil permeability and the possibility of infiltration into the soil are needed, as a basis for the development of the Green Infrastructure Plan, which will also be in the function of mitigating the risk of flooding, as well as an analysis of the possibility of water retention by applying nature-based solutions to mitigate the consequences of drought. In addition to climate change, identified risks also require stronger preparation and adaptation of infrastructure, as well as the development of early warning and protection systems.

Agriculture

Moderate risk of agricultural losses due to droughts and floods. The increasing length of drought periods and the rise in extreme precipitation show a high degree of threat to this sector. Adaptations in soil tillage practices, the planting of adaptive crops and the use of irrigation technologies are needed, as well as the cooperation of farmers, institutions and the

scientific community in order to strengthen the resilience of the agricultural sector of the City of Zagreb to climate change and ensure long-term food security.

Forestry

High risk of thunderstorms, which can severely damage forest ecosystems because existing urban systems are not adapted to this threat. Although the risk of fire is low, in the future, a rise in temperature may increase this risk. It is necessary to research the impact of climate on local tree populations in the forests of Zagreb, establish systematic monitoring of forest health with the application of remote sensing methods, prescribe minimum permissible logging areas, introduce adaptive management of urban forests, parks and green infrastructure, all in accordance with European forest legislation by 2030.

Health

Moderate risk of heat waves with an upward trend in the future. Extreme temperatures can increase the number of health problems, in this context, it is indispensable to implement measures to reduce health risks (such as cooling systems and and education). It is necessary to include green infrastructure in urban plans, improve indoor and outdoor housing conditions, develop plans to protect health from heat, and monitor the impact of heat waves on health.

Tourism

Low risk of a decrease in the number of tourists due to heat waves and extreme weather, but with a growing trend in the summer months. It is necessary to develop a tourist offer that is resistant to climate change and promote the city as a destination for a vacation in nature. In the summer months, it is necessary to provide enough green and water surfaces for cooling and rest (fountains, sprinklers and water mist spraying systems in urban heat island areas, installation of green canopies at bus and tram stops, provision of free drinking water fountains). Include the aspect of climate change in development strategies and tourism plans.

Biodiversity

Moderate risk of biodiversity loss due to changes in temperature and rainfall, which can cause species migration and habitat loss. Securing ecological corridors, linking green spaces and protecting endangered species will be critical to preserving biodiversity. Integration into spatial planning and strengthening of green urban areas is needed, while linking fragments of green spaces, creating ecological corridors to improve biodiversity, as well as selecting plant species resistant to new climatic conditions to shape plant communities in public landscapes. It is necessary to strengthen cooperation between the city administration, scientific institutions and associations for the conservation of biodiversity and maintenance of ecosystem services. The development of urban biodiversity with resilient ecosystems is key to adapting to climate change and preserving a healthy urban environment.

Building

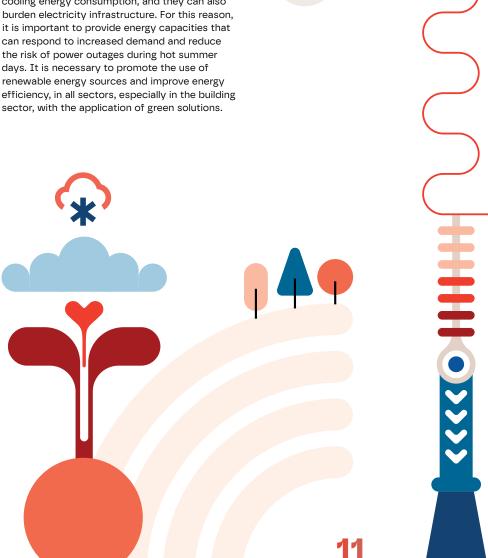
High risk of damage during thunderstorms and moderate risk of damage to buildings due to flooding. For the building industry, this is a challenge in terms of strengthening building standards and infrastructure to ensure storm resistance. Buildings and infrastructure in the city are vulnerable to climate change due to design (poor resistance to storm storms) or location (areas prone to flooding, landslides, erosion). It is necessary to build resilient buildings and improve energy efficiency, adapt construction provisions in spatial plans on the basis of a previously developed expert basis, create a digital database on damage to public and private buildings due to natural disasters, as well as monitor land use change and changes in the condition and potential of land.

Traffic

High flood risk due to possible extreme weather events. High risk is associated with inadequate rainwater drainage. It is necessary to plan and reconstruct/build flood-resistant infrastructure, using technological innovations such as permeable materials and green measures. Also, it is important to adapt public urban transport and railways through the development of a real-time traffic information system and early warning systems. It is recommended to keep records of damage to roads during weather disasters in order to identify critical locations and plan their adjustments.

Energy

Moderate risk of increased energy demand during heat waves. High temperatures can increase cooling energy consumption, and they can also burden electricity infrastructure. For this reason, it is important to provide energy capacities that can respond to increased demand and reduce the risk of power outages during hot summer days. It is necessary to promote the use of renewable energy sources and improve energy sector, with the application of green solutions.



SUSTAINABLE DEVELOPMENT GENALS

Overview of Measures

The programme includes 68 measures to mitigate climate change and adapt to climate change, as well as one measure to protect the ozone layer. The holders, partners, estimated amounts, individual activities and indicators were determined for each measure. This summary provides only the overall names of the measures by sector, their planned values and the UN Sustainable Development Goals to which each measure contributes.

In 2015, United Nations Member States adopted 17 Sustainable Development Goals (SDGs) by 2030. Shared goals focus our global efforts towards peace and prosperity for people and the planet, today and in the future. The SDGs recognize that efforts to eradicate poverty and deprivation must accompany strategies that support health, education, equity, and economic development while tackling climate change and preserving oceans and terrestrial habitats. This Programme is aligned with these objectives.

BUILDIN	G	TOTAL	€193,370,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
ZG-01	Automatic and remote monitoring of consumption in public buildings with activities to reduce consumption	6 CILAN MATIC OLEAN DEBOY 7. MICROPAGE AND CLEAN DEBOY 13. GENATE ADDITION 13. GENATE ADDITION 14. ADDITION 15. ADDITION 16. ADDITION 17. ADDITION 17. ADDITION 18. ADDITION	€200.000
ZG-02	Energy renovation of public buildings owned by the City of Zagreb and companies owned by the City of Zagreb up to nZEB category	4 GUMLITY COLCATION 7 AFFORDMEE AND CLEAR INHIBITY AND INFRASTRUCTURE	€188,000,000
ZG-03	Education, promoting and encouraging energy efficiency and information on the effects of climate change for citizens through the Zagreb Energy Center	7 AFFORDME AND PROJECT NO GLAN EMERGY NO PROJECT 13 ACTION 13 ACTION 14 AFFORDME AND PROJECT NO COLOMBRA TRACTICAL CONCASTOR NO PROGREE AD PROJECT AD PROJEC	€225.000
ZG-04	System for monitoring energy consumption and renovation of commercial and residential buildings and family houses	7 AFFRENCHE AND GLEAN BERGY 8 DECENT WORK AND GLEAN BERGY 9 MOUSTRY INVOLUTION AND INVASITRY CITY.	€350.000
ZG-05	Climate validation of infrastructure projects (new construction, reconstruction and upgrading)	9 MODERTY, INDIVIDUAL TIL SISTEMMENT CITIES 13 ACIDAT AND COMMONTES 13 ACIDAT AND COMMONTES 13 ACIDAT	€1,300,000
ZG-06	Capital investments related to green infrastructure projects	6 CLEAN WATER 8 DECENT WORK AND SANITATION 11 SUSTAINABLE CITIES AND SANITATION 11 SUSTAINABLE CITIES AND COMMONTES	€1,495,000
ZG-07	Air conditioning of educational institutions owned by the City of Zagreb	3 GOOD HEATH 4 COUNTIN 9 INCUSTRY, MOUNTAIN 11 SUSTAINABLE COUNTIN AND COMMON AND PRESCRIPTION AND COMMON AND COUNTIN AND COUNTIN AND COMMON AND COUNTIN AND COUN	€1,800,000

ENERGY		TOTAL	€23,378,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
EN-01	Development of local energy production from RES on public buildings in combination with the application of green infrastructure elements	7 AFFORDABLE AND CLEAN ENGINEY 8 DECENT WORK AND PRACTICAL PLANS THE PROPERTY AND INFASTRUCTURE 9 DECENTIVE AND INFASTRUCTURE	€20,000,000
EN-02	Exploration of geothermal energy potential by evaluating existing and developing new geothermal wells	7 AFFORMALE AND CLEAN DEBINY 8 DESCRIPTION AND DEDINGRAD CHOWNER 100 DEBINY 9 DECURITY DEBINGRAD HAVE BEEN AND DESCRIPTION	€738.000
EN-03	Monitoring of emissions in the energy sector and development of a strategy for decarbonisation of heating and cooling systems	7 AFFORMARIE AND CLEAM EXERCIT WORK AND CLEONING CHOWITH AND BEDONUME CHOWITH AND BINDSTRUCTURE AND AND BINDSTRUCTURE AND ACCOUNTS AND BINDSTRUCTURE AND ACCOUNTS AND BINDSTRUCTURE AND ACCOUNTS AND ACC	€640.000
EN-04	Exploitation of landfill gas for thermal energy production	7 AFFORMARIE AND CLEAN DEFICIT WORK AND CLEAN DEFICIT SECURITY ENGINEERS AND PRESENTATION OF THE PRESENTAT	€800.000
EN-05	Implementation of the Program for Combating Energy Poverty	1 SIXTAMBRE CITIES 11 SIXTAMBRE CITIES 11 SIXTAMBRE CITIES 12 COORD HEALTH AND WELL-SIRNO TO APPRIMAME AND TO CLEAN BRADET TO REDUCKID BEQUIALITES TO REDUCKID TO REDUCKID BEQUIALITES TO REDUCKID TO RE	€1,200,000

TRAFFIC		TOTAL	€553,375,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
PR-01	Increasing the frequency and reliability of public transport	3 GOOD HEALTH AND WELL-HENG CLEAN EMBRY 7 APPROPRIES AND SHARTHCITTEE AND COMMINSTERS 13 ACTION 13 ACTION 14 SISTAMANE EMBRY AND NEHASTRICITURE 15 SISTAMANE EMBRY AND NEHASTRICITURE 16 SISTAMANE EMBRY AND NEHASTRICITURE 17 APPROPRIES AND OF SISTAMANE EMBRY AND NEHASTRICITURE 18 SISTAMANE EMBRY AND NEHASTRICITURE 19 MULTIPLY AND NEHASTRICITURE 10 APPROPRIES AND NEHASTRICITURE 11 SISTAMANE EMBRY AND NEHASTRICITURE 11 SISTAMANE EMBRY AND NEHASTRICITURE 12 APPROPRIES AND NEHASTRICITURE 13 ACTION 14 APPROPRIES AND NEHASTRICITURE 15 AND NEHASTRICITURE 16 AND NEHASTRICITURE 17 APPROPRIES AND NEHASTRICITURE 18 AND NEHASTRICIT	€364,300,000
PR-02	Development of the public city bicycle system	3 GOOD HEALTH AND WIELL-BENG PRODUCTION AND PRODUCTION	€10,000,000
PR-03	Improvement of the tram electric power system in order to improve the public service	9 MOUSTRY INFORMATION 11 AND DOMINANTIES AND DOMINANTIES AND DOMINANTIES	€16,875,000
PR-04	Development of an integrated passenger transport system in the City of Zagreb, Zagreb County and Krapina-Zagorje County	8 DECENT WORK AND LOCADING CHAPTER 9 MOUSTRY, NAVOUNDERS 111 SUSTAINABLE CITIES AND COMMUNITIES	€40,000,000
PR-05	Development of a network of pedestrian and bicycle corridors and zones together with supporting infrastructure	3 GOOD MEALTH 8 DECENT WORK AND STOCKMORE COOKING 11 SUSTAINABLES CHIEF AND MEALTHCOTHE 12 SUSTAINABLES CHIEF AND CHIEF	€32,000,000
PR-06	Establishment of a single system for smart management of automotive traffic and public transport	3 ORDO HELLTH 8 DESCRIT WORK AND ECONOMIC CHOWTH 9 PROLITETY AND WALL-BENG 11 SUSTRIANABLE CRIES AND OWNERSTRIANDER CRIES 11 SUSTRIANABLE CRIES AND OWNERSTRIANDER CRIES	€88,200,000
PR-07	Greening grey infrastructure	3 GOOD HEALTH 9 MOUNTLEEPING 11 SISTNAMUSE CITIES 15 ON LIMB 15 ON LIMB 16 ON LIMB 17 ON LIMB 18 ON LIMB 1	€2,000,000

WASTE M	ANAGEMENT	TOTAL	€163,366,200
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
GO-01	Improvement of infrastructure for separate collection of municipal waste	8 DECENT WORK AND COUNTRY INFORMATION BY AND INFORMATION AND PROSPRIENCE AND	€19,300,000
GO-02	Optimization of driving routes of Čistoća waste management trucks during the execution of the waste collection service	7 APPROPRIES AND CLAM DEBTO CLAM	€400.000
GO-03	Raising awareness, information and education on waste and product management	3 GOOD HEALTH AND WELL-STEING	€304.000
GO-04	Establishment of re-use centres	8 DESERT MORE AND DECOMME CROWTH SAID NAD NINEASTRUCTURE 111 SUSTRAINED CITES 12 DOSSIDIFFINANCE CONTRACTOR CITES AND PRODUCT CITES A	€200.000
GO-05	Reduction of bio-waste	8 ECONOME CROWTH PART NOWARD RECORDER TO AND INFESTRECTURE AND PRODUCT AND PRO	€662.200
GO-06	Waste management center and recycling sites for construction waste	8 DECENT WORK AND SECURITY OF AND INFESTRICTURE 11 SUSTAINABLE CITIES AND PRODUCT AND PROD	€142,400,000
GO-07	Removal of environmental waste	3 GOOD HEALTH AND WILL-BIRDS	€100.000

WATER RE	SOURCES	TOTAL				€416,687,260
Measure order number	Name of the Measure	Contribution	ons to the S	DGs		Planned value of the Measure
VR-01	Protection of source inflow areas	3 GOOD HEALTH AND WELL-SEING	6 CLEAN WATER AND SANTATION 13 CLEATE ACTION	9 MOUSTRY, PRODVATEN AND INFRASTRUCTURE 14 LIFE BELOW WATER	11 SISTAMABLE CIPIS AND COMMUNITIES 15 UPF ON LAND	€1,915,260
VR-02	Improvement of the water supply system and reduction of water losses in the water supply network of the City of Zagreb	6 CLEAN WATER AND SANTATEIN	9 MOUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CHIES AND COMMUNITIES	12 responsibile consumption and production	€141,610,000
VR-03	Rationalization of water consumption	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	9 MOUSTRY, INNOVATION AND INFRASTRUCTURE	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	€1,530,000
VR-04	Improvement of the stormwater drainage system	6 CLEAN WATER AND SANITATION	9 MOUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CRITES AND COMMUNITIES	13 CLIMATE ACTION	€17,440,000
VR-05	Development of the city taps network	3 GOOD HEALTH AND WELL-BEING	6 CLEAN WATER AND SANITATION	11 SUSTAINABLE CITIES AND COMMUNITIES		€480.000
VR-06	Raising awareness and capacity building on effective management and rational use of water and the impact of climate change on water as an environmental component	6 CLEAN WATER AND SAMITATION 13 CLEMATE ACTION	7 AFFORDABLE AND CLEAN ENERGY 15 UFF ON LAND	11 SUSTAINMELE CITIES AND COMMUNITIES	12 RESPONSENTE CONSUMPTION AND PRODUCTION	€120.000
VR-07	Identification of vulnerable groups in society and critical assets prone to floods	6 CLEAN WATER AND SANTATION	10 REDUCED NEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	13 CLIMATE ACTION	1

WATER RESO	JRCES continue		
Measure order number	Name of the Measure	Doprinosi ciljevima održivog razvoja	Planned value of the Measure
VR-08	Ensuring sufficient capacity of springs for safe water supply	6 CLEAN MATER PARTY PART	€18,592,000
VR-09	Improvement of the wastewater treatment system	6 CLEAN WAITER 9 MODERTY INVOVIDED 11 SUSTAINABLE CITES AND CREASURED TO AND PRESTRUCTURE 11 SUSTAINABLE CITES AND COMMONTES	€100,000,000
VR-10	Improvement of the wastewater drainage system	6 CLIAN WAITER 9 MOD SHIFTCHICKEE 11 SUSTAINABLE CITES 12 REPOSSIBLE CONSIDERATION AND PRESENCE CITES 14 UPT BROWN WATER 15 ON LAND 15 ON LAND 16 CLIAN WAITER 17 ON LAND 18 SECTION OF THE CONSIDERATION AND TRADICTION AND TRADICT	€135,000,000

AGRICUL	TURE	TOTAL				€3,250,000
Measure order number	Name of the Measure	Contribution	Contributions to the SDGs			
PO-01	Increasing the areas where urban agriculture and edible landscape activities take place	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	9 MOUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	€1,750,000
PO-02	Encouraging organic and precision farming	2 ZERO HUNGER STATEMENT OF THE PROPERTY OF TH	8 DECENT WORK AND COONDING CROWTH 13 CLIMATE ACTION	9 MOUSTRY, INNOVITION AND INFRASTRUCTURE 14 LIFE BELLOW WATER	11 SUSTAINABLE CHIES AND COMMINISHES	€1,000,000
PO-03	Encouraging the construction of a system of protection against natural disasters	2 ZERO HUNGER (() 13 CLMATE ACTION	3 GOOD HEALTH AND WELL-BEING	9 MUSTRY, INNOVATION AND INFRASTRUCTURE	11 SUSTAINABLE CITIES AND COMMUNITIES	€500.000

FORESTR	Y	TOTAL	€17,686,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
ŠU-01	Forest regeneration to strengthen resilience to climate change	8 DEEDN WORK AND ECONOMIC GROWTH AND COMMUNITYS TO AND FROMOUTES AND FROM LAND COMMUNITYS AND FROM LAND FR	€15,566,000
ŠU-02	Education and exchange of knowledge and experience in the field of forestry and forest adaptation to climate change	9 MAND PREASTRATION AND THE AND COMMANDED AND PREASTRATION AND COMMANDED AND PRODUCTION AND PROD	€100.000
ŠU-03	Implementation of green infrastructure models with the aim of strengthening climate resilience in urban areas	12 RESPONDEL AND PRODUCTION AND PRODUCTION	€1,000,000
ŠU-04	Valorisation and inclusion of areas smaller than 0.1 ha overgrown with smaller groups of trees owned by the city or the Republic of Croatia in green infrastructure	11 SUSTAINABLE CITES AND COMMUNITES AND PRODUCTION	€1,000,000
ŠU-05	Strengthening the capacity of key stakeholders to respond to the consequences of extreme weather events such as windbreaks and windwaves in forests	11 SUSTAINABETORIS 13 CALIFOR ACTES	€20.000

HEALTHC	ARE	TOTAL				€1,710,000
Measure order number	Name of the Measure	Contribution	ons to the S	BDGs		Planned value of the Measure
2D-01	Development of advanced information and communication functionalities for monitoring the impact of air quality on the population and on health indicators in the timespatial information and communication display	3 GOOD HEALTH AND WELL-STEND —///	6 CLEAN WATER AND SAMTIATION	11 SISTANABECTIES NO COMMUNITS	12 BESTONGBLE CONCENTRION AND PRODUCTION OF PRODUCTION	€1,510,000
ZD-02	Preparation and implementation of public education on the safety and availability of water and food during expected climate changes (extreme weather conditions, etc.)	1 NO POWERTY 小子子子子	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	6 CLEAN WATER AND SANTATION	€200.000

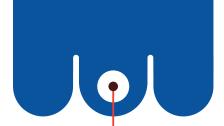
SPATIAL	PLANNING	TOTAL	€1,764,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
PP-01	Development of expert bases for spatial plans of the City of Zagreb in the function of climate change adaptation	2 TRO HUNCER 6 CLEAM WATER OF CLEAM HARRY 17 AFFORMACE AND AND NEARTHCHEE 11 AND COMMANDED 12 REPORTED NO COMMANDED NO COM	€800.000
PP-02	Integration of climate change adaptation measures and conditions for implementation into spatial plans of the City of Zagreb	9 MODISTRY, NOTIVETIDE 11 SISSAMANUE CRIES 13 GAMATE AND GOMMANDELS 15 URF 15 URF 15 URF 15 URF 15 URF 16 URF 17 URF 18 URF	€780.000
PP-03	Development of various IT databases/catalogues	8 DESANT MORE AND ECONOMIC GROWTH 9 AND DIFFERENCE TIME 13 CHAMTE ACTION 13 CHAMTE ACTION	€92.000
PP-04	Strengthening competencies and raising awareness of space planning opportunities with the aim of mitigating and adapting to climate change	11 SIGNAMURE CRIES 13 COMMITE ACTION COMMITTE COMMITTE	€92.000

BIODIVE	RSITY	TOTAL	€8,224,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
BO-01	Conservation of the remaining natural and subnatural habitats of the City of Zagreb	6 CHEN WATER AND SANTATION 11 SUSTAINABLE CHILIS AND COMMONTIES 13 CHARTE 14 BEE 15 DEE 15 DEE 15 DEC 16 CHARTE 17 SUSTAINABLE CHILIS AND COMMONTIES 18 SUSTAINABLE CHILIS AND COMMONTIES 19 SUSTAINABLE CHILIS AND COMMONTIES 11 SUSTAINABLE CHILIS AND COMMONTIES 13 CHILINE AND COMMONTIES 14 BEET CHILIS AND COMMONTIES 15 DEC CHILIS AND COMMONTIES A	€400.000
BO-02	Ecological restoration and revitalization of aquatic and wetland habitats of the City of Zagreb	6 CELAN NATION AND SIMPLIFIED 11 SUSTAINABLE CHIES AND SIMPLIFIED 12 UPF AND SIMPLIFIED 13 SUSTAINABLE CHIES AND SIMPLIFIED 14 UPF AND SIMPLIFIED 15 ON LAND 15 ON LAND 16 ON LAND 17 ON LAND 18 ON LAND 18 ON LAND 19 ON LAND 19 ON LAND 10 ON LAND 10 ON LAND 10 ON LAND 11 ON LAND 12 ON LAND 13 ON LAND 14 UPF AND 15 ON LAND 16 ON LAND 17 ON LAND 18 ON LAND	€100.000
BO-03	Adaptation of urban green space management and tree planting	3 GOOD HEALTH AND WELL-SERVIC P NOUSTRY, MOVINTON AND MELL-SERVIC P NOUSTRY, MOVINTON AND	€4,025,000
BO-04	Improving sustainable wildlife management in urban and suburban areas		€1,964,000
BO-05	Educating and raising public awareness of the role of natural ecosystems in mitigating and adapting to climate change	3 GOOD HEALTH AND WELL-SENCE WHAT AND WELL-SENCE TO CHAND TO CHA	€240.000
BO-06	Improving the capacity of the city branch Zrinjevac for the production of planting material and the arrangement and maintenance of green areas	8 RECEIT WORK AND SCHOOL COUNTY OF THE PROPERTY OF THE PROPERT	€1,495,000

TOURISM	ı	TOTAL	€5,750,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
TU-01	Adapting a tourist destination to potential climate change	8 DESCRIT MORA AND ENDANGEMENT AMOUNTAIN AND PRODUCTION AND PRODUCTION AND PRODUCTION AND PRODUCTION AND PRODUCTION	€940.000
TU-02	Implementation of measures to encourage the use of new technologies and sustainable tourism practices to adapt and mitigate climate change	8 DECENT MODEL AND TOOM AND HOUSETH INHOMATION CONCEINED AND HOUSETH INHOMATION AND PRODUCTION AND PRODUCTION AND PRODUCTION	€4,000,000
TU-03	Tourism infrastructure adaptation to climate change	3 GROOD HEALTH AND WELL-STEING WELL-STEING AND WELL-STEING WELL-STEING AND WELL-STEING AND WELL-STEING WELL-STEING AND WELL-STEING WELL-ST	€540.000
TU-04	Implementation of promotional activities and education for citizens, tourists and the tourism sector	8 RESHT WIRE AND COMMUNIC SHOWN IN ACTION	€270.000

RISK MAN	NAGEMENT	TOTAL	€1,580,000
Measure order number	Name of the Measure	Contributions to the SDGs	Planned value of the Measure
UR-01	Improvement of coordination and crisis management systems in all sectors	3 GOOD HEALTH AND DAMENTERN THE AND SAMETHERN THE AND COMMONTES TH	€160.000
UR-02	Strengthening the capacity of key stakeholders to assess hazards and responses during disasters, major accidents, emergencies or climate- related incidents/crises	3 GOOD HEALTH AND SOMEOTEN TO THE AND SOMEOTEN	€220.000
UR-03	Examining the impact of climate change on increasing the risk of life in the urban zone of Zagreb (launching initiatives, participating in projects, organizing conferences)	7 ATTOMORAL AND CLEAN DESIGN AND PRINCIPLE IN SIXTANARI CHES 13 ACTION AND PRINCIPLE IN SIXTANARI CHES 13 ACTION AND PRINCIPLE IN SIXTANARI CHES IN SIXTANAR	€200.000
UR-04	Adaptation of urban utility infrastructure to the increasingly frequent occurrence of urban torrential floods	6 CHEAN MATER AND SANTARDH PROSTRICTURE 11 SISTANABAL CHES 13 ACIDN ACID	€200.000
UR-05	Defining critical points and prioritization	9 houstry norwalder 11 sustander office 13 communities Action Action	€200.000
UR-06	Development of infrastructure to be used in case of long-term heat waves	3 COURT HEALTH AND SANTENTEN 6 CLEAN WATER AND SANTENTEN 9 MODERITY BROWNING 11 AND SANTENTEN 12 ACTION 13 CLEMATE 13 CLEMATE 14 ACTION 15 ACTION 16 AND SANTENTEN 17 ACTION 18 ACTION 18 ACTION 18 ACTION 18 ACTION 19 ACTION 10 ACTION 10 ACTION 10 ACTION 11	€200.000
UR-07	Development of a model for predicting landslide hazards based on precipitation forecasts and existing landslide maps	11 SUSTAINABLE CITIES AND COMMUNITES OR COMMUNITARY AND PRODUCTION AND PRODUCTION OF P	€400.000

OTHER M	EASURES	TOTAL				€400.000
Measure order number	Name of the Measure	Contribution	ons to the SI	OGs		Planned value of the Measure
ОМ-01	Development of a digital information platform for climate change in the City of Zagreb	3 GOOD HEALTH AND WELL-BEING	11 SUSTAINABLE CITIES AND COMMUNITIES			€400.000
20-01	Increasing the visibility of information on calls and tenders for financing projects for the reduction and elimination of consumption of ozone-depleting substances and fluorinated greenhouse gases	8 DECOMO WIDER AND ECONOMIC GROWTH	9 INDUSTRY INSCRIPTION AND INTRACTICUTE AND INT	11 SISTAMOLECITES AND COMMUNITIES	12 respondent concumpation And production	/



Total Amount of Planned Investments

In the period from 2025 to 2028, this Program envisages an investment in the amount of EUR 1.4 billion. By comparison, the budget of the City of Zagreb in 2025 is EUR 2.8 billion.

The largest investments will be made in the transport sector, where it is planned to increase the frequency and reliability of public urban transport through the procurement of new vehicles, the improvement of the existing electricity network, but also the development of the public bicycle system. Together, this will contribute to greater use of public urban transport, i.e. reduction of emissions from automotive transport.

In the area of water resources, it is planned to improve the water supply network through the reconstruction of pipelines with the aim of reducing losses in the network, as well as the construction of Stage III wastewater treatment plants. This will contribute to reducing the emissions required to deliver water but also reduce the use of water and ensure environmental protection from pollution.

Among other major measures, investments in a waste management center should be highlighted, which will contribute to the reduction of emissions through more rational use of waste as a resource, more advanced technology for waste treatment, but also the reuse of certain materials. In addition, part of the emissions will be saved in the reduced use of energy for heating and cooling in energy renovated public sector buildings.





TOTAL INVESTMENTS IN

SECTORS	YEAR 2025	2026	2027	2028	2025 – 2028
WATER RESOURCES	€32,019,000	€130,924,000	€146,935,000	€106,809,260	€416,687,260
AGRICULTURE	€625.000	€875.000	€875.000	€875.000	€3,250,000
FORESTRY	€3,891,500	£4,751,500	€4,691,500	€4,351,500	€17,686,000
BIODIVERSITY	€4,444,000	€1,010,000	€860.000	€1,910,000	€8,224,000
WASTE MANAGEMENT	€11,438,200	€6,976,000	€54,676,000	€90,176,000	€163,266,200
ENERGY	€5,493,000	€5,815,000	€6,150,000	€5,920,000	€23,378,000
TRAFFIC	€103,075,000	€158,800,000	€161,950,000	€129,550,000	€553,375,000
BUILDING	€31,215,000	€97,185,000	€32,135,000	€32,835,000	€193,370,000
TOURISM	€1,400,000	€1,410,000	€1,450,000	€1,490,000	€5,750,000
HEALTHCARE	€260.000	€2,000,000	€1,500,000	€1,000,000	€4,760,000
SPATIAL PLANNING	€420,000	6444,000	€448,000	£452,000	€1,764,000
RISK MANAGEMENT	€420,000	€400.000	€380.000	€380.000	€1,580,000
OTHER MEASURES	€100,000	€100,000	€100,000	€100,000	€400.000
тотаг	€194,800,700	€410,690,500	€412,150,500	€375,848,760	€1,393,490,460

Want to know more? Come to ZEC!

Visit Zagreb Energy Center - the top spot for all questions about green transition and the path to climate neutrality!

At the ZEC, you can get information on the activities of the City of Zagreb related to the Program, i.e. with mitigation and adaptation to climate change, support for the construction of your own solar power plant, advice for energy renovation and energy savings or for greening the yard.

Find us at

Maksimirska cesta 51

or contact us at zec@zagreb.hr

and take a look at

zec.zagreb.hr

